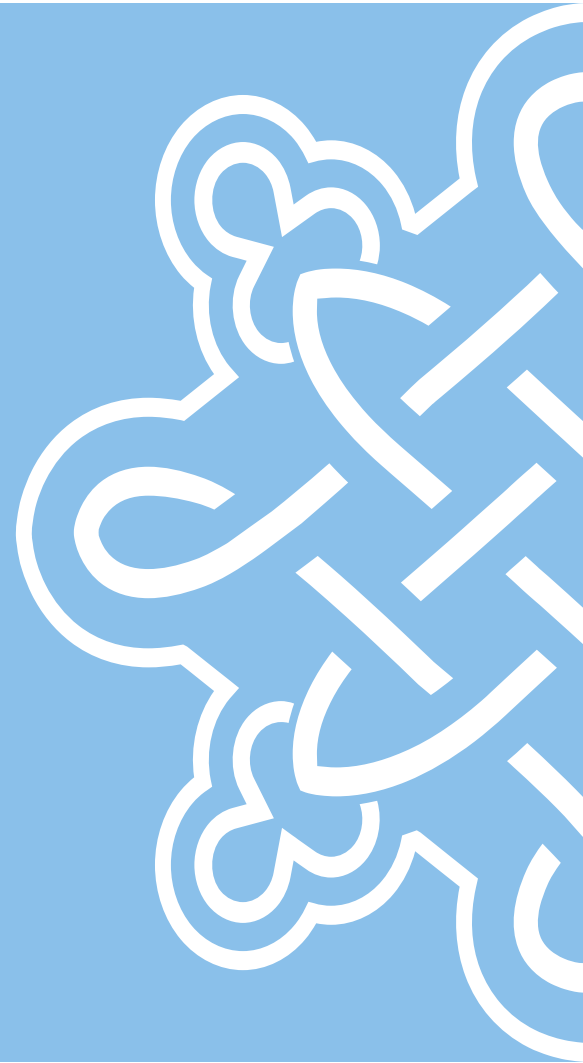




ANNUAL REPORT



2021



ANNUAL REPORT

**2021 BUSINESS REPORT AND
FINANCIAL STATEMENTS
OF THE MAGYAR NEMZETI BANK**

2021

Published by the Magyar Nemzeti Bank

Publisher in charge: Eszter Hergár

H-1013 Budapest, Krisztina körút 55.

www.mnb.hu

ISSN 1216-6197 (print)

ISSN 1585-4604 (on-line)

Contents

Part A)

2021 Business Report of the Magyar Nemzeti Bank	5
1 The Governor's foreword	7
2 A brief overview of the Magyar Nemzeti Bank	8
2.1 Objectives, basic and other tasks of the MNB	8
2.2 Bodies and management of the MNB	9
2.3 Organisation of the MNB	12
2.4 The MNB as a member of the European System of Central Banks	12
3 Review of the MNB's performance in 2021	17
3.1 Monetary policy	17
3.2 Stability of the financial intermediary system	26
3.3 Supervision and consumer protection	32
3.4 Resolution	45
3.5 Payment and securities settlement systems	47
3.6 Managing international reserves	52
3.7 Cash logistics activity	55
3.8 Statistical services	61
3.9 The MNB's activity in the area of social responsibility	63
3.10 The MNB's environmental sustainability activity	66
3.11 Factors shaping the communication of the MNB	69
3.12 The MNB's income in 2021	70
3.13 The MNB's financial management in 2021	72
3.14 Introduction of the ESCB Committees	77
3.15 Research activity of the MNB	79
3.16 Publications and conferences organised by the MNB	79
4 Additional information on the supervisory activity of the MNB in 2021	87
5 Explanation of abbreviations and terms specific to central banking	92

Part B)

Audited financial statements of the Magyar Nemzeti Bank 2021	97
1 Independent auditor's report	99
2 Balance sheet of the Magyar Nemzeti Bank	102
3 Income statement of the Magyar Nemzeti Bank	103
4 Notes to the financial statements	104
4.1 MNB accounting policies	104
4.2 Effects of macroeconomic trends on the 2021 balance sheet and income statement of the Magyar Nemzeti Bank	109
4.3 Forint receivables from the central government	110
4.4 Foreign currency receivables from the central government	110
4.5 Forint and foreign currency liabilities of the central government	110
4.6 Net positions vis-à-vis the central government	111
4.7 Forint receivables from and liabilities to credit institutions	112
4.8 Net positions vis-à-vis credit institutions	113
4.9 Gold and foreign exchange reserves of the central bank	114
4.10 Other forint and foreign currency receivables	114
4.11 Other forint deposits and liabilities	115
4.12 Investment assets	117
4.13 Provisions and impairment losses	124
4.14 Deferred expenses/accrued income and accrued expenses/deferred income	124
4.15 Changes in equity	125
4.16 Revaluation reserves	125
4.17 Off-balance sheet MNB liabilities and other significant off-balance sheet items	126
4.18 Net interest income and realised net income of financial operations	128
4.19 Components of income from the revaluation of foreign exchange holdings	131
4.20 Cost of issuing banknotes and coins	131
4.21 Other income/expenses	132
4.22 Income other than fees and commissions	132
4.23 Income from supervisory activities	133
4.24 Operating income and expenses	134
4.25 Information on wages and number of staff, remuneration of executive officers	136
4.26 Other major events affecting 2021 and after the reporting period	137

Part A)
2021 Business Report
of the Magyar Nemzeti Bank

1 The Governor's foreword

2021 was a difficult but at the same time successful year for the Magyar Nemzeti Bank. It was difficult because last year was still fundamentally influenced by the complex crisis caused by Covid-19. 2021 was once again a year fraught with intricate problems. Yet, it was successful because the Magyar Nemzeti Bank was able to address the challenges related to the steady rise in inflation by accomplishing a monetary policy turnaround at the right moment. The central bank's measures and programmes were essential in restarting the Hungarian economy and reaching pre-crisis levels of output by the second quarter, and, as a result, the country was able to inch closer to the European Union average in terms of economic development even during the crisis.

The complex crisis threatened the economy, healthcare, society, communities and the labour market. However, crucially, no financial crisis unfolded, thanks to the economy's solid foundations. In the crisis management years of 2020–2021, the country was able to achieve success because we had won the previous decade, so the crisis management programmes were implemented in a highly resilient Hungarian economy. The firm foundations underpinned and supported the coordinated steps taken by the government, the central bank, the banking system and the business sector.

When assessing last year, one should go one step further: the greatest achievement of 2020 was that the crisis management programmes were effective in preserving the success of the past decade. The concerted efforts of the government and the central bank paved the way for Hungary's swift recovery. Then in 2021, building on the success of the previous year, annual economic growth was 7.1 per cent. In 2021, Hungary was one of the fastest economies to recover in Europe, due in large part to the MNB's crisis management programmes. Even in the context of the past one hundred years, the Hungarian central bank has never offered such enormous support to the domestic economy in managing the crisis and financing the recovery. On account of the central bank programmes, the government securities market stayed steady all throughout the crisis, and the stability of the financial system was not jeopardised even for one second.

Nevertheless, this unprecedented support had the consequence that the Magyar Nemzeti Bank's balance sheet bloated from 26 to 43 per cent of 2019's gross domestic product. This was feasible because the balance sheet had been reduced between 2013 and 2020. Still, owing to the costs of combating the crisis, there was a marked shift in the circumstances towards the end of 2021, and the central

bank's balance sheet stopped growing. Following consistently profitable years since 2013, the MNB incurred a loss of HUF 57.1 billion last year. Yet it has to be borne in mind that the MNB paid HUF 250 billion as dividend from its retained earnings to the central budget in 2021 to help alleviate the crisis, and the central bank projects also boosted the general government's tax revenues considerably.

Last year's most daunting challenges included the return of inflation the world over, triggered by the crisis. The global disruption of supply and production chains as well as the soaring prices of energy and transport costs led to a surge in inflation, which was addressed by the central bank in a timely fashion and with the necessary determination, coupled with predictability and flexibility. Hungary was among the first in Europe to begin the tightening cycle. A monetary policy turnaround was completed, and a more stringent stance was adopted.

A landmark change occurred in 2021 in that the Hungarian Parliament was the first in Europe, and among the first in the world, to extend a green mandate to the central bank, which helps the Magyar Nemzeti Bank to successfully and efficiently support Hungary's sustainable and green transition. The foundations of this new central banking approach were laid by the Green Central Banking Policy Instrument Strategy announced on 6 July 2021, the main thrust of which is to provide a uniform framework and point out the potential ways how the MNB can incorporate climate protection and environmental sustainability considerations into its monetary policy instruments. Hungary's sustainable convergence can only occur through a green transition of the economy, and this requires the emergence of a financial system in Hungary by the end of the decade that takes into account and promotes environmental sustainability aspects. The housing loan market was a good starting point for facilitating the incorporation of green considerations, as the energy efficiency of Hungarian residential properties is low, and there is ample scope for modernisation. To this end, the MNB launched two initiatives, the FGS Green Home Programme and the Green Mortgage Bond Purchase Programme.

The operation and financial management of the Magyar Nemzeti Bank were both robust in 2021. The central bank fulfilled all three of its mandates, safeguarded earlier achievements and laid the foundations for recovery and for Hungary's return to a convergence path. The central bank's mission and duties were successfully completed. The bank's annual report for 2021 details these accomplishments.

2 A brief overview of the Magyar Nemzeti Bank

Company name: Magyar Nemzeti Bank

Registered Office: Until 31 October 2021: 1054 Budapest, Szabadság tér 8-9., from 1 November 2021: 1013 Budapest, Krisztina körút 55.

Form of operation: company limited by shares. The form of operation, i.e. the 'company limited by shares' designation or its abbreviation need not be included in the company name of the Magyar Nemzeti Bank.

Year of foundation: 1924

Owner (shareholder): the Hungarian State, represented by the minister in charge of public finances (hereinafter: Minister of Finance)

Scope of activities: as defined by Act CXXXIX of 2013 on the Magyar Nemzeti Bank (hereinafter: MNB Act)

Subscribed capital: HUF 10 billion

2.1 OBJECTIVES, BASIC AND OTHER TASKS OF THE MNB

The Magyar Nemzeti Bank (hereinafter: MNB, the central bank) is a legal entity operating as a special company limited by shares, which conducts its operations in accordance with the provisions of the MNB Act.

In accordance with Article 127 of the Treaty on the Functioning of the European Union, the MNB Act, which contains provisions governing the MNB's primary objectives, basic and other tasks as well as its institutional, operational, personal and financial independence and operation, stipulates that the primary objective of the MNB is to achieve and maintain price stability. Without prejudice to its primary objective, the MNB supports the maintenance of the stability of the system of financial intermediation, the enhancement of its resilience and its sustainable contribution to economic growth, as well as the economic policy of the government using the instruments at its disposal. Pursuant to the amendment that entered into force on 2 August 2021, the secondary mandate of the MNB was expanded with facilitating the government's policies on environmental sustainability.

The MNB Act also stipulates the independence of the central bank in accordance with Article 130 of the Treaty on the Functioning of the European Union. On the basis of central bank independence, the MNB and the members of its bodies shall be independent in carrying out their tasks

and meeting the obligations conferred upon them by the MNB Act, and shall neither seek nor take instructions from the Government, the institutions, bodies and offices of the European Union, the governments of its Member States or any other organisations or political parties, except from the European Central Bank (ECB) and as required based on its membership in the European System of Financial Supervision. The Government or any other organisation shall adhere to this principle and shall not attempt to influence the MNB or any member of its bodies in the course of the performance of their tasks.

The basic tasks of the MNB are as follows:

- it defines and implements monetary policy;
- it has the exclusive right to issue banknotes and coins, including commemorative banknotes and coins, which shall be the legal tender of Hungary;
- it has the exclusive right to hold and manage official foreign exchange and gold reserves, in order to preserve the external stability of the Hungarian economy;
- it has the exclusive right to conduct foreign exchange operations in relation to the management of foreign exchange reserves and the implementation of exchange rate policy;
- it has the exclusive right to oversee payment and securities settlement systems, including overseeing the operation of the system and the operation of the organisation performing central counterparty activities, in order to ensure the sound and efficient operation of these systems and the smooth circulation of money. Within the scope of its powers set forth in the MNB Act, it participates in the development of payment and securities settlement systems;
- it collects and publishes the statistical information required for carrying out its tasks and fulfilling its statistical reporting obligations toward the European Central Bank as defined in Article 5 of Protocol (No. 4) on the Statute of the European System of Central Banks and of the European Central Bank attached to the Treaty on the Functioning of the European Union;
- it establishes the macroprudential policy for the stability of the entire system of financial intermediation, with the objective to enhance the resilience of the system of financial intermediation and to ensure its sustainable

contribution to economic growth. To that end and within the limits specified in the MNB Act, the MNB explores the business and economic risks threatening the system of financial intermediation as a whole, promotes the prevention of the development of systemic risks and the reduction or elimination of evolving systemic risks; furthermore, in the event of disturbances to the credit market, it contributes to the balanced functioning of the system of intermediation in financing the economy by stimulating lending and – in the event of excessive credit outflow – by restraining lending.

Above and beyond its basic tasks, the tasks of the MNB are the following:

- it acts as a resolution authority;
- it acts as the sole supervisor of the financial intermediary system, in order to
 - a) ensure the smooth, transparent and efficient functioning of the system of financial intermediation;
 - b) facilitate the prudent operation of the persons and organisations comprising the system of financial intermediation and supervise the prudent exercise of owners' rights;
 - c) discover undesirable business and economic risks to individual financial organisations or individual sectors thereof, reduce or eliminate specific or sectoral risks which have evolved, and take preventive measures to ensure the prudent operation of individual financial organisations;
 - d) protect the interests of users of the services provided by financial organisations, and strengthen public confidence in the system of financial intermediation;
- it administers – via the Financial Arbitration Board – the out-of-court resolution of disputes related to the establishment and fulfilment of contracts for services as established between consumers and organisations of the financial intermediary system.

Additional tasks of the MNB may be defined by acts and, in relation to the supervision of the system of financial intermediation, by legal regulations adopted pursuant to authorisation by an act. Such tasks of the MNB shall comply with the basic tasks and responsibilities of the MNB as defined in the MNB Act.

Pursuant to Act CXCV of 2011 on the Economic Stability of Hungary, the Governor of the MNB is a member of the Fiscal Council (hereinafter: FC), and thus the information and professional expertise available in the MNB supports the work of the FC. The MNB prepares background analyses

for the FC's tasks stipulated in the Stability Act and makes such available to the FC.

2.2 BODIES AND MANAGEMENT OF THE MNB

The MNB operates as a legal person functioning in the form of a single-member company limited by shares. The general rules pertaining to companies limited by shares and the relevant provisions of Act on the Civil Code are applicable to the MNB, with the exceptions laid down by the MNB Act.

The Hungarian State as the shareholder is represented by the Minister of Finance. The MNB operates without a General Meeting.

The **shareholder** is entitled to adopt decisions, by way of a shareholder's resolution, on the establishment and in the amendment of the Statutes as well as on the appointment, recall and remuneration of the auditor.

As a guarantee of independence, in contrast to the practice of other companies limited by shares, the remuneration of the MNB's Governor, Deputy Governors and other members of the Monetary Council as well as the members of the Supervisory Board is determined by the MNB Act rather than by the shareholder.

Likewise, the bodies of the MNB are specified by the MNB Act as follows: the Monetary Council, the Financial Stability Council, the Executive Board, and the Supervisory Board.

The MNB's supreme decision-making body is the **Monetary Council**.

The scope of competence of the Monetary Council includes:

- strategic decisions concerning monetary policy, the issue of legal tender, the holding and management of foreign exchange and gold reserves, strategic decisions relating to foreign exchange transactions in the context of foreign exchange reserve management and the implementation of exchange rate policy, as well as strategic decisions concerning statistical tasks, including in particular decisions on the level of the reserve ratio and the interest rate payable on the minimum central bank reserves, and decisions related to the exchange rate regime and determining the central bank base rate;
- in relation to macroprudential tasks, the oversight and supervision of the financial intermediary system and the MNB's role as a resolution authority, decisions on the strategic framework within which the Financial Stability Council makes its decisions;
- establishing the rules of procedure;

– decisions on any other matter in the exclusive competence of the Monetary Council as defined by law.

Members of the Monetary Council are: the Governor of the MNB as Chairman of the Monetary Council, the Deputy Governors of the MNB and the members elected by the Parliament for six years. The Monetary Council has at least five and at most nine members.

At the first meeting of each year, the Monetary Council elects a Deputy Chairman from among the Deputy Governors of the MNB, who substitutes for the Chairman in the event of his absence, with the exception of the issuance of decrees. In 2021, the Monetary Council elected Barnabás Virág, Deputy Governor, as deputy chairman.

In 2021, the members of the Monetary Council were:

- Dr György Matolcsy, Governor of the Magyar Nemzeti Bank and Chairman of the Monetary Council since 4 March 2013, reappointed on 4 March 2019
- Dr Mihály Patai, Deputy Governor from 22 April 2019,
- Dr Csaba Kandrács, Deputy Governor from 2 October 2019,
- Barnabás Virág, Deputy Governor from 22 June 2020,
- Dr Kolos Kardkovács, from 13 September 2016,
- Dr György Kocziszky, re-elected from 6 April 2017,
- Dr Bianka Parragh, from 23 March 2017,
- Gyula Pleschinger, re-elected from 5 March 2019,
- Dr Péter Gottfried, from 1 January 2021.

Concerning the matters falling within the MNB's competence, the **Financial Stability Council** acts on behalf of the MNB within the strategic framework defined by the Monetary Council in the course of decision-making in relation to oversight, macroprudential tasks and resolution authority duties, as well as the supervision of the system of financial intermediation.

Within this scope of competence, the Financial Stability Council

- continuously monitors the stability of the system of financial intermediation as a whole and of the financial markets, in order to maintain the stability of the system of financial intermediation as a whole;
- takes account of risk factors threatening the system of financial intermediation as a whole;
- analyses the risks related to certain types of institutions or products or to the spread of these which may represent a threat to the system of financial intermediation as a whole;
- monitors developments on international and European markets and risks which may represent a threat to the stability of the system of financial intermediation as

a whole, and makes decisions on the necessary measures within the strategic framework defined by the Monetary Council;

- discusses strategic, regulatory and risk-related issues affecting the system of financial intermediation as a whole and issues opinions if necessary;
- in situations threatening the stability of the system of financial intermediation, assesses systemic risks and decides on the measures required to mitigate or eliminate such risks;
- places on its agenda, as necessary, the recommendations, opinions and risk warnings of the European Systemic Risk Board relevant to the system of financial intermediation as a whole;
- discusses the recommendations and decisions issued by the European Supervisory Authorities as needed, including decisions addressed to national supervisory authorities calling for specific measures in the event of serious risks to the stability of the European financial system and expresses its opinion on the tasks arising from such decisions;
- publishes non-binding recommendations for persons and organisations supervised by the MNB describing the basic principles of the legal enforcement practices of the MNB;
- annually defines the priority target areas of the MNB's controlling activities;
- makes decisions within the framework of performing the MNB's resolution tasks concerning decisions ordering resolution and applying resolution measures, as well as in administrative proceedings related to performing resolution tasks under the MNB decree on the detailed rules of exercising of powers relating to certain decisions taken by the Magyar Nemzeti Bank as an authority as well as of the substitution of the body that exercises such powers;
- makes decisions in administrative proceedings relating to exercising the supervision of individuals and organisations as well as activities falling under the scope of the acts defined in Articles 39-41 of the MNB Act and the directly applicable legal provisions of the European Union, in administrative proceedings related to exercising supervision under the MNB decree on the detailed rules of exercising of powers relating to certain decisions taken by the Magyar Nemzeti Bank as an authority as well as of the substitution of the body that exercises such powers; and
- makes decisions in administrative proceedings related to performing the macroprudential tasks under the MNB decree on the detailed rules of exercising of powers relating to certain decisions taken by the Magyar Nemzeti

Bank as an authority as well as of the substitution of the body that exercises such powers.

Members of the Financial Stability Council:

- the Governor of the MNB as its Chairman,
- the Deputy Governors of the MNB,
- as executives appointed by the Governor of the MNB, the Executive Director responsible for licensing and legal enforcement, the Executive Director responsible for financial system analysis and statistics, the Executive Director responsible for digitalisation, the Executive Director responsible for monetary policy and foreign reserve management (and from November 2021 for monetary policy instruments and foreign reserve management), the Executive Director responsible for prudential and consumer protection supervision of financial market institutions, and
- the Director General.

In accordance with the MNB Act, responsibility for implementing the decisions of the Monetary Council and the Financial Stability Council, as well as for managing the operation of the MNB rests with the **Executive Board**.

The scope of competence of the Executive Board includes, among other things:

- managing the implementation of the decisions of the Monetary Council and the Financial Stability Council;
- approving the accounting report of the MNB and adopting decisions on the payment of dividends;
- approving the draft report to be sent to the shareholder on the management and assets of the MNB;
- approving matters related to the organisation and internal management of the MNB;
- approving the study plans and programmes relating to the operation of the MNB and the performance of its tasks, including the costs of the development and operational plan;
- managing the MNB's internal audit organisation in respect of tasks falling outside the scope of competence of the Supervisory Board, and discussing the observations and plans of the internal audit;
- amending the collective agreement in respect of employment rights and obligations, the exercise and performance of these rights and obligations, and the associated procedures; and

- adopting decisions in respect of the central bank's powers to manage accounts and other financial and auxiliary financial services, as well as certain auxiliary services supplementing investment service activities.

The members of the Executive Board, which is the executive body of the MNB, are the Governor, as the Chairman of the Board, and the Deputy Governors of the MNB.

Provisions relating to the functions and operational procedures of the Monetary Council, the Financial Stability Council and the Executive Board are set forth in the MNB Act, the MNB's Statutes, Organisational and Operational Rules as well as the rules of procedure formulated by these bodies.

The **auditor** of the MNB can be appointed for a maximum of 5 years. The shareholder decides on the appointment, recall and remuneration of the auditor by way of a shareholder resolution. Prior to the appointment or proposal for the dismissal of the MNB's auditor, the Governor of the MNB consults the President of the State Audit Office.

In addition to the auditor appointed by the shareholder, the MNB is also audited by the State Audit Office and the Supervisory Board.

The supervisory competence of the **State Audit Office** over the MNB is set forth in the Act LXVI of 2011 on the State Audit Office. The State Audit Office supervises the financial management of the Magyar Nemzeti Bank and its activities that are not included in its basic tasks. In this regard, the State Audit Office examines if the MNB operates in accordance with the applicable law, its Statutes and the shareholder's resolutions.

As set forth in the MNB Act, the **Supervisory Board** is the body responsible for the continuous supervision of the MNB on behalf of the owner. The supervisory competence of the Supervisory Board defined by the MNB Act does not cover the supervision of the MNB's performance of its basic tasks, its actions as a resolution authority and its supervisory activity in respect of the financial intermediary system, or the impact thereof on the MNB's profit and loss. Accordingly, the Supervisory Board compiles the report on the annual accounts as specified in Act C of 2000 on Accounting within the above limitations.

The members of the Supervisory Board as defined in the MNB Act are its Chairman elected by Parliament, three additional members elected by Parliament, the representative of the Minister of Finance and an expert appointed by the Minister of Finance. The Chairman of the Supervisory Board elected by Parliament is nominated by the parliamentary panels of the governing parties, whereas

the other members elected by Parliament are nominated by parliamentary groups. The mandate of the members of the Supervisory Board lasts until 31 December of the year in which the mandate of Parliament terminates.

On 17 September 2018, Parliament elected the members of the Supervisory Board nominated by the parliamentary groups; the Minister of Finance then designated his representative delegated to the Board and the expert appointed by him.

Members of the Supervisory Board in 2021:

- Dr Ferenc Papcsák, Chairman,
- László Madarász,
- István Molnár,
- Dr László Nyikos,
- Dr Gábor András Szényei, and
- Dr Attila Simon Tóth.

2.3 ORGANISATION OF THE MNB

The organisation of the MNB is based on the operating and operational governance model introduced on 1 July 2013 and, in respect of the integrated organisation, on 1 October 2013. Although the organisational structure has changed several times since then, these changes did not fundamentally alter the organisational structure developed in 2013.

Fulfilment of the statutory and operational tasks of the MNB is controlled and supervised by, in addition to the members of the Executive Board, the Director General, and, in their capacity as the top level executors of the decisions, the executive directors.

In 2021, modifications to the MNB's organisational structure were introduced in relation to areas controlled by the Governor, the Deputy Governor responsible for monetary policy and financial stability, the Deputy Governor responsible for financial institutions supervision and consumer protection, and the Deputy Governor responsible for international relations, cash logistics, financial infrastructures, digitalisation and lending incentives, as well as the Director General. The primary objective of these changes was to enhance efficiency.

The organisational structure as at 31 December 2021 which resulted from the organisational changes is illustrated on the **organisation chart**.

2.4 THE MNB AS A MEMBER OF THE EUROPEAN SYSTEM OF CENTRAL BANKS

Hungary's accession to the European Union also entailed the MNB's membership in the European System of Central Banks (ESCB). The ESCB comprises the European Central Bank (ECB), which was established in June 1998 with its registered office in Frankfurt, and the national central banks of the EU Member States. Its governing bodies are the Executive Board and the Governing Council, the latter consisting of the members of the ECB's Executive Board and the governors of the central banks of the euro area Member States. The General Council holds its meetings quarterly and consists of the President and the Vice-President of the ECB and the governors of the central banks of all EU Member States. The key responsibilities of the General Council include consultancy concerning preparations for accession to the euro area, approval of the convergence reports of the ECB and monitoring the functioning of ERM II. Within the framework of the latter activity, it assesses the sustainability of the bilateral exchange rate of non-euro currencies participating in ERM II against the euro and provides a forum for the alignment of monetary and exchange rate policies and the management of intervention and financing mechanisms in ERM II. In addition, the General Council is involved in verifying whether the central banks of EU Member States and the ECB comply with the prohibition of monetary financing of the budget and privileged access of the public sector to financial institutions. The General Council also participates in the ECB's advisory functions and in the collection of statistical information; it must be consulted in respect of any changes in the rules of accounting and financial data reporting, as well as issues related to the adjustment of the keys for subscriptions to the ECB's capital. The mandate of the General Council will expire on the date when all of the member states of the European Union have adopted the euro.

The number of ESCB members and euro area central banks did not change in 2021.

The ESCB members are also the owners of the ECB. The respective ownership shares of Member States are determined according to their shares in the GDP and total population of the EU (on the basis of statistical data compiled by the European Commission). Since 1 July 2013, the paid-up capital of the ECB amounts to EUR 10.825 billion.

Members of the Executive Board and the Monetary Council of the Magyar Nemzeti Bank



Dr György Matolcsy
Governor,
Chairman of the Monetary Council



Dr Csaba Kandrác
Deputy Governor,
Member of the
Monetary Council



Dr Mihály Patai
Deputy Governor,
Member of the
Monetary Council



Barnabás Virág
Deputy Governor,
Deputy Chairman of the
Monetary Council

Members of the Monetary Council of the Magyar Nemzeti Bank



Dr Péter Gottfried
Member of the Monetary Council



Dr Kolos Kardkovács
Member of the Monetary Council



Dr György Kocziszy
Member of the Monetary Council



Dr Bianka Parragh
Member of the Monetary Council



Gyula Pleschinger
Member of the Monetary Council

Members of the Supervisory Board of the Magyar Nemzeti Bank



Left to right: Dr Attila Simon Tóth, Dr László Nyikos, László Madarász, Dr Ferenc Papcsák (Chairman), Dr Gábor András Szényei, István Molnár

Currently, euro area central banks subscribe to 81 per cent of the ECB's capital, while the remaining 19 per cent is divided among the central banks of non-euro area Member States. These latter central banks pay a predefined minimum quota of their respective subscriptions to the ECB's capital as a contribution to the operational costs of the ECB which are incurred in connection with their ESCB membership. With effect from 29 December 2010, this contribution was defined as 3.75 per cent of the respective subscriptions (previously it had been 7 per cent). As set forth in the Statute of the ESCB and of the ECB, the capital keys are adjusted every five years, or whenever the number of national central banks contributing to the ECB's capital changes. The capital keys were last adjusted when the United Kingdom left the EU, and as a result, the capital key of the MNB increased to 1.5488 per cent and the amount of its paid-up capital rose to EUR 6.3 million as of 1 February 2020.

The ESCB Committees play an important role in the work of the ECB's decision-making bodies. The basic role of

these committees is to prepare decisions and facilitate coordination as per the horizontal division of various central bank duties, covering all areas of central banking operations from monetary policy through communication to statistical data reporting. Experts from the central banks of non-euro area Member States attend those committee meetings where the agenda includes items affecting the ESCB as a whole and which fall within the competence of the General Council. The committees meet and discuss current issues relevant to their professional areas in ESCB composition, 4-5 times a year on average, according to a schedule determined for a year in advance. (For a detailed description of the ESCB Committees and the activities of the various forums assisting them, see Chapter 3.14.)

The senior executives and relevant experts of the MNB continue to play an active role in the activities of these committees and their working groups. In 2021, the ESCB committees continued to be useful forums for the exchange of professional experience.

3 Review of the MNB's performance in 2021

3.1 MONETARY POLICY

The central bank performed a monetary policy turnaround in 2021. While at the beginning of the year it maintained persistently loose conditions by maintaining the measures aimed at combating the economic impact of the coronavirus pandemic and implementing new ones, in the second half of the year the monetary policy stance became tighter in the changing environment caused by the restarting economy and steadily rising inflation.

In the first months of 2021, the MNB's monetary policy measures were dominated by the economic effects of the coronavirus pandemic and the economic recovery. The central bank's measures and programmes were essential in restarting the Hungarian economy and reaching pre-crisis levels of output by the second quarter.

To address the rise in inflation that started in the middle of the year, the central bank launched a tightening cycle in June 2021, and it also began to reduce the use of crisis management instruments. The MNB continued monthly interest rate increases even through the last months of the year, and it responded firmly and flexibly to the rise in financial market and commodity market risks. Moreover, by December it had terminated the programmes related to crisis management.

In the summer of 2021, the MNB's authority was supplemented with a green mandate. The primary objective of the MNB remains to achieve and maintain price stability. Without prejudice to its primary objective, the central bank promotes the maintenance of financial stability as well as the government's economic policy and its policy related to environmental sustainability.

International financial market developments

Money and capital market sentiment fluctuated throughout 2021. At the beginning of the year, investors' mood improved due to the favourable news regarding vaccines; however, risk aversion increased on account of global reflation concerns and soaring developed market yields. Towards the middle of the year, more countries began to restart their economies, amidst heightening risks of global reflation. In the summer months, the impending new wave of the coronavirus pandemic, the interruptions in global

supply chains and reflation concerns weighed on global risk appetite, while it was improved in the second half of the period by the monetary policy messages of the world's leading central banks and incoming macroeconomic data. In the last third of the year, global investor sentiment deteriorated again. Commodity markets experienced a wave of surging prices. Energy prices increased substantially, with natural gas and electricity prices seeing a manifold rise compared to the beginning of the year.

International monetary policy environment

The international monetary policy environment was characterised by loose conditions and the continued use of crisis management instruments in the first half of the year. The growing reflation concerns from the end of the spring and the steady rise in inflation in the second half of the year led to a tightening in central banks' monetary policy stance. Several central banks started to phase out their unconventional instruments and raise policy rates. Among the world's leading central banks, in the case of the Federal Reserve (Fed), the tightening of the monetary policy stance was first indicated by the communication of decision-makers. Then following their meeting in November, they announced the gradual phase-out of the asset purchase programme, the acceleration of which was considered necessary in December due to expectations of high inflation. The programme is expected to end in March 2022, when the central bank may start raising policy rates. The European Central Bank (ECB) did not change its key interest rates in 2021. Nevertheless, the Governing Council decided to gradually phase out the pandemic emergency purchase programme (PEPP), so purchases will be terminated in March 2022. In response to climbing inflation, all CEE central banks increased rates considerably in the fourth quarter.

Domestic macroeconomic environment

In 2021, consumer prices expanded by 5.1 per cent overall. Inflation was below the ceiling of the tolerance band in the first quarter of the year, before rising above it in the second quarter. The jump in the consumer price index was caused by the inflationary effects of restarting the economy, the raising of excise duties and the base effect. In the summer months, mainly due to base effects, inflation moderated somewhat, but remained above the ceiling of the tolerance band. In September, the rise in inflation gathered pace,

reaching 7.4 per cent in the months towards the end of the year. This process was attributable to growing global commodity prices increasingly fuelling the rise in consumer prices.

The Hungarian economy expanded even during the third wave of the coronavirus pandemic. In 2021 Q1, Hungarian GDP grew by 2.0 per cent quarter-on-quarter, while exhibiting a year-on-year contraction of 2.1 per cent. The vaccination coverage of the public, which puts Hungary in the forefront of the European Union, provided a solid basis for breathing new life into the economy. Hungary was among the fastest economies to recover in Europe, with GDP reaching pre-crisis levels in the second quarter. In the third quarter, growth continued at a more moderate pace. Year-on-year GDP growth stood at 6.1 per cent, 0.7 per cent above the pre-crisis level. In the fourth quarter, the economy expanded more than previously expected, while the structure of growth was uneven. On the one hand, the disruptions in global production chains and rising commodity and energy prices hampered the economic recovery, while on the other hand the continued momentum in domestic demand cushioned the effects of external factors. Based on available data, the budget deficit and government debt started to contract in 2021. The current account balance temporarily diminished, partly due to the spike in commodity and energy prices, although it will gradually improve as external markets and supply chains are restored.

Monetary policy measures

The MNB did not change interest rate conditions at its rate-setting meetings in January–May 2021, however, the Monetary Council introduced numerous measures to manage the economic situation changed by the coronavirus pandemic. In January, in an effort to use its instruments affecting longer maturities more effectively, the central bank reallocated liquidity across its different programmes from collateralised credit instruments towards government securities purchases. In addition, it expanded the scope of government securities purchases to government securities with maturities shorter than ten years, thereby providing continuous liquidity on the government securities market at the middle section of the yield curve, too. On 9 March, the Monetary Council decided to make flexible purchases under the government securities purchase programme, without limits on the individual series. This decision was warranted by the growing money market yields and volatility caused by the third wave of the coronavirus pandemic and the heightening reflation risks in advanced economies. Based on its decision of 9 March, the MNB extended its corporate bond purchases under the Bond Funding for Growth

Scheme (BGS) to securities issued by public corporations, then it raised the allocated amount for the Funding for Growth Scheme (FGS) Go! to HUF 3,000 billion on 6 April. To promote long-term sustainability, and without prejudice to its primary objective, the MNB announced in early July the FGS Green Home Programme (FGS GHP) as well as the Green Mortgage Bond Purchase Programme.

In response to the inflation risks rising from the middle of the year, the Monetary Council launched a tightening cycle to ensure price stability, prevent the sustained effects of inflation risks and anchor inflation expectations. In June, the Monetary Council raised the base rate by 30 basis points to 0.9 per cent. It kept the O/N deposit rate at –0.05 per cent, and maintained the interest rate on O/N and 1-week collateralised credit instruments at 1.85 per cent. After this, the Monetary Council decided to raise the central bank base rate, the O/N central bank deposit rate and the O/N and one-week collateralised loan rate by 30 basis points in July and August, and by another 15 basis points in September and October. Starting in November, in response to the higher inflation path and the risks of the increasing second-round effects, the Monetary Council once again accelerated its monetary tightening, raising the base rate in the last two months of the year by another 30 basis points each. By the end of the year, the base rate had risen by 180 basis points, to 2.40 per cent.

In November, monetary policy entered a new phase. As short-term money and commodity market risks increased, the central bank responded swiftly and flexibly, by changing the interest rate on the one-week deposit instrument. Since mid-November, the one-week deposit rate has been higher than the base rate. On 30 November, the Monetary Council also decided to make the interest rate corridor asymmetrical to increase the room for monetary policy manoeuvre. It increased the O/N and one-week collateralised lending rate by 105 basis points to 4.10 per cent, expanding the width of the upper band of the interest rate corridor from 95 to 200 basis points. In addition, the Monetary Council raised the O/N central bank deposit rate by 45 basis points to 1.60 per cent, before increasing the O/N deposit rate by 80 basis points to 2.40 per cent, on par with the base rate, while also raising the one-week collateralised credit instrument's interest rate by 30 basis points to 4.40 per cent. Using the greater room for manoeuvre, the MNB increased the one-week deposit rate to 4.00 per cent by the end of the year.

As interest rate conditions were tightening, the MNB also started to phase out the crisis management instruments in June. Accordingly, the Monetary Council indicated that the FGS Go! would be terminated by the central bank after

the allocated amount of HUF 3,000 billion has been used up. In July, the use of the long-term collateralised credit instrument was discontinued. After this, the Monetary Council reduced the weekly target for government securities purchases in several steps, from HUF 60 billion to HUF 50 billion per week based on a decision in August, and then from HUF 50 billion to HUF 40 billion in September. In December, the Monetary Council decided to end the programme, and the purchases were terminated at the end of the year. At its meeting in December, the Monetary Council also ceased the Bond Funding for Growth Scheme.

In 2021, the MNB held foreign exchange swap tenders providing euro liquidity at the end of the quarters. The central bank used its active market presence to mitigate the spillover of international swap market tensions, seen at the end of the quarter, to Hungary, thereby contributing to preserving the stability of monetary conditions and thus also to maintaining price stability. In December, the short-term discount note auction further strengthened the efficient sterilisation of liquidity in the financial system. The stability of swap market yields was also supported by the Monetary Council by raising the O/N central bank deposit rate to the level of the base rate. At the same time, the central bank also considered swap market developments and gradually started to phase out its swap instrument providing forint liquidity in November, thereby reducing the amount of forint liquidity provided through this instrument, in line with the tightened monetary stance introduced in June.

Inflation trends in 2021

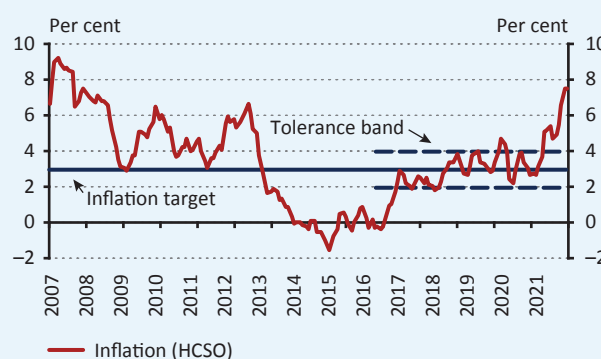
Following a trend in inflation basically matching the MNB's 3-per cent inflation target between 2017 and 2020, inflation started to rise in 2021, largely due to external factors. Inflation trends during the year were strongly influenced by a rise in commodity prices as well as the phases of combating the global coronavirus pandemic, causing larger volatility in consumer prices than in previous years. After the central bank's inflation target had been met for several years, domestic inflation increased from 2.7 per cent in January to 7.4 per cent in December 2021, largely owing to external factors, and totalling an annual average of 5.1 per cent.

In the first months of 2021, lower repricing was seen than in the previous year, while in the months from April repricing was higher, as pandemic restrictions were eased. Hungary was among the first to reopen its economy as the pandemic receded, which led to a rapid economic recovery. Based on international experiences, price increases were higher in the countries where the economy was restarted faster. When the global economy reopened, supply could not keep up

with buoyant demand, leading to bottlenecks in commodity and transport markets. In addition, delayed repricing also took hold in Hungary's economy in early summer, and the excise duty on tobacco products was increased in two steps in the first half of the year as a result of EU regulation.

In the second half of the year, inflation soared globally due to a rise in energy prices. The average price for natural gas was around seven times higher in December 2021 than in December 2020, while electricity prices increased fivefold. Directly, the spike in energy and commodity prices mostly influenced fuel prices, but its effect could be gradually felt in an increasing range of products and services. In autumn, 80 per cent of the acceleration in inflation was attributable to such international developments, even though household energy prices did not grow due to government regulation. The rise in inflation is a global phenomenon: in December it climbed to 7.0 per cent in the US, and, within the CEE region, to 6.6 per cent and 8.6 per cent in the Czech Republic and Poland, respectively.

Chart 1
Inflation target and inflation trends



Source: HCSO, MNB.

Indicators capturing longer-term inflation trends (core inflation excluding processed food and the inflation of sticky-price products and services) were down at the beginning of the year. After this, growth was observed in most of the year both in core inflation excluding processed food and the inflation of sticky-price products. Core inflation excluding indirect taxes also increased gradually in the second half of the year, hitting 6.4 per cent at the end of the year. Average annual core inflation excluding indirect taxes was 3.9 per cent in 2021. Year-on-year inflation of industrial goods started to steadily rise in the middle of the year, probably owing to a rise in commodity and energy prices as well as the effect of the global shortage of semiconductors. Year-on-year inflation of market services declined in the spring, before progressing steadily upwards until the end of the year.

Table 1
Consumer price index and its components
(percentage change, year-on-year)

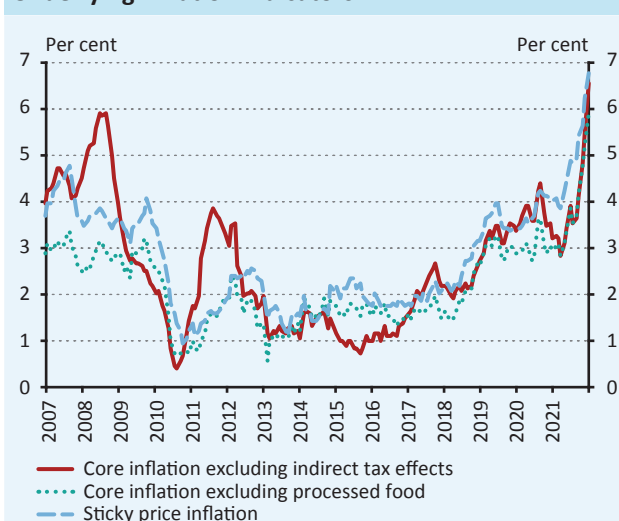
	2019	2020	2021	2021			
				Q1	Q2	Q3	Q4
Core inflation	3.1	3.7	3.9	3.0	3.4	3.7	5.5
Unprocessed food	8.9	11.7	2.6	1.7	-0.3	3.2	5.8
Fuel and market energy	1.2	-4.6	20.6	5.8	29.4	18.8	28.4
Regulated prices	0.7	0.4	0.6	-1.3	0.6	0.9	2.2
Consumer price index	3.4	3.3	5.1	3.2	5.2	5.0	7.1
Consumer price index at constant tax rates	3.2	3.2	4.6	2.8	4.5	4.5	6.6

Note: The calculation of core inflation changed in line with the statement of the Hungarian Central Statistical Office published on 4 May 2021. Since the publication of consumer price index data in April 2021 (11 May 2021), the HCSO excludes alcoholic beverages and tobacco products while calculating core inflation. The change also affected the core inflation time series retroactively.

In the case of price indices with constant tax rates, the HCSO adjusts the consumer price index for the technical effect of changes in indirect taxes.

Source: HCSO.

Chart 2
Underlying inflation indicators



Note: All things being equal, core inflation excluding processed food is in line with earlier demand-sensitive inflation. The new name is warranted by the fact that at a time of all-encompassing and major cost shocks, the earlier name may be misleading.

Source: MNB.

Changes in monetary policy instruments

In 2021, just as in 2020, the MNB responded to the highly volatile pandemic and global economic developments with a series of measures.

On 12 January, the MNB decided to increase the amount allocated for the central bank's corporate bond purchases from HUF 750 billion to HUF 1,150 billion, citing the prior success of the FGS and the keen interest in the

programme. The maximum maturity of eligible securities was extended from 20 to 30 years, while the central bank's maximum exposure to a company group was raised from HUF 50 billion to 70 billion.

On 9 March, similar to the ECB's bond purchase practices, the Monetary Council extended the corporate bond purchases under the FGS to bonds issued by non-financial corporations domiciled in Hungary, to achieve all the original objectives of the FGS in the bond market. The third wave of the coronavirus pandemic in the first months of 2021 caused a rise in yields and increased volatility in financial markets. In order to maintain the efficiency of monetary policy transmission in the rapidly changing environment and to foster the stability and liquidity position of the government securities market, the Monetary Council decided to make flexible purchases under the government securities purchase programme, scrapping the earlier 50 per cent limit on individual series. The central bank purchases have contributed to the stable liquidity position of the government securities market and promoted the efficiency of the monetary policy transmission mechanism.

In April, in view of the ongoing pandemic, the Monetary Council increased the allocated amount for the FGS Go! from HUF 2,500 billion to HUF 3,000 billion.

On 22 June, the Monetary Council launched a tightening cycle to ensure price stability and anchor inflation expectations.

In the second half of the year, as inflation risks became persistent, the central bank continued its tightening cycle,

overhauled its long-term toolkit, and in the second half of the period it decided to phase out instruments and liquidity reducing measures.

The long-term collateralised credit instrument was suspended from 27 July. Therefore, since the tender on 21 July, the total outstanding amount has been unchanged at HUF 2,623 billion. The MNB's collateralised credit instrument successfully provided the necessary liquidity to the banking system, but as banks' liquidity position stabilised, the importance of the collateralised credit instrument decreased compared to the acute phase of the crisis.

On 2 August, the MNB launched the Green Mortgage Bond Purchase Programme, under which it purchases, on the primary and secondary market, fixed-rate, forint-denominated mortgage bonds with a green certificate satisfying international standards and issued with a maturity of at least 5 years.

On 18 August, the MNB raised the allocated amount for central bank purchases under the FGS by HUF 400 billion to HUF 1,550 billion.

At its meeting on 24 August, the Monetary Council decided to begin a gradual phase-out of the government securities purchase programme, taking into account market stability considerations, and to reduce the weekly purchase targets.

As the allocated amount was used up by 30 September, the FGS Go! was terminated. The scheme played an important part in maintaining buoyant SME lending and thus mitigating the real economy consequences of the coronavirus pandemic, by providing financing to over 40,000 firms under favourable conditions.

As part of the MNB's green toolkit strategy, the FGS GHP was launched under the Funding for Growth Scheme on 4 October, with an allocated amount of HUF 200 billion.

On 3 November, the MNB increased the cap on the central bank's exposure to the same corporate group during BGS bond purchases from HUF 70 billion to HUF 100 billion.

On 16 November, the central bank discontinued the use of the swap instrument providing forint liquidity to reduce liquidity in the banking system. At the same time, a new, limited, ad hoc and short-term central bank discount bond was introduced, which supports the efficient sterilisation of the liquidity in the financial system.

On 30 November, the Monetary Council decided to make the interest rate corridor wider and asymmetrical.

On 14 December, the Monetary Council decided to end the government securities purchase programme, therefore the central bank stopped its bond purchases, both in terms of announcing weekly auctions and making secondary market purchases. The central bank's Monetary Council also decided to terminate the BGS, so after the ongoing issuer negotiations are realised, up to the allocated amount of the programme, the central bank will not purchase new corporate bonds.

As a result of the monthly interest rate increase decisions of the Monetary Council, the base rate had risen by 180 basis points to 2.4 per cent by the end of 2021, and regarding the interest rate corridor, the year ended with an O/N deposit rate of 2.4 per cent and an O/N and one-week collateralised lending rate of 4.4 per cent.

It remains a priority for the central bank to ensure that short-term interest rates are in line with the short-term rate considered optimal by the Monetary Council, in all sub-markets and periods. To this end, the MNB used its swap instrument providing euro liquidity actively, without any quantitative limit, at the end of all quarters in 2021. Furthermore, the short-term discount bond auction in December 2021 was used to assist the efficient sterilisation of some of the liquidity in the financial system.

Decision date	Measure
1.12.2021	Bond Funding for Growth Scheme: modification of key conditions
3.9.2021	Bond Funding for Growth Scheme: expansion of purchases to public undertakings
3.9.2021	Government bond buying limit >50%
6.22.2021	Launching interest raising cycle +30bp → base rate 0.9%
7.6.2021	Launching Green mortgage bond purchase programme
7.6.2021	Launching FGS Green Home Programme
7.27.2021	Suspension of long term covered loan
8.2.2021	Start of Green mortgage bond purchase programme
8.18.2021	Bond Funding for Growth Scheme: total amount increase
8.24.2021	Gradual termination of Government bond purchase programme
9.30.2021	End of the FGS Go!
10.4.2021	Start of the FGS Green Home Programme
11.3.2021	Bond Funding for Growth Scheme: increase of MNB exposure limit by company group
11.16.2021	Termination of forint-giving FX-swap tool
11.16.2021	Launching occasional discount bond
11.30.2021	Widening interest corridor to 1.6-4.1%
12.14.2021	Bond Funding for Growth Scheme: termination of the programme
12.14.2021	Termination of Government bond purchase programme
quarters' end	FX-swap tenders giving euro liquidity

Recourse to central bank instruments and the development of short-term yields

In 2021, the banking system's average net forint liquidity (the balance of current and instant current accounts, the amount of preferential, overnight and one-week deposits less overnight and one-week loans) amounted to HUF 8,233 billion on average over the year as a whole, exhibiting an upward trend. The average values for the quarters were HUF 6,662 billion, HUF 7,526 billion, HUF 8,799 billion and HUF 9,903 billion, respectively, and the year-end closing value was HUF 8,489 billion. This growth was primarily attributable to TSA outflows and the MNB's liquidity measures. On the liabilities side, the effect of this was mainly reflected in the growing recourse to the one-week deposit instrument. Banking system liquidity was reduced to a lesser degree by the growth in cash holdings.

The banking system's aggregate monthly reserve requirement fluctuated between HUF 286 billion and HUF 346 billion, with a slow rise over the course of the year. Average annual holdings on reserve accounts, including the balance of instant reserve accounts, amounted to HUF 350 billion. Cumulative excess reserves exhibited a falling trend during the year, peaking at HUF 77 billion

at the end of February, before turning downwards and reaching their trough of HUF 12 billion in August, and then remaining below HUF 20 billion for the rest of the year.

The excess liquidity of the banking system can be deposited in the central bank's overnight (O/N) and one-week deposit as well as the preferential deposit instrument.

Until mid-December, the O/N deposit played a secondary role compared to the preferential deposit and the one-week deposit instrument, which had a better interest. The interest on the instrument became the same as the base rate when the floor of the interest rate corridor was lifted to 2.4 per cent. Therefore the average recourse to this instrument also increased considerably, amounting to more than HUF 450 billion between 15 December and the end of the year. By contrast, the average recourse in the rest of the year was merely HUF 91 billion.

The preferential depositing option is subject to participation in the FGS *fix*, FGS *Go!* and BGS schemes. In 2021, the MNB provided a depositing opportunity in the preferential deposit instrument up to the amount of the excess money issued under these schemes. The preferential deposit instrument was offered with a tiered-rate structure (base rate, 2 per cent, 4 per cent), and the limits were determined

based on the participation in the related central bank programmes.

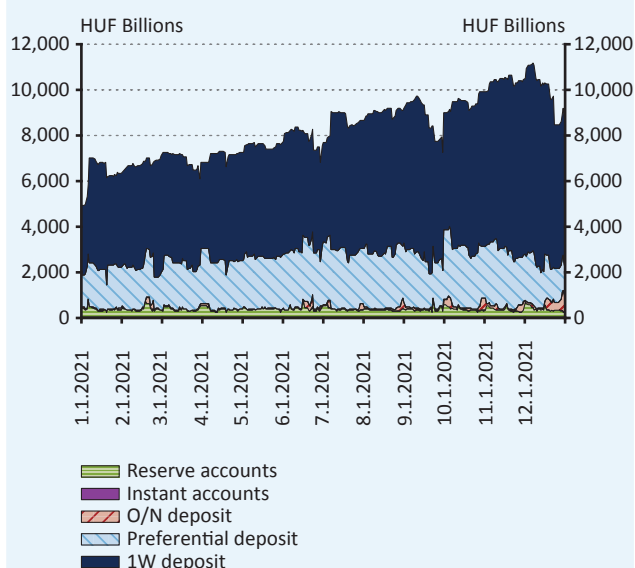
In terms of the deposit instruments, the banking system mostly used the one-week instrument for depositing liquidity in the period under review. At the deposit tenders held by the MNB, all submitted bids were accepted. Bids per tender trended higher, with average deposits standing at HUF 4,578 billion in the first half of the year, before growing to HUF 5,930 billion in the third quarter, and then climbing to HUF 7,042 billion in the fourth quarter. The highest accepted amount was almost HUF 8,236 billion on 2 December.

In 2021, banks took out the overnight collateralised loan 57 times, with an average amount of HUF 4 billion. Similar to the previous year, there was no recourse to the one-week lending instrument.

The MNB announced its long-term collateralised credit instrument for 3- and 5-year maturities, until the suspension in July. Out of the 29 tenders, total demand was higher at 5 years, amounting to HUF 3,639 billion. The MNB only accepted bids at 5 years, totalling HUF 360 billion. As a result of the tenders, total holdings increased from HUF 2,263 billion at the beginning of the year to HUF 2,623 billion following the last tender on 21 July. The outstanding holdings, amounting to HUF 2,589 billion, predominantly have a maturity of 5 years.

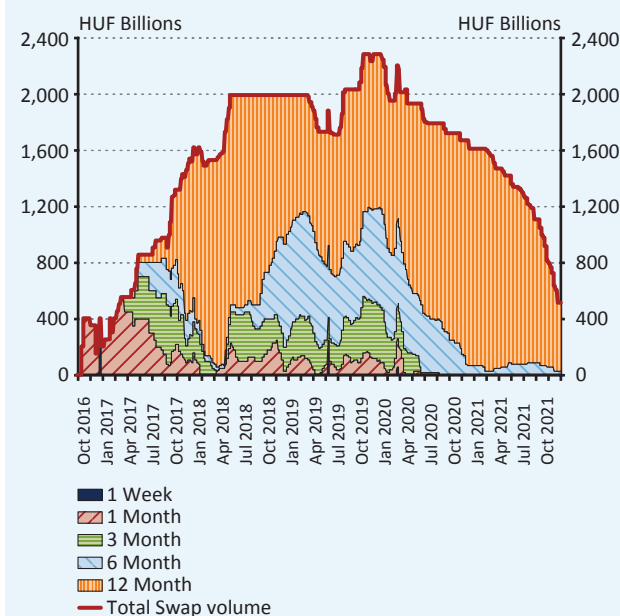
The opening stock of central bank FX swaps providing forint liquidity was HUF 1,606 billion at the beginning of the year, then it steadily contracted to HUF 511 billion until the end of the year. As the instrument was phased out on 16 November, holdings will continue to diminish and then become totally depleted on 7 September 2022.

Chart 3
Recourse to central bank deposit instruments



Source: MNB.

Chart 4
The central bank's FX swap holdings



Source: MNB.

Table 3
Bid and allotted amounts at FX swap tenders providing central bank forint liquidity

Tender tenor	Bid amount (HUF billion)	Bid amount (EUR million)	Allotted (HUF billion)	Allotted (EUR million)
1-month	577	1,605	0	0
3-month	611	1,703	0	0
6-month	1,493	4,181	97	273
12-month	2,681	7,496	485	1,358
Total	5,362	14,985	582	1,631

Table 4
Key data on the central bank FX swap tenders providing euro, (EUR million)

Tender date	Value date	Maturity	Type	Total allotted amount
24.03.2021	26.03.2021	08.04.2021	2 weeks	765
29.03.2021	31.03.2021	01.04.2021	spotnext	325
30.03.2021	31.03.2021	01.04.2021	tomnext	125
31.03.2021	31.03.2021	01.04.2021	overnight	767
23.06.2021	25.06.2021	08.07.2021	2 weeks	2,613
28.06.2021	30.06.2021	08.07.2021	1 week	265
29.06.2021	30.06.2021	01.07.2021	tomnext	1,350
30.06.2021	30.06.2021	01.07.2021	overnight	292
15.09.2021	17.09.2021	01.10.2021	2 weeks	920
22.09.2021	24.09.2021	01.10.2021	spotweek	2,150
28.09.2021	30.09.2021	07.10.2021	spotnext	510
29.09.2021	30.09.2021	01.10.2021	tomnext	1,665
30.09.2021	30.09.2021	01.10.2021	overnight	30
07.12.2021	09.12.2021	06.01.2022	1 month	1,610
21.12.2021	23.12.2021	06.01.2022	2 weeks	1,460
30.12.2021	31.12.2021	06.01.2022	1 week	1,505
31.12.2021	31.12.2021	06.01.2022	1 week	817
Total	-	-	-	17,169

The MNB held tenders providing euro liquidity to mitigate any potential swap market tensions before the end of the quarters. The total amount accepted at the tenders providing euro liquidity was EUR 1,982 million, EUR 4,520 million, EUR 5,275 million and EUR 5,392 million, respectively. The maturity of the tenders typically ranged between overnight (O/N) and two-week, with the exception of the one-month tender on 7 December.

The central bank's communication and acceptance of the total bid amount successfully mitigated swap market volatility at the end of the periods.

In addition to the market-smoothing effect of the FX swaps, the MNB held an ad hoc discount bond auction on 20 December to manage the fairly turbulent liquidity developments on the FX swap market towards the end of the year, announced with a maturity of two weeks and a maturity date of 6 January. Having accepted all the bids by the 6 bidding partners, the MNB issued discount bonds to the tune of HUF 796 billion.

In the period under review, the MNB's level of engagement in the government securities market varied. Until the decision to gradually phase out the programme on 24 August, the weekly amount fluctuated at HUF 50–60 billion. Starting in September 27, the purchased amount fell below HUF 40 billion per week, then below HUF 30 billion from 22 November, and the last week's purchase before the

complete phase-out of the programme, on the week of 13 December, amounted to HUF 10 billion.

In the period under review, the MNB purchased securities amounting to HUF 1,336 billion in face value at 50 government securities auctions. The purchased face value concentrated around government securities with a maturity of more than 10 years. Annual secondary market purchases totalled HUF 1,165 billion.

In 2021, the securities purchases with a government guarantee amounted to HUF 106 billion in face value. The MNB purchased the most from the series EXIM2027/1 and MFB2031/1.

Due to the Government securities purchase programme, the government securities holdings in the balance sheet of the central bank amounted to HUF 3,379 billion at the end of the period.

In 2021, the MNB only purchased traditional mortgage bonds for exchange rate maintenance purposes, and only on the secondary market, totalling HUF 26 billion. When the programme was terminated in July, the face value of the total purchased amount stood at HUF 144 billion in the primary market (back in 2020), and HUF 163 billion in the secondary market (in 2020 and 2021), totalling HUF 307 billion.

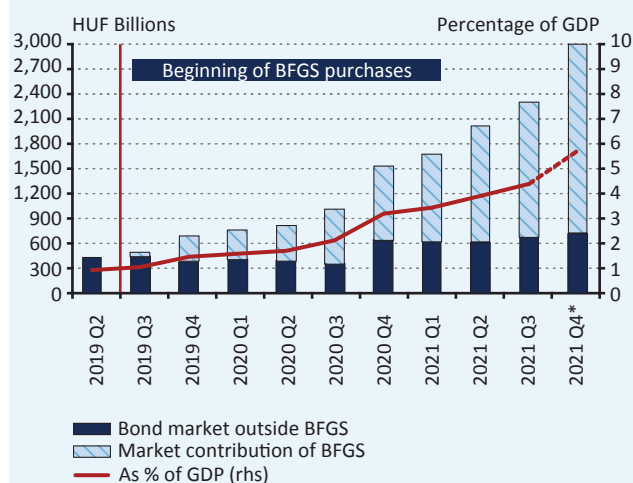
In the Green Mortgage Bond Purchase Programme, the year-end closing stock was worth HUF 51 billion.

The FGS Go! that was ended on 30 September 2021 was one of the most efficient tools in crisis management: with around 62,000 loan and lease agreements signed, it allowed over 40,000 Hungarian companies to access funding. The outstanding borrowing in the scheme, i.e. the amount already drawn down but not paid back yet, was HUF 2,075 billion at the end of 2021, while the aggregate outstanding credit in all the phases and schemes of the FGS was HUF 2,858 billion. The credit institutions participating in the FGS GHP reported to the MNB signed contracts worth HUF 31 billion until the end of 2021.

In the BGS, 41 bond series of 38 issuers were marketed in 2021, coupled with corporate borrowing of over HUF 1,590 billion and central bank bond purchases of HUF 770 billion. Since the start of the programme, 94 bond series from 71 issuers have been marketed, thanks to which the total raised amount was over HUF 2480 billion, and the MNB's purchases were worth over HUF 1,310 billion. The securities have maturities between 7 and 15 years, although the most typical maturity is 10 years.

Thanks to the substantial contribution of the successful issues under the BGS, from laggards among the Visegrád countries, the bond market for Hungarian non-financial corporations was able to catch up with the CEE markets. At the end of 2021, the bond market for non-financial corporations registered in Hungary was worth HUF 3,000 billion, equivalent to 5.7 per cent of GDP.

Chart 5
Contribution of the Bond Funding for Growth Scheme to the domestically incorporated non-financial corporations' bond market

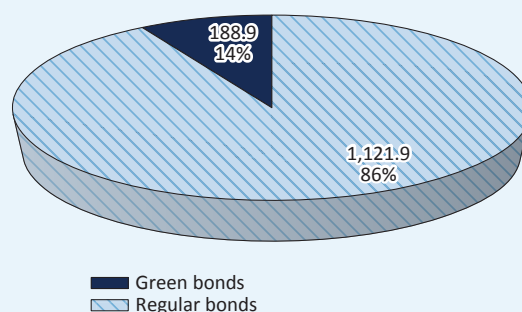


* The 2021 Q4 data on gross domestic product is based on estimates.
Source: MNB.

Marking an important milestone in the history of Hungarian capital markets, the first Hungarian green corporate bond was issued under the BGS in August 2020, followed by two other series until the end of 2020. In 2021, another 10 green corporate bonds were issued, thanks to which issuers spend over HUF 220 billion on sustainable lending purposes. Out of the 13 green securities series issued so far, the central bank purchased almost HUF 190 billion, therefore the bonds with a green certificate made up 14 per cent of the corporate bond portfolio held by the MNB at the end of 2021.

Chart 6
Share of green corporate bonds within the MNB's corporate bond portfolio

HUF billion and per cent of MNB's portfolio



Source: MNB.

To ensure that all the MNB's monetary policy instruments facilitate the fast achievement of price stability, the Monetary Council decided to end the BGS on 14 December 2021. In the central bank's view, the banking system's abundant liquidity and strong capital position as well as the improvements in bond market conditions in recent years allow the corporate sector's financing requirement to be satisfied on the market. Accordingly, following the final completion of the ongoing issuer negotiations, up to the currently effective allocated amount of the programme, the MNB will not purchase new corporate bonds.

Instruments promoting environmental sustainability

With a milestone decision on 28 May 2021, Parliament gave statutory authorisation to the MNB to support the government's policies related to environmental sustainability. The foundations of this new central banking approach had been laid by the Green Central Banking Policy Instrument Strategy announced on 6 July 2021, the main thrust of which is to provide a uniform framework and point out the potential ways how the MNB can incorporate climate protection and environmental sustainability

considerations into its monetary policy instruments. According to the strategic vision presented in the published strategic document,¹ Hungary's sustainable convergence can only occur through a green transition of the economy, and this requires the emergence of a financial system in Hungary by the end of the decade that takes into account and promotes environmental sustainability aspects. Along with the announcement, the secondary market purchases of 'brown' mortgage bonds, those without a green certificate, were suspended. The housing loan market is a good starting point for facilitating the incorporation of green considerations, as the energy efficiency of Hungarian residential properties is low, even though this segment accounts for a third of Hungary's primary energy use, and there is ample scope for modernisation. To this end, the MNB launched two new initiatives, the FGS GHP and the Green Mortgage Bond Purchase Programme.

The FGS GHP facilitates the development of the green housing loan market and the implementation of environmental sustainability considerations in the Hungarian housing market, which may also help boost the demand for green homes and thus also the associated supply. The programme helps people purchase and build new, energy-efficient homes with a favourable loan that has a fixed, therefore predictable, rate until maturity, indirectly encouraging builders to construct energy-efficient residential buildings. Similar to the earlier phases of the FGS, which promoted the SME sector's access to finance, the central bank provides refinancing to credit institutions at 0 per cent interest, which they can lend on to households with an interest margin of up to 2.5 per cent. Only natural persons can apply for the loan, for purchasing and building new, energy-efficient owner-occupied apartments and family houses (with an energy rating of at least BB and a primary energy requirement of no more than 90 kWh/m²/year), with a loan amount of no more than HUF 70 million and a maturity of 25 years. The credit institutions participating in the FGS GHP reported to the MNB signed contracts worth HUF 31 billion connected to 1,596 transactions until the end of December. The actually outstanding amount, i.e. that already drawn down but not paid back, was HUF 7 billion.

The objective of the Green Mortgage Bond Purchase Programme Strategy is to use targeted purchases to contribute to the development of the green mortgage bond market in Hungary and thus also the widespread use of green mortgage credit. This indirectly supports the construction of properties that are modern from an energy perspective, and also makes the structure of the stock of

Hungarian properties healthier. Under the programme, the MNB purchased securities amounting to HUF 48 billion in face value at 5 auctions by 4 issuers. Together with the mortgage bonds worth HUF 3 billion purchased in the secondary market, the year-end closing stock was worth HUF 51 billion in 2021.

At the same time, the practical application of the Green Toolkit Strategy also encompassed the central bank's collateral management practices. Collateral management is a key tool among monetary policy instruments, as the related framework significantly influences the amount of liquidity available to the banking system, and it helps the MNB support certain sectors and promote the adoption of best practices in the market. At the same time, the MNB has to continuously ensure that the risks related to the central bank's lending activities are reduced to a minimum. Without implementing sustainability considerations, there can be no efficient implementation of monetary policy, therefore the MNB also has to examine the 'greening' of collateral management.

The value of the assets eligible as collateral is influenced by climate risks, therefore climate risks also impact the MNB's risk exposure, and the optimal structure of risk management instruments needs to be considered. The central bank's collateral management practices exert a substantial impact on commercial banks' practices, the greening of their exposures as well as the economy's sustainable transformation. Accordingly, the 'green haircut' was introduced in September 2021, which, in the short run, can efficiently contribute to the development of the green bond market by ensuring preferential treatment of green bonds. As climate risk reporting practices develop, the availability of data and models improves and international best practices become solidified, the MNB should consider further steps in collateral management related to climate risks.

3.2 STABILITY OF THE FINANCIAL INTERMEDIARY SYSTEM

The domestic banking sector is stable, even through the prolonged pandemic, and its shock-absorbing capacity can be deemed robust both in terms of liquidity and loss absorbency. Hungarian banks can continuously provide the necessary funds to economic actors. Thanks to the central bank and government lending programmes, the extension of the moratorium and the persistence of strong demand, outstanding credit continued to expand dynamically. The Hungarian crisis management is based on lending, which can be seen from the fact that credit institutions' outstanding

¹ Sustainability and central bank policy – Green aspects of the Magyar Nemzeti Bank's monetary policy toolkit, MNB, 2021.

credit to households increased by 15 per cent year-on-year in 2021, primarily owing to a massive expansion in housing loans. Currently, the growth rate of household lending in Hungary is one of the highest in the European Union in annual terms. Corporate credit also increased at a high pace, with its annual growth rate reaching almost 11 per cent, while the growth rate of the SME segment was 16.8 per cent in 2021, which was heavily influenced by the FGS Go! and the general moratorium extended until the end of October 2021 as well as the lending and guarantee schemes of government institutions. The depletion of the allocated amount for the FGS Go! did not cause any tension in the financing of Hungarian enterprises, and demand for corporate loans remained strong even after the FGS Go! was phased out in the second half of the year, while the share of market loans increased.

The MNB's macroprudential activities focused on mitigating the potential negative effects of the pandemic on financial stability, in parallel with monitoring the evolution of systemic risks and the adjustment of market participants. In order to stimulate competition among banks and boost the digitalisation of lending processes, the MNB allowed the market value of properties to be estimated with statistical methods while calculating the loan-to-value ratio, and it extended the Certified Consumer-Friendly product scheme to the market of personal loans, too. In the area of liquidity and financing regulation, the MNB, in line with its Green Programme introduced a beneficial treatment for funds borrowed to finance green properties in the Mortgage Funding Adequacy Ratio regulation, and it asymmetrically loosened its requirement regarding the Foreign Exchange Coverage Ratio to support the FX swap market.

In 2021, the MNB's activities promoting financial innovation and digitalisation focused on assessing and strengthening the level of digitalisation of the Hungarian financial system, and deepening the FinTech ecosystem. In 2021, the central bank published its *FinTech and Digitalisation Report for the second time*, and also published a recommendation, considered a novelty by international standards, encouraging the digital transformation of the Hungarian banking system. In addition, MNB experts also published a book of studies on central bank digital currencies, which is considered a novelty in the world due to its comprehensive scope.

Pursuant to the MNB Act, the primary objective of the MNB is to achieve and maintain price stability. Without prejudice to its primary objective, the MNB shall support the maintenance of the stability of the financial intermediary system, the enhancement of its resilience and its sustainable contribution to economic growth, as well as the economic and environmental sustainability policy of the government using the instruments at its disposal. In addition, based

on its mandate linked to its membership in the European System of Financial Supervision, the MNB performs its share of tasks originating from the competence of the European Banking Authority, the European Insurance and Occupational Pensions Authority, the European Securities and Markets Authority and the European Systemic Risk Board, supervises the Hungarian financial intermediary system and also acts as a resolution authority.

In 2021, the risks influencing the functioning of the Hungarian banking system and their possible mitigation were presented in detail in the *Financial Stability Reports*, which regularly evaluate the risks to financial stability in a comprehensive manner. The coronavirus pandemic continues to exert a considerable impact on the operation of the economy, but the Hungarian banking system remains robust, and its shock-resistance is adequate from the perspective of the liquidity position and loss-absorbing capacity. This is illustrated by the fact that despite the pandemic, household and corporate credit increased substantially, largely due to central bank and government-run loan programmes and the moratorium. After having reached a historic low, the share of the banking system's non-performing loans increased slightly among both corporate and household loans as the general moratorium was phased out at the end of 2021, standing at 4 per cent in both segments in December. Due to the fall in credit risk costs, the profitability of the Hungarian banking system improved significantly, with the sector's profit after tax coming in at HUF 550 billion in 2021, up by HUF 346 billion from the preceding year. The consolidated capital adequacy ratio of the banking system was 18.6 per cent at the end of December 2021, 29 basis points higher than in the previous year. With the easing measures in effect, all credit institutions fulfil the capital adequacy requirement as stipulated by law, but the distribution of free capital buffers within the sector remains concentrated.

Key developments in the financial system

The biannual publication *Trends in Lending* provides a detailed overview of developments in lending in Hungary. Household and corporate credit expanded considerably in 2021, despite the prolonged pandemic. This was influenced by the general moratorium on payments introduced in March 2020 and extended until the end of October 2021. At the end of May 2020, 55 per cent of household credit and 53 per cent of corporate credit was under moratorium, while at the end of October 2021 only 22 per cent of household loans and 13 per cent of corporate loans were affected.

Credit institutions' household loans expanded by 15 per cent year-on-year as a result of disbursements and repayments

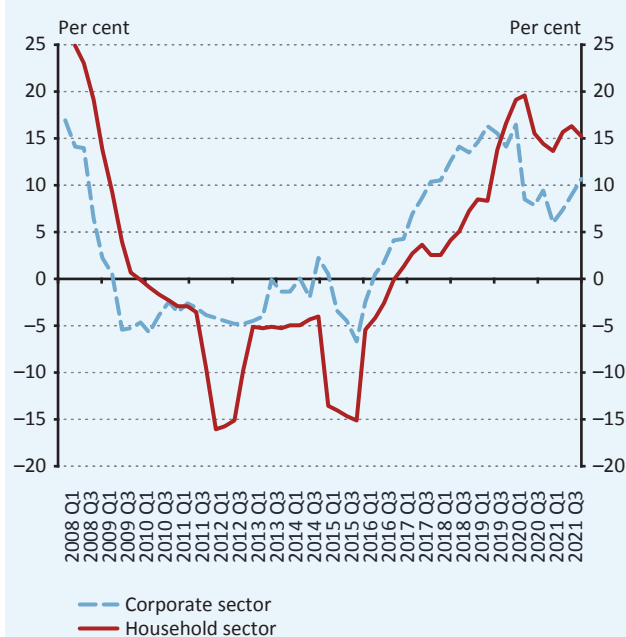
(Chart 7). The volume of new credit dropped somewhat in the first quarter linked to the third wave of the coronavirus pandemic, but the rest of the year was characterised by a record volume of output. In 2021, the value of new contracts was up by 22 per cent from 2020, largely due to the home creation measures available from 2021. During the year, the output of all retail loan products increased, only the volume of prenatal baby support loans contracted, although such loans accounted for over HUF 1,500 billion by the end of the year, representing 17 per cent of retail credit. Subsidised loans connected to the family protection and home creation programmes continue to support retail lending, with the subsidised schemes (family home creation allowance [CSOK], rural CSOK and prenatal baby support loans) making up 29 per cent of the volume issued.

The annual volume of new housing loans is HUF 1,300 billion in 2021, up by 42 per cent from the previous year, marking a new historic high. Interest rate risk has also been reduced by the increasing popularity of the Certified Consumer-Friendly Housing Loans (CCFHL) in recent years. At the end of 2021, these products accounted for around 61 per cent of total new housing loans. 2021 saw the introduction of the Certified Consumer-Friendly Personal Loan product certification, which quickly became popular, and in April every fifth new personal loan had such a certificate. Under the FGS Green Home Programme, launched in October 2021, 1,596 housing loans were disbursed by credit institutions until the end of December, to the tune of HUF 31 billion. 55 per cent of these were taken out by people to build their own homes, 24 per cent were connected to purchasing fully completed flats or houses, and 21 per cent went for purchasing flats and houses under construction. The average loan amount was around HUF 29 million, and the average maturity was 20.6 years.

At the end of 2021, the annual growth rate of corporate credit amounted to around 11 per cent, while the growth rate of the SME segment was 16.8 per cent. The volume of corporate credit increased by HUF 1,000 billion in 2021, up by 28 per cent from the previous year. This continued growth was considerably enhanced by the general moratorium extended until the end of October 2021 as well as the FGS Go!, along with the loan and guarantee schemes of government institutions. The total allocated amount of the FGS Go! scheme, terminated at the end of September, was used up, with 62 per cent of the total loan volume going to micro and small enterprises, while in terms of the number of transactions such firms signed 88 per cent of the contracts. Although the contracting period has ended, due to disbursements in tranches, the funds from the programme continue to assist the operation of businesses. Demand remained robust in the corporate

credit market even after the FGS Go! was discontinued, and credit institutions signed new, non-overdraft contracts worth over HUF 1,000 billion in the fourth quarter, while the share of market loans increased. The fourth quarter volume was well over the figure from two years earlier, while the share of market loans was 80 per cent, which is much higher than the 45 per cent seen in the same period of the previous year and barely falls short of the 85–90 per cent typical in the pre-pandemic period.

Chart 7
Annual growth rate of outstanding corporate and household loans



Note: Credit institutions sector.

Source: MNB.

In 2021, the fundamentals determining residential real estate market demand improved considerably. After the economy was restarted, the labour market quickly recovered and employment reached historic highs in the summer months, which went hand in hand with an increase in people's real income. The growing demand was also fuelled by the new home creation allowances launched at the beginning of the year. The volume of new housing loans reached a new high in 2021 Q2. On account of the growing demand, the Hungarian housing market once again experienced an acceleration of house price rises in 2021. According to the MNB house price index published in the *Housing Market Report*, residential real estate prices in Budapest increased by 11.3 per cent year-on-year in Q4, while a much greater annual growth rate of 25.0 per cent was seen in cities outside the capital (Chart 8). In Q4, the average annual growth rate of house prices was 21.4 per cent in nominal terms across the entire country, which is

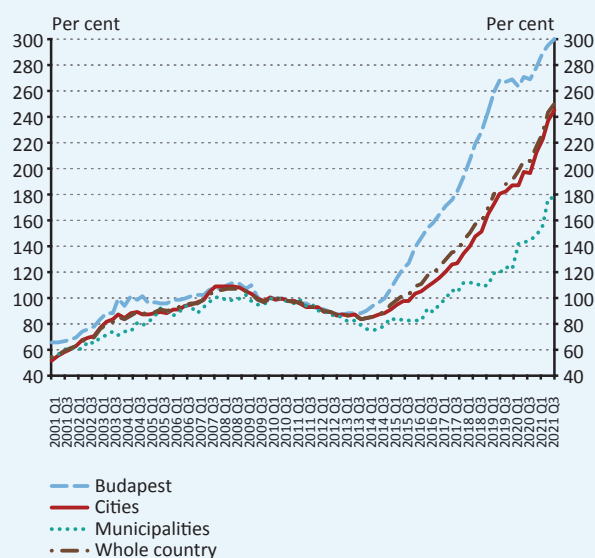
significantly higher than the rate of 8.9 per cent registered at end-2020. On average in 2021, the overvaluation of residential real estate prices relative to fundamentals increased to a historically high level throughout the country, and the capital returned to near the level seen in 2018–2019.

In the first three quarters of 2021, the number of new homes handed over declined by 1.7 per cent year-on-year. Thanks to the handover of the condominium flats planned for 2020 but only completed in 2021, the number of dwellings built increased significantly in the capital, while it declined by 27.3 per cent outside the capital in the first three quarters. At the same time, based on the new building permits granted, people were once again more eager to construct homes due to the temporary restoration of the preferential VAT rate on homes in early 2021. In order to further increase this trend, measures sustainably encouraging supply are needed. The FGS GHP indirectly promotes the construction of new residential real estates that are environmentally sustainable. Overall, the upswing in the housing market and the return to the rapid growth of house prices in 2021 has not been coupled with overheating in the credit market so far. The transactions combined with borrowing still account for less than half of all transactions, and only 5.5 per cent of the new housing loans were close to the regulatory limits set by the MNB in the form of the debt-service-to-income ratio and the loan-to-value ratio (DSTI of over 40 per cent and LTV of over 70 per cent). The MNB closely monitors the expansion of the housing and credit market, and continuously examines the necessity of applying instruments that reduce cyclical systemic risks.

As a result of the economic rebound that started in early 2021, the output of the sectors relevant for the commercial real estate market improved, but the favourable impact of growth on the real estate market fell short of what was seen in earlier cycles, which is partly a direct effect of the pandemic (drop in tourism), and partly attributable to the uncertainty arising from the trends it accelerated (rise in home office schemes and e-commerce). At the end of 2021, the vacancy rate of the Budapest office market was 9.2 per cent, up by 0.1 percentage point from end-2020. The vacancy rate was relatively stable over the year, mostly due to the low volume of new handovers. Nevertheless, in the industry-logistics market, demand was strong in 2021, just as in 2020; the volume of new handovers reached record highs, but the vacancy rate slightly increased from 2 per cent at end-2020 to 3 per cent at end-2021, which is still a very low figure. In the retail segment, the vacancy rate stagnated as consumption and shopper numbers were up. In 2021, credit institutions did not tighten their financing conditions, and at the end of the year only 3.1 per cent of the stock of project loans with commercial real estate collateral participated in the targeted extension of the moratorium, mostly representing hotel exposures. The banking system's capital adequacy is firm; therefore, the sector can manage risks stemming from to the commercial real estate market.

After having reached a historic low, the share of the banking system's non-performing loans increased slightly both in the corporate and the household segments as the general moratorium was phased out at the end of 2021. In the credit institution sector corporate loans over 90 days past due decreased by HUF 14 billion, while that of households declined by HUF 30 billion in the past year. At the same time, the stock of loans that are less than 90 days past due but are classified non-performing increased by HUF 119 billion and HUF 171 billion, respectively. As a result, the share of non-performing loans climbed to 4.2 per cent in both segments (the household NPL ratio was 3.1 per cent, while the corporate NPL ratio was 3.5 per cent at the end of 2020). The value of NPLs amounted to HUF 432 billion and HUF 390 billion, respectively, at the end of 2021. One-fifth of corporate NPLs and 30 per cent of household NPLs are comprised of loans over 90 days past due. Within the corporate credit portfolio, problem-free (Stage 1) loans accounted for 78 per cent, heightened-risk (Stage 2) loans represented 19 per cent, while NPLs (Stage 3) made up 3 per cent at the end of December. In the household segment, the corresponding shares were 74, 22 and 4 per cent, respectively. Compared to end-2020, the ECL recognised by credit institutions diminished by 2 per cent in the case of corporate credit, whereas it increased by 28 per cent for household loans. The loan loss coverage

Chart 8
The MNB's nominal residential property price index by type of locality (2010 = 100%)



Source: MNB.

ratio of Stage 3 corporate and household loans continued to decline during the quarter, reaching 46 and 48 per cent, respectively by the end of December.

Based on individual (unconsolidated) reporting data, the profits after tax of the credit institution sector amounted to HUF 550 billion in 2021, reflecting an increase of HUF 346 billion compared to the previous year. The 12-month rolling return on equity (ROE) rose by 6.7 percentage points to 11 per cent, while the profit on assets increased by 52 basis points to 0.95 percentage points. The growth in profit after tax was mostly supported by the reduction in risk costs and the expansion in net interest income, although the rise in the latter was mostly due to the temporary measures related to the coronavirus pandemic. The expansion in the sterilisation stock and banks' government securities holdings also pointed towards a higher net interest income. Commission and fee revenues increased considerably year-on-year, partly due to the recovery of economic activity, lending and cash flow as the Covid pandemic started to recede. Only the rise in operating costs pointed towards the deterioration of profitability, consistent with the significant growth in personnel costs that had stagnated since the onset of the pandemic. Relative to total assets, operating costs diminished by 9 basis points thanks to the rise in the balance sheet total, while net interest income remained stable.

Following a dip in the third quarter, the banking system's consolidated capital adequacy ratio rose to 18.6 per cent by the end of the year. The rise was mainly attributable to the slower increase in total risk exposure. The sector's free capital amounted to HUF 1,631 billion, while total capital was HUF 2,900 billion together with the annual profit that cannot be included in own funds yet in the absence of an audit, and calculating with the easing of the capital conservation buffer until June 2022. When considering total profits for the year, the overwhelming majority of banks had a free buffer of over 4 per cent, and their leverage ratio was typically over 4 per cent.

The central bank conducted its fourteenth *Market Intelligence Survey* in 2021, within the framework of which the MNB sent written questions on the economic impact of the pandemic and its survey for assessing the risks surrounding the Hungarian banking system to nine large Hungarian commercial banks. The main findings of the survey were presented in the June issue of the Financial Stability Report.

Macroprudential activity of the MNB

In 2021, the MNB's macroprudential activity continued to focus on monitoring the developments in potential systemic risks caused by the pandemic, and on market participants' adjustment to previously introduced measures, as well as on the related methodological developments and on fine-tuning macroprudential instruments. In its 2021 *Macroprudential Report*, the MNB gave a detailed assessment of the development of financial systemic risks, the macroprudential policy responses to them and the experience with them.

In February 2021, the MNB decided to amend the debt brake rules, in view of the new law simplifying the appraisal processes related to retail mortgages. According to the amendment, the market value of properties can now also be determined with statistical valuation methods when calculating the loan-to-value ratio. This promotes banks' digitalisation as well as the development of smoother and more cost-effective lending practices. In addition, building on market participants' experiences, the MNB also introduced modifications helping the seamless application of the debt brake rules.

In order to stimulate competition among banks and further boost the digitalisation of lending processes, the MNB, also taking into account consumer protection considerations, extended the Certified Consumer-Friendly product scheme and launched the 'Certified Consumer-Friendly Personal Loans' products. Certified Consumer-Friendly Personal Loans have been available to customers since January 2021, and at the end of the year they were offered by seven credit institutions. This clearly reflects the rising popularity of certified personal loans: their share within new personal loans was over 20 per cent at the end of 2021.

In line with its Green Programme, the MNB revised its regulation of the Mortgage Funding Adequacy Ratio (MFAR) in 2021. In accordance with the amendment, from 1 July 2021, green mortgage-based funds can be taken into account with a preferential weighting when calculating the ratio, which stimulates the issuance in Hungary of green mortgage bonds, increasingly widespread internationally, and thus also the spread of mortgages financing green properties. The MNB also made amendments to the regulation to increase forint maturity matching across the sector: these included raising the prescribed minimum of the ratio from 25 to 30 per cent, requiring the listing of

newly issued mortgage bonds on a stock exchange, and following a suspension due to the coronavirus pandemic, the restoration of the constraints on mortgage bond cross-holdings among banks in an amended form, which are expected to come into effect from 1 October 2022.

In November 2021, considering market developments and risks, the MNB decided to asymmetrically ease the regulatory limit on the Foreign Exchange Coverage Ratio (FECR). Accordingly, the expected minimum of the ratio is reduced from –15 to –30 per cent in the case of an FX liability surplus while the currently effective limit (+15 per cent) remains in place in the case of an FX asset surplus. The amendment provides banks more leeway in their swap market activities in the context of the rising FX liability surplus across the sector caused by the growing FX customer deposits in recent years, therefore it also improves the efficiency of the FX swap market. The amendment does not lead to a marked rise in risks, as operating with an FX liability surplus has much lower risks than an FX asset surplus, and the Foreign Exchange Funding Adequacy Ratio (FFAR) continues to ensure that the raised FX liabilities are sufficiently long-term and stable.

In 2021, the MNB reassessed the systemic significance of Hungarian credit institutions, and identified seven banking groups as systemically important, down from eight previously. The group of credit institutions concerned changed because on 15 December 2020 Magyar Bankholding Zrt. started exercising ownership rights over the entity comprising MTB Magyar Takarékszövetkezeti Bank Zrt., MKB Bank Nyrt. and Budapest Bank Zrt. Due to the increasingly close integration among the institutions, the MNB examined the group at the highest level of consolidation during the identification process. The capital buffers temporarily released by the MNB in 2020 on account of the coronavirus pandemic need to be gradually rebuilt by the systemically important credit institutions in three years, starting in 2022.

Since January 2016, the MNB has been operating the Countercyclical Capital Buffer regulation, which aims to enhance the through-the-cycle resilience of the financial intermediary system. The evolution of the indicators under review reflected rising cyclical systemic risks, which did not, however, warrant a countercyclical capital buffer, therefore the MNB left the countercyclical capital buffer rate at 0 per cent in 2021, too. Based on lending trends and real estate market developments, a build-up of cyclical systemic risks is expected in the medium term because of the swift recovery and upswing of the economy, which closely monitored by the MNB.

The experts of the central bank monitored the systemic risk evaluations and international regulatory developments affecting the financial intermediary system in 2021 as well, and participated in various European institutions' working groups dealing with macroprudential policy.

The MNB's activities promoting financial innovation and digitalisation

The central bank continuously and actively analyses the level of digitalisation of the Hungarian financial system, and fosters the improvement of the digital competitiveness of institutions providing financial services.

In May 2021, the MNB published its FinTech and Digitalisation Report for the second time, presenting the most important FinTech trends, and providing a comprehensive and detailed analysis of the Hungarian FinTech ecosystem and a detailed assessment of the level of digitalisation in the Hungarian banking system and insurance sector. Based on the assessment, the central bank issued a recommendation to further bolster the digitalisation of the Hungarian banking system in the first half of 2021, which was unprecedented internationally. The recommendation required institutions to prepare and submit a comprehensive digital transformation strategy by 31 October, and every institution complied.

The MNB also seeks to provide broad support for innovation and digitalisation and strengthen the FinTech ecosystem in its cooperation with both Hungarian and international actors. In this context, the central bank actively participates in the tasks related to the Global Financial Innovation Network (GFIN) initiative. On 11–12 November 2021, in cooperation with the Singapore FinTech Festival, the MNB organised an online event called World FinTech Festival in Budapest for the second time. During the event, with the participation of the two countries' FinTech associations, central banks and companies, the 1st Singapore–Hungary FinTech Business Forum was held in Singapore. On the closing day of the Budapest event, Hungarian and Singaporean FinTech associations signed a memorandum of understanding.

In July 2021, a study volume, unique in its comprehensiveness in the international context, was published by the MNB under the title *At the Dawn of a New Age – Money in the 21st Century*, which simultaneously examines the conceptual, design, monetary policy, financial stability and infrastructural issues related to central bank digital currencies.

The pilot project of the MNB Digital Student Safe mobile application was a huge success, therefore a new pilot period was announced for the academic year 2021/2022. The MNB Digital Student Safe not only tests the concept of a central bank digital currency but also improves children's financial literacy and offers an innovative form of saving on a digital device. In connection with the so-called wholesale central bank digital currency, accessible to financial institutions, the MNB participates as an observer in Project Dunbar, a joint initiative of the BIS Innovation Hub Singapore Centre as well as the central banks of Singapore, Australia, South Africa and Malaysia, examining the potential role of central bank digital currencies in cross-border transactions between professional financial players.

In addition to the above, the central bank, within the framework set up already, continued to contribute substantially for the safe spread of innovations within the Hungarian financial system. By operating the MNB Innovation Hub, the central bank supported financial institutions and FinTech firms in the clarification of supervisory and legal issues arising in connection with their financial innovations with regard to several initiatives.

In 2021, the MNB continued to pay special attention to enhancing digital competencies. It contributed to the development of financial and technological education via its previously established cooperation with a number of Hungarian universities and colleges with a digital focus, by developing study materials, supporting research projects, giving lectures, participating in professional events and organising student competitions (e.g. hackathons).

During 2021, the central bank's experts participated at numerous online forums and conferences, gaining first-hand experience with international FinTech and digitalisation developments and regulatory approaches. The MNB also presented its digitalisation efforts and achievements in several bilateral discussions held with other central banks. The development of international cooperation and efficient information sharing support the MNB in gaining increasing prominence in the international community, thanks to its results achieved in enhancing digitalisation as well as its demonstrated support for innovation.

3.3 SUPERVISION AND CONSUMER PROTECTION

In 2021, the MNB's microprudential supervisory activities focused on supporting the gradual phase-out of the measures related to the coronavirus pandemic, while ensuring the stability of individual market participants and prioritising consumer protection efforts.

Money market inspections had a special focus on institutions' processes related to creation of group of connected clients, their measures related to the moratorium on payments, the compliance with the recommendation on the project loans for residential property development as well as the framework for handling troubled facilities. During the inspections, the MNB identified the most significant shortcomings related to the adequacy and regulation of internal control functions, the regulation and resources of the compliance function, the fraud prevention framework and its regulation, the regulation of internal loans as well as the records and reporting of outsourcing. The MNB closely monitors the ECL provisioning levels and practices of supervised credit institutions.

In the case of the inspection procedures launched during the supervision of the insurance market, special attention was paid in 2021 to the complete implementation of the requirements of the IDD,² in particular those related to product oversight and the governance system as well as the inspection of the KIDs under the PRIIPs Regulation.³ From 2021, special attention was paid to the preparation of insurers for IFRS 17⁴ as well as to inspecting compliance with the adequacy of Certified Consumer-Friendly Home Insurance Products. The MNB also examined the actuarial justification for MTPL fee calculations and the expediency, market conformity and cost-effectiveness of unit-linked asset funds' investment transactions.

During the inspections carried out as part of the supervision of the funds market, the MNB continued to focus on the efficiency of internal control systems, the soundness of the business model, the appropriateness of the investment policy as well as its consistency with the actual asset composition. Other key points included checking the

² IDD (Insurance Distribution Directive): Directive (EU) 2016/97 of the European Parliament and of the Council on insurance distribution.

³ Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on Key Information Documents for Packaged Retail and Insurance-based Investment Products.

⁴ International Financial Reporting Standards – Insurance Contracts Standard.

justification for the calculation of the TCIPf⁵ indicator, the examination of obsolete IT systems, just like monitoring the larger risk-taking related to fund portfolios, with a particular focus on real estate investments.

During the prudential supervision of investment service providers, the primary focus was on the practices related to managing customer claims and on the availability of customer claims. In the course of the prudential supervision of investment fund managers, the main priority was assessing investment decision-making, order management, net asset value calculation and the operation of internal safeguards.

In the spirit of proactive engagement, the MNB examined hundreds of reports about suspicion of unauthorised activities and market abuses. In order to combat unauthorised activities, the central bank seeks to develop instruments that best protect consumers' interests through amending laws.

The purpose of AML/CFT inspections is to identify shortcomings and vulnerabilities on the one hand, and to assess the actual threat to institutions to quantify expected reputation risks on the other hand. Other important aspects include the examination of efficiency, and the identification and understanding of the potential sources of risk.

The measures aimed at ensuring more transparent, effective and robust consumer protection and customer-focused business attitudes remained in the focus of the MNB's consumer protection activities in 2021. The growing popularity of certified products may lead to greater competition, foster appropriate customer information and a shortening of administrative deadlines, and encourage the widespread adoption of fully online processes.

Based on the data from 31 December 2021, the MNB was responsible for the full prudential supervision of 1,297 institutions.⁶ Today the MNB's supervisory activities reflect a highly complex form of supervision, in particular partial prudential, consumer protection, money laundering and issuer supervision, therefore it makes sense to mention here not only the institutions falling under prudential supervision but also those operating under other forms of supervisory activities. According to this approach, besides the institutions under prudential supervision, the MNB exercised some form of supervision over more than 300 institutions in 2021. These institutions do not fall under the MNB's prudential (financial) supervision, or

only partly so, but the MNB does exercise supervision over them in another form, with a narrower scope, in particular concerning consumer protection, money laundering and issuer supervision.

In 2021, targeted inspections were concluded in 74 prudential, 330 consumer protection, 23 market surveillance cases and 1 issuer supervision case, while thematic inspections were concluded in 3 AML cases. During this period, the MNB issued 2,302 material decisions related to prudential licensing and legal enforcement in connection with inspections and continuous supervision, with another 550 decisions in consumer protection cases, 262 of which were official decisions. There were 419 decisions in the area of market surveillance, 692 in issuer supervision, while 44 decisions and orders were issued in the field of AML. As part of its supervisory and consumer protection activities in 2021, the MNB levied supervisory penalties totalling HUF 1433.1 million. Out of this, the penalties imposed during measures related to prudential supervision totalled HUF 744.8 million, consumer protection penalties totalled HUF 211.3 million, market surveillance penalties amounted to HUF 141.5 million, issuer supervision penalties came in at HUF 7.1 million, while issuer supervision penalties amounted to HUF 321 million, and administrative and licensing penalties totalled HUF 7.4 million.

The MNB issued several executive circulars and recommendations in the period under review to point out to market participants specific rules that need to be adhered to and the behaviour expected by the MNB. The executive circulars and recommendations that deserve special mention are described here as follows:

- The MNB gave notice to credit institutions not to pay dividends or undertake irrevocable dividend payment obligations from the profits of the 2019 and 2020 financial year and earlier years until 31 December 2021. Nonetheless, under strict conditions, limited dividend payments can be made. The main reason behind maintaining the limit on dividend payments was that the moratorium on payments had been extended until the end of September 2021, and it is still available, since 1 November, for certain special social groups until 30 June 2022. However, in view of the low share of debtors that registered for the 3rd phase of the moratorium (5 per cent), the amount of ECL recognised by institutions and the trends in European regulation, the MNB decided not to extend the constraint on dividend payments after its expiry, therefore such payments can be

⁵ Pension funds' total cost indicator.

⁶ These institutions are under the MNB's full (prudential) supervision.

made since 1 January 2022, while complying with other laws on dividend payments.

- At the end of June,⁷ the MNB indicated that it expected the credit institutions, financial enterprises and branches concerned not to charge a prepayment and contract amendment fee related to the payment moratorium if customers wish to partly or fully prepay the interest and fees accrued due to the grace period. The central bank encourages solutions where customers have an option to amend contracts for free even if they voluntarily undertake to make higher monthly payments to reduce the extended maturity period. Of course, in the case of retail customers, financial institutions need to take into account the debt brake rules related to the payment-to-income ratio. The MNB also expects financial institutions to offer this free contract amendment option to customers at least until 31 December 2022.
- In its executive circular dated 30 July 2021,⁸ the MNB informed institutions about its position and expectations regarding the termination of consumer payment services framework agreements and the related settlement, as it had identified several institutional practices hampering the right to termination during its continuous supervision. In the executive circular, the MNB also called on institutions to report to the MNB about compliance with the expectations, the performance of a review process and its results.
- In terms of the ESG⁹ elements of credit risk, expectations for institutions are formulated in the new MNB recommendation on ‘climate-related and environmental risks and the integration of environmental sustainability considerations into the activities of credit institutions’, issued in the first half of 2021.
- In November 2021, the MNB published an executive circular on managing any potential payment difficulties of customers who were removed from the moratorium or did not take part in it, addressed to the credit institutions and financial enterprises concerned. The central bank expects financial institutions to pay special attention to

retail and corporate customers facing payment difficulties. They should develop financing schemes, solutions and internal processes that help appropriately address the situations arising from the changed solvency of debtors.¹⁰

- The MNB also published on its website a revised recommendation¹¹ on the complaint handling of financial organisations in November 2021. The guidelines presented to market participants promote customer-friendly and efficient complaint handling, which helps avoid the emergence or deepening of legal disputes between financial organisations and consumers, and strengthens the general confidence in service providers.
- In order to promote transparent claims settlement procedures at insurers that prioritise customers’ interests, the MNB sent an executive circular¹² to the insurers concerned on how market participants should act in the case of non-life personal injury claimants, usually after MTPL accidents, when making a lump-sum payment in lieu of the annuity payments due to them.

The measures aimed at ensuring a more transparent, effective and robust consumer protection and customer-focused business attitudes remained in the focus of the MNB’s consumer protection activities in 2021. The growing popularity of certified products may lead to greater competition, foster appropriate customer information and a shortening of administrative deadlines, and encourage the widespread adoption of fully online processes:

- Certified Consumer-Friendly Personal Loans (CCFPLs)¹³ were first marketed in early 2021. Between January and late December 2021, lenders disbursed CCFPLs amounting to almost HUF 109 billion, and over 30,200 loan contracts were signed in this period. The MNB authorised 7 institutions to sell CCFPLs.
- The total disbursed amount of Certified Consumer-Friendly Housing Loans (CCFHLs)¹⁴ was over HUF 2,176 billion at the end of December 2021, and the number of contracts was more than 157,000. While the little over 18 years of average maturity did not change, the average loan

⁷ <https://www.mnb.hu/letoltes/vezetoi-korlevel-a-fizetesi-moratorium-igenybevetelere-tekintettel-felhalmozodott-tartozas-rendezesevel-kapcsolatos-dijakrol.pdf> (in Hungarian only).

⁸ <https://www.mnb.hu/letoltes/keretszerzodesek-felmondasa-vezetoi-korlevel.pdf> (in Hungarian only).

⁹ Environment, Social, Governance.

¹⁰ Executive circular on managing the exposures of the customers who entered the payment moratorium on 1 November 2021, minimum impairment levels and the recognition of portfolio-level management adjustments (mnb.hu). (in Hungarian only)

¹¹ MNB Recommendation No 16/2021 (XI. 25.) on Complaint Handling of Financial Organisations. (in Hungarian only)

¹² [vezetoi-korlevel-a-magyar-nemzeti-bank-elvarasairol-a-nem-eletbiztositasi-jaradekok-megvaltasaval-kapcsolatosan.pdf](https://www.mnb.hu/letoltes/vezetoi-korlevel-a-magyar-nemzeti-bank-elvarasairol-a-nem-eletbiztositasi-jaradekok-megvaltasaval-kapcsolatosan.pdf) (mnb.hu) (in Hungarian only).

¹³ <https://www.mnb.hu/mszh/> (in Hungarian only).

¹⁴ <https://minositetthitel.hu/> (in Hungarian only).

amount was HUF 15.69 million in December 2021, up by HUF 1.1 million year-on-year. The CCFHLs with an interest period of 10 years remain the most sought for, accounting for 59 per cent of total CCFHLs.

- In 2021, the number of Certified Consumer-Friendly Home Insurance (CCFHI) products increased to seven in the Hungarian insurance market, and now a large portion of the market (calculated on a premium income basis) offers CCFHI products. Household wealth insured with CCFHIs was close to HUF 270 billion at the end of 2021, and the number of new contracts increased. CCFHIs are now offered across the entire country, customers choose them for flats and family houses alike, and digital solutions have proven to be popular. The MNB has developed a calculator to assist individual CCFHI calculations and the comparability of CCFHI offers. It was launched in March 2021, and supplemented with an online data navigation function in August. The comparison website facilitating the choice between products has been visited more than 20,000 times since its launch. After the comparison, users can navigate from the MNB's website to the chosen insurer's site and finish the contracting procedure there. Therefore the digital process means simpler administration, shorter processing times and last but not least environmental friendliness. The development of the CCFHI calculator is aligned with the central bank's expectations that insurers' customer communication, claims reporting and claims settlement should be offered fully digitally. At the end of the year, customers saw many campaigns for CCFHI products. More CCFHI products are set to launch in 2022.¹⁵

With the help of the MNB Motor Third Party Liability Insurance (MTPL) Index¹⁶, first published in early 2021, customers can now compare their own MTPL quote with the actual changes in market prices. The central bank's data cover the entire MTPL market, adjusted for distorting effects. The Index shows the development of MTPL fees for individual-use (non-fleet) cars with normal operation and contracts (e.g. not taxis), using the itemised MTPL contract and claims database (KKTA) operated by the MNB and based on the reporting of insurers. The MTPL Index is released quarterly, accordingly members of the public received comprehensive information about the evolution of MTPL fees four times in 2021. Following a rise at the beginning of the year, the average insurance premium for cars declined in Q2 and Q3 year-on-year, mainly owing to the contraction of the insurance premium in Budapest. Average insurance premiums were typically also down for other vehicles after the first quarter.

In the past year, the link to the MNB's warnings appeared on the screens of customers looking for online investment opportunities 1.3 million times. This is because using the advertisement opportunities offered by Hungarian customers' most popular search engine, the central bank can show the link to its online consumer protection messages during online searches for typical investment keywords. Thanks to this, the MNB's messages appeared among more than half of the searches for 'hot topics' in investments, frequently among the top results, with an emphasis on being displayed next to potentially suspicious advertisements. In the past year, the number of people who visited the MNB's consumer protection sites and thus received help in making appropriate and safe financial decisions increased by more than 80,000, thanks to the links displayed.

Money market supervision

The MNB supervises the money market sector through inspections and the continuous assessment of the data and information provided by supervised institutions, using the tools of the so-called continuous supervision. The institution-level risk assessments performed during continuous supervision are based on analyses building on supervisory disclosures, the key elements of which are the evaluations of the agendas, proposals and decisions of the committees governing the institutions as well as the dialogue with the senior managers of supervised institutions. In 2021, MNB experts conducted 89 prudential interviews with senior managers of the supervised institutions during the course of continuous money market supervision, and participated at 137 executive body and working group meetings. The periodic risk assessments based on qualitative and quantitative information are consolidated for each institution in a so-called viability assessment during the annual supervisory cycle. As the MNB also supervises international banking groups, it is a member of 13 international supervisory colleges, and it acts as a so-called home authority for OTP Banking Group, coordinating and integrating the college's work.

Inspections had a special focus on institutions' processes related to creation of group of connected clients, their measures related to the moratorium on payments, the compliance with the recommendation on the project loans for residential property development as well as the framework for handling troubled facilities. During the inspections, the MNB identified the most significant shortcomings related to the adequacy and regulation of

¹⁵ MFO (mnb.hu) (in Hungarian only).

¹⁶ <https://www.mnb.hu/letoltes/mnb-kgfb-index-2020q4.pdf> (in Hungarian only).

internal control functions, the regulation and resources of the compliance function, the fraud prevention framework and its regulation, the regulation of internal loans as well as the records and reporting of outsourcing. In the area of credit risk, there are still a large number of findings related to shortcomings arising from collateral management processes, collateral records and collateral revaluation. The MNB closely monitors the ECL provisioning levels and practices of supervised credit institutions. An executive circular¹⁷ was prepared to ensure that institutions discuss with the MNB the material changes to ECL models and processes as well as any major release of ECL provisions before they are implemented.

Within the framework of the supervision of credit institutions, financial enterprises, payment institutions and money market intermediaries, the MNB concluded 25 prudential inspections and 14 comprehensive and focused ICAAP/BMA¹⁸ inspections. Moreover, supervisors conducted simplified ICAAP review exercises at small institutions that pose a lower level of systemic risk.

- Major infringements were identified by the MNB during the comprehensive group inspection of MagNet Bank Zrt. The findings included problems related to the operation of the supervisory board and the internal audit function. Due to this and the shortcomings in connection with credit risk, deposit insurance, IT security and capital calculation, a penalty of HUF 46.25 million was levied on the bank, while its subsidiary, MagNet Faktor Zrt. was ordered to pay a penalty of HUF 4.37 million.
- During the targeted inspection of MTB Magyar Takarékszövetkezeti Bank Zrt. (MTB Zrt.) and certain subsidiaries, Takarékbank Zrt. (Takarékbank) and Takarék Központi Követeléskezelő Zrt. (TKK), the MNB imposed a penalty of HUF 15.5 million on MTB Zrt. for certain shortcomings in credit risk, IT, capital calculation, reporting, ECL methodology and governance; a penalty of HUF 14 million on Takarékbank for anomalies in credit risk, capital calculation, deposit insurance, IT, reporting and governance; and a penalty of HUF 3 million on TKK for shortcomings in credit risk.
- In its decision concluding the targeted inspection at the Hungarian Branch of ING Bank N.V., the MNB called on the Branch to take measures to remedy the errors in reference data reporting to the Central Credit Information System (CCIS), and at the same time levied a supervisory penalty of HUF 12 million due to the shortcomings in connection with the CCIS.
- The targeted inspection at MKB Bank Nyrt. identified shortcomings related to compliance with the regulation on the payment moratorium, which were ordered to be rectified, and a penalty of HUF 6 million was imposed.
- On account of shortcomings related to the performance of pawnbroking activities through intermediaries, the MNB took measures against Takarékbank Zrt. and ordered it to pay a penalty of HUF 10 million.
- Due to the shortcomings seen during the comprehensive inspection at Gránit Bank Zrt., the MNB imposed a total penalty of HUF 58.5 million, in particular because of issues with governance, the treatment of credit risk, the recognition of ECL, AML/CFT and IT.
- During the follow-up inspection of KDB Bank Európa Zrt., the MNB levied a penalty of HUF 2.6 million due to the inadequate remedies to the shortcomings identified in the previous comprehensive inspection, and to the shortcomings identified during the consolidated insured deposit (KBB) records inspection conducted in the follow-up inspection.
- In the course of its comprehensive inspection, the MNB imposed a penalty of HUF 45.3 million on Erste Bank Hungary Zrt., HUF 5.7 million on Erste Lakástakarék Zrt. from the same group and HUF 3.7 million on Erste Jelzálogbank Zrt., for problems including governance, credit risk, IT security, reporting, credit risk calculation, ECL provisioning and deposit insurance records.
- Following its comprehensive inspection, the MNB imposed a penalty of HUF 41.3 million on Sberbank Magyarország Zrt. for shortcomings related to credit risk management, governance, ECL and capital requirement calculation, IT and deposit insurance as well as for problems with reporting.
- During its comprehensive inspection, the MNB levied a penalty of HUF 27 million on UniCredit Bank Hungary Zrt., and HUF 3 million each on UniCredit Jelzálogbank Zrt. and UniCredit Leasing Zrt., which are subject to consolidated supervision together with it. The inspection identified issues related to governance, internal control,

¹⁷ Executive circular on managing the exposures of the customers who entered the payment moratorium on 1 November 2021, minimum impairment levels and the recognition of portfolio-level management adjustments (mnb.hu). (in Hungarian only)

¹⁸ Internal Capital Adequacy Assessment Process and its supervisory review, and Business Model Analysis.

reporting, lending, capital calculation, IT security and deposit records at the institutions.

- During its targeted inspection of Porsche Finance Zrt., the MNB found shortcomings in connection with PTI calculation, APR setting, commercial communication and complaint handling, leading to a total penalty of HUF 4 million.

The MNB launched thematic inspections to review compliance with the requirements related to the payment moratorium at 16 banks and savings banks. The financial institutions under review control around 90 per cent of household debt, and they are the most affected by the moratorium. The inspection seeks to assess how the credit institutions concerned will modify, in accordance with the relevant laws, the maturity of the relevant retail loan contracts upon customers exiting the payment moratorium or it being terminated. The thematic inspection monitors credit institutions' preparations and the implementation of their actions, and is expected to end in 2022.

During the ICAAP reviews, a greater emphasis was placed on examining the advanced Pillar 1 and/or Pillar 2 credit risk models of systemically important banks. Besides benchmark models, the central bank considers it important to examine banks' own models in more detail, and, if necessary, make them rectify those models. Due to the SREP dialogue in recent years, banks' internal assessment and supervisory calculations have converged.

The MNB issued a recommendation on project loans for residential property development.¹⁹ It contains, among other things, expectations and guidelines on financing projects, regarding the risk framework and the risk-taking procedures related to the projects. The central bank recommendation that is to be used in the case of new loans, disbursed after 1 April 2021, for residential property development projects with buyer-side financing therefore strengthens the confidence of the prospective (retail) buyers of residential properties.

In order to lay out its expectations in connection with how financial organisations undertake, measure, manage and control credit risk, and thus increase the predictability of the application of the law and promote the uniform application of the relevant laws, the MNB issued a revised recommendation in September 2021.²⁰ Under the new framework, the MNB's decree on the prudential

requirements related to non-performing exposures and restructured receivables was modified, along with the decree on the prudential requirements for the rating of customers and partners, and for collateral valuation. The MNB expects the financial organisations concerned to implement the new requirements and expectations related to the credit risk framework from 1 October 2021.

The MNB also amended its Recommendation No 15/2021 (X. 29.) on the management of risks of financial organisations related to real properties in connection with the project loans related to residential property development. The recommendation was supplemented with, among other things, requirements about the application framework of the statistics-based valuation methodology for extending loans secured with real estate, in harmony with the amendment of Decree No 25/1997 (VIII. 1.)PM of the Minister of Finance on the Methodological Principles for Defining the Collateral Value of Properties not Qualifying as Arable Land on 5 February 2021. The MNB expects the recommendation to be applied from 1 December 2021.

In the area of credit institution licensing, it should be mentioned that in 2021 Q3 the MNB licensed the second financial holding corporation in Hungary under the name of Magyar Takarék Bankholding Zrt. On 8 October 2021, it also authorised the acquisition of a qualifying holding by Magyar Takarék Bankholding Zrt. in MTB Magyar Takarékszövetkezeti Bank Zrt. and its subsidiaries. During the third quarter, OTP Bank Nyrt. was granted permission to acquire a qualifying holding in a Chinese joint venture. The MNB registered Nyíltbankolás Zrt. as a payment institution providing only account information services, and the payment institution ICT Európa System Szolgáltató Zrt. handed back its operating licence in the same quarter. The MNB also issued decisions on approving the acquisition of a qualifying holding in one case (in Duna Bank Zrt.) and on portfolio transfer in two cases (Gránit Bank Zrt. – SME Property Lízing és Pénzügyi Szolgáltató Zrt., Kereskedelmi és Hitelbank Zrt. – K&H Pénzforgalmi Kft.). Furthermore, due to the large number of cases, the procedures for authorising the use of special services intermediaries (pawnbroking intermediaries) concluded at the end of 2021, as well as the cross-border notifications received based on the Payment Services Directive (PSD2). With respect to financial enterprises, the amount of procedures aimed at authorising the acquisition of qualifying holdings in the first and second quarter stagnated at an outstanding level in the second half of 2021. In 2021 Q3, one applicant was granted a licence

¹⁹ <https://www.mnb.hu/letoltes/1-2021-lakoingatlan-ajanlas.pdf> (in Hungarian only)

²⁰ MNB Decree No 14/2021 (IX. 16.) on undertaking, measuring, managing and controlling credit risk

for establishing a financial enterprise (iCredit Zrt.). MagNet Bank Zrt.'s entry into the money exchange market continues, and at the same time the realignment in the pawnbroking intermediary market has finished with the entry of the new principal institution (Hypotheca Financing Zrt.).

As a form of sanctioning, the MNB withdrew the operating licence of 3 financial enterprises (MikroCredit Zrt., CREDIT HOUSE Magyarország Ingatlanfinanszírozási Hitelezési Zrt. and HOLMIUM WORK-OUT Zrt.), and ordered their dissolution. One of the reasons behind this was that these financial enterprises did not comply with the stipulations of the Credit Institutions Act regarding prudential operation.

In the course of its consumer protection activities, the MNB conducted thematic inspections at 10 financial institutions to assess the information provision practices following contracting, in particular the compliance with the legal provision concerning the sending of annual statements, the availability of information related to prepayment following the termination of a contract, as well as information provision before and after the CCIS data transmission. The inspections identified shortcomings at all institutions, typically related to the legal stipulations regarding information provision following the closing of a payment account or the termination of a loan contract, the availability of information related to prepayment, information provision before and after the CCIS data transmission as well as the sending of the annual fee statement, therefore the MNB decided to levy a penalty of HUF 64.7 million in total.

During its continuous supervision, the MNB detected that Takarékbank Zrt. sent the so-called fee statement containing the aggregation of the transactions in a year related to payment accounts, together with the corresponding fees, in a well-structured form, 10 working days past the deadline stipulated by law in close to 850,000 cases. The MNB imposed a penalty of HUF 2.5 million for the infringements identified.

The MNB's targeted inspection at Polgári Bank Zrt. identified an infringement in connection with charging and modifying fees related to consumers' payment accounts. In its decision, the MNB imposed a penalty of HUF 8 million. The institution has taken action to pay back the unlawfully charged fees as a result of the inspection.

Supervision of the insurance market

In the case of the inspection procedures launched during the supervision of the insurance market, special attention was paid in 2021 to the complete implementation of the requirements of the IDD,²¹ in particular those related to product oversight and governance system as well as the inspection of the KIDs under the PRIIPs Regulation.²² From 2021, special attention was paid to the preparation of insurers for IFRS 17²³ as well as to inspecting compliance with the adequacy of Certified Consumer-Friendly Home Insurance Products. The MNB also examined the actuarial justification for MTPL fee calculations and the expediency, market conformity and cost-effectiveness of unit-linked asset funds' investment transactions. In the field of IT, examining obsolete IT systems was a priority.

The MNB concluded 6 comprehensive inspections, 1 targeted inspection in the case of insurers, and 3 prudential targeted inspections in the case of insurance intermediaries. During its comprehensive inspections at insurers, the MNB identified key findings and imposed penalties due to infringements related to, among other things, MTPL portfolio management, IT security, the remuneration policy, the risk management framework, UL life insurance portfolio management, outsourcing and customer information and complaint handling.

- The MNB levied a total supervisory and consumer protection penalty of HUF 50 million on Union Vienna Insurance Group Biztosító Zrt. due to infringements identified in MTPL and UL life insurance portfolio management, IT security, outsourcing and customer information and complaint handling.
- Following its comprehensive inspection, the MNB levied a penalty of HUF 22 million on Genertel Biztosító Zrt. for, among other things, shortcomings identified in governing and controlling business process outsourcing, portfolio management and claims settlement of MTPL contracts as well as the enforceability of customer rights regarding casco and MTPL contracts.
- Based on a targeted inspection concluded, the MNB imposed a total supervisory penalty of HUF 36 million on three earlier senior managers of CIG EMABIT Biztosító Zrt. as well as two people formerly working there as expert

²¹ IDD (Insurance Distribution Directive): Directive (EU) 2016/97 of the European Parliament and of the Council on insurance distribution.

²² Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on Key Information Documents for Packaged Retail and Insurance-based Investment Products.

²³ International Financial Reporting Standards – Insurance Contracts Standard.

managers, and one still employed there in that capacity at the time of making the decision, on account of their personal responsibility related to the insurer's Italian cross-border guarantor and surety insurance activities.

- In the insurance intermediary market, three major inspections were concluded at LIC Független Biztosítási Alkusz Kft., ERSTE Bank Hungary Zrt. and Raiffeisen Biztosításközvetítő Kft. In the case of all three insurance intermediaries, the inspection focused on whether operating activities complied with the operating licence, considering that their sales activities showed a major, almost complete, shift towards one insurer, even though LIC Független Biztosítási Alkusz Kft. works as a broker, acting on behalf of a client, while ERSTE Bank Hungary Zrt. and Raiffeisen Biztosításközvetítő Kft. work as multiple-agents, commissioned by several insurers. In the decisions terminating the targeted inspection, the companies were called on to comply with prudential operation and rectify shortcomings, and the MNB also levied a supervisory penalty of HUF 9 million and a consumer protection penalty of HUF 6 million on the broker, and a supervisory penalty of HUF 40 million and HUF 30 million and a consumer protection penalty of HUF 15 million and HUF 5 million on the two multiple-agents, respectively.

The MNB launched a thematic inspection in the second half of 2021 to assess and evaluate the changes insurers made in their claims settlement practices (including the development of the necessary records systems) to comply with Section 123/A of Act LXXXVIII of 2014 on the Business of Insurance regarding their obligation to provide information during claims settlement within the stipulated deadline.

The MNB issued a recommendation on automatic portfolio management services related to UL life insurance in June. The primary objective of the recommendation is to serve customers' interests during the development and operation of services aimed at limiting losses, timed investments and withdrawing profits, as well as during providing information to customers and in the course of insurers' internal audit connected therewith.

The Solvency II²⁴ review reached an important milestone in the third quarter, as on 22 September 2021 the European

Commission published its proposed amendment based on the opinion of the European Insurance and Occupational Pensions Authority (EIOPA). The MNB closely monitors this process and participates in commenting on the draft.

The amendment of the Insurance Act²⁵ that entered into force on 26 June 2021 regulates the claims settlement of non-life products in more detail than before. Pursuant to the law, insurers obligations include that they need to inform claimants who request a lump-sum payment in lieu of annuity payments about the present value of the principal amount of the lump-sum payment, and no lower amount can be paid in lieu of the annuity payments. The MNB published an executive circular²⁶ about this to clarify the detailed rules. The guidance went through several rounds of discussions with professional associations; therefore, it now facilitate transparent claims settlement that prioritises customers' interests. The executive circular is another element of the recent supervisory measures connected to regulating the MTPL market, supplementing the MNB's executive circular on premium calculation from September 2020²⁷ and its MTPL Index launched in 2021. The central bank's measures aim to guarantee the financial stability of the MTPL market and take into account customers' interests.

In insurer authorisation, a major event during the period was the authorisation of the acquisition of a qualifying holding in Wáberer Hungária Biztosító Zrt., as well as the authorisation of the transfer of CIG Pannónia Első Magyar Általános Biztosító Zrt.'s portfolio of Polish casco and extended guarantee insurance contracts to the Malta-based Fortegra Europe Insurance Company Ltd. Other notable events in 2021 included the authorisation of the transfer of the portfolio of NN Biztosító Zrt.'s Bulgarian branch to the Bulgarian insurer DZI–Life Insurance EAD, as well as the authorisation of certain activities related to IT services, as activities directly related to insurance activities. In the third quarter, the MNB authorised Hungarikum Biztosítási Alkusz Kft. to obtain a 100-per cent share of the two CIG insurance companies, within the framework of a public purchase offer, and the direct and indirect owners of Hungarikum Biztosítási Alkusz Kft. were allowed to obtain a share of 50 per cent.

The authorisation procedures for the portfolio transfer of Dimenzió Önkéntes Kölcsönös Biztosító Egyesület were

²⁴ Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance.

²⁵ Act LXXXVIII of 2014 on the Business of Insurance.

²⁶ <https://www.mnb.hu/letoltes/vezetoi-korlevel-a-magyar-nemzeti-bank-elvarasairol-a-nem-eletbiztositasi-jaradekok-megvaltasaval-kapcsolatosan.pdf> (in Hungarian only).

²⁷ [vezetoi-korlevel-a-kotelezo-gepjarmu-felelossegbiztositas-megfelelo-dijszabasahoz-felhasznalható-kkta-karstatisztikakrol-es-annak-az-mnb-vizsgalatok-soran-torteno.pdf](https://www.mnb.hu/letoltes/vezetoi-korlevel-a-kotelezo-gepjarmu-felelossegbiztositas-megfelelo-dijszabasahoz-felhasznalható-kkta-karstatisztikakrol-es-annak-az-mnb-vizsgalatok-soran-torteno.pdf) (in Hungarian only).

concluded, and in its decisions dated 29 September 2021 the MNB authorised the insurer's risk, mixed and unit-linked life insurance portfolios, among others, to be taken over by CIG Pannónia Életbiztosító Nyrt., and its portfolio of delayed-onset supplementary pension insurance portfolios still in the capital accumulation stage to be taken over by Pannónia Nyugdíjpénztár.

Besides the above, the MNB authorised UNION Vienna Insurance Group Biztosító Zrt. to perform activities for CIG Pannónia Első Magyar Általános Biztosító Zrt. as activities directly related to insurance activities, within the framework of the cooperation regarding the reinsurance of CIG Pannónia Első Magyar Általános Biztosító Zrt.'s travel and home insurance business, related to such products.

With respect to the insurance sector, 55 requested consumer protection procedures were terminated in 2021. During continuous supervision and the inspections, the MNB monitored information provision, in particular information provision during contracting, the content of notification letters and websites, and it also inspected complaint handling and claims settlement practices. Recurring themes in individual reports include complaints related to shortcomings in information provision regarding vehicle and property insurance services as well as UL life insurance, and the MNB treats these as a priority in both requested and ex officio inspections.

Supervision of the funds market

During the inspections carried out as part of the supervision of the funds market, the MNB continued to focus on the efficiency of internal control systems, the soundness of the business model, the appropriateness of the investment policy as well as its consistency with the actual asset composition. Other key points included checking the justification for the calculation of the TCIPf²⁸ indicator, the examination of obsolete IT systems, just like monitoring the larger risk-taking related to fund portfolios, with a particular focus on real estate investments.

In the case of funds, the MNB concluded a total of 16 prudential inspections, 2 of which assessed IT security. In its decision terminating the targeted inspection of Pannónia Nyugdíjpénztár's property management, the MNB initiated to dismiss the chairman of the management board and to

terminate the employment relationship of the managing director, who is also the chief investment manager. A total personal fine of HUF 59 million was imposed on them and 13 other current and former executives at the fund. The inspection revealed that in connection with a property development project involving apartments and offices in Budapest, one of the executives of the fund and certain stakeholders related to executives or the fund were able to purchase apartments for themselves at lower prices than the list price charged to other buyers, coupled with other discounts and a favourable payment schedule. The fund recorded the property development in the safety reserve that includes members' savings, therefore the unjustified discounts reduced the return on members' savings.

In accordance with Regulation (EU) 2019/1238 of the European Parliament and of the Council of 20 June 2019 (effective from 22 March 2022), the registration of a PEPP²⁹ and the supervision of the product's provision shall be the task of national authorities, and thus in Hungary the MNB. The MNB pointed out to the institutions potentially offering PEPP services in the future (insurers, credit institutions, investment firms, fund management companies, alternative investment fund management companies, occupational retirement institution) the survey launched by EIOPA, and as a result Hungarian institutions were the most heavily represented in it internationally.

In 2021 the MNB once again published on its website data on annual returns and 10- and 15-year average return rates offered by voluntary pension funds.³⁰ Voluntary pension funds had an average net return of 4.13 per cent, weighted by closing managed funds in 2020. Taking into account the inflation effect (2.7 per cent), this represents a real return of 1.39 per cent, so at the sector level funds managed to generate returns in excess of inflation again. On 10- and 15-year horizons, the average net return of voluntary pension funds, mainly encouraging long-term savings, weighted by closing managed funds was 6.23 and 5.91 per cent, respectively, in 2020. This means a real return of 3.87 and 2.49 per cent, respectively, for members.

On October 2021, the MNB published data on the annual average fees payable by voluntary pension fund members for 2020.³¹ In 2020, due to unchanged operating deductions and the considerably lower costs of investment, chiefly attributable to the reduction in the performance fee, the

²⁸ Pension funds' total cost indicator

²⁹ Pan-European Personal Pension Product.

³⁰ <https://www.mnb.hu/letoltes/kozvetetel-honlapra-1.pdf> (in Hungarian only).

³¹ <https://www.mnb.hu/letoltes/osszefoglalo-a-nyugdijpenztari-tagok-dijterhelese.pdf> (in Hungarian only).

average fee payable by voluntary pension fund members declined at an unprecedented rate, from 0.75 to 0.64 per cent. The funds' long-term total cost indicator, which models fund members' future costs, was 0.85 per cent. This means that the funds sector has remained cost-effective and thus competitive with other pension saving opportunities.

In January 2021, the MNB appointed a supervisory commissioner to Tempo Egészség- és Önszegélyező Pénztár, who helped rationalise the fund's operational expenditures until its already decided merger, and ensured that financial management and bookkeeping records were duly kept and that supervisory reporting was reliably provided. With the merger into Patika Önkéntes Kölcsönös Kiegészítő Egészség- és Önszegélyező Pénztár on the record date of 31 March 2021, the supervisory commissioner's mandate ended on 1 April 2021.

In the first half of 2021, the MNB withdrew the operating licence of one fund involved in dissolution (MOK Önkéntes Kölcsönös Kegyeleti Önszegélyező Pénztár 'under dissolution').

Capital market supervision

In the case of investment firms and fund managers, the MNB concluded 20 prudential inspections. These inspections produced no findings affecting a large number of institutions or suggesting a systemic problem. Among the concluded supervisory inspections, one should mention the major shortcoming concerning customer information and supervisory reporting practices, identified during the inspection of CIB Bank Zrt., for which the MNB levied a penalty of HUF 40 million.

During the prudential supervision of investment service providers, the MNB continued to pay special attention to the practices related to managing customer claims and to the availability of customer claims. Therefore during the course of continuous supervision, the MNB checked money and securities coverage on a daily basis, and requested quarterly reports from investment service providers' safeguarding officer (SGO) to monitor potential risks at the institutions. In December 2021, the MNB held its third year-end workshop for SGOs, where it shared the worst and best practices it had seen as well as its supervisory expectations vis-à-vis the sector. Depending on the business model of the different institutions, the priorities of prudential

supervision included the use of payments accepted from third parties, continuous transaction monitoring procedures (personal transactions of employees, market manipulation), remuneration practices as well as the appropriateness of the risk management procedures for leveraged transactions.

From a prudential supervision perspective, investment firms experienced a significant change in their operation due to the IFR/IFD regulation³² applicable from June 2021, which entailed revised capital and capital calculation requirements. Based on the MNB's preliminary market survey in 2021 Q1 and the disclosures for September 2021, market participants had been fundamentally prepared for applying the new capital calculation practices, and they have the own funds required for Tier 1 capital as stipulated in the regulation. However, the secondary regulatory expectations, in connection with the method for determining the capital add-on, for example, have not been published by the European Banking Authority (EBA) in final form, therefore market participants' full adjustment period and the first time when the entire own funds requirement will be determined in accordance with the IFR/IFD regulation have been postponed to 2022. In parallel with the change in the regulation, the MNB, taking into account the EBA's regulatory guidelines, also plans to review the methodology for determining the capital add-on applicable in the annual supervisory review process.

In the course of the prudential supervision of investment fund managers, the main priority was assessing investment decision-making, order management, net asset value calculation and the operation of internal safeguards.

The MNB imposed a penalty of HUF 19.2 million on Erste Alapkezelő Zrt. for the infringements related to the property funds it managed. The targeted inspection at the fund manager was primarily concerned with determining whether it had complied with legal provisions and supervisory expectations during its operation, in particular the MNB recommendation on marketing the shares of public, open-ended real estate funds. As a result of the targeted inspection, the MNB has found that Erste Alapkezelő violated the legal provisions because regarding the property funds it manages, the amount of investment fund shares in circulation exceeded the limit in the investment management rules. According to the findings, this is attributable to the fact that Erste Alapkezelő does not have control processes and procedures in place that would

³² Regulation (EU) 2019/2033 of the European Parliament and of the Council of 27 November 2019 on the Prudential Requirements of Investment Firms and Directive (EU) 2019/2034 of the European Parliament and of the Council of 27 November 2019 on the Prudential Supervision of Investment Firms.

allow it to appropriately monitor the current amount of investment fund shares in circulation or manage the buy orders received after the maximum value is reached.

The uncertainty increased by the pandemic made it a priority for investment fund management companies to manage liquidity risks. The MNB pointed out liquidity risks to the fund manager sector at several prudential discussions, and it also published a recommendation³³ on its expectations regarding investment funds' liquidity stress testing practices in April 2021. In the case of public, open-ended property funds, special emphasis was placed on analysing the composition of the real estate portfolio managed in the investment funds as well as on liquidity monitoring during continuous supervision, in view of the uncertainty generated by the coronavirus.

In 2021, the European national supervisory authorities examined the costs and fees charged during the operation of UCITS³⁴ funds, using a methodology determined jointly with the European Securities and Markets Authority (ESMA). During this common supervisory action (CSA) in 2021, the costs charged to the funds were checked using the methodology, with the participation of 20 per cent of UCITS fund managers, and with a coverage of 30 per cent of the assets managed in UCITS funds. In the course of continuous supervision, the MNB performed the CSA check of four UCITS fund managers' holdings.

Three new alternative investment fund managers (AIFMs), Herius Capital Alapkezelő Zrt., Batthyány Tőkealap-kezelő Zrt. and KBKB Kék Bolygó Klímavédelmi Befektetési Alapkezelő Zrt., owned by Kék Bolygó Klímavédelmi Alapítvány, were licensed. Authorisation for expanding AIFMs' activities was granted in four cases, concerning the management of further fund types (GLADIÁTOR Befektetési Alapkezelő Zrt., Széchenyi Alapok Kockázati Tőkealap-kezelő Zrt., AXIOM Alapkezelő Zrt., FINATECH Capital Befektetési Alapkezelő Zrt.). At the request of Erste Befektetési Zrt. as the direct owner and Erste Bank Hungary Zrt. as the indirect owner, the MNB authorised their acquisition of a qualifying holding in the investment firm Random Capital Broker Zrt. The Dutch STX Group received authorisation for obtaining a qualifying holding in Vertis Környezetvédelmi Pénzügyi Zrt.

At a request put forward based on the exception rule to the IFR/IFD regime fully applicable from 26 June 2021, the MNB allowed Erste Befektetési Zrt. and Random Capital Broker Zrt. to remain under the CRR/CRD³⁵ regime. The modification of the scope of activities was authorised in the case of one investment firm, Sinus–Fair Corporate Zrt., regarding investment advice and investment services.

Taking into account international practices, the MNB prepared a new recommendation³⁶ for the fund manager sector related to the calculation of the performance fee. The market participants concerned need to apply the recommendation from 1 August 2021 for the funds using a performance fee and established after that date. In the case of already existing funds like this, the MNB, having taken into account the ESMA's guidelines when formulating its regulation, expects that the recommendation's requirements are met from 1 January 2022. A key point in the regulation is that the performance fee calculation model has to be consistent with the fund's investment objectives, and customers need to be informed of all its important characteristics. Customers need to be clearly informed in funds' preliminary marketing materials and the Key Information Document, using examples to illustrate the calculation method behind the performance fee, the date of calculation and the past performance of the benchmark index used in the calculation.

Compliance with the investor protection requirements in the MiFID II Directive³⁷ was continuously monitored by the MNB. As part of this, it also conducted a thematic inspection concerning investment service providers' practices regarding their assessment of financial instruments' eligibility, which was concluded in August 2021. Decisions containing action against 9 service providers were issued, but no penalty was imposed. The inspection identified shortcomings related to the methodology used for the risk rating of products, the content of the suitability test, the methodology monitoring cost-benefit calculations, the too narrow interpretation of switching investments and the too general justification in suitability reports. However, the inspection also identified several best practices on the market. After the thematic inspection was concluded, the MNB pointed out the supervisory expectations regarding

³³ Recommendation 6/2021 (IV. 29.) of the Magyar Nemzeti Bank on liquidity stress testing of UCITS and AIFs.

³⁴ Undertakings for collective investment in transferable securities.

³⁵ In the European Union, the prudential rules on credit institutions are stipulated in Regulation (EU) No 575/2013 of the European Parliament and of the Council on Prudential Requirements for Credit Institutions (CRR), and in Directive 2013/36/EU on Access to the Activity of Credit Institutions and the Prudential Supervision of Credit Institutions (CRD).

³⁶ Recommendation No 11/2021 (VII. 1.) of the Magyar Nemzeti Bank on the performance fees applied by investment fund management companies: <https://www.mnb.hu/letoltes/11-2021-sikerdij-ajanlas.pdf> (in Hungarian only).

³⁷ Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

the suitability assessment as well as the best and worst practices identified in an executive circular addressed to market participants.

At the end of 2021, the MNB assessed the fulfilment of the expectations concerning the practices related to annual ex-post cost information to customers, laid down in the executive circular. It was seen that the overwhelming majority of service providers made important steps towards compliance with the supervisory expectations in the roughly six months that had passed since the circular, in terms of the deadline for information provision and the communication's detailed content and clear structure.

The wishes to continuously improve the monitoring of foreign service providers' online presence, especially those that offer leveraged investments, to identify the harmful practices detrimental to customer information. In December 2021, the MNB pointed out to consumers in a professional article³⁸ that such online advertisements may often offer a misleading impression about investments' characteristics, concealing risks and expected losses. During the course of its inspections, the MNB wishes to continue focusing on checking the appropriateness of customer information and the balanced nature of the communication with customers.

Market surveillance

In 2021, the MNB conducted 23 market surveillance procedures due to unlawful conduct, market abuse (insider trading, market manipulation) and to monitor compliance with the rules of the short selling regulation. Besides this, the MNB also performed a legal remedy procedure, in which the Financial Stability Council brought the decision.

In the spirit of proactive engagement, the MNB examined hundreds of reports about suspicion of unauthorised activities and market abuses. In order to combat unauthorised activities, the central bank seeks to develop instruments that best protect consumers' interests through amending laws. Such a proposed legal amendment allows the application of website blocking from January 2022. In 2021, the MNB also pointed out the risks of unauthorised service providers and activities on the Warnings page of its website,³⁹ in public statements as well as its presentations strengthening financial awareness.

It should be underlined that as part of the conclusion of a specific market surveillance procedure, the MNB identified unauthorised lending practices in more than 240 cases, amounting to around HUF 1.8 billion. Therefore, the MNB imposed a market surveillance fine amounting to HUF 100 million among other measures.

The other major segment of market surveillance activities comprises the combat against market abuse as defined by MAR. The MNB detects these by continuously monitoring the capital market and taking appropriate action as soon as possible after the fraudulent activities have started. Among the market surveillance procedures related to a violation of MAR, the inspection of a natural person's activities stands out, during which the MNB identified for the first time market manipulation through layering, as described in the MAR implementing regulation. According to the identified facts, the customer submitted a large volume of false bids far from the market price on one side of the order book within a given period, entering into transactions on the other side of the order book during their existence in the order book (lifetime), before cancelling this large volume of false bids. Due to these activities, the MNB imposed a market surveillance fines amounting to HUF 5 million.

Issuer supervision

In 2021 the MNB launched 3 targeted inspections and closed 1 at public securities issuers. While examining the issuers' disclosures, the MNB paid special attention to the information which can raise the suspicion of capital market abuse in accordance with the MAR.

The MNB has concentrated a significant amount of resources on educating market participants. In 2021, it offered opportunity for publicly traded securities issuers to clarify any questions related to their capital market requirements in bilateral MNB – issuer workshops and held the Professional Capital Market Day in the first half of December. During the professional event, 174 registered participants from 50 issuers listened to the presentations about the methodology related to identifying, handling, disclosing inside information and dealing with executives' transactions, which was identified by the central bank as a best practice to be followed.

³⁸ <https://www.penzcentrum.hu/megtakaritas/20211217/cfd-reklamok-es-a-valosag-a-mindenki-szamara-konnyu-befektetes-illuzioja-1120327> (in Hungarian only).

³⁹ Warnings for investors (mnb.hu).

IT supervision

The revised MNB Recommendation on the protection of information systems⁴⁰ and the MNB Recommendation on the information security requirements of teleworking and remote access⁴¹ entered into force on 1 January 2021. In connection with the implementation of these recommendations, MNB experts held several consultations, presentations and trainings at professional forums, conferences and universities, to facilitate compliance for supervised institutions.

The thematic inspection of the IT systems of account information service providers (AISPs), as defined under PSD2, was concluded in the period under review. Overall, service providers operate in line with supervisory expectations. The thematic inspection regarding electronic contracting and remote customer authentication is currently under way, during which positive experiences have been gained, but in 2021 Q3 there was a very serious finding closely related to this topic, when an institution concerned lost the electronic customer contracts stored in the cloud during an incident.

Supervisory activities related to the prevention and combating of money laundering and terrorist financing as well as the implementation of asset- and finance-related restrictive measures

The purpose of AML/CFT⁴² inspections is to identify shortcomings and vulnerabilities on the one hand, and assess the actual threat to institutions to quantify expected reputation risks on the other hand. Other important aspects include examining efficiency, and the identification and understanding of the potential sources of risk. The scope of AML/CFT inspections also includes the reason why a certain infringement or a series of offences occurred, and whether a given infringement can indicate broader shortcomings in the system or internal controls. Special attention is paid to informing the executives of supervised institutions about the AML/CFT risks identified during the inspections. In recent years, continuous supervision has become increasingly important in AML/CFT supervision, enabling supervised institutions to address the identified risks as soon as possible, and allowing the results of

continuous supervision to effectively support inspections and the review of supervisory risk assessment.

In the course of continuous supervision in 2021, the MNB examined several institutions under its supervision as to whether they complied with their statutory obligation for reporting the designated person, as defined in the Anti-money Laundering Act⁴³ and the Sanctions Act,⁴⁴ to the Hungarian National Tax and Customs Administration's Office of Central Governance and Anti-Money Laundering and Terrorist Financing (financial information unit). During the inspection, the MNB detected in several cases that the designated persons had not been reported, therefore it imposed a total supervisory penalty of HUF 8.4 million on 17 financial enterprises and 1 investment firm. As part of continuous supervision, the MNB examined in the case of one bank and one investment service provider whether they reported to the financial intelligence unit when warranted. As shortcomings were identified in both cases, a decision was taken to impose a total supervisory penalty of HUF 2.2 million.

Out of the MNB's thematic inspections concluded in 2021, the MNB identified several shortcomings at principal credit institutions and money exchange offices alike in the thematic inspection aimed at the AML reporting expected from certain money exchange offices and principal credit institutions as well as the customer due diligence tasks supporting such disclosures, and at examining the appropriateness of principal control as well as the cooperation between the credit institution and the money exchange agent. Money exchange offices, which were insufficiently controlled by their banks in this respect, failed to report several transactions that raised AML concerns, did not inquire at their customers about the source of the funds, and their screening and risk assessment practices were also deficient, therefore a supervisory penalty of HUF 108.6 million was imposed on the institutions under review.

Customer service activity

In 2021, the MNB's customer service received 24,817 enquiries and petitions in total. Based on experiences from the customer service office, in terms of distribution by sector, these mostly concerned the money market

⁴⁰ MNB Recommendation No 8/2020 (VI. 22.) on the protection of information systems.

⁴¹ Recommendation No 12/2020 (XI. 6.) of the MNB on the information security requirements of teleworking and remote access.

⁴² Anti-Money Laundering/Combating the Financing of Terrorism.

⁴³ Act LIII of 2017 on the Prevention of and Combating Money Laundering and Terrorist Financing.

⁴⁴ Act LII of 2017 on the Implementation of the Financial and Economic Sanctions, ordered by the European Union and the UN Security Council.

(around 60 per cent) and the insurance market (23 per cent). Customers mainly turned to the central bank in issues related to lending, non-life insurance as well as collection and workout.

In the financial issues related to the economic measures taken to ease the impact of the pandemic on the national economy, the MNB's customer service was contacted by customers 1,051 times in 2021. Most enquiries were related to the payment moratorium (631) and the measures aimed at restarting the economy (178).

The MNB's customer service office suspended personal administration on 8 March 2021 due to the pandemic restrictions. Retail customers could return to the MNB's Budapest customer service office to conduct their business in person from 25 May 2021, and the branches of the Financial Navigator Advisory Office Network available at county seats reopened their gates from 1 June 2021. The Financial Arbitration Board also returned to personal hearings from 31 May 2021. Customers could visit all three institutions while adhering to pandemic hygiene rules.

3.4 RESOLUTION

In 2021 the MNB, acting in its capacity as the resolution authority, fulfilled its obligations regarding resolution planning and resolvability assessment as well as the determination and review of the minimum requirement for own funds and eligible liabilities (MREL requirement) in connection with the banking groups and institutions concerned that fall under its jurisdiction in accordance with the Resolution Act amended pursuant to the legal amendments in the European Union. In addition, it continued to expand its principles on prescribing the MREL requirement (MREL policy), and published the sequence of write-downs and conversions applicable during loss absorption and recapitalisation. In an online presentation series organised under a European Union project, MNB experts assisted the Central Bank of Montenegro in its preparation for resolution tasks, and they were actively engaged in the resolution working groups of European supervisory authorities (EBA, EIOPA, ESMA) as well as the boards of the collective funds (NDIF, Resolution Fund). Furthermore, the regular annual fees payable by member institutions to the Resolution Fund were calculated, and the MNB continued to exercise its ownership rights in MSZVK Magyar Szanálási Vagyonkezelő Zrt. (MSZVK Zrt.).

Resolution planning, resolvability assessment and determination of the MREL requirement

Within the MNB's resolution responsibilities, resolution planning is a key area, which also includes the establishment of the minimum requirement for own funds and eligible liabilities (MREL requirement). During the 2021 resolution planning and the determination of the MREL requirement, the MNB had to take into account the new provisions in the regulatory package adopted by the European Parliament and the Council in June 2019 aimed at reducing the risks of the European Union's banking system, parts of which pertaining to the Resolution Directive have already been transposed into Hungarian law and most of which have been in effect since 26 December 2020, and this has resulted in a fundamental change, especially in the determination of the MREL requirement.

In view of the new regulation, the MNB, acting as the group-level resolution authority, reviewed the resolution plan and carried out the resolvability assessment procedure for the current resolution planning cycle for the banking group registered in Hungary that also carrying out a significant cross-border activity. In connection with this, it determined the MREL requirement for the consolidated group level and for the individual Hungarian subsidiaries, and joint decisions were reached about the resolution plan and the resolvability assessment as well as the MREL requirement. Furthermore, the work related to group-level resolution planning and MREL requirement determination continued in the resolution colleges led by the Single Resolution Board (SRB), acting in the capacity of the resolution authority in charge of the most important institutions and banking groups registered in the Banking Union, with the participation of the MNB. During this, the MNB, as the resolution authority responsible for the Hungarian subsidiaries of the parent companies registered in the Banking Union, developed its proposal regarding the individual MREL requirement for each Hungarian subsidiary concerned, and provided it to the SRB along with its reasoning, then joint decisions were reached to adopt the group-level resolution plans and the group-level and individual MREL requirements.

The MNB also performed its duties as the national resolution authority in all other resolution colleges not led by the SRB as the group-level resolution authority.

In the case of Hungarian institutions and non-cross-border groups, the MNB conducted resolvability assessments and determined MREL requirements for the institutions concerned. At the same time, the review started on the resolution plans of the institutions subject to simplified obligations.

Active engagement in shaping domestic and international regulation

In line with the provisions of the Resolution Act⁴⁵ transposing the amendments of the Resolution Directive⁴⁶ and taking into account Hungarian experiences and international best practices, the MNB reviewed and further detailed its principles regarding the prescription of the MREL requirement (MREL policy). The further detailed principles cover the interpretation of waiving the application of the individual MREL requirement, and the rules for meeting the individual MREL requirement partly or fully with a guarantee. In order to clarify the MNB's expectations concerning the fulfilment of the MREL requirement, the MNB has developed its sanctions policy applicable in the period when the MREL requirement is built up. In accordance with an EU regulation,⁴⁷ the MNB published on its website the sequence of write-downs and conversions to facilitate the fulfilment of institutions' MREL reporting obligations. Moreover, the MNB also participated in commenting on and propositioning the latest amendments to the relevant provisions in the Resolution Act.

The MNB's experts participate in the European Banking Authority's (EBA) working groups engaged in resolution planning and the issues related to the practical application of resolution tools. The working groups have developed a programme aimed at the convergence of Member States' resolution activities (planning and implementation) (EBA 2022 – European Resolution Examination Programme), and they will also be tasked with preparing the annual report on its implementation in the future. The MNB met its reporting requirement towards the EBA in 2021, too. The European Union regulation on the recovery and resolution framework for central counterparties directly applicable in

all Member States was published in the Official Journal of the European Union in early 2021, and in this context the MNB contributed to the work of the European Securities and Markets Authority's (ESMA) working group to prepare level 2 EU legislation.

In September 2021, the European Commission published its proposal about a directive on the recovery and resolution framework for insurers, heavily building on the concept developed by the European Insurance and Occupational Pensions Authority (EIOPA). During the discussions about the latter, the MNB's experts participated by sharing their experiences in bank resolution with the EIOPA working group.

The MNB's resolution tasks relating to institutions strengthening the financial stability safety net

The financial stability safety net is strengthened by the fact that – thanks to the annual ex ante contributions of the member institutions – the coverage level of the Resolution Fund is increasing as scheduled. Thus, by 31 December 2028 the available financial means of the Resolution Fund are to reach at least one per cent of the amount of covered deposits of all credit institutions authorised in Hungary. To achieve this, the MNB calculated the amount of the annual ex ante contributions for 2021 for all member institutions based on the methodology stipulated in the European Union regulation⁴⁸ and in accordance with the Resolution Act, then it notified the member institutions and the Resolution Fund. Furthermore, the MNB's representatives continued to actively participate in the work of the boards of the Resolution Fund and the National Deposit Insurance Fund.

The majority of the assets managed by MSZVK Magyar Szanálási Vagyonkezelő Zrt. (MSZVK Zrt.) and its subsidiaries were sold by July 2018. Based on the proposal by MSZVK Zrt.'s Board, the MNB, exercising its ownership rights, authorised the medium-term business plan of the MSZVK Group, according to which sufficient funds are available to the Group for its continued operation at least until 2026.

⁴⁵ Act XXXVII of 2014 on the Further Development of the System of Institutions Strengthening the Security of the Individual Players of the Financial Intermediary System.

⁴⁶ Directive (EU) 2019/879 of the European Parliament and of the Council of 20 May 2019 amending Directive 2014/59/EU as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms and Directive 98/26/EC.

⁴⁷ Commission Implementing Regulation (EU) 2021/763 of 23 April 2021 laying down implementing technical standards for the application of Regulation (EU) No 575/2013 of the European Parliament and of the Council and Directive 2014/59/EU of the European Parliament and of the Council with regard to the supervisory reporting and public disclosure of the minimum requirement for own funds and eligible liabilities.

⁴⁸ Commission Delegated Regulation (EU) 2015/63 of 21 October 2014 supplementing Directive 2014/59/EU of the European Parliament and of the Council with regard to ex ante contributions to resolution financing arrangements.

3.5 PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

Since the introduction of the instant payment system, the number and value of transactions has steadily increased. The development of the innovative payment solutions based on the system started in 2021, and almost 80 per cent of retail customers have access to a request-to-pay service and over 60 per cent can access QR code payments. Due to the success of instant payments' introduction, the MNB won the Central Banking Award in 2020, and, together with the Polish and the Lithuanian central banks, it participates in a European Union technical support project.

The MNB also focused on the compulsory strong customer authentication in the case of online payments initiated with a payment card, with not only inspections but also coordination and support activities. Due to its active engagement, the European Banking Authority (EBA) listed Hungary among the four best prepared countries. In addition, the MNB considers it a priority to fully comply with the open banking requirements in accordance with PSD2.

Under the KELER Service Development Program, the process and monitoring of securities settlement was renewed. Due to the turbulences in the energy market in 2021, the KELER CCP was under liquidity pressure. To reduce default risks, it steadily increased its guarantee elements.

The MNB conducted a satisfaction survey among the members directly joining VIBER, based on which VIBER members are satisfied with the services provided by the MNB.

In 2021, the central bank published 26 legal interpretations and expert opinions about payments, launched 12 payments authority inspection procedures and concluded 10.

Efficiency and security of Hungarian financial infrastructures and payments

The instant payment system remains a steadfast success

The number of transactions conducted in the instant payment system continues to grow steadily, with over 135 million transactions in 2021, of which 12.5 million were in the busiest month. 70 per cent of the transactions were completed in one second, and 96 per cent were completed in two seconds. In view of the coronavirus pandemic, instant payments were introduced at the best possible moment, and the continuously growing volume suggests that the public easily and quickly got used to the fast and innovative service during the pandemic. Using instant payments is

also safe from a pandemic perspective, as it can be used to send money and make purchases without personal contact and leaving our homes. The number of retail transactions increased considerably compared to the same period of the previous year. The number of transactions worth less than HUF 10,000 grew by 10 per cent, while the number of those worth between HUF 10,000 and HUF 20,000 was up by 5 per cent year-on-year. This suggests that the introduction of instant payments and the coronavirus pandemic channelled retail transactions formerly conducted in cash (e.g. transactions between individuals, for example relatives, sending pocket money, paying for services and bills) to the instant payment system.

The development of the innovative payment solutions built on the basic service picked up in 2021. 18 months after instant payments were launched almost 80 per cent of retail customers have access to a request-to-pay service and over 60 per cent can access QR code payments. This could increase further in both segments down the road. In order to ensure that auxiliary services offer the best customer experience and a genuine alternative in most payment situations, the MNB organised a consultation with the largest Hungarian banks. During the consultation, the MNB explored the factors that could hamper the development and widespread adoption of the services. As a result, the MNB works together with the market participants concerned to determine the steps that could facilitate the completion of the instant payment ecosystem and thus also support banks and the corporate sector in developing services based on instant payments.

The Hungarian financial infrastructure operated securely and efficiently during the pandemic

The pandemic did not allow the system operators of the Hungarian financial infrastructure to return to the office in full numbers from home office and shared branches in 2021. Similar to the previous year, the VIBER, the Interbank Clearing System, the KELER Central Securities Depository and KELER CCP managed the challenges of system operation while remote working because of the pandemic. They continued to settle and fulfil Hungarian payments and capital market transactions securely, efficiently and without major incidents and longer outages. In its oversight capacity, the MNB paid special attention to monitoring the operation, business continuity and availability of financial infrastructures.

Satisfaction survey among VIBER members

In 2021 Q3, the MNB conducted a satisfaction survey among the members directly joining VIBER. The survey assessed

members' opinion about the following topics: performance, security, customer relations, membership, liquidity management, liquidity management of connected systems, fees and notifications relating to payment orders. Based on the responses, VIBER members are satisfied with the services provided by the MNB, but they see a potential for improvement in several areas. An especially important piece of feedback was that members were fully satisfied with VIBER's processing performance and security, in other words VIBER performs its role as the critical core infrastructure of the Hungarian financial system appropriately. Average aggregate scores were given only for VIBER fees, the other topics were rated good or excellent. The members filling in the survey made several proposals for improving the efficiency of VIBER processes, and the MNB will strive to implement these.

Application of the strong customer authentication as foreseen in PSD2 and the publication of the MNB's recommendation

The MNB paid special attention to the change due to which strong customer authentication has been compulsory in the case of online payments initiated with a payment card since 1 January 2021.

Besides the inspections, the MNB played a coordinating and supportive role in preparing this major change. Thanks to this, the EBA, based on its report examining the preparedness of the EU-wide sector, ranked Hungary among the top four in the EU, both on the card issuer and the merchant acquirer side.

In 2021, the MNB prepared and published its recommendation entitled *Hampering Open Banking*, and provided professional consultation to payment service providers with the involvement of the Hungarian Banking Association. The recommendation details the MNB's expectations and the best practices about open banking.

The EBA called on national authorities, including the MNB, to take supervisory action to remove the barriers to accessing payment accounts, as defined in PSD2 and the connected subrules, and accessing APIs.

The MNB considers it a priority to fully comply with the open banking requirements provided for in SCAR and the Payment Services Act in accordance with PSD2, and it has taken several measures to this end. During the inspection of the sector in 2021, it started checking the interfaces created by account-servicing payment service providers facilitating open banking (hereinafter APIs) from a technical perspective. An independent and individual ad hoc expert was appointed to conduct the inspections, and a recommendation⁴⁹ was published against hampering third party providers using the account-servicing payment service providers' APIs. In addition, the MNB launched a consultation to facilitate the communication and operation of account-servicing payment service providers and third party providers, and this is planned to be continued as a regular event called *API Roundtable Talks*.

New MNB decrees were published in 2021, and the Hungarian oversight framework was expanded

One of the special core tasks of the MNB is the oversight of payment and securities settlement systems, which supports and strengthens financial stability. The sphere of service providers and members concerned with payments and securities transactions has many players, and the systems are interconnected. The clearing and settlement process has directly affected players (for example clearing house, settlement bank, participant) and those providing the necessary background for this (for example communication service providers, software providers). Among service providers, key players include system operators, who provide clearing and settlement services to system participants.

The MNB needs effective tools to be able to meet its continuous oversight obligations. The oversight work mainly focuses on prevention and is of an advisory nature, but the available tools also include binding regulations, in the form of MNB decrees. While reviewing MNB decrees previously in force, major amendments became necessary, therefore the MNB issued new laws⁵⁰ in the third quarter to comply with codification rules.

The amendment was warranted by several factors, the most important of which is that according to the PFMI,⁵¹

⁴⁹ Recommendation No 10/2021 (VII. 1.) of the Magyar Nemzeti Bank.

⁵⁰ MNB Decree No 33/2021 (IX. 15.) on the detailed rules regarding the operation of the payment system and MNB Decree No 34/2021 (IX. 15.) on the requirements pertaining to the operating rules and certain regulations of the organisations operating the payment system (before the 2021 amendment: MNB Decree 34/2009 (XII. 28.) on the material, technical, security and business continuity requirements for operation of the payment system, MNB Decree No 35/2009 (XII. 28.) on the material, technical, security and business continuity requirements relating to the operation of the payment system).

⁵¹ BIS CPSS-IOSCO, Principles for Financial Market Infrastructures April, 2012.

the comprehensive oversight assessments conducted by the MNB in recent years and those that are still in progress as well as the ongoing risk-based payment system monitoring delineated the core requirements that made it necessary for the MNB to use stricter legal tools to enforce compliance with its expectations.

Cyber risks represent a growing threat in the financial infrastructure, which can ultimately jeopardise financial stability and economic growth. This threat continues to grow, one only needs to take into account the mutual dependence of the operators and the participants in the increasingly complex system of financial markets. That is why the MNB considered it important to appropriately address cyber risks, therefore as part of its previously mentioned oversight activities and consistent with the ECB's CROE,⁵² it transposed the related principles (CROE) to the Hungarian oversight framework. The MNB supplemented its framework with the eight principles of the CROE, and it uses them to assesses and inspect the Hungarian systems subject to oversight.

Due to the major technological innovation in payments and the processing of the disclosures for 2018 and 2019, the MNB decided to change the mode of reporting. The aim was to develop a reporting framework that facilitates, and in the case of many financial service providers even develops, risk consciousness in terms of payment services. Reporting P69 MNB is based on MNB Recommendation No 26/2018 (VIII. 16.) previously issued in the topic.

G20 roadmap for enhancing cross-border payments

In September 2021, the MNB participated in the meeting of the regional consultative body of the Financial Stability Board (FSB), the international organisation concerned with the stability of the global financial system. Meeting participants discussed the quantitative objectives of the G20 roadmap for enhancing cross-border payments as well as how the achievement of the objective will be monitored. The objectives seek to ensure the following for cross-border interbank transfers, retail and corporate transfers and remittances: low cost, fast processing, broad availability and transparency. The FSB typically wishes to fulfil the global objectives by end-2027. The MNB is committed to enhancing transfers, therefore it monitors the FSB's relevant activities and participates in the experts' work.

Securities settlement system in 2021

Energy market turbulences and their impact on KELER CCP

In 2021, especially in the second half of the year, energy markets experienced steadily rising prices, which has impacted players trading in the market as well as the institutions in charge of the post-trade processes, for example KELER CCP. The price hike is attributable to fundamental reasons such as the buoyant economic growth caused by the post-Covid recovery, the preparation for winter weather, lower gas levels in European storage tanks, lower-than-usual gas transports from Russia to Europe and Asia's growing LNG demand. KELER CCP clears and guarantees Hungarian gas markets as a central counterparty, and, as a general clearing member of ECC,⁵³ it offers access to European gas and electricity markets. As a result, the gradually climbing prices entailed continuously growing risks and exposures, which necessitated greater individual and collective collateral in the guarantee system. Market participants and market infrastructures experienced heightened liquidity pressure, and the operation of an appropriate liquidity framework became crucial, while the option for fast borrowing became very important. KELER CCP continuously expanded all of its guarantee elements to make itself more resilient in the event of a default, as energy market turbulences put energy trading companies using KELER CCP's services at great risk.

Modification of the gas market guarantee system at KELER CCP

KELER CCP initiated at the European Securities and Markets Authority (ESMA) on 7 May 2021 the modification of its gas market default fund regarding the spot gas market, accordingly a validation procedure in accordance with Article 49 of EMIR⁵⁴ became necessary. The ESMA's Board of Supervisors discussed and adopted the report on the changes on 16 December 2021, assessing the initiated modifications as progressive and in accordance with the EMIR stipulations. KELER CCP's Supervisory College voted on the methodological changes regarding the gas market, and the college members with a mandate unanimously adopted the changes to the gas market methodology, according to which KELER CCP can introduce them in its day-to-day practices. Following the introduction of the changes, the rules on collateral calculation are tightened, a new stress

⁵² Cyber Resilience Oversight Expectations.

⁵³ European Commodity Clearing.

⁵⁴ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories. KELER CCP has an operating licence pursuant to the EMIR.

testing method is applied, the calculation of the necessary size of the default fund and the determination of the default fund contribution is modified, and the trading limit system is tightened.

Operation of the College of KELER CCP in 2021

In 2021, KELER CCP's annual supervisory college meeting was held as foreseen in EMIR. The College comprising international supervisory authorities and the ESMA held its meeting on 20 October, in online form due to the pandemic. In the first phase of the meeting, the supervisory and oversight activities of the MNB in 2021, the results of the comprehensive supervisory inspection concluded in 2021, the appropriateness of KELER CCP's risk management and IT operations as well as the supervisory and oversight tasks planned for 2022 were presented and discussed in detail. Then the joint work with the College during the year was summarised. In the second phase of the meeting, the most important events in the life of KELER CCP regarding the previous year were described, such as the planned compliance with the upcoming regulatory changes, the recovery and resolution framework, the framework intended to improve settlement discipline, and the most important strategic objectives and plans of KELER CCP for the future. During the meeting, College members assessed the MNB's supervisory and oversight activities as well as the operation of KELER CCP in accordance with EMIR requirements as adequate.

Launch of KELER CSD's new core depository system

KELER CSD, under the majority ownership of the MNB, went live with its new core depository system on 6 December 2021. The software that had been launched was part of the closure of the so-called KELER Service Development Program (KSDP)'s first phase, which renewed the process of securities settlement, the method of the monitoring of securities settlement and the management of primary depository data and reports, and it also helped to improve Hungary's compliance with the depository standards stipulated by the European Union. The go-live

date of 6 December 2021 was followed by another launch on 31 December 2021, when the process of calculating depository fees was overhauled. The second phase of the KSDP will end when the module for penalty mechanism ensuring compliance with the EU's regulation on settlement discipline (SDR, created to improve settlement discipline/efficiency) starts to operate, which would mark the end of putting the main functions of the KSDP into operation.

The establishment of the recovery and resolution framework of central counterparties

The so-called R&R Regulation⁵⁵ on the establishment of the recovery and resolution framework of central counterparties came into force on 11 February 2021. The regulation gave a mandate to the ESMA to develop further regulatory technical standards⁵⁶ and guidelines on recovery and resolution of central counterparties. The ESMA involved national competent authorities in this work through their participation in working groups and committees. After formulating the main concept, the ESMA held a public consultation with stakeholders on the detailed rules and guidelines of recovery,⁵⁷ which ended on 14 September 2021. Along the comments received during the public consultation, the regulatory drafts were once again revised and all the relevant regulatory technical standards and guidelines were submitted to the ESMA BoS⁵⁸ for decision at the end of January 2022. Work is ongoing regarding the resolution mandates as well; the stakeholders could add their input to the public consultation⁵⁹ until 24 January 2022.

Legal interpretations and inspections

In 2021, the central bank issued 26 legal interpretations and expert opinions about payments based on queries from credit institutions, other economic entities and natural persons, mainly concerning the interpretation of certain stipulations in the MNB's Payments Decree and the Payments Act. In addition, the MNB published its CBPR FAQ page on its website, and updated it once, facilitating the interpretation of the European Union regulation on cross-border payments.

⁵⁵ Regulation (EU) 2021/23 of the European Parliament and of the Council of 16 December 2020 on a framework for the recovery and resolution of central counterparties and amending Regulations (EU) No 1095/2010, (EU) No 648/2012, (EU) No 600/2014, (EU) No 806/2014 and (EU) 2015/2365 and Directives 2002/47/EC, 2004/25/EC, 2007/36/EC, 2014/59/EU and (EU) 2017/1132.

⁵⁶ Regulatory technical standards.

⁵⁷ ESMA public consultation on the recovery of central counterparties: <https://www.esma.europa.eu/press-news/esma-news/esma-launches-public-consultations-ccp-recovery-regime>.

⁵⁸ Board of Supervisors.

⁵⁹ ESMA public consultation on the resolution of central counterparties: <https://www.esma.europa.eu/press-news/esma-news/esma-launches-public-consultations-ccp-resolution-regime>.

In 2021, the MNB launched 12 administrative inspections regarding payments, conducting 9 at credit institutions, 2 at EEA credit institution branches (hereinafter branches) and 1 at so-called third party payment providers. Based on the topic of inspection, they can be classified into three groups. At 4 credit institutions, 1 branch and the third party payment provider, the subject of inspection was a general inspection as published on the MNB's website, whereas at 4 credit institutions the MNB had a narrower scope and used an external expert to examine the adequacy of the interface enabling the access of third party providers. Furthermore, the MNB also launched a procedure at 1 credit institution and 1 branch based on information obtained in the course of continuous supervision during the year, inspecting adherence to three rules in the MNB's Payments Decree, pertaining specifically to such payments.

In 2021, 10 administrative inspections concerning payments were concluded, of which 6 were conducted at credit institutions, 1 at a branch, and 3 at third party payment institutions. In the procedures concluded during the year, penalties totalling HUF 35.5 million were imposed on 4 credit institutions for infringements identified in the MNB's administrative procedures related to payments. The impact of procedures continuing into the next year is shown by the fact that decisions will be made in 2022 in the case of 8 of the inspection procedures launched in the year under review, whereas 6 of the completed inspection procedures started in 2020.

In 2021, the MNB continued to develop the technical conditions for conducting checks outside on-site inspections. In March 2020, as the instant payment system was launched, the option for continuously monitoring instant payment orders became available with the P57 disclosure, however, the information only covered the events in Giro Zrt.'s clearing system. Therefore in 2021 the Reporting Decree called for a new, weekly disclosure (P76), in which the MNB requests information from payment service providers on the instant clearing of incoming and outgoing transactions. Examining the information is expected to help the MNB considerably improve the efficiency of payment inspections, because this allows the conditions of sending and receiving to be examined, along with the information received from Giro Zrt. Banks need to send reports on this from April 2022.

Presentations, conferences and analyses

The article on the effects of the regulation of interchange fees in Hungary ('The impact of policy effects on the Hungarian payments card market') was published in the March issue of *The Journal of Banking Regulation*. 'A magyarországi kiskereskedők és vállalatok fizetési szokásainak elemzése' (The Analysis of retailer and corporate payment habits in Hungary) appeared in Volume 20 Issue 2 of the *Hitelintézési Szemle (Financial and Economic Review)*. An MNB professional article was drafted under the title 'A koronavírus-járvány hatása a magyarországi pénzforgalomra 2020-ban' (The impact of the coronavirus pandemic on Hungary's payment turnover in 2020).

Staff from the European Commission requested an expert discussion with the MNB to obtain information on the Hungarian instant payment model and the implementation of, and the experiences with, the system. This was because a key element in the Commission's package of proposals on digital finance issued in September 2020 was the promotion of the continued adoption of instant payments in euro, by stipulating a requirement to introduce the SCT Inst. (SEPA Instant Credit Transfer) service on the receiver side where necessary. In order to more accurately define the main avenues to be followed, the experiences from the internationally unparalleled Hungarian model can be of major help to the European Commission.

The PSD2 brought about several significant changes, therefore the MNB considered it especially important in 2021 to contribute to knowledge transfer as a presenter at professional conferences and lectures relating to this topic, and to clarify the enforcement approach and aspects related to the rules. These included, to name but a few, the position of new players in payments and the hampering of their services, the errors in account-servicing institutions' interfaces, the strong customer authentication of online payments and their exception rules, the renewal of disclosures and the change in the trends in payment fraud. The MNB discussed the same topics in the relevant working groups of the Hungarian Banking Association with players in the sector several times.

One of the priorities of the MNB is examining people's payment habits and the share of the different payment

methods as well as why one is chosen over the other, and the results were reported by the MNB in a study⁶⁰ and a four-part series of articles⁶¹ in 2021.

3.6 MANAGING INTERNATIONAL RESERVES

The MNB's international reserves increased by around EUR 4.7 billion in 2021, with holdings at the end of December 2021 amounting to EUR 38.4 billion. The level of foreign exchange reserves was raised by the Government Debt Management Agency's (ÁKK) foreign currency bond issuances, the SDR allocation by the IMF, inflows of EU transfers from the European Commission and the rise in deposits placed by domestic financial institutions. At the same time, disbursements by the state to repay debt, foreign exchange expenditures of the Hungarian State Treasury (MÁK) and the change in the central bank's forint liquidity providing FX swap holdings mitigated the increase. For financing the euro liquidity providing swap tenders over year-end, the MNB used its framework agreements concluded with international organisations.

Purposes of holding reserves

Similarly to other central banks, one of the key tasks of the MNB – as specified in the MNB Act – is to manage the country's foreign exchange reserves. The MNB holds foreign exchange reserves for the purpose of fulfilling several functions:

- to ensure the level of reserves expected by market participants ('international collateral'),
- to support the monetary and exchange rate policy (providing intervention capacity),
- to provide foreign currency liquidity for the banking sector,
- and to meet the state's transaction-related foreign currency needs.

In terms of transaction goals, servicing the management of government debt continued to be the most important

objective in 2021. In addition, in this context mention should be made of the continuous provision of foreign currency to cover the needs of budgetary institutions. The transfers received from the European Union also flow through the MNB, and as in previous years, they boosted the foreign exchange reserves. The aforementioned transaction goals were satisfied smoothly in 2021 as well.

The MNB regularly reviews the desirable level of reserves and, if necessary, takes measures – within the permitted limits – to reach the adequate level. Throughout 2021, international reserves of the MNB exceeded the reserve indicators followed by the central bank and investors as well. Of these indicators, the MNB pays special attention to the Guidotti–Greenspan rule, on the basis of which the reserves considerably exceed the level of short-term external debt.

Reserve size

The level of Hungary's international reserves rose by nearly EUR 4.7 billion in 2021 and amounted to EUR 38.4 billion at the end of the year.

New foreign currency bonds issued by the state had the largest reserve increasing impact. In September, the ÁKK issued 7-year government securities with a face value of EUR 1 billion, and 10- and 30-year government papers with a face value of USD 2 billion and USD 2.25 billion, respectively, followed by a 3-year green bond with a face value of RMB 1 billion in December.

The IMF's allocation of approximately SDR 1.9 billion (equivalent to around EUR 2.2 billion) in August resulted in a massive increase.

The EU transfers received from the European Commission in a net amount of EUR 3.6 billion and an increase of EUR 217 million in deposits placed by domestic financial institutions also contributed to the growth in the reserves, and so did the revaluation of FX assets other than the euro and of the euro-denominated price of gold by around EUR 900 million.

These items were partly offset by the ÁKK's debt repayment items (including the maturing of bonds with a face value

⁶⁰ OP 143. Vivien Deák, István Nemeckó and Tamás Végső, 'Payment Habits of the Hungarian Households in 2020' (mnb.hu).

⁶¹ A bankszámla-lefedettség már nem akadályozza az elektronikus fizetés terjedését (Bank account coverage no longer hinders the adoption of electronic payments) (vg.hu) (in Hungarian only) .

Már a lakosság 80 százaléka veszi igénybe az elektronikus fizetési lehetőségeket (80 per cent of people already use electronic payment options) (vg.hu) (in Hungarian only) .

Az életkortól, a végzettségtől, a foglalkoztatottsági státuszunktól és a jövedelmünktől is függ az, hogy mivel fizetünk. De mennyire befolyásolja vajon? (The method of payment depends on age, educational attainment, employment status and income. But to what extent?) (vg.hu) (in Hungarian only) .

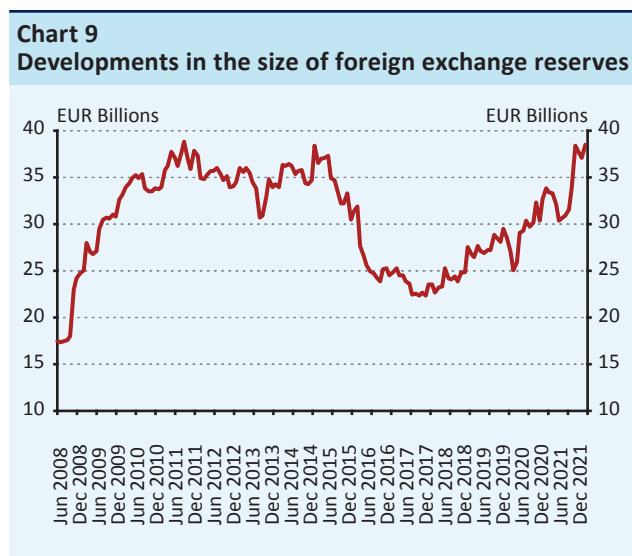
A lakosság fele szívesebben fizet(ne) elektronikusan (Half of the population (would) like to pay electronically) (vg.hu) (in Hungarian only) .

of JPY 30 billion and of bonds with a maturity value of USD 1.5 billion in March, the maturing of the residency bonds in June, the maturing of PEMÁP and residency bonds in September, the maturing of residency bonds and Panda bonds with a face value of RMB 2 billion in December) and the Hungarian State Treasury's FX spending.

The increase in reserves was further tempered by the change in the central bank's forint liquidity providing FX swap holdings, totalling EUR 3.1 billion.

For financing the euro liquidity providing swap tenders over year-end, the MNB used its framework agreements concluded with international organisations. The difference between the value of the swap transactions provided to the banking system and the repo transactions used for their financing had a temporary effect on reserve levels.

The MNB's gold reserves were increased from 31.5 tonnes to 94.5 tonnes in 2021 Q1. This makes Hungary 37th in the world and 3rd in the CEE region.⁶²



Financial performance and risks of foreign exchange reserves

In carrying out its core tasks as stipulated in the MNB Act and especially in the management of the country's international reserves, the MNB inevitably faces financial risks. The basic principle followed by the central bank is that the degree of the assumed risks should be aligned with the objectives of the core activity, the size of the risks should be known, and risk assumption should be conscious and limited, in accordance with the institution's risk-taking capacity. In the course of foreign exchange reserve

management, the threefold objective of liquidity, security and yield must be satisfied, meaning that the MNB strives to achieve the highest possible yield level while continuously keeping the risks at a pre-defined low level and maintaining the necessary liquidity.

As is the case with the other core duties of the central bank, the Monetary Council of the MNB is the supreme decision-making body in respect of foreign exchange reserve management: it defines the objectives and requirements related to the foreign exchange reserves such as the level and liquidity of the reserves, decides on the currency used for optimisation, the risk strategy and the most important quantitative strategic parameters of reserve investment. The operative decision-making powers are exercised and the foreign exchange reserve management strategy is implemented by the Executive Board of the MNB, within the framework stipulated by the Monetary Council. The Executive Board approves the limit system serving as a framework for risk taking: the permitted maximum deviation of the reserve portfolios from the benchmarks, the counterparty limits and the range of investment instruments permitted in the field of reserve management.

The benchmark system and the limit system comprise the two main pillars of reserve management. Independent performance measurement is an important element of the risk-taking policy. In order to measure the success of portfolio management, the performance of each reserve portfolio is compared against the performance of a reference (benchmark) portfolio. The benchmark portfolios show the yield that would have been earned by a passively managed portfolio representing a wide market segment with the same investment parameters. The performance of foreign exchange reserve management activity is presented in comparison to these benchmark portfolios. The benchmarks reflecting the risk-return preference of the MNB and serving the performance measurement of the portfolios are maintained, independently of portfolio management, by the risk management unit.

The most important risk categories related to foreign exchange reserve management comprise market risk, liquidity risk and credit risk (settlement risk and counterparty risk). The MNB controls the possible degree of financial risks related to foreign exchange reserve management with limits. In accordance with the conservative reserve portfolio management characteristics of central banks, the MNB applies a strict limit system, which considers market and other indicators, in addition to the expected high level of credit ratings. In the course of

⁶² See: Central Bank Gold (www.centralbankgold.org), Reserve statistics.

reserve management, the MNB also considers the foreign currency liquidity requirement of the monetary policy instruments.

In the course of foreign exchange reserve management, the MNB applies a variety of risk-minimising techniques to ensure that the assumed risks correspond to the MNB's risk tolerance. In the case of derivative instruments, the MNB concluded ISDA⁶³ and related CSA⁶⁴ agreements with its counterparties, which keep the credit risk exposure potentially arising in respect of the counterparty at a low level through the margin arrangement. In the case of the repo transactions regulated by the GMRAs,⁶⁵ the prescribed margin also assists in limiting the risks. In the case of foreign exchange transactions, in accordance with the international best practices the MNB settles its transactions in the CLS system, thereby minimising its settlement risks.

In 2020, central banks clearly shifted towards easing on account of the coronavirus crisis, but this trend was reversed in the second half of 2021. As vaccination levels improved, the number of restrictions was reduced and economies restarted, central banks started to focus on growing inflation. In 2021, the Federal Reserve (FED) kept its policy target band unchanged at 0–0.25 per cent, continued its asset purchases under its announced liquidity programmes during the year, although it reduced the rate of asset purchases in several steps from November, which is expected to be followed by a rise in the policy rate in 2022. The ECB took more moderate measures in easing: the policy rate did not change, and no raise is expected in the coming years. The ECB decided to terminate the pandemic emergency purchase programme (PEPP) in March 2022, while temporarily boosting the asset purchase programme (APP).

As a result of market developments, a major rise in yields was observed in many of the markets relevant in terms of reserve management in 2021. The yield curve became steeper in the euro area: in the short segment there was a minor fall or stagnation, while at longer maturities yields increased by 30–40 basis points, standing in negative territory at all relevant tenors at year-end. The yields on US government securities increased by 60–90 basis points at longer maturities, and the curve became steeper. The yields on AUD and GBP, along with CEE yields, which are all relevant from the perspective of reserve management, increased significantly in 2021, the only fall in yields was seen in the Chinese market.

Gold price was mainly influenced in 2021 by the development of the coronavirus crisis (success of vaccination campaigns, appearance of new mutants of the virus), central bank measures (especially those of the Fed), the globally increasing inflationary pressure, the development of bond yields and the change in the USD exchange rate. The exchange rate of gold against the USD was volatile, and while it climbed to a local peak in May, at the end of the year it fell short of its level a year earlier. With respect to the EUR/USD exchange rate continuous appreciation of the US dollar was observed in 2021 (from 1.23 to 1.14).

The MNB remained prepared in 2021 to continue to manage the intense uncertainty caused by the pandemic. The level of FX reserves significantly exceeded the relevant reference values. In addition, the MNB has previously created an international safety net consisting of bilateral swap and repo agreements, representing additional FX liquidity (foreign exchange liquidity may be increased by more than EUR 10 billion within a short time) and expanding the leeway of the central bank, while maintaining the safe level of international reserves, reducing external and internal vulnerabilities.

- Repo agreements with the ECB and the Bank for International Settlements (BIS),
- Access to the repo facility announced by the Federal Reserve,
- Currency swap agreement concluded with the People's Bank of China (PBoC).

Continuously monitoring the processes that represent a risk for the reserve level, the MNB – similarly to most central banks – regularly revises the reserve investment framework. In keeping with the reserve holding objectives and bearing in mind the conservative investment framework, the MNB made one significant change in foreign reserves in 2021. By the end of March 2021, continuing its gold reserve increases which had started in 2018, it tripled the country's gold reserves from 31.5 tonnes to 94.5 tonnes. The decision was attributable to long-term national and economic strategy objectives. The heightening risks amidst the coronavirus pandemic, such as the global rise in government debt and the growing inflationary pressure continue to strengthen gold's role as a safe-haven asset, along with its value retaining function and strategic importance for the nation.

⁶³ International Swaps and Derivatives Association.

⁶⁴ Credit Support Annex.

⁶⁵ Global Master Repurchase Agreement.

Gold is an instrument free from credit and counterparty risk, therefore it helps bolster confidence in the country by others.

In 2021, the MNB essentially managed foreign exchange reserves in 8 currencies (EUR, USD, JPY, GBP, AUD, RMB, PLN, CZK), in a variety of portfolios. The MNB assumes exchange rate exposure essentially in euro: it hedges the other currency/euro cross rate risks via derivative instruments. The holding of foreign currency instruments denominated in currencies other than euro is justified by the higher diversification and, in the case of the US dollar, the higher liquidity available. Altogether, the MNB actively manages eight portfolios in euro, US dollar, British pound, renminbi and Australian dollar. The MNB manages the Japanese yen, the Czech koruna and the Polish zloty portfolios, containing government securities only, as indexed portfolios strictly following the benchmark. Since the end of 2012 – in the form of a mandate given to an external asset manager and custodian – US agency mortgage backed securities (MBS) have also formed part of the MNB's investment strategy. Similar to previous years, the strategic average duration (target duration) of the reserve portfolios was around 1 year, while the duration of green bond and MBS exposures was the highest during the year, at 4–5 years. The liquidity allocated for the attainment of the monetary policy objectives was continuously available during the year, and credit risk events that would have had an adverse effect on the MNB were avoided.

The euro risk-free portfolio represents the backbone of the foreign exchange reserves and may only include highly-rated government securities, state-guaranteed securities and the issues of (supranational) international institutions. Highly-rated corporate and bank issues, and covered securities may be purchased for the second largest, euro investment portfolio, and for the investment portfolios in general; this portfolio typically includes government securities only for the purpose of adjusting the maturity structure. After the euro exposure, the combined share of the US dollar portfolios represent the most substantial item in the reserves, where – along with the investment portfolio – the considerable proportion of the agency MBS exposure deserves special mention.

The creation of the green bond portfolio containing green investments which was launched in 2019 within the framework of the MNB's Green Programme to facilitate the achievement of its related social responsibility and environmental strategy objectives was completed in 2020.

In 2021, the MNB continued to take steps to understand climate risks and take into account considerations related to them in reserve management. In 2022, The MNB was one of first central banks to publish the TCFD report⁶⁶ presenting the institution's climate exposure, which includes an analysis of the reserve holdings' climate risks. By publishing the report, the MNB wishes to set an example for banks, and it aims to publish it every year, while continuously enhancing it.

The MNB achieved a return of 0.67 per cent on the gold and foreign exchange reserves in 2021. Expressed in euro and adjusted for the cost of funds due to hedging for euro, bond portfolios' 64-basis point performance generated a loss of 96 basis points during the year, which was lifted by 29 basis points by the gold position. Denominated in their own currency, the performance of bond portfolios exceeded the benchmark by 7 basis points.

In respect of the future performance of the foreign exchange reserves, the risk persists that the performance of the reserve portfolios could be negative because yields on highly rated assets are at lows and could move as a result of a yield increase, which undermines the reserve performance over the short run due to the revaluation loss arising from the depreciation of bonds in positions. On the other hand, due to the short duration of the reserves, a yield rise has a positive medium-term impact on the results, as the maturing reserve components can be reinvested at higher yields. Besides being a safe-haven asset, gold has a volatile price, which can significantly influence reserve values in the short run.

3.7 CASH LOGISTICS ACTIVITY

On 31 December 2021, the total value of currency in circulation amounted to HUF 7,675.2 billion, representing an increase of 7.1 per cent, or HUF 510.9 billion, compared to the end of the previous year. Cash outflows from the central bank were significantly lower in most of 2021, especially in Q2 and Q3, than in the same periods of earlier years, and as a result the annual month-on-month growth rate of the currency in circulation fell to 6.6 per cent in October, the lowest value since 2017. By contrast, November was characterised by an outstanding demand for banknotes, mainly attributable to the lump-sum payment of pension premiums, therefore Hungarian cash holdings continue to be characterised by a decelerating expansion in the longer run. The latest waves of the coronavirus pandemic did not have any discernible effect on the demand for banknotes or coins.

⁶⁶ Task Force on Climate-related Financial Disclosures

In 2021, the MNB managed cash turnover for its clients, i.e. credit institutions and the Hungarian Post, in the total amount of HUF 3,124 billion; within that it distributed 223.4 million banknotes to its clients, while 187 million banknotes were delivered to the central bank.

In line with previous years' trends, the degree of the counterfeiting of forint banknotes has remained low, and the number of counterfeit forint notes removed from circulation was only 195 in 2021. In 2021, the number of counterfeit banknotes per one million genuine banknotes in circulation was 0.3, an extremely favourable value by international standards.

The MNB Decree No 7/2021 (II. 25.) on replicas of forint and euro coins entered into force on 1 April 2021. The regulation was mainly amended to determine the requirements for creating replicas of commemorative circulation coins.

Continuing the traditions of collector coin issuance, the MNB had an exceptionally rich collector coin programme in 2021: 33 collector coins were issued in 19 topics, of which 2 were gold coins, 12 were silver coins and 19 were non-ferrous metal collector coins (of which 6 coins had an independent theme, and 13 coins were issued as the non-ferrous metal versions of precious metal coins).

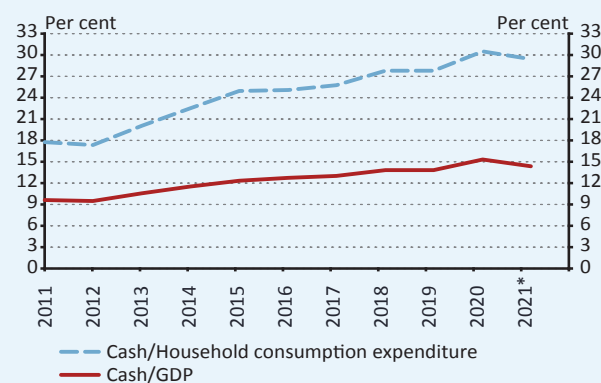
In addition, the central bank also put into circulation an exceptionally large number of commemorative circulation coins: of the circulation coins, 12 million 5-forint coins and 2 million 50-forint coins were issued in a new version.

Currency in circulation

On 31 December 2021, the total value of currency in circulation amounted to HUF 7,675.2 billion,⁶⁷ representing an increase of 7.1 per cent, or HUF 510.9 billion in nominal terms, compared to the end of the previous year. Cash outflows from the central bank were significantly lower in most of 2021, especially in Q2 and Q3, than in the same periods of earlier years, and as a result the annual month-on-month growth rate of the currency in circulation fell to 6.6 per cent in October, the lowest value since 2017. By contrast, November was characterised by an outstanding

demand for banknotes, mainly attributable to the lump-sum payment of pension premiums, therefore Hungarian cash holdings continue to be characterised by a decelerating expansion in the longer run. The latest waves of the coronavirus pandemic did not have any discernible effect on the demand for banknotes or coins.

Chart 10
Currency in circulation as a percentage of the annual Hungarian GDP and household consumption expenditure



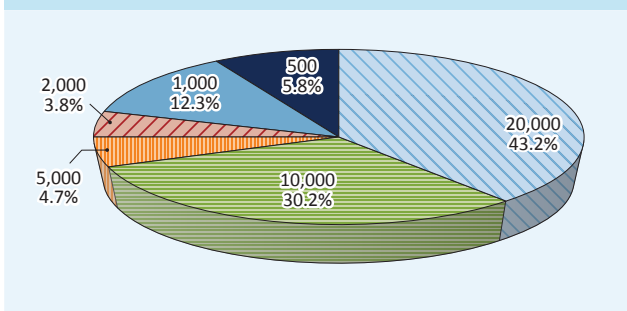
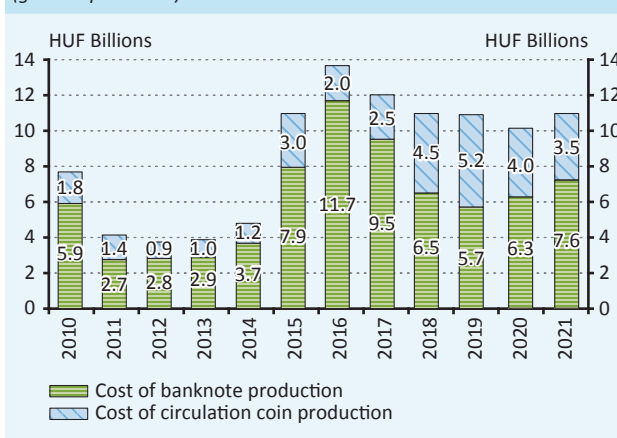
*The 2021 GDP figure and the household consumption expenditure data are MNB estimates.

The change in the amount of currency in circulation varies by denomination. The 20,000-forint note continues to account for the largest share in turnover; its expansion of 8 per cent in 2021 was still considerable. The volume of 10,000-forint notes increased to a lesser degree, by 5 per cent. It is also worth noting that the volume of 1,000-forint notes grew dynamically by 8 per cent. Compared to end-2020, the volume of 500-forint notes in circulation rose 6 per cent. By contrast, the stock of 2,000-forint and 5,000-forint notes declined slightly (by 1 per cent).

The two largest banknote denominations still play a dominant role in cash turnover: at the end of 2021 they jointly accounted for 73 per cent of the volume and 96 per cent of the value of all banknotes in circulation.

Compared to the end of previous year, the volume of forint coins in circulation expanded by 5 per cent on average.

⁶⁷ The value includes holdings of collector coins and commemorative banknotes issued by the central bank, which, as legal tender, form part of the means of payment in circulation at face value, but in accordance with their role, do not participate actively in cash payments. It does not include, however, the value of withdrawn banknotes that are still convertible, which is recorded in the central bank's balance sheet as a liability.

Chart 11
Breakdown of banknotes in circulation by quantity at the end of 2021

Chart 12
Banknote and circulation coin manufacturing (gross expenditure)


Banknote and coin production

In order to meet the increasing cash demand and replace worn out and, for this reason, destroyed, banknotes and coins, the central bank commissions the production of banknotes and coins.

The MNB's expenditures related to cash production amounted to a gross sum of HUF 11.1 billion in 2021, which was HUF 0.8 billion more than in the previous year.

Distribution of cash

In 2021, the MNB managed cash turnover for its clients: credit institutions and the Hungarian Post, in the total amount of HUF 3,124 billion; within that it distributed 223.4 million banknotes to its clients, while 187 million banknotes returned to the central bank.

Table 5
Banknotes and coins in circulation⁶⁸

(figures as at 31 December 2021 and 31 December 2020)

Banknotes	2021				2020			
	Volume	Value	Ratio (per cent)		Volume	Value	Ratio (per cent)	
	Million pieces	Billion HUF	Volume	Value	Million pieces	Billion HUF	Volume	Value
20,000 forint	270.0	5,400.5	43.2	71.3	249.4	4,988.0	42.4	70.5
10,000 forint	188.6	1,886.5	30.2	24.9	179.8	1,797.6	30.6	25.4
5,000 forint	29.6	147.8	4.7	2.0	29.9	149.4	5.1	2.1
2,000 forint	23.9	47.9	3.8	0.6	24.2	48.5	4.1	0.7
1,000 forint	77.0	77.0	12.3	1.0	71.4	71.4	12.1	1.0
500 forint	35.3	17.7	5.8	0.2	33.5	16.8	5.7	0.3
Total	624.5	7,577.3	100.0	100.0	588.2	7,071.5	100.0	100.0
Coins	Volume	Value	Ratio (per cent)		Volume	Value	Ratio (per cent)	
	Million pieces	Billion HUF	Volume	Value	Million pieces	Billion HUF	Volume	Value
	Million pieces	Billion HUF	Volume	Value	Million pieces	Billion HUF	Volume	Value
200 forint	177.7	35.5	8.0	41.7	171.0	34.2	8.1	41.9
100 forint	224.2	22.4	10.1	26.3	214.5	21.5	10.2	26.3
50 forint	219.0	10.9	9.9	12.8	209.2	10.5	9.9	12.8
20 forint	407.5	8.2	18.3	9.6	384.6	7.7	18.2	9.4
10 forint	452.1	4.5	20.3	5.3	430.4	4.3	20.4	5.3
5 forint	741.2	3.7	33.4	4.3	701.2	3.5	33.2	4.3
Total	2,221.9	85.3	100.0	100.0	2,111.0	81.6	100.0	100.0

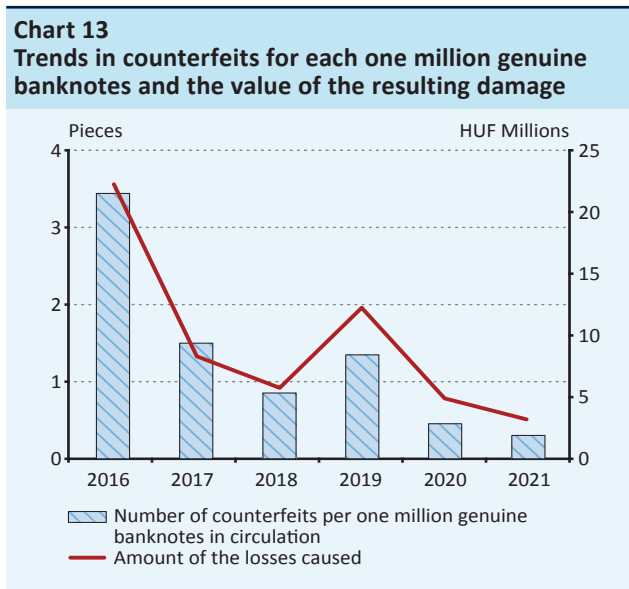
⁶⁸ The table does not include holdings of collector coins and commemorative banknotes issued by the central bank.

In the past year, the MNB removed from circulation 57 million end-of-life banknotes, and replaced them with new, high quality means of payment. Removal mainly affected the smaller denominations, which have a transactional function.

Prevention and reduction of counterfeiting

In line with previous years' trends, the degree of the counterfeiting of forint banknotes has remained low, and the number of counterfeit forint notes removed from circulation was only 195 in 2021.

In 2021, the number of counterfeit banknotes per one million genuine banknotes in circulation was 0.3, an extremely favourable value by international standards.



Due to the pandemic restrictions, the free banknote awareness trainings provided by the MNB were limited in number (17 sessions with 400 participants) in 2021.

As in previous years, the counterfeiting of higher denominations (mainly the 10,000-forint and 20,000-forint banknotes) remained most typical in 2021, accounting for 97 per cent of counterfeit forint notes.

Table 6
Denomination breakdown of forint banknote counterfeits discovered in 2021

Denominations	500	1,000	2,000	5,000	10,000	20,000
Breakdown (per cent)	0	1	0	2	31	66

No significant change occurred in counterfeiting methods, which are still characterised by the use of office reproduction equipment (colour copy machines, printers). Persons familiar

with the features of authentic banknotes can detect the counterfeits using simple checks (touching, holding up to light or moving) or in a cashier's office environment using combined checks with UV-A and UV-C light.

The experts of the central bank identified 10,109 various currency counterfeits in 2021. Within that, the number of counterfeit euro banknotes was 9,875. The increase that took place in the number of euro banknotes withdrawn from circulation is attributable to four incidents, and thus examining the domestic cash circulation as a whole, it is still true that the occurrence of counterfeit currencies is insignificant.

Withdrawn old banknotes can be exchanged despite the banknote replacement

Withdrawn forint banknotes do not lose their value for a long time, because they can be exchanged for legal tender, of the same denomination, in the MNB's retail cash office for twenty years following the withdrawal deadline.

On 31 October 2021, the deadline for exchanging the old 1,000-forint banknotes, issued before 2017, for free at banks and post offices expired. 9.5 million old 1,000-forint banknotes did not circulate back to the central bank until 31 December 2021.

Changing rules on replica coins

The MNB Decree No 7/2021 (II. 25.) on replicas of forint and euro coins (New Replica Coin Decree) entered into force on 1 April 2021. The regulation was mainly amended to determine the requirements for creating replicas of commemorative circulation coins and for supplementing the restrictions on the parameters of replicas of circulation coins, in view of the commemorative circulation coins issued in recent years and the issuance of the 100-forint coin made from a new material. Pursuant to the new regulation, for 20 years from the issuance of collector coins and commemorative circulation coins, replicas of such collector coins and commemorative circulation coins may only be made with the permission of the MNB.

Executive circular letter on operating ATMs, handling customer complaints about ATMs and closing and restricting the operation of bank cashier's offices

In view of the growing number of customer complaints in the procedures of the Financial Arbitration Board, the MNB conducted a survey across the credit institution sector in the first quarter of 2021 about cash withdrawal, the operation

of cash payment machines, customer complaints regarding the payment transactions with machines and complaint handling practices. The results of the survey showed that the developments in customer complaints were related to the recent changes in the network of machines, in other words the appearance and widespread adoption of the advanced machines (which not only offer cash withdrawals but also new services, such as accepting cash payments and a choice of denomination). In view of this, the MNB issued an executive circular letter on 8 September 2021, aimed at facilitating the uniform interpretation of the legal provisions pertaining to the operation of the machines, customer information, handling customer complaints related to payment transactions and clearing payment transactions, and at establishing the MNB's expectations concerning the preparation and implementation of measures for closing bank cashier's offices or limiting their operation.

Cash distribution administrative inspections

In 2021, the MNB inspected compliance with the provisions of the MNB Act pertaining to cash issuance⁶⁹, of the Banknote Decree⁷⁰ and of the MNB decrees on the central bank data reporting⁷¹ at 10 credit institutions, 1 cash processing provider and 1 payment institution. At two other cash processing providers, the on-site stage of the inspection procedure launched in 2020 was conducted in 2021 due to the coronavirus pandemic, and the procedures were terminated with a decision in the absence of any identified infringements.

In 2021, the MNB launched seven inspection procedures against six credit institutions and one cash processing provider, of which three were concluded in 2021 and four in 2022.

Out of the three procedures launched and closed in 2021, measures were taken in two cases, including warning letters containing calls for the organisation of training and full compliance in the future with the laws. In one case, in the absence of any identified infringements, the MNB terminated the inspection procedure with a decision prescribing no action to be taken. During the course of continuous supervision, another five institutions, four credit institutions and one payment institution, were examined, regarding the revised list of the network elements that are considered critical infrastructure from a cash distribution perspective.

Out of the inspection procedure launched in 2020 and terminated in 2021, the MNB called on the inspected institutions to rectify the unlawful situation in two cases, and, in the absence of any identified infringements, the inspection procedures were concluded with a decision to take no action in two further cases.

In the course of the administrative inspections, the MNB detected the violation of certain rules pertaining to the operation of banknote handling machines, the handling of incomplete or damaged forint banknotes, and the exchange of damaged forint banknotes that are difficult to identify.

Issuance of collector coins and commemorative circulation coins

Pursuant to the MNB Act, the central bank has the exclusive right to issue banknotes and coins, also including commemorative banknotes and collector coins, which are also legal tender of Hungary. The MNB issues collector coins with the aim of commemorating Hungary's major historic, cultural and scientific anniversaries significant for society as a whole, and passing these on to succeeding generations in a lasting form, and to celebrate contemporary events and honour national heroes.

In 2021, the MNB's collector coin issuance programme was particularly rich: 33 collector coins were issued by the central bank in 19 topics, of which 2 were gold coins, 12 were silver coins and 19 were non-ferrous metal collector coins (of which 6 coins had an independent theme, and 13 coins were issued as the non-ferrous metal versions of precious metal coins). The central bank launched two successful series in 2021: the coin series adorned with Hungarian kings from the Árpád dynasty, the starting piece of which was issued in gold, silver and non-ferrous metal version, too, as well as the non-ferrous metal series showcasing major items from the Hungarian Folk Tales animated series.

In 2021, the MNB also issued an exceptionally high number off commemorative circulation coins. 2 million pieces each were put into circulation from the six versions of the 5-forint commemorative coin, each bearing one letter of the word 'FORINT' to commemorate the 75th anniversary of the forint's introduction. Marking the 52nd International Eucharistic Congress, 2 million 50-forint commemorative circulation coins were issued.

⁶⁹ Subtitle 16 of the MNB Act.

⁷⁰ MNB Decree No. 19/2019 (V. 13.) on the processing and distribution of banknotes and on technical tasks relating to the protection of banknotes against counterfeiting.

⁷¹ The provisions of MNB Decree No 37/2019 (XI. 19.) on the obligations to report data to the central bank's information system primarily to enable the Magyar Nemzeti Bank to carry out its basic duties, in force during the periods under review, and MNB Decree No 41/2020 (XI. 18.) concerning the P50, P23 and P26 MNB disclosures.

Table 7 The MNB's 2021 collector coin issuance programme*		Specification									
Theme of coin	Material	Weight g/pc	Diameter / size mm	Edge	Finish	Face value HUF	Issued quantity pc	Date of issuance			
Stephen I of Hungary	Au .999	31.104 (1 ounce)	34	smooth with inscription	PP	500,000	500	11 January 2021			
	Ag .999	31.104 (1 ounce)									
	CuZn10	23.40									
Millennium Underground Railway	CuNi	27	39.60*26.40	smooth	coated (metallic)	3,000	5,000	3 May 2021			
UEFA EURO 2020	Ag .925	31.46	38.61	milled	PP	10,000	5,000	15 May 2021			
	CuNi	30.80									
Hungarian presidency in the Council of Europe, 2021	CuNiZn	16	34	milled with inscription	proof-like	2,000	7,000	18 May 2021			
Games of the XXXII Olympiad and the XVI Paralympic Games	Ag .925	24	37	milled	PP	10,000	5,000	4 June 2021			
	CuNi	23.7									
Independent prosecution service	Ag .925	31.46	38.61	milled with inscription	PP	10,000	5,000	9 June 2021			
750 years of Győr	CuNi	30.80	38.61	milled with inscription	BU	2,000	5,000	10 June 2021			
	CuNiZn	9.40									
Ópusztaszer Heritage Park	CuNiZn	18.40	37	milled	bronze coated	2,000	10,000	20 June 2021			
	CuNiZn	16									
Sky-high tree	CuNiZn	16	34	milled	proof-like	2,000	15,000	12 August 2021			
52nd International Eucharistic Congress	Ag .925	31.46	38.61	milled	PP	10,000	5,000	1 September 2021			
	CuNi	30.80									
Móric Benyovszky	Ag .925	31.46	38.40	milled	PP	10,000	10,000	20 September 2021			
	CuNi	30.80									
'One With Nature' World of Hunting and Nature Exhibition	Ag .925	32.50	38.40	smooth	with gold-coated inlay	15,000	5,000	21 September 2021			
	CuNi	30.80									
Hungarian gazehound	CuNiZn	16	34	milled	proof-like	2,000	15,000	4 October 2021			
György Cziffra	Ag .925	12.50	30	milled	PP	7,500	4,000	22 October 2021			
	CuNi	12.50									
University of Szeged	Ag .925	31.46	38.61	milled	PP	10,000	5,000	12 November 2021			
	CuNi	30.80									
10th anniversary of the Fundamental Law	Ag .925	24	37	milled	PP	10,000	5,000	16 November 2021			
	CuNi	23.70									
Saint Elizabeth of Hungary	Au .986	6.982	22	smooth	PP	100,000	2,000	19 November 2021			
	CuNiZn	4.20									
János Pilszky	Ag .925	31.46	38.61	milled	PP	10,000	4,000	26 November 2021			
	CuNi	30.80									
Sopron, the Most Loyal Town	Ag .925	31.46	38.61*38.61	smooth	PP	15,000	5,000	14 December 2021			
	CuNi	38.50									

*Marking colours:

gold

silver

non-ferrous metal

3.8 STATISTICAL SERVICES

In 2021, the renewal and expansion of the MNB's statistical publications continued. The press release on credit institutions' aggregated balance sheet and on household and non-financial corporation interest rates as well as the publication including the statistical balance sheet of insurers was overhauled. The consolidated balance sheet data of large public (government- or local government-owned) enterprises was started to be published. Also in the corporate data segment, the information presenting the changes in subscribed capital at non-financial corporations were published. Regular publications now include a statement about the interest income of the sectors of national economy. A publication showcasing the balance sheet data of non-profit institutions serving households came out, statistical reporting on foreign currency transactions began, and a publication presenting daily data about securities issued in Hungary and owned by non-residents appeared.

The comprehensive quality control of the central bank credit register containing individual-level credit data (HITREG) continued in 2021. From the reference period of September 2021, a certain group of financial enterprises, along with credit institutions, was included among HITREG reporting entities, thereby enabling group-level analysis. The sectoral coverage of HITREG reporting was also expanded, and now the reporting contains the loan transactions from all sectors, with the exception of interbank loans. It also includes the data mentioned in the ESRB recommendation on monitoring real estate financing.

In 2021, new tasks emerged when the common prudential rules of credit institutions in the EU (CRR2) were amended, and the uniform supervisory reporting requirements have substantially changed from the second quarter of 2021. Modified and new data collections were implemented in the MNB's systems, and a new reporting framework was introduced for investment firms from 2021 Q3 to support their new prudential regulation.

For the purpose of fulfilling its duties as specified in the MNB Act, the MNB collects statistical information and publishes the statistics thus compiled for the analysis of financial developments, the preparation of monetary policy decisions, oversight of the operation of the payment and settlement systems to ensure the smooth execution of

payments with a view to supporting the stability of the financial system, and for the performance of micro and macroprudential supervisory activities.

The MNB publishes statistical information, analyses and time series on its website for the public, in accordance with the release calendar for statistics. In relation to the individual statistical areas, the MNB also issues methodological and thematic publications.

In 2021, the MNB issued six decrees related to reporting for 2022. One of these primarily contains reporting required for the fulfilment of the MNB's basic tasks,⁷² supplemented by four MNB decrees requiring reporting primarily necessary for the fulfilment of supervisory tasks,⁷³ and an MNB decree amending the HITREG reporting due to new data requirements, effective from 1 April 2022.⁷⁴ In 2021, the effective MNB decrees related to data reporting were amended on four occasions during the year, due to the changes in the international and Hungarian legislative environment.

Credit register data collection

From the reference period of September 2021, a certain group of financial enterprises, together with credit institutions, was included among HITREG reporting entities, thereby enabling group-level analysis. The sectoral coverage of HITREG reporting, starting from a reference period of December 2019, was also expanded in accordance with MNB Decree No. 46/2020 (XI. 20.), also from the reference period of September 2021, so now the reporting contains the loan transactions from all sectors, with the exception of interbank loans. It also includes, besides several minor changes, the data mentioned in the ESRB recommendation on monitoring real estate financing.

In addition to the increasingly active use of the HITREG reporting containing over 400 data fields, the comprehensive quality control exercise related to HITREG data carried out together with functional areas using the reported data continued. In cooperation with the sector and the MNB's functional areas, the assessment of replacing aggregate credit reporting with HITREG data got under way, and MNB Decree No. (59/2021) (XI. 24.) expanding the HITREG disclosures with a few additional data requirements based on the needs of the professional areas, amending it from the second quarter of 2022, was issued at the end of 2021.

⁷² MNB Decree No 54/2021 (XI. 23.).

⁷³ MNB Decrees No 55/2021. (XI. 23.), 56/2021. (XI. 24.), 57/2021. (XI. 24.), and 58/2021. (XI. 24.).

⁷⁴ MNB Decree No 59/2021 (XI. 24.).

Supervisory statistics

In 2021, new tasks emerged when the common prudential rules of credit institutions in the EU (CRR2) were amended, and the uniform supervisory reporting requirements changed substantially from the second quarter of 2021. Modified and new data collections were implemented in the MNB's systems, and a new reporting framework was introduced for investment firms from 2021 Q3 to support their new prudential regulation.

After the transition at the end of 2020, the prudential supervisory reports provided by credit institutions and investment firms were accepted and processed in the renewed IT system environment, so during 2021 the focus was on stabilising the joint operation of the new systems (KARITER, Taxonomy Manager, FER) and improving the efficiency of workflows.

The publications based on mostly quarterly supervisory reporting appeared on the MNB's website in the expected quality and by the stipulated publication deadlines during the year, and the semi-annual time series and report related to pension funds' was made interactive.

Regarding the insurance sector, the active international work concerning the review of the Solvency II rules continued. The parallel work on the review of the implementing technical standard on reporting published by the EIOPA was practically completed in 2021 thanks to the active professional contribution of the statistical function, and it is expected to be fully concluded in the first half of 2022.

Moreover, the preparatory work requiring coordination across areas of expertise continued in relation to the pan-European Personal Pension Product (PEPP) to be distributed from 2022 onwards, and the MNB Decrees on data reporting were amended in order to comply with directives on PEPP supervisory reporting.

Improving the quality of capital market reporting has been a priority in recent years, and thanks to the ongoing joint work of ESMA and national authorities the scope and frequency of data quality tests were increased. Furthermore, several new disclosures falling under the purview of ESMA were introduced in 2021, enriching the wealth of data available to the MNB.

Changes in MNB statistical publications

In 2021, the renewal and expansion of the monetary statistical publications continued. The press release on credit institutions' aggregated balance sheet and household and non-financial corporation interest rates for January was published with a new structure and in an interactive form in early March 2021. The publication containing insurance corporations' statistical balance sheet was also renewed, and its interactive version was first published in February 2021, with data from 2020 Q4.

The regular disclosures of financial account statistics were expanded with several new sets of data in 2021. The publication of aggregated balance sheet data of large public (government- or local government-owned) enterprises began, supplementing the annual financial accounts of public enterprises. Also in the corporate data segment, the information presenting the changes in subscribed capital at non-financial corporations were published. Regular publications now include a statement about the interest income of the national economy, showing the interest received or paid on various financial instruments in debtor and lender sectors. The publication presenting the balance sheet data of non-profit institutions serving households, showing assets and liabilities by type of institution. The statistical disclosure on foreign currency transactions were also started, presenting, in a monthly breakdown, the transactions of credit institutions and currency exchange offices in euros and dollars.

With respect to securities statistics, a publication showcasing daily data on the Hungarian-issued securities owned by non-residents appeared, showing non-resident holdings by type of securities, and also transactions in the case of listed shares.

The MNB updated and expanded the model estimating probability of default for SMEs that was created in 2016.⁷⁵ Besides recalibrating the model using the latest data, the calculation was included in the MNB's live data warehouse on an SQL basis; new sets of data were included (Opten ownership information, NTCA VAT returns); and the MNB also used an advanced machine learning method, sgboost to ensure more accurate estimates and a better understanding of correlations. Based on the analysis, a publication intended for general use was prepared, and it was published in the MNB Occasional Papers series.

⁷⁵ See Banai et al 2016, MNB Occasional Papers 123.

Cooperation with the Hungarian Central Statistical Office

In cooperation with the HCSO, projects were started to coordinate revision policies and harmonise the definitions of economic sectors to improve the consistency of balance of payments, financial accounts and national accounts data.

The implementation of the third wave of the household wealth survey (*Household Finance and Consumption Survey, What do we live from?*), coordinated by the ECB and carried out in Hungary with the cooperation of the HCSO and the MNB, continued. The survey data was edited and imputed in 2021.

International data supply, international cooperation

As follows from its status, the expectations arising from international cooperation and its membership obligations, the MNB regularly supplies data and information to the ECB, the Statistical Office of the European Communities (Eurostat), the European supervisory authorities (EBA, EIOPA), the BIS, the IMF, the World Bank and the Organisation for Economic Co-operation and Development (OECD).

With a view to complying with the international recommendations and requirements and monitoring the changes therein, the MNB regularly participates in international forums related to the central bank's statistical activity and plays an active role in the work of the international working groups dealing with methodological developments and current statistical issues.

In 2021, the review of the international methodological standards continued, in particular the revision of the national accounts handbook (SNA handbook), the balance of payments manual (BPM) and the reference book of foreign direct investments (FDI). The MNB actively participated in the work of various international working groups engaged in the review, and in commenting on the working documents sent by the IMF and the ECB.

Data quality, administrative inspections

In 2021, the MNB checked compliance with the reporting requirements stipulated in the MNB's reporting decrees, i.e. timely fulfilment and adequate data quality, during continuous supervision on the one hand, and in the course of off-site targeted inspections on the other hand. In 2021, based on the continuous supervision, the MNB imposed 45 penalties (totalling HUF 24.5 million) on 44 reporting entities for failure to meet the reporting requirements or for

delays, in addition to the warnings and the 49 resolutions imposing measures and notices.

Out of the 3 targeted inspections launched in 2021, 1 inspection was concluded during the year with a decision requiring action, and 2 will be terminated in 2022.

3.9 THE MNB'S ACTIVITY IN THE AREA OF SOCIAL RESPONSIBILITY

Based on the social responsibility strategy announced in harmony with the fundamental values and vision set out in its Statutes, the MNB considers serving the public good and providing support for the implementation of value creating objectives of the society as a whole without jeopardising the fulfilment of its basic tasks as its mission. The main elements of the strategy are the enhancement of financial literacy, the renewal and enhancement of the system of education (primarily higher education), the training of economists and financial training, supporting scientific activity, the preservation and protection of national cultural values as well as contributions to charitable initiatives. The 2021 achievements in the central bank's social responsibility activity contributed significantly to meeting these strategic objectives.

Higher education programmes and cooperation

As part of implementing the MNB's corporate social responsibility strategy, the MNB has announced, for the sixth time, the MNB Scholarship of Excellence for students of economics participating in bachelor and master programmes relevant to the central bank's activity, for the 2021/2022 academic year. In the academic year in question, 554 students at 24 Hungarian higher education institutions were granted this scholarship.

In 2021, the MNB renewed its cooperation with its priority university partners, the Budapest University of Technology and Economics (BME) and the University of Debrecen for the 2021/2022 academic year. Within the framework of the cooperation with BME, the joint research project successfully continued in two large professional workshops (the Digitalisation, Artificial Intelligence and Data Era Workshop as well as the Green Finance and Green Economy Workshop) with the involvement of instructors from BME and experts from the MNB. In the course of the cooperation with the University of Debrecen, besides the two courses already introduced, two new were launched, and seven research projects were completed. Regular academic competitions for the students of the partner universities were also announced.

The cooperation between the MNB and the Corvinus University of Budapest was ended in 2021, but the strategic cooperation agreement signed with John von Neumann University (NJE) in 2014 was expanded by the two parties, and in addition to the dual partnership, the MNB Knowledge Centre was established at the NJE's Budapest campus (and three centres were built as part of that: Sustainable Finance Centre; Economic Geography, Urban Marketing and Geopolitics Centre; Eurasia Centre).

The transformation of the MNB's higher education cooperation with institutions other than the priority partners into a Horizontal Programme has been successfully completed under the 'University network for sustainable development'.

The MNB is actively involved in the 'Opening up to the East' policy announced by the government of Hungary, and in strengthening these efforts Chinese groups of researchers and priority actors were supported by the MNB in Hungary. Under this scheme, the cooperation between the 'Modern Far East Research Group' operating at the Pázmány Péter Catholic University and the MNB continued in 2021.

The primary objective of the operation of the Oriental Business and Innovation Center (OBIC) founded by the MNB and the Budapest Business School is to support the training of young professionals (economists, international relations experts) who speak Eastern Asian languages and know the culture and economy of Eastern Asian countries and regions, within the framework of the Horizontal Programme from autumn 2021.

With the professional participation of the MNB, as an incentive for the continuing education of the Tiszorff sub-region the 'Tiszorff Scholarship' has been announced each year since 2015 to support students in higher education. Under the title 'Tiszorff Further Education Scholarship', in 2017 the programme was extended to the support of the studies of secondary school students. In the spring semester of the 2020/2021 academic year 46 university students (including 5 PhD students) and 26 secondary school students won scholarships, while in the autumn semester of the 2021/2022 academic year 56 university students (including 4 PhD students) and 29 secondary school students won scholarships.

Financial education for the public

In order to improve the financial awareness of the adult population, and consistent with the MNB's financial stability and financial consumer protection objectives, the

MNB developed its complex information system called *Financial Navigator*, which is aimed at providing credible and accessible information to wide sections of society through various channels about typical financial decisions as well as the aspects and risks to be considered while taking informed financial decisions.

The Financial Navigator website presents the features of various financial services and products, emphasising the importance of gathering information and comparing products and service providers in hundreds of articles. Monitoring legislative changes and market developments, the MNB regularly updates and expands the content. Well-informed decisions as well as comparisons of products and service providers are assisted by the product search features and calculators available free-of-charge, including nationwide branch and ATM search, bank account selector, credit calculator, deposit calculator, household budget calculator, loan and lease selector, deposit selector applications, etc. A large portion of the contents is easy to use, can be tailored to individual needs and is available on a mobile application as well that can be run on both iOS and Android systems. The *Financial Navigator mobile application* helps to find information with the latest news and exchange rate data, the embedded versions of online search engines and calculators, a customer service appointment reservation function and a financial dictionary.

The 40-part series of thematic booklets is available for those who gather information from printed publications. The free *Financial Navigator Papers* are available at the MNB's customer service, the customer service offices of financial service providers as well as from cooperating civil society organisations. The Papers renewed in 2021 have reached a large segments the public through the branches of more than 100 partners (mainly financial service providers and the Hungarian Post Office), and they are available 24/7 online, at the Financial Navigator page of the MNB's website.

In order to enhance the public's financial awareness, the MNB operates the Financial Navigator Advisory Office Network (FNAON), with offices in all county seats. The offices are operated by civil society organisations, which are independent of financial institutions and service providers. The advisers give unbiased, professional and free financial advice for consumers in person, on the phone as well as electronically and by post. The objective of the advisory service, which is under the MNB's continuous professional control and support, is to allow consumers to request an independent expert opinion before their financial decisions as well as to receive assistance in drafting and submitting

official documents, applications and complaint letters⁷⁶. The FNAON advisers addressed more than 20,000 cases in 2021, and around two-thirds of the queries concerned financial services. Consumers mostly reached out to the offices to enquire about Certified Consumer-Friendly products, the payment moratorium and enforcement.

In the second half of 2021, the MNB launched a massive campaign to popularise the services of the Financial Navigator Advisory Office Network available free of charge to financial customers. Thanks to the campaign, which mainly used modern digital channels (website banners, social media, Google Ads) the general public was faced with information making everyday finances easier more than 20 million times.

In the spirit of edutainment, the MNB published financial educational questions on the web and mobile application platform of a popular Hungarian online strategic quiz in 2021 as well, reaching hundreds of thousands of users. The data show that the number of respondents selecting the correct answer to recurring questions increases considerably as the game progresses.

In connection with the MNB's Green Programme and sustainability objectives, an important goal was to stimulate potential demand for green financial products among households. Therefore the central bank launched its new, awareness-raising programme called *Family Green Finance (FGF)*, which seeks to expand financial literacy and shape consumers' awareness among adults by presenting how the conscious management of finances can serve the environment and sustainable development. The *Family Green Finance* programme began as a new menu item on the Financial Navigator site, with an ecological footprint calculator and diverse, continuously expanding content providing practical help. Since its launch, there have been more than 23,000 individual visits to the site hosting the programme. Since February 2021, the content of the *Family Green Finance* programme appears on the MNB's Facebook page regularly, several times a week. To pave the way for enhancing the *Family Green Finance* programme and understand the needs of the target group in more detail, a quantitative, representative public survey was conducted with 1,000 participants in the summer of 2021, which has clearly shown that there is a link between households' environmental consciousness and the way they relate to finance.

Hungarian Money Museum and Visitor Centre

By establishing the Money Museum, one of the priorities of the central bank is to make the improvement of financial literacy available to all strata of society, children and adults alike. The Hungarian Money Museum and Visitor Centre, which is an outstanding experience in Europe from a technological and a museological perspective, opened on Széll Kálmán tér, Budapest on 15 March 2022. The established innovative spatial experience presents the world of financial processes interactively, using spectacular simulations and games, offering a unique opportunity for fun and education to all ages.

Sponsoring

In addition, within the constraints of available resources, the MNB participated, under strategic agreements or via ad-hoc grants, in value creation, the preservation of national values, intellectual and cultural heritage (e.g. Pannonhalma Archabbey Non-Profit Foundation, Liszt Ferenc Chamber Orchestra) and supported scientific activities and financial literacy (e.g. Hungarian Economic Association, Blue Planet Climate Protection Foundation), in 2021. It contributed to improving the quality of life and equal opportunities of disadvantaged groups and to alleviating the difficulties arising from extraordinary life situations, which were often related to the Covid pandemic, with charitable grants (e.g. Hungarian Charity Service of the Order of Malta, Hungarian Reformed Church Aid Foundation).

Preservation and protection of national cultural treasures

Emulating international examples and practices, the MNB considers it important to engage in responsible preservation activities in all areas of culture. In this spirit, it views supporting contemporary arts as a key objective. The MNB aims to allow the public to familiarise themselves with the works of major contemporary Hungarian artists, therefore it has created a collection showcasing the cross section of contemporary fine arts in Hungary, supplemented with an online catalogue prepared in 2021. The expansion of the collection is based on the recommendations of renowned art historians, with the involvement of galleries focusing on contemporary Hungarian artists, to bequeath to future generations a representative collection of the works of contemporary Hungarian culture.

⁷⁶ In order to prevent and reduce the risks of the coronavirus, from 30 November 2020 until 31 May 2021 the MNB suspended personal advising in the Financial Navigator Advisory Offices as well as the organisation of external counselling events. After restrictions were eased, offices started gradually reopening on 1 June 2021, while complying with the relevant safety precautions. In the interim period, the advisers received queries exclusively by phone, electronically or by post.

3.10 THE MNB'S ENVIRONMENTAL SUSTAINABILITY ACTIVITY

Within the framework of its Green Programme launched in 2019, the central bank took further steps in the years that followed to reduce the risks associated with climate change and other environmental problems and to expand green financial services in Hungary. In 2021, the MNB has been active in all three pillars of the Green Programme, i.e. in activities targeting 1) the financial sector, 2) the development of its own social and international relations, and 3) the further 'greening' of its operational activities.

The MNB wishes to remain committed to supporting the transition of the entire economy to an environmentally friendly path, without jeopardising price stability. This is facilitated by the fact that in the summer of 2021 the Parliament conferred a green mandate on the central bank, creating an even stronger legal basis than before for sustainability considerations to be increasingly heavily represented in the MNB's activities, without prejudice to its primary objectives.⁷⁷

In 2021, the MNB's Green Programme won in one of the categories at the Sustainable Future Prize awards announced by the Business Council for Sustainable Development in Hungary. The MNB organised its international green finance conference as part of the Planet Budapest Sustainability Expo and World Summit.

In connection with its operational activities, the MNB has developed an environment protection strategy for the period 2020-2022 to continue reducing its own ecological footprint. To further green its own operations, it has decided to make ambitious carbon footprint reductions, while since 2021, it has been fully offsetting its carbon dioxide emissions with a habitat restoration project. In 2021, besides the implementation of the strategy, an important task was to adopt the processes necessary for environmentally conscious operation during the preparation for, and the realisation of, the move into the new buildings.

The MNB's Green Programme

The MNB wishes to remain committed to supporting the transition of the entire economy to an environmentally

friendly path, without jeopardising price stability. This is facilitated by the fact that in the summer of 2021 Parliament conferred a green mandate on the central bank, creating an even stronger legal basis than before for sustainability considerations to be increasingly heavily represented in the MNB's activities, without prejudice to its primary objectives.

The MNB is committed to enhancing the Hungarian financing environment. In order to prioritise green financing, the MNB has introduced several initiatives through its Green Programme, out of which the first results of the Green Corporate Preferential Capital Requirement Programme, launched in December 2020, can already be seen. The aim of the preferential capital requirement is to increase the share of green industries in the balance sheet of Hungarian credit institutions, compared to the 'brown' customers who are more exposed to the risks of the transition to a sustainable economy. That is how the MNB wishes to mitigate Hungarian financial institutions' climate exposure and thus also make financial products greener. The programme was joined by twelve banks until the end of 2021. Between its launch and the end of 2021, sum of HUF 294 billion were provided through green bond purchases and disbursing renewable energy loans. In view of the growing market demand, the programme was expanded, so since September 2021 the allowance can be requested for electromobility, sustainable agriculture development, sustainable food industry and beekeeping as well as other green investments.

The central bank first announced a green housing loan programme promoting sustainability, which can provide home creation loans to tens of thousands of families at a favourable rate for building or purchasing their home in the period ahead.

Besides the green corporate preferential capital requirement, the MNB makes further efforts to improve the resilience of the Hungarian financial system to climate change and identify environmental risks. In the context of the latter, the MNB has developed a long-term climate stress test.⁷⁸ The *Green Recommendation*⁷⁹ published in 2021 expects Hungarian credit institutions to assess and analyse their financial risks arising from climate change. Credit institutions submitted their self-assessment in connection with the *Green Recommendation* as well as their roadmap for eliminating shortcomings until September 30.

⁷⁷ According to the Section 3 (2) of the MNB Act: 'Without prejudice to its primary objective, the MNB shall support the maintenance of the stability of the system of financial intermediation, the enhancement of its resilience, its sustainable contribution to economic growth; furthermore, the MNB shall support the government's economic policy and its policy related to environmental sustainability, using instruments at its disposal.' According to the paragraph (f) of the Section 170 (3) of the MNB Act: '(3) The MNB's revenues from fines may be used for[...] f) 6% promoting and supporting the environmental objectives in order to mitigate the effects of the MNB's activities on the environment.'

⁷⁸ The results of the MNB's long-term climate stress test.

⁷⁹ 5-2021-zold-ajanlas-2.pdf (mnb.hu).

In addition, the MNB sent an executive circular⁸⁰ to prudentially supervised institutions to inform them about the supervisory position and expectations regarding the regulation on sustainability-related disclosures in the financial services sector (SFDR⁸¹), applicable from 10 March 2021, to improve the predictability of enforcement and facilitate uniform application. The MNB plans to compile institutions' disclosures for information and awareness-raising purposes, rather than during an inspection procedure.

In 2021, the MNB's Green Programme won one of the categories at the *Sustainable Future Prize* awards announced by the Business Council for Sustainable Development in Hungary. The jury of the organisation decided to grant the prestigious prize to the MNB due to the programme's innovative, internationally unique solutions that promote sustainable financing.

The European Bank for Reconstruction and Development (EBRD), the MNB and Deloitte as advisory firm, organised a joint online conference on 20 October 2021 called Sustainable Capital Markets. At the event, the lectures and discussions focused, among other things, on the future green investments that are vital for the achievement of Hungary's climate protection and sustainability goals.

An interactive online tool⁸² developed by the World Wide Fund for Nature (WWF) went live in October 2021, enabling the comparison of financial regulatory and supervisory authorities and central banks in terms of how they integrate climate considerations, and more broadly environmental and social aspects in practice. This tool assessed the financial regulatory environment of 37 countries, including Hungary, and the European Union, in three sustainability categories: climate, environmental and social considerations. Although no itemised ranking was published with the assessment, it is an important piece of international feedback that based on the assessment of supervisory performance along climate considerations, the MNB's sustainability activities and its measures connected to climate-related financial risks in microprudential supervision put it among the top performers out of the 37 institutions from around the world. Regarding monetary policy, the assessment welcomes the fact that the MNB's practices clearly include climate and environmental considerations. All in all, the WWF assessment paints a very positive picture about the Hungarian central bank's sustainability activities. The MNB

welcomes the fact, and considers it an environmentally friendly step, that during the year the first Hungarian credit institution joined the UN Environment Programme Principles for Responsible Banking (Principles) initiative, of which the MNB is an official sponsor. The document has been signed by 250 credit institutions around the world, including the parent banks of several Hungarian commercial banks.

The MNB organised its international green finance conference as part of the Planet Budapest Sustainability Expo and World Summit. The presentations and panel discussions of the event focused on the implications of the COP26 climate summit for the financial system and further environmental anomalies beyond climate change. At the conference, the *Green Finance Awards* for financial institutions and the *Green Finance Science Awards* for excellence in academia were awarded. In awarding the Green Bank Award, the MNB looked at the extent of green lending, the green bond portfolio held by institutions and the institutions' exposure to climate change. In the case of the Green Insurance and Pension Fund Award and the Green Investment Fund Manager Award, the number of ESG funds and portfolios available to institutions and the size of their assets under management were taken into account in granting the award. The Green Finance Award jury, taking into account all the criteria, awarded the Green Bank Award to MKB Bank Zrt. The Green Insurance and Pension Fund Award was given to UNION Vienna Insurance Group Biztosító Zrt. and the Green Investment Fund Manager Award to Erste Fund Management Zrt.

Environmental factors of the operational activities of the MNB

Evolution of energy indicators

The MNB's direct environmental impact is mainly due to energy consumption, within which consumption related to the operation of buildings makes a key contribution. Regarding the total energy consumption of the properties included in the MNB's environmental management system (Head Office, Logistics Centre, business site at Krisztina krt.), it can be stated that in 2021, due to the epidemiological measures, the consumption of electricity and fuel for the motor vehicle fleet a further decrease was observed. It is important to note that much of the energy required to operate the buildings is independent of the number of

⁸⁰ <https://www.mnb.hu/letoltes/129526-3-2021-sfdr-vezetoi-korlevel.pdf>

⁸¹ Sustainable Finance Disclosure Regulation, Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector.

⁸² Sustainable Financial Regulation and Central Bank Activities Tracker, SUSREG Tracker.

Table 8**Total energy consumption**

Total energy consumption (kWh)	2020				2021				Change in 2021 (%)	Change compared to the 2019 base (%)
	Head Office Building	MNB Logistics Centre	Krisztina Boulevard Building	Total	Head Office Building	MNB Logistics Centre	Krisztina Boulevard Building	Total		
Electricity consumption (kWh)	2,826,738	2,862,215	1,065,473	6,754,426	2,454,620	3,022,414	974,316	6,451,350	-4.5	-9.9
Heating, hot water energy consumption (kWh)	2,171,613	1,412,731	1,308,219	4,892,563	2,189,076	1,415,021	1,381,007	4,985,104	1.9	21.5
Fuel energy consumption (kWh)		357,467		357,467		352,724		352,724	-1.3	-22.2
Total energy consumption (kWh)				12,004,456				11,789,178	-1.8	0.6
Unit energy consumption (kWh/person)				9,133				8,902	-2.5	-0.3

people working in the building. Heating energy consumption was up somewhat in the past year. The increase in 2021 was also due to the fact that the average temperature during the heating period (from October to April) was 1.95°C lower than in the same period of the previous year (1.62 C° on average in 2021).

As a result of the above, total energy consumption per capita declined by 1.6 per cent in 2021.

Waste management

There was no significant change in the separate waste collection system in 2021. In early 2020, the separate collection of aluminium-based coffee capsules and Tetra Pak cartons was introduced, further reducing the amount of waste going to landfill. Due to the modified work schedule on account of the coronavirus pandemic, employees' office presence was lower, therefore the amount municipal waste shrank by 48.6 tonnes in 2021, after having contracted by 41 tonnes in 2020. 66 per cent of the total annual waste amount was collected separately, which is an 18-per cent improvement compared to the base year.

At the end of 2021, 100 per cent of the equipment that became redundant when the MNB moved into new buildings (e.g. furniture, electronic devices and instruments) were reused or recycled, as they were mainly donated to charity organisations, while some of them were handed over to a waste recovery firm. The proportion of hazardous waste in total waste was just 0.19 per cent.

Water management

Due to the lower office occupancy rate, drinking water consumption decreased by a further 11.8 per cent in 2021, so water use was down by 33.5 per cent at the end of 2021 compared to the base year.

In 2021, 32 per cent more groundwater was used for watering the lawn and technological purposes.

Evolution of the carbon footprint of the MNB's operational activities

The carbon footprint connected to electricity consumption increased in 2021, despite the lower consumption. The increase compared to the previous year was due to the fact that in 2021 electricity consumption did not include renewable sources. The carbon footprint of the total energy use was 29.0 lower than in the base year.

The decline in business travel emissions was significant; the lower number of conferences and other events and their online form, even with an increase in emissions from taxi use, added up to a contraction of 80.8 per cent. The change was basically due to the significant drop in air travel.

At the end of 2021, the carbon footprint per capita relating to the operational activities of the MNB was smaller by 29.7 per cent than in the base year.⁸³

⁸³ One important objective for the 2020-2022 strategic period is to refine the carbon footprint calculation model and to revise and update the emission factors used. In 2020, the range of elements causing environmental pressures resulting from operational activities was expanded, and factors from the Clim'Foot database, also proposed by the WWF, were used in the model.

Carbon footprint/cause	MNB's carbon footprint (CO ₂ emission in tons)		Change in 2021 (%)	Change compared to the 2019 base (%)
	2020	2021		
Electricity	2,624	3,013	14.8	-26.4
Natural gas and district heating	966	981	1.6	13.9
Vehicles fleet	104	104	-0.05	-15.2
Total carbon footprint from energy use	3,694	4,098	10.9	-19.1
Air travel	201	33	-83.6	-96.5
Car travel abroad	0.4	0.5	25.0	-79.3
Domestic car travel	1.9	2.7	42.1	-65.3
Taxi usage	3.2	3.5	9.4	32.2
Total business travel	207	40	-80.8	-95.9
Refrigerants	5	5	0.4	-
Banknote briquettes for energy purposes	18	17	-6.6	-
Recycled office paper	2	3	57.9	-
Waste	156	110	-29.4	-
Total other emissions	181	135	-25.3	-
Total carbon emissions (tons)	4,082	4,273	4.7	-29.0
Specific carbon footprint (tons/person)	3.1	3.2	3.9	-29.7

3.11 FACTORS SHAPING THE COMMUNICATION OF THE MNB

In 2021, the MNB considered it important to continuously and transparently present the central bank's activities, achievements, reports and recommendations. In order to supply comprehensive information and continuous updates on its technical work, the MNB held nearly 40 press conferences and published 300 press releases. In addition, during the year it published 175 technical professional articles in the print press, on online economic portals and on its website in order to transparently present the MNB's professional work and the economic impact of its decisions. The central bank sought to increase the financial awareness of the corporate sector and the public through its social responsibility, supervisory, market surveillance and consumer protection activities and communication actions. The MNB also organised international conferences important for the management of its reputation abroad, and published professional articles in English on its website, which it distributed to interested foreign audiences through its social media platforms.

In 2021, the MNB considered it important to continuously and transparently demonstrate the central bank's activities, achievements, reports and recommendations, despite the pandemic that continued to have a negative effect on business as usual. In order to supply comprehensive

information and continuous updates on its technical work, the MNB held 40 press conferences and published 300 press releases. Press briefings took place in the online space throughout the year, in line with the distancing rules imposed due to the pandemic.

In the course of its communication, the MNB focused on disclosing and explaining the key decisions concerning the core tasks of the MNB, monetary policy and financial stability. Accordingly, the MNB regularly presented the substance and background of its major decisions, disclosed the outcomes of Monetary Council meetings and published on an ongoing basis the results of supervisory inspections and procedures, the content of the measures, including those responsible for the infringements which were found. Warnings about the necessary precautions to identify risk related to financial operations also formed part of the supervisory communication in 2021, along with the active communication about Certified Consumer-Friendly products. Another priority comprised the awareness-raising campaigns of the FGS Go! and the instant payment system (IPS) in the first half of the year, as well as the professional communication on liabilities, which returned in connection with the expiry of the moratorium on payments in the third quarter.

The professional articles about key central bank topics were produced at regular intervals during the year. The

articles were intended to present an in-depth view of the MNB's activities in adequate detail and in accordance with the requirements of clarity, while at the same time bringing interested parties closer to the work of the various functional areas and the explanation of the key results. In 2021, more than 170 publications appeared, and the MNB was assisted in this by reputable news and economic websites. The professional articles, analyses and summaries were also posted on the mnb.hu website in order to maintain the reputation created by the central bank's high quality professional work, to strengthen positive public opinion and to increase the number of visitors of the website.

The central bank sought to increase the financial awareness and knowledge of the corporate sector and the public through its social responsibility, supervisory, market surveillance and consumer protection activities and communication actions. Increasing consumers' knowledge was a focus area in the central bank's communication in 2021 again, not only through supervisory press relations but also in the form of topical campaigns. Certified Consumer-Friendly products not only have an information campaign, as each member of the product group has its own dedicated page and calculator on the MNB's website. With its decision in May 2021, the Parliament conferred a new mandate on the Hungarian central bank that included the promotion of environmental sustainability, which was a first in Europe. In accordance with that decision, the MNB's activities can facilitate the development of green financial markets and strengthen environmentally conscious consumer attitudes. The communication related to the MNB's new Green Strategy and the preparation and launching of the FGS – Green Home Programme was of key importance in the second half of 2021.

In 2021, communication continued to be conducted online due to the pandemic. The international conferences, press conferences streamed on the MNB's official YouTube channel together with the video blog and the podcasts were published on the central bank's website and its social media platforms. In addition to informing the public and raising its financial awareness, the main purpose of producing this content was to highlight professional achievements. The efficient platform for reaching Generations Y and Z are Facebook and YouTube as well as other social media outlets. In this spirit, important central banking messages were transferred through readily accessible audiovisual content tailored to the platform.

The MNB's collector coin programme continued, the themes of which include major anniversaries in history, science and art. The central bank also commemorated the 75th

anniversary of our national currency, the forint, with an active campaign including an online conference, an exclusive historical publication and short films and infographics published on social media. Professional communication on strengthening the importance of green finance, FinTech and digitalisation developments and central bank digital currency were also in focus.

The central bank considers it its social responsibility to preserve the traditions of culture and arts, and present and strengthen the treasures in Hungarian fine arts as well as contemporary artists. This drove the development of the central bank's online catalogue of contemporary collections in 2021.

In addition, the MNB has placed increasing emphasis on communication on the social media platforms: with nearly 110,000 followers, social media is able to provide a wide reach. The central bank also organised international conferences important for the management of its reputation abroad and published professional articles in English on its website. Related information was typically and mainly communicated to international economic actors via the Twitter interface, which also allowed for continuous and direct interaction. During the year, the MNB continuously updated the public on the international activities of the central bank and its executives. There was also active communication about the foreign visits of Hungarian delegations as well as the international meetings and conferences organised in Hungary. Thanks to the developments in recent years, the central bank's social media outreach has remained in the top three among European central banks.

3.12 THE MNB'S INCOME IN 2021

In 2021, the MNB recorded a loss of HUF 57.1 billion. The net interest and interest-related income turned into a loss due to the balance sheet-expanding effect of the central bank measures aimed at addressing the economic impact of the coronavirus pandemic and restarting the economy, and to rising interest rates. Income arising from exchange rate changes declined compared to the high values seen in the recent periods. The MNB paid HUF 250 billion as a dividend from its retained earnings to the central budget in 2021.

In 2021, the MNB recorded a loss of HUF 57.1 billion. During the year, the following main developments had an effect on the balance sheet and the profit:

- the level and composition of international reserves defined by monetary policy, risk management considerations and foreign currency purchases and sales

Table 10
Abbreviated income statement and individual balance sheet items of the MNB
(HUF Billions)

No.	Description (P/L line)	2020	2021	Change
1	Net interest and interest-related income (I+II)-(X+XI)	40.7	-72.6	-113.3
2	- net forint interest and interest-related income (I-X)	10.7	-70.0	-80.7
3	- net foreign exchange interest and interest-related income (II-XI)	30.0	-2.6	-32.6
4	Realised gains/losses arising from financial operations (IV-XIV)	5.1	-25.0	-30.2
5	Income arising from exchange rate changes (III-XII)	286.1	146.2	-139.9
6	Other constituents of net income* (V+VI+VII+VIII)-(XIII+XV+XVI+XVII+XVIII)	-76.5	-105.7	-29.2
7	Profit/loss for the year (1+4+5+6)	255.4	-57.1	-312.5
Selected items of equity in the balance sheet				
8	Retained earnings	202.9	208.3	5.4
9	Revaluation reserves due to unrealised foreign exchange gain/loss	586.4	654.5	68.1
10	Revaluation reserves due to changes in the market value of the foreign currency securities	58.0	-16.8	-74.8

*Incomes from supervisory activities, net profit/loss of banking operations, costs of issuing banknotes and coins, creation of provisions and impairment, income/expenses from commission and from other items.

affecting the level of reserves: net foreign exchange inflows from EU transfers, operations performed by the Government Debt Management Agency in relation to debt management, and the foreign exchange conversions performed by the Hungarian State Treasury for purposes not related to debt financing;

- developments in instruments absorbing forint liquidity, which are correlated with changes in foreign exchange reserves and the MNB's net foreign currency receivables, as well as with the evolution of the central bank's liquidity and growth support instruments;
- monetary policy instruments to support the liquidity and lending activities of the banks (collateralised loan facility, FGS) and the BGS aimed at diversifying the fundraising of the corporate sector, increasing the liquidity of the corporate bond market;
- central bank asset purchase programmes (government security and mortgage bond purchase programmes);
- changes in forint interest rates and international foreign exchange interest rates; and
- changes in exchange rates.

The net interest and interest-related losses amounted to HUF 72.6 billion, falling by HUF 113.3 billion compared to the profit seen at the end of 2020. Net interest income in both forint and foreign exchange deteriorated. In 2021, the balance sheet total continued to expand, the volume of central bank programmes launched in 2020 to help restart the economy (providing collateralised loans and FGS loans,

mortgage bonds, government securities, corporate bond purchases) continued to increase, then in the second half of the year this increase decelerated as the programmes were gradually terminated.

Net forint interest and interest-related income amounted to a loss of HUF 70 billion. The new, long-term fixed-rate assets (collateralised loans, mortgage bonds, government securities and corporate bonds) were financed by variable-rate liabilities (one-week deposit, preferential deposit) on the central bank's balance sheet. The forint interest expenditure increased considerably related to the tiered-rate preferential deposits in the first half of the year, and to the gradual interest rate hikes in the second half of the year. The interest on the one-week deposit climbed from 0.75 per cent at the beginning of the year to 4 per cent at the end of the year. The rise in interest expenditure was only partly offset by the interest income that expanded due to the new central bank programmes. The contraction in net forint interest and interest-related income was also attributable to the lower profits in interest rate swap transactions with credit institutions, conducted in the context of shrinking holdings due to maturities and rising forint interest rates on the market.

The net FX interest and interest-related losses amounted to HUF 2.6 billion. Interest income on international reserves continued to contract in the low, partly negative international interest rate environment, which was compounded by the change in the structure of reserve holdings. The net income on forward transactions concluded to hedge the risk of reserves was also lower. The rise in yields that started in the last months of the year only takes hold in interest income with a lag, as securities are replaced,

so in 2021 the rise in yields was not manifested in rise in interest income.

The realised gains arising from financial operations contain gains and losses realised from changes in the market price of securities generated upon the sale of the securities. In 2021, the MNB realised a net loss of HUF 25 billion on selling securities relating to foreign exchange reserves management transactions as well as forint securities, attributable to a rise in market prices.

Income arising from exchange rate changes is determined by the difference between the forint's official exchange rate and the average cost rate on the one hand and by the volume of foreign currency sales on the other hand. Foreign currency sales were mostly connected to the Government Debt Management Agency's debt management operations in 2021. The FX requirement of the Government Debt Management Agency's repayments was partly covered by the FX bond issues of earlier years, which therefore reduced the volume of FX sales. This was partly the reason why the conversion volume fell short of the amount in 2020, which had been high compared to earlier periods. In addition, the difference between the official exchange rate and the average cost rate decreased. Income arising from exchange rate changes increased by HUF 139.9 billion to HUF 146.2 billion compared to the previous year.

Other income factors include banking operating incomes, costs and expenditures, costs of issuing banknotes and coins, accounting for provisions and impairment, incomes from supervisory activities, and income/expenses from fees and commissions and other income/expenses. Net expenditures resulting from these items amounted to HUF 105.7 billion in 2021, an increase of HUF 29.2 billion compared to the previous year. This increase was due to the impairment created for monetary forint securities on the basis of prudential considerations, as well as to the rising operating costs.

The MNB's equity amounted to HUF 798.9 billion on 31 December 2021. In accordance with the Executive Board's decision, the MNB paid HUF 250 billion in dividend from its retained earnings to the central budget in 2021. The amount of equity was reduced by dividend payment, the loss for the year and the change in the consolidated balance of revaluation reserves.

The positive difference between the official forint exchange rate and the average cost rate shrank compared to the end of 2020, but the revalued foreign exchange holdings

increased, so the revaluation reserves due to exchange rate changes was up by HUF 68.1 billion, coming in at HUF 654.5 billion on 31 December 2021.

On 31 December 2021, unrealised losses on foreign currency securities marked to market amounted to HUF 16.8 billion, which falls short of previous year's level by HUF 74.8 billion. The change was related to the rise in foreign exchange yields, typically occurring in the last quarter of the year, which depressed the market prices for securities.

3.13 THE MNB'S FINANCIAL MANAGEMENT IN 2021

Actual operating costs in 2021 amounted to HUF 54,428 million, which is 5.7 per cent below the approved budget (excluding central reserves) and 13.5 per cent above the expenditures incurred in 2020. The increase compared to the previous year was mainly reflected in general operating costs, principally arising from renting and operating new properties (MNB Centre in Buda, MNB Supervisory Centre and Money Museum) and the costs of moving, on account of the restoration of the head office on Szabadság tér and the cancelled use of the leased property at 39 Krisztina körút.

In relation to normal operations, the approved capital expenditure budget for 2021 amounted to HUF 13,599 million. During 2021, a total of HUF 13,267 million was paid in connection with capital expenditures. A significant part of capital expenditures in 2021 were related to the purchase of IT hardware devices and software products.

Successful implementation of the MNB's strategic objectives and safeguarding its reputation and assets are extraordinarily important values. An efficient operational risk management system plays an important role in the protection of these objectives and values. With this in mind, the identification, assessment and continuous in-house monitoring of operational risks and the implementation of the appropriate response measures constitute an integral part of the MNB's corporate governance. In order to continuously maintain the operational risk management activity at a high level, it is essential to monitor international best practices and to improve the MNB's procedures and systems in agreement with such practices.

The internal operations of the MNB are aimed at providing the resources required for the efficient discharge of the duties stipulated by the MNB Act.

Table 11
Operating costs of the MNB in 2021

Description	Actual data for 2020	Budget for 2021	Actual data for 2021	Index (2021 actual / 2021 budgeted)	Index (2021 actual / 2020 actual)
	HUF millions			Per cent	
1. Staff expenditures	26,058	28,478	27,722	97.3	106.4
2. General operating costs	21,916	29,229	26,706	91.4	121.9
Total	47,974	57,707	54,428	94.3	113.5

Operating costs

Actual operating costs in 2021 amounted to HUF 54,428 million, which is 5.7 per cent below the approved budget (excluding central reserves) and 13.5 per cent above the expenditures incurred in 2020.

The increase compared to the previous year was mainly reflected in general operating costs, principally arising from renting and operating new properties (MNB Centre in Buda: from 1 October; MNB Supervisory Centre and Money Museum: from 5 November) and the costs of moving. In addition, IT costs and depreciation also increased. Within personnel costs in 2021, it was mainly the wage costs of staff members that increased.

Personnel costs

In 2021, personnel costs (HUF 27,722 million) exceeded the previous year's figure by 6.4 per cent (by HUF 1,664 million).

The difference mainly reflects the fact that, pursuant to the decision of the MNB's Executive Board, in order to ensure and retain highly qualified personnel over the long term, the 2020 wage bill limits within the wage bill management scheme were raised by 5 per cent from 1 January 2021, and by another 5 per cent from 1 July 2021 under certain conditions. In addition, in view of the situation arising from the pandemic, the Executive Board of the MNB decided to provide employees with a net extraordinary SZÉP Card benefit of HUF 350,000 in 2021, in accordance with the provisions of the Government Decree on tax relief measures required to mitigate the economic impacts of the pandemic. In this context, as the social contribution tax was waived until the end of December 2021, personnel costs were reduced. At the same time, the statistical average headcount rose by 4 per cent.

Furthermore, hospitality & entertainment costs in 2021 increased by 10.3 per cent compared to the very low

expenditure in 2020, but most of the MNB's internationally significant events were still cancelled or were held online due to the pandemic.

General operating costs

In 2021, general operating costs (HUF 26,706 million) were 21.9 per cent higher than in 2020 (up HUF 4,790 million); the changes in the components can be attributed to the following reasons.

IT costs increased by HUF 996 million (26.7 per cent) compared to the previous year, due to added functions and the extra costs incurred from higher availability levels on the one hand, and to the costs of already implemented IT investments on the other hand, principally related to the integrator and manufacturer support for the new buildings' IT and network equipment. The repair and maintenance costs of IT equipment also increased, just like the fees for news services and IT security services due to the growth in related user needs and prices and to the services continued from last year.

In 2021, *operating costs* were up by HUF 3,010 million (46.2 per cent) compared to 2020, dominated by property lease and maintenance costs arising from the renting and maintenance of the new properties and from moving, as well as by utility and transport costs. (The building of the head office on Szabadság tér was handed over to the contractor in charge of the restoration in December 2021, and the property at 39 Krisztina körút, the rental price of which increased, was rented by the MNB until the end of the year.) Armed security costs were also up due, from January 2021, to the rise in the fees and headcount of MNB-Biztonsági Zrt., which provides these services. Other operating costs for 2021 (mainly transport costs) also exceeded the expenditure from the previous year, on account of moving the office, the one-off cost of precious metal transport, and the rise in the fees of domestic courier services.

The *depreciation* of tangible and intangible assets in 2021 was 21 per cent (HUF 984 million) higher than the amortisation costs in the previous year. This is mainly related to investments in 2021, predominantly in IT, largely connected to the IT infrastructure equipment in the new buildings and the renewal of Microsoft licences.

Other costs in 2021 shrank by 2.5 per cent (HUF 178 million) compared to the expenditure in the previous year, chiefly due to the lower costs of communication services, because some of the costs in 2020 were one-off items, and in some cases the costs incurred in 2021 were lower than earlier. However, membership fees increased in 2021 compared to 2020, on account of the rise in the membership fees payable to European Union organisations based on their operating costs.

The absolute value of the *transfer of costs*, which reduces operating expenses to ensure that the total amount of operating expenses reflects only the actual expenses incurred by the MNB, increased in year-on-year terms. This is mainly because the carry-over effect of the costs related to the instant payment system, as a form of payments, was partly recognised as a new item (in accordance with the relevant legal provisions), and the amount carried over from the general operating costs due to VIBER was higher than in the previous year, mainly on account of price changes.

Capital expenditure

Various development projects and procurements are required for the achievement of the MNB's objectives and maintaining the volume and quality of its assets. In relation to normal operations, the approved capital expenditure budget for 2021 amounted to HUF 13,599 million. In 2021, a total of HUF 13,267 million was paid in connection with capital expenditures.

The majority of capital expenditures in 2021 were related to IT hardware devices, software development projects for various IT systems and the purchase of other software products and licences.

As part of the real estate-related capital expenditures, the mechanical works of the Logistics Centre building in connection with the pipe network were completed.

Personnel management at the MNB

The MNB continues to treat human resource management as a strategic issue with a view to fostering efficient and profitable operation. By providing a stable workplace, it has developed a work culture where employees are able to

perform their tasks efficiently, focusing on performance, in a value-driven atmosphere. They acquire and enhance the knowledge, skills and competence necessary for efficient work. The productive work performed by the employees is supported by incentives and moral appreciation. In return, the MNB expects ethical behaviour on the part of its employees, in addition to the high-level work. Through it all, in line with the interests of the institution, the individual interests of the colleagues can be promoted as well.

The MNB is an exceptional and attractive organisation in the labour market, characterised by its special legal status, its specific and wide-ranging tasks and the financial and moral esteem of its staff. The combined effect of all this is already evident in the labour market, as according to the PwC Employee Preference Survey, the MNB ranked among the top three in the financial sector two times in the past three years.

Based on the human resource strategy, highly educated and motivated employees can be recruited in the required number. The MNB strives not only to hire excellent employees, but also to retain its employees. To this end, it also helps support individual ambitions in line with objectives of the organisation. One of the key human resources strategic goals of the MNB is to employ employees loyal to the institution, who enable it to take active part in the changes arising in view of the renewing domestic economic and social interests and values.

During the year, employees typically attended professional trainings, personal skills development programmes and language trainings, which, tailored to individual needs, served the participants' development in efficiency and approach, as well as the development of cooperation skills. In response to the special working and life situation caused by the pandemic, the MNB offered online access to language trainings, individual and group skills development and the training programmes promoting the effectiveness of hybrid work and mental and physical well-being. The opportunities and topics on offer supported living a healthy lifestyle, coping easier with continuously changes situations as well as smoother workflow; they also provided opportunities for complex development for executives.

With the extension of its internship system, also incorporating international best practices, the MNB continued to support university students in acquiring professional skills. Within the framework of the internship system, the MNB received higher education students for the period of their field practice and also within the framework of dual training. In cooperation with John Von Neumann University and as a dual corporate partner, the

MNB participates in the training of BA students in Business Administration and Management, International Business Administration and Finance and Accounting courses. In this scheme, 49 students completed their traineeship at various functional areas and subsidiaries of the MNB until 31 December 2021. In 2021, the MNB continued to expand its dual training programme with BA and MA courses at other higher education institutions, reaching new university students with the programme.

New graduates and career starters also had the opportunity to participate in the internship programme, which helped their integration in the labour market, and also provided the MNB with the opportunity to select students showing outstanding performance and employ them at the bank.

In 2021, the human resource area continued with the development and digitalisation of HR systems, which supported the integration of new entrants and the relations between the employee and the organisation for the duration of the legal relationship, and supported the process of departure from the organisation.

The heads of functional areas play a key role in determining the headcount and defining the wages necessary for fulfilling the tasks. The MNB's wage and income policy reflects its special position and supervisory function. The wages recognise the special knowledge and professional skills that the staff of the individual functional areas possess in performing the tasks described above.

The wage bill management system operating in the MNB provides the opportunity, in accordance with the objectives specified upon the implementation thereof, to manage changes and requirements arising in the various functional areas in a fast and flexible manner by regrouping the employees, temporarily as well if necessary. In addition, wage bill management also supports executives in the most complete performance of the tasks of the areas they manage, in a way that the heads of the various areas can directly evaluate excellent work and the relevant achievements, which may also be reflected in the remuneration of the employees. Accordingly, the system that was introduced became suitable for the long-term retention of high-quality, highly qualified personnel and also for strengthening responsible financial management by granting much wider possibilities for the heads of wage management areas to submit proposals.

The MNB phased out the optional non-wage benefits system as of 1 January 2020 and, at the same time, while retaining or restructuring some forms of the non-wage benefits already provided under the system, it introduced new

elements, which were maintained in 2021. Thus it provided broad support to its employees and also preserved its family welfare scheme during the year. In this context, it provided special support for starting a family and having and raising a child, and contributed to the mitigation of the burden related to unexpected situations in life, and to the self-care of its employees. For the preservation of the personnel's health, a complete medical check-up programme was still available for each employee once a year. Moreover, the employees who had contracted the coronavirus could also make use of a tailored post-Covid screening package, and the MNB also expanded the scope of vaccines subsidised by the employer.

It is of key importance in the MNB's organisational culture that employees can also fulfil their roles and grow in their private life, while performing their tasks at the workplace supported by a well-balanced family background. As a result of a number of measures and successful initiatives, and as acknowledgement of its Child-focus and Family-Friendly Programme, in 2021, the MNB was awarded the title of 'Family-Friendly Workplace' by the Ministry of Human Capacities for the seventh consecutive time. With this title, the Ministry honoured the efforts, programmes, initiatives and system level solutions undertaken by the central bank voluntarily, in order to support employees with family and children. Over the past seven years, the MNB has enriched its Family-Friendly Programme with a number of new programmes and allowances.

Within the framework of its Family-Friendly Programme, the Government of Hungary announced its first call for applications for the Family-Friendly Place Certification in 2019, and having submitted an application, the MNB obtained the Bronze certificate, the highest that could be acquired in the first round of certification. Although the programme was revamped in 2021, the MNB obtained a Family-Friendly certification in 2021, too.

Changes in staff numbers

The headcount of the MNB in 2021 was shaped by the labour-intensiveness of the tasks to be completed.

As a result of natural migration, quality-driven replacements and changes in inactive payroll, 139 employees were removed from the MNB's statistical headcount.

In order to secure an adequate workforce for the operating structure aligned with the challenges and the MNB's tasks to fill vacant or new positions, 189 persons were recruited and added to the MNB's statistical headcount in 2021.

As the combined balance of the decreases and increases, the closing headcount of 2021 was 1,557, exceeding that of 2020 by 50 persons.

In 2021, the average staff number of the MNB was 1,529.2 employees, exceeding that of the previous year by 59.4 persons.

The average age of employees at the end of 2021 was 41.6 years.

Procurement

Like other central banks in the European Union, the MNB conducts public procurement procedures in respect of purchases where the value reaches the value limits of national public procurements. In accordance with Directive 2014/24/EU of the European Parliament and of the Council on public procurement and repealing Directive 2004/18/EC and Act CXLIII of 2015, the MNB is subject to public procurement jurisdiction. The procurement processes of the MNB are regulated both by the internal regulations and the Business Management Manual, in accordance with the effective Act on Public Procurement. The procurement needs of MNB arising in 2021 resulted in a total of 949 procedures. The total value of the successful procedures amounted to HUF 20,822.5 million based on the signed contracts. No legal remedy was sought in relation to the procurement procedures launched and concluded in 2021. The MNB performed the procurement tasks in compliance with the deadlines, with due transparency and keeping in mind the good reputation and prestige of the institution.

Operational risk management and business operation continuity

The global health emergency declared by the World Health Organisation (WHO) due to the spreading of the coronavirus at the end of January 2020 persisted in 2021. The MNB strove to minimise the impact of the pandemic on the MNB as the coronavirus pandemic continued in order to protect the health of its employees and ensure the continuity of business operations. During the year, the home office was the dominant measure taken to check the spreading of the pandemic in view of the developments. In summary, on the basis of international examples and practices, the MNB's emergency management and the measures taken – as detailed below – continued to be outstanding and exemplary.

Since early 2021, as the infection became widespread and the country-wide vaccination drive started, using the

opportunities offered by law, records have been compiled on the number of employees with a vaccination certificate due to work organisation considerations. After receiving authorisation from the government, compulsory vaccination was introduced as a requirement to ensure business continuity at the bank. The communication towards employees conducted through the intranet and executives has been appropriate during the coronavirus pandemic.

The move to the new MNB buildings began in the autumn, which was successfully completed without incident at the end of 2021. The move occurred smoothly and with low operational risks, in the context of the tried and tested home office arrangements used during the Covid pandemic.

Besides the earlier measures, the following measures/steps were taken from the onset of the third wave to maintain low operational risk and preserve the health of employees:

- in view of modifications and legal amendments, the action plan on handling Covid-19 infections and suspected infections within the MNB was updated.
- the MNB generally allowed all functional areas, including those performing critical activities, to make use of home office with as many employees as possible to prevent the emergence of infection hotspots, and also to ensure that children can be cared for during the day at times of potential closures of public education and vocational training institutions (kindergartens, schools).
- under Government Decree No 104/2021 (III. 5.) Korm., the MNB suspended personal administration at its customer service offices, and banned third parties from entering the building to visit the customer service offices or the Financial Arbitration Board for any reason.
- restrictions on personal contact were ordered in the third wave of the pandemic, again.
- personal contact was replaced by online communication, both within the MNB and with external partners. Besides utilising the existing and previously used system, in particular the video conference system in the meeting room and the communication system at workstations, the usability of other channels of communication was assessed, and the existing system was first expanded and then replaced.

Besides the measures that were partly maintained since the third wave, the measures taken in the fourth wave that started in the autumn of 2021 included the following:

- From September 2021, the MNB once again increased the share of home office and restricted personal encounters to prevent infection.
- Regular and compulsory testing was introduced at the area of cash logistics to ensure the continuity of the cash supply.
- From the autumn of 2021, one of the priorities of the Covid working group was to continuously monitor the vaccination requirement stipulated in a Governor's decree and to make the necessary proposals for action.

By the end of 2021, the overwhelming majority of the MNB's employees had been vaccinated, thereby mitigating the impact of the pandemic and operational risks as well as ensuring business continuity.

As a result of the measures taken during the year, the MNB was able to continuously operate and perform its duties with a high level of competence, as stipulated in the MNB Act.

During the pandemic, the MNB was in constant contact with the central banks of the European Union as a member of a working group set up for this situation in order to share emergency management experience.

3.14 INTRODUCTION OF THE ESCB COMMITTEES

The ESCB Committees play an important role in the work of the ECB's decision-making bodies. The basic role of these committees is to prepare decisions and facilitate coordination as per the horizontal division of various central bank duties, covering all areas of central banking operations. The senior executives and relevant experts of the MNB play an active role in the work of these committees and in the activities of the committees' working groups.

Since Hungary's accession to the European Union, the MNB's management and experts have been participating in the work of the ESCB committees and their working groups. This membership and cooperation provides an opportunity for national central banks to work together and formulate coordinated positions, and also enables the representatives of national central banks to obtain information on the ECB's activities on a regular basis.

On 31 December 2021, fifteen ESCB committees and two other committees assisting the work of the ESCB

were in operation. In connection with the launch of the Single Supervisory Mechanism (SSM) in November 2014, in addition to the two existing configurations (euro area composition and ESCB composition) a number of committees have held meetings in SSM composition since 2014 as well, with the attendance of representatives of the supervisory authorities operating as organisations independent of the central banks of the Member States participating in the SSM.

The following provides a brief summary of the fields of activity (mandates) of each ESCB committee:

Accounting and Monetary Income Committee (AMICO):

This Committee develops and regularly reviews the accounting policy principles which define the framework of financial statements in accordance with the Statute of the ESCB and the methodology of the preparation of regular financial reports, facilitating their coordination at an international level. It monitors the calculation of monetary income in accordance with the risk management process developed by the security framework system of accounting.

Banknote Committee (BANCO):

This Committee determines the euro banknote needs of euro area countries, coordinates the production of banknotes and works out the stockpiling and banknote processing policies of euro banknotes. Its tasks include sharing experience in the production of euro banknotes, the examination and development of security features to prevent euro banknotes from being counterfeited, and the assessment of security risks related to the production of the euro. It contributes to the harmonisation of practices applied in the euro area, the development of the system which monitors counterfeiting and the verification of statistics regarding euro banknotes and coins.

Committee on Controlling (COMCO):

It contributes to the application and enhancement of the Common Eurosystem Cost Methodology and prepares analyses on the cost data and cost structure of certain functions and products of the Eurosystem and the ESCB. In the area of management information systems, it serves as an important forum for cooperation and information exchange on issues concerning the ESCB as a whole. The COMCO only holds meetings with euro area participants.

Eurosystem/ESCB Communications Committee (ECCO):

This Committee contributes to the development of the external communication policy of the Eurosystem, the ESCB and the ECB, with the aim of making the objectives

defined by the Eurosystem and the ESCB more transparent and understandable, and informing the public of the tasks and activities of the Eurosystem and the ESCB.

Financial Stability Committee (FSC): Its task is to provide professional support to the decision-making bodies of the European Central Bank in their functions relating to financial stability and macroprudential policy issues.

Internal Auditors Committee (IAC): By reviewing the relevant common projects, systems and activities and by providing for cooperation in certain auditing issues which are of 'common interest' for the ECB and national central banks, this Committee assists the ESCB in achieving its targets.

International Relations Committee (IRC): The IRC assists in carrying out those tasks of the ESCB that are related to international cooperation and contributes to formulating the position of the Eurosystem regarding the various areas of relations with non-EU countries.

Information Technology Committee (ITC): This Committee contributes to the development of the information technology policy and strategy of the Eurosystem and the ESCB as well as the related guidelines (with special regard to security concerns) and provides technical advice to other committees. Furthermore, it initiates and implements Eurosystem and ESCB level developments and independent projects.

Legal Committee (LEGCO): LEGCO provides legal assistance for the work of the ESCB; in particular, it contributes to the maintenance of the regulatory framework of the Eurosystem and the ESCB and to the review of the transposition of legal regulations into national law, and monitors and reports on how national authorities and EU institutions comply with their consultation obligations relating to draft legislation in areas falling within the ECB's competence.

Market Infrastructure and Payments Committee (MIPC): This Committee assists the ESCB in the smooth operation of payment systems and in connection with the cross-border use of collateral. Furthermore, it supports the ESCB in general and 'oversight' issues relating to payment systems, as well as in strategic decisions related to securities clearing and settlement systems. It pays special attention to the strengthening of the oversight activity, the fostering of Pan-European developments in the area of high and small value payments, securities and collateral management.

Market Operations Committee (MOC): The MOC assists the ESCB in the implementation of the single monetary policy and the execution of foreign exchange transactions, the management of the ECB's foreign reserves and in the appropriate adaptation of the monetary policy tools applied by the central banks of the non-euro area Member States, as well as in the implementation of ERM II.

Monetary Policy Committee (MPC): This Committee assists the ESCB in the implementation of the single monetary and exchange rate policy of the Community. In addition, it provides assistance in the execution of the ESCB's tasks related to the coordination of the monetary and exchange rate policies of the NCBs of non-euro area Member States and the ECB. In addition, it provides assistance in the execution of the ESCB's tasks arising from the coordination of the monetary and exchange rate policies of the NCBs of non-euro area Member States and the ECB.

Organisational Development Committee (ODC): It assists the work of ECB decision-makers with proposals regarding the planning and organisational issues related to the operation of the Eurosystem and the Single Supervisory Mechanism (SSM). In addition, it also coordinates the work of the Eurosystem Procurement Coordination Office (EPCO) and runs the operational risk management and business continuity system of the Eurosystem/ESCB. The ODC only holds meetings with euro area participants.

Risk Management Committee (RMC): Its task is to assist the work of ECB decision-makers in managing and controlling risks arising from the market operations of the Eurosystem by means of analyses and proposals. The RMC only holds meetings with euro area participants.

Statistics Committee (STC): The STC assists in the collection of statistical information required for carrying out the tasks of the ESCB. It contributes, *inter alia*, to the elaboration and cost-effective application of necessary modifications in statistical data collection.

Other committees assisting the work of the ESCB:

Budget Committee (BUCOM): This Committee assists the Governing Council of the ECB in issues concerning the budget of the ECB; its members are the ECB and the central banks of euro area Member States.

Human Resources Conference (HRC): The objective of this committee is to serve as a forum for the central banks of the

Eurosystem/ESCB in the exchange of information, opinion and experiences on issues concerning the management of human resources.

3.15 RESEARCH ACTIVITY OF THE MNB

The purpose of the research activity performed by various directorates of the MNB is to support the central bank's decision-making. The results of the research are published in international and domestic scientific journals and the MNB's internal publications, in the MNB Working Papers (typically published in English only), in the MNB Occasional Papers series and in the Hitelintézeteti Szemle (Financial and Economic Review). In addition to the publications, the representation of the MNB at international conferences and in the research networks and working groups coordinated by the ECB all form a part of the MNB's research activity.

In 2021, eleven international publications appeared by authors affiliated with the MNB, the overwhelming majority of which (eight studies) were published in the most prestigious quarter (Q1) of periodicals. In its March issue, the *Journal of International Economics* published a paper by a co-author from the MNB on the effect of monetary policy on bank lending in the case of FX-denominated loans. The *Journal of Business and Economic Statistics* published a study by an MNB author in January, in which the extent of bias is determined in instrumental variable models using new econometric methods. An MNB paper that appeared in the August issue of *Journal of Money, Credit and Banking* discusses the relationship between fiscal policy and nominal interest rates. An MNB co-author was also involved in a study that was published in the January issue of the *Journal of Banking & Finance* and discussed the effect of subsidised loans on the real activity of small enterprises. Also in January 2021, a paper by an MNB author was published in *Energy Economics*, examining the effect of regulated electricity prices on the profit distribution of electricity providers. In June, the *International Journal of Forecasting* published a study, written by an MNB co-author, which examines the benefits from incorporating external information from survey forecasts into time series forecasts. *Renewable Energy* published an MNB study in December in which the authors examine the indirect effect of democratic institutions on the consumption share of renewables. In August 2021, a paper by authors affiliated with the MNB appeared in *Current Issues in Tourism*, discussing the different effects of the coronavirus crisis on the share price of traditional and budget airlines. In addition, MNB authors also published studies in the following journals in 2021: *Scottish Journal of Political Economy*, *Journal of Financial Services Marketing* and *Journal of Banking Regulation*.

In addition to international journals, studies by MNB researchers and analysts also appeared in publications of foreign central banks, international institutions and universities: A study was published in the BIS Working Papers series and a chapter in *Macroeconomic Responses to the COVID-19 Pandemic: Policies from Southeast Europe*.

Among Hungarian journals, the *Hitelintézeteti Szemle (Financial and Economic Review)* published eight studies, three essays, five articles, six book reviews and four conference reports by MNB experts in its 2021 issues. Moreover, two MNB papers appeared in Category A journals as classified by the Hungarian Academy of Sciences, one of them published in the *Közgazdasági Szemle (Economic Review)*, while the other appeared in the *Statistikai Szemle (Hungarian Statistical Review)*.

Numerous applied research results were also published in the MNB's internal publications. Five studies on topics of relevance to central banking were published in the *MNB Working Papers* series, and two in the publication *MNB Occasional Papers*. In addition to its Hungarian and English language issues, the *Financial and Economic Review* also has a special issue in Chinese in 2021.

3.16 PUBLICATIONS AND CONFERENCES ORGANISED BY THE MNB

In 2021, the MNB's professional book series about economics and monetary policy was expanded with new publications, and the range of MNB publications was also supplemented with several new reports. Besides the new, English version of the book Economic Balance and Growth, books of studies appeared on Eurasia, the 75th anniversary of the forint and central bank digital currencies. 2021 was the first year when the Sustainability Report and the Green Finance Report were published.

Regular publications

Inflation Report

The *Inflation Report* is published quarterly in order to enable the public to understand and follow the Bank's policies. The Report provides a regular presentation of past and expected future trends in inflation, evaluates the macroeconomic developments that determine inflation and provides a summary of the forecasts and considerations on the basis of which the Monetary Council makes its decisions.

Report on Financial Stability

Published twice a year, this *Report* outlines the position of the Bank regarding the changes experienced in the financial system and describes the effect of these changes on the stability of the financial system. The analysis in the *Report* focuses on the forward-looking assessment of long-term trends and risks.

Growth Report

The annual Growth Report is intended to present Hungary's longer-term growth path (occasionally encompassing an entire business cycle) and its determinants, also using standard and alternative indicators. The Report provides an annual overview of the most important trends shaping economic growth over the short, medium and longer term.

Productivity Report

The Productivity Report, published once a year, helps to understand the drivers, characteristics, distribution and dynamics of the key factor of economic growth and catching-up, and thus brings us closer to the formulation and implementation of productivity reforms. The Report does this in a complex manner, examining a wide range of efficiency indicators, including labour productivity as well as innovation, digitalisation and ecological productivity.

Housing Market Report

The MNB's semi-annual *Housing Market Report* presents the current trends in the Hungarian housing market. The purpose of the publication is to provide a comprehensive overview of the short-term and long-term trends affecting the residential property market and present the regional differences in the domestic market. Housing market developments are closely related not only to financial stability issues, but also fundamentally determine the short-term and long-term prospects of economic activity.

Commercial Real Estate Market Report

This thematic MNB publication analyses developments on the commercial real estate market on a semi-annual basis. It presents the macroeconomic factors influencing the market as well as supply and demand trends characterising various market segments. The report also covers banks' real estate financing activities, the main link between real estate market developments and financial stability.

Macprudential Report

The purpose of the annual *Macprudential Report* is to present the macroprudential instruments applied by the MNB to prevent and address the systemic risks identified and communicated in the *Financial Stability Report*, as well as their effects and the adjustment of market participants. In line with the MNB's Statute and macroprudential strategy, the publication intends to make the MNB's macroprudential measures easier to follow and understand both for the actors of the sector and the general public.

Competitiveness Report

The purpose of the *Competitiveness Report* is to provide a comprehensive, objective picture of aspects of Hungary's competitiveness that usually are given less attention in the Bank's traditional macroeconomic analyses, although they are determinants in terms of economic developments. The Report measures and assesses Hungary's competitiveness in 12 areas, using more than 150 indicators – 95 per cent of which are objective – in comparison to the European Union and countries of the Visegrád Group (V4).

Competitiveness Mirror

The publication seeks to monitor in a structured manner the realisation of the competitiveness directions and recommendations formulated by the MNB, facilitating the necessary competitiveness turnaround by supporting implementation. Hungary's progress in competitiveness is assessed every autumn, based on the 330 recommendations in the Competitiveness Programme published in 2019. The monitoring system uses both descriptive and analytical methods for evaluating the implementation of the central bank's recommendations.

FinTech and Digitalisation Report

The purpose of the annual FinTech and Digitalisation Report is to provide insight into domestic and international trends of development in financial innovation, digitalisation and their underlying technologies, which are becoming increasingly dominant in the Hungarian financial markets. In this way, the MNB intends to contribute to strengthening the digitalisation level of the domestic financial system, a process in which it intends to continue playing a key supporting role.

Report on Insurance, Funds, Capital Market Risk and Consumer Protection

The publication presents key characteristics and risks of insurance companies, funds, intermediaries, non-banking group entities and markets of capital market participants. The purpose of the *Report*, which is published annually, is to inform the public and the institutions of the financial system in respect of current prudential and consumer protection issues, thereby enhancing the risk awareness of stakeholders and also maintaining and strengthening confidence in the financial system. Official activities to identify and reduce risks, as well as the information and educational activities of the central bank, and its efforts to enhance Hungarian financial literacy all contribute to making the information necessary for decisions concerning financial institutions and products available to stakeholders, thus strengthening the stability of the financial system as a whole.

Trends in Lending

The objective of the publication *Trends in Lending* is to present a detailed picture of the latest trends in lending and to facilitate the appropriate interpretation of these developments. To this end, it elaborates on developments in credit aggregates and the demand for loans perceived by banks and credit conditions.

Report on the Balance of Payments

The *Report* is published four times annually to inform market participants on developments in the balance of payments and to provide deeper insight into the correlations in the economy. Developments in the external balance are key to financial stability, as processes relating to the balance of payments allow for conclusions to be drawn concerning the sustainability of economic growth and the relevant risks. The MNB carries out comprehensive and regular analyses of trends relating to Hungary's external balance, examining a number of indicators to assess macroeconomic imbalances.

Payment Systems Report

Once a year, this Report provides a comprehensive review of the trends in payments and the functioning of the overseen payment and securities settlement systems in Hungary, the main risks and any measures taken by the MNB which are necessary to maintain the smooth provision of payment services and facilitate the reliable and efficient operation of the supporting payment and settlement systems.

Public Finance Report

With the aim of supporting the fulfilment of its fundamental duties stipulated in the MNB Act, and particularly the task related to the definition and implementation of monetary policy, the MNB analyses developments in the budget deficit and debt, monitors the financing of the general government, analyses the impact of financing on the monetary processes, on the capital markets and on liquidity, and researches fiscal policy issues. Pursuant to Act CXCV of 2011 on the Economic Stability of Hungary, the Governor of the MNB is a member of the Fiscal Council (FC), and thus the professional expertise and accumulated information available in the MNB can indirectly support the work of the FC. The MNB prepares background analyses for the duties of the FC stipulated in the Act and makes such available to the FC. The general public can learn about the most important results of these expert analyses from the *Public Finance Report* (formerly known as the *General Government Fiscal Analysis*).

Annual Report

Published once a year in Hungarian and English, this publication presents the Bank's business report on the previous year and its audited annual financial statements in accordance with the Accounting Act.

Semi-annual Report: Semi-annual Report on the MNB's Activities

The Semi-annual Report is published once a year in September with contents corresponding to those of the Annual Report. The report is the central bank's business report and financial statements pertaining to the first half of the year (unaudited).

Interim Report: Quarterly Report on the MNB's Activities

The Interim Report is published biannually, in April and November, between the annual and semi-annual reporting periods. It gives an account of the basic activities of the central bank's operating units as stipulated in the MNB Act, in respect of the first and the third quarters: monetary policy, overview of the financial system, FX reserves, payment transactions, cash logistics activities and statistical changes.

Report on the annual activities of the Financial Arbitration Board

The Financial Arbitration Board, operated by the MNB, publishes its summary report about its operation and

activities once a year online and in printed form, under the title 'Report on the annual activities of the Financial Arbitration Board'. The annual report prepared based on the considerations stipulated in Article 130(1) of the MNB Act discusses, among other things, the analysis of incoming requests and closed cases as well as the recurring or major problems between consumers and financial service providers that often lead to disputes. The publication also contains recommendations on how to avoid or solve such problems in the future. The report presents the average time it takes to resolve consumers' legal disputes, and it also includes information on how companies implement the recommendations, the decisions including a requirement and the decisions authorising a deal.

Supervisory Board Report

Pursuant to the MNB Act, members of the Supervisory Board have reporting obligation to the Parliament that elects them and the Minister who appoints them. The focus of the Supervisory Board's duties is on controlling the central bank's continuous operation. The Supervisory Board performs its activity based on the laws applicable to it, its own rules of procedure, and the internal operational principles defined by the members jointly during the operation of the Board. The meetings of the Supervisory Board constitute the main form of the control activity, the topics of which are determined by the annual rolling work plan based on the audit universe. The *Supervisory Board Report* is a presentation of the Supervisory Board's activity.

Environmental Statement

The fight against and the adaptation to climate change as well as environmental issues that are generally becoming increasingly severe have significant impacts on the economy as a whole and thus also on the financial intermediary system. In view of this, the MNB launched its Green Programme in 2019, which is aimed at reducing the risks associated with climate change and other environmental issues, expanding green financial services in Hungary, widening the related Hungarian and international knowledge base and further mitigating its own ecological footprint and that of other financial actors. The MNB is at the forefront of international practices in continuously reducing the environmental impact of its operations. In accordance with the requirements of the environmental management system, the so-called EMAS (Eco-Management, and Audit Scheme), regulated by Regulation (EC) No 1221/2001 of the European Parliament and of the Council and Regulation (EU) No 2017/1505, the certified Environmental Statement is published annually. The publication provides stakeholders with information

on the institutional efforts to improve environmental performance and the results achieved.

Sustainability Report

In accordance with the MNB's legal mandate, the Sustainability Report aims to examine and clarify the key factors in Hungary's long-term sustainable convergence and inclusive growth, thereby facilitating the formulation and implementation of reforms ensuring sustained economic and social welfare. This is achieved by the Sustainability Report in a complex manner: besides real economy factors, it also examines whether by international standards the financial, social and environmental resources are utilised sustainably to ensure successful convergence and the achievement and preservation of social welfare. The report is published once a year in Hungarian and English.

Green Finance Report

The MNB plans to publish the Green Finance Report annually. The aim of the publication is to increase transparency on environmental sustainability and finance and thereby strengthen market awareness, and to contribute to a more accurate understanding of the financial aspects of climate change by the actors of the financial system and economy, as well as by the Hungarian society. Since the consequences of climate change and environmental anomalies may be reflected as financial risks, it is especially important to eliminate any lack of data in the financial system. By improving the understanding regarding sustainable financing, the publication may indirectly boost the effectiveness of sustainability efforts.

Analyses, studies, statistics

MNB Occasional Papers

The *MNB Occasional Papers* series primarily presents practical (applied) research relating to the central bank's professional areas, summarises existing theories and international findings in certain topics, and provides analyses facilitating the understanding of central bank decision-making.

MNB Working Papers

The *MNB Working Papers* series presents the results of more theoretical research conducted at the MNB. The studies published in this series are primarily directed at academic, central bank or other researchers, with the goal of encouraging readers to offer comments that the authors may use in their future research.

Financial and Economic Review

The *Financial and Economic Review* is a journal in social science with a history of over a decade. The journal has been edited and published quarterly by the MNB in separate volumes in Hungarian and in English. A Chinese-language compilation of the most important studies is also published once a year. The journal publishes scientific studies, short essays, book reviews, conference reports and reports on other scientific activities.

Other publications*From the pandemic to the restart – Crisis management measures of the MNB*

Governments and central banks responded to the coronavirus pandemic that started in early 2020 by introducing crisis management measures of historic proportions. The former launched several job protection and economic stimulus programmes, while the latter provided liquidity to all economic actors and helped restart the economies. In its publication 'From the pandemic to the restart – Crisis management measures of the MNB', the MNB presented and summarised its responses that helped Hungary successfully address the coronavirus crisis.

The significance of the retail government securities strategy for economic policy

In recent years, the MNB's professional workshops have been actively monitoring the evolution of household savings, the development of the retail government securities strategy and the experiences from the introduction of the MÁP Plusz government securities. Those involved in this work produced several analyses, many of which are available to the public in the form of professional articles and series of articles. This book of studies aims to supplement, synthesize and organise the knowledge and experiences gained over the years.

Sustainability and central bank policy – Green aspects of the Magyar Nemzeti Bank's monetary policy toolkit

The MNB's Green Toolkit Strategy provides a uniform framework for presenting the possible avenues that could help the central bank to incorporate sustainability considerations into its monetary policy toolkit. The strategy is built around a framework that determines the central bank's long-term operation, under which the MNB continuously examines how the different instruments in the monetary policy toolkit can assist in achieving price stability as well as the environmental sustainability

objectives. Without jeopardising its other objectives, the MNB aims to support sustainable economic transformation and the achievement of climate objectives, increase the climate-consciousness of the financial system, contribute to consumer and social awareness-raising and the adoption of international best practices, and assess the climate exposure of its monetary policy instruments within the framework provided for in the MNB Act.

Financial Navigator Papers

The thematic, easy-to-read booklet series targeting financial consumers helps in providing information to the public and preparing individual financial decisions. The free booklets are available at the branches and customer service offices of various financial institutions, at the MNB's customer service and at the customer reception areas of the Financial Navigator Advisory Office Network in all county seats. Monitoring legislative changes and market developments, the MNB regularly updates the content of the Papers covering more than 40 topics, and it also expands the scope of topics. The Papers renewed in content and visuals in 2021 have reached a large section of society through the branches of more than 100 partners (mainly financial service providers and the Hungarian Post Office), and they are also available online, at the Financial Navigator subpage of the MNB's website.

MNB books

The MNB considers the development of financial literacy in Hungary as one of its priority tasks; hence, relying on the available means, it intends to facilitate education in the field of economics as well as the widening and enhancement of financial literacy. An essential element of this is the book series on economics and monetary policy, which was expanded to include more publications in 2021.

The second revised edition of György Matolcsy's book *Economic Balance and Growth 2010–2019: From the Last to the First* was published in English early in the year. The book provides a detailed presentation of all the new economic policy concepts, innovations and instruments that resulted in the success of the Hungarian economy after 2010, which was significant from the aspect of economic history as well. Fiscal and financial stabilisation and the reform of central bank policy together created the basic conditions for sustainable growth, as a result of which Hungary embarked on a sustained catching-up path.

In the decade of financial revolution, central banks the world over are looking at the option of introducing a central bank digital currency. The MNB wishes to join the central

banks spearheading research into central bank digital currencies, and as a first step it published a comprehensive book of studies entitled *At the Dawn of a New Age – Money in the 21st Century*. In the book that appeared in both Hungarian and English, MNB staff summarise the theoretical considerations and most important practical issues related to central bank digital currencies, as well as the motivations behind creating this innovative asset and the opportunities offered by this new form of money.

A book of studies was published for the Budapest Eurasia Forum 2021 under the title *Age of Eurasia – Future Directions of Knowledge, Technology, Money and Sustainable Geoeconomics*, with the participation of 32 authors from seven countries, building on the close international relations of the MNB. The 19 papers on Eurasia discuss, among other things, the green transition, smart cities and the future of money in six chapters (geopolitics, multilateral cooperation, economy, finance, technology and infrastructure, education). Several other areas are explored that are suitable for ensuring long-term sustainable development and strengthening mutually beneficial partnerships in Eurasia.

The 75th anniversary of the introduction of the forint, Hungary's national currency, was celebrated on 1 August. The central bank commemorated the major events from the 75 years of the forint and its predecessors for posterity in the form of an attractive and information-packed volume. The anniversary book *75 Years of the Forint – 75 Years, 75 Stories* was authored with the help of the staff of the MNB, Magyar Pénzverő Zrt., Pénzjegynyomda Zrt. and Diósgyőri Papírgyár Zrt. as well as the Hungarian National Museum.

The *Nagy Pénzkönyv (Big Book of Money)* published at the end of the year is not only a representative and credible money history and money theory book of studies but also a new milestone in revitalising Hungarian financial literacy. The book abandons conventional approaches and examines the meaning of money in a much broader context than before.

Events organised by the MNB

In respect of the events organised, the MNB pursues a strategy of openness with its associate and partner institutions, which is aimed at strengthening professional partnership. Another objective of the MNB is to achieve broad recognition and to integrate the work of the Hungarian central bank, to the greatest possible extent, into that of the international professional community. To this

end, the MNB organises international conferences, internal events and cultural events.

International conferences

The majority of the international professional conferences usually involve 70-100 persons, although the number of participants in some events reaches 200-300 guests. The international conferences are primarily held on the premises of the MNB. However, due to the Covid-19 pandemic, the MNB events in 2021 were held in virtual or hybrid format to comply with the pandemic related measures and ensure the health and safety of participants.

The most important international conference events organised in 2021 were as follows:

Lámfalussy Lectures Conference

The objective of this annual event under the name '*Lámfalussy Lectures Conference*' (launched in 2014) is to invite distinguished lecturers to Hungary to share with and present to the audience and fellow professionals their views on current issues in global economic policy, specifically in monetary policy and the financial system. Parallel to launching the international conference, the Governor of the MNB established the Lámfalussy Sándor Award to recognise outstanding international professional performance and lifetime achievements that influence the MNB's activity and have a major long-term impact on developments in international monetary and financial policies. Besides the Lámfalussy Award, the Popovics Prize, commemorating the first governor of the MNB, is a recognition awarded by the central bank to outstanding young professionals in the field of economy and finances. The awards are presented annually at a gala ceremony linked to the conference.

In January 2021, the conference was held for the eighth time, in online form for the first time since its inception due to the pandemic. The conference was dedicated to the post-Covid future of monetary policy and the impact of the pandemic on government debt. The conference was opened by Barnabás Virág, Deputy Governor of the MNB, followed by the keynote speech by Gang Yi, the Governor of the People's Bank of China. Philip R. Lane, a member of the ECB's Executive Board and the former governor of the Central Bank of Ireland, Jacques de Larosière, the former Managing Director of the IMF and the former Governor of the Banque de France, Yang Yao, a professor at Peking University, and William B. English, professor at Yale University participated in the professional section of the conference.

Based on the proposal by the MNB's expert committee, the prize named after the 'Father of the Euro' was awarded to Boris Vujčić, the Governor of the Croatian National Bank, and the Popovics Prize was received by Gergely Fábián, the MNB's Executive Director for financial system analysis and statistics in 2021.

Budapest Renminbi Initiative Conference

The sixth Budapest Renminbi Initiative Conference was organised by the MNB and held in online form in March 2021. The event discussed how central banks combat the global crisis caused by Covid-19 as well as the role of China and the renminbi (RMB) in a post-Covid world with the participation of renowned international and Hungarian experts. The event was opened by Dr Mihály Patai, Deputy Governor of the MNB, then Péter Szijjártó, Hungary's Minister of Foreign Affairs and Trade delivered a welcome speech. The event was also addressed by Qi Dayu, the ambassador extraordinary and plenipotentiary of the People's Republic of China to Hungary. Following the keynote lectures given by Mei Jin, the Chief Representative of the PBoC and Changchun Mu, the Director General of the Institute of Digital Currency of the PBoC, the invited guests attended two panel discussions to share their views about the role of the Chinese currency in restarting the global economy as well as about the challenges and solutions regarding the introduction of the PBoC's central bank digital currency.

Visegrád Group Central Bank Governors Conference

A high-level central banking conference was organised by the MNB to mark the 30th anniversary of the Visegrád Cooperation on 15 July 2021. The event titled 'Gradual Transition into a Greener Economy – Challenges and Opportunities' was attended by central bank governors and deputy-governors from the V4 countries and leading financial and economic experts from the region. Due to the pandemic the conference was held online and its key topics were the increasing importance of sustainable economic policy and the green transition. The event was opened by György Matolcsy, Governor of the MNB, who highlighted the milestones in the history of the V4. Keynote speeches were delivered by Peter Kažimír, Governor of the National Bank of Slovakia (Národná banka Slovenska), Jiří Rusnok, Governor of the Czech National Bank (Česká národní banka) as well as Marta Kightley, Vice President of the National Bank of Poland (Narodowy Bank Polski). During the two panel discussions the participants discussed the role of central banks in the fight against climate change and the green renewal in the post-pandemic era.

World FinTech Festival in Budapest

In November 2021, the MNB hosted the World FinTech Festival in Budapest, the official partner event of the Singapore FinTech Festival, for the second time. At the event, leading experts discussed topics such as finance 3.0, decentralised finance, cybersecurity and central bank digital currencies (CBDC). Contributors and presenters included György Matolcsy, Governor of the MNB, Andrew McCormack, Head of the BIS Innovation Hub Singapore Centre, John A. Rolle, Governor of the Central Bank of the Bahamas, Michal Braverman-Blumenstyk, Vice President of Microsoft Corporate and Cloud & AI Security CTO as well as Claire Calmejane, Chief Innovation Officer of Société Générale Group, all sharing their valuable ideas during the event.

Budapest Eurasia Forum 2021 E-Conference

On 18–19 November 2021, the MNB held its flagship event, the Budapest Eurasia Forum, for the third time. The online event entitled 'Sustainable Recovery and Prosperity in Eurasia – Trends, Future, Solutions' hosted 43 presenters from 15 countries in six thematic panels, discussing various topics such as the changing role of central banks in the post-Covid era, the development of the Eurasian geopolitical field of force, or stimulation of innovation as the driving force of economies. In addition, the opportunities for multilateral cooperation in a green transition, the development of digital infrastructure and digital literacy were also addressed. At the high-level opening ceremony of the event, welcome speeches were delivered by, György Matolcsy, Governor of the MNB, Liu Zhenmin, Under-Secretary-General for Economic and Social Affairs at the UN, Péter Szijjártó, Hungary's Minister for Foreign Affairs and Trade and Tian Guoli, Chairman and Executive Director of China Construction Bank among others. The closing remarks were given by Dr Mihály Patai, Deputy Governor of the MNB, underlining the necessity of strengthening Eurasian partnerships amidst the global challenges we are facing.

Central European Green Finance Conference

The traditional international Green Finance Conference was held on 1 December 2021, as part of the Planet Budapest Sustainability Expo and World Summit organised by the Ministry of Foreign Affairs and Trade. The presentations and panel discussions of the event focused on the implications of the COP26 climate summit for the financial system and the significance of further environmental anomalies beyond climate change, such as biodiversity issues, focusing on the potential of appropriately designed ESG policies in financing the fight against the above challenges.

In his presentation, Dr Csaba Kandrás, Deputy Governor of the MNB, presented the MNB's long term climate stress test, according to which – both globally and in Hungary – a swift and orderly transition to a carbon neutral economy, as soon as possible, would be important for the quality of bank credit. Ádám Banai, Managing Director of the MNB, spoke about the monetary policy implications of climate change and the pioneering role of the Green Home Programme. Speakers included Senior Executives from the European Investment Bank, the Asian Institute for Sustainable Finance, and the Senior Executives of the Sustainable Finance Platform developing the EU Taxonomy, as well as high-level representatives from Cicero, BlackRock and 2°Investing Initiative and the UN Environment Programme. On the part of domestic market players, the heads of Magyar Bankholding Zrt., Erste Bank Zrt. and OTP Bank Nyrt. exchanged their green finance experiences.

Notably, at the conference, the Green Finance Awards for financial institutions and the Green Finance Science Awards for excellence in academia were presented.

Other international events

Ceremonial reception to honour the 100th anniversary of diplomatic relations between Hungary and the United States of America

On 9 December 2021 the MNB hosted a ceremonial reception to honour the 100th anniversary of establishing diplomatic relations between Hungary and the US. The event was opened by Dr Mihály Patai, Deputy Governor of the MNB and speeches were given by Marc Dillard, Chargé d'Affaires of the US Embassy in Budapest, and Dr Péter Sztáray, State Secretary for Security Policy at the Ministry of Foreign Affairs and Trade. During the reception, a commemorative medal issued by the MNB in limited edition but not considered legal tender was presented.

4 Additional information on the supervisory activity of the MNB in 2021

Table 12	
Institutions subject to full supervision¹	
Money market	759
Financial institution	284
Credit institution	33
Bank	21
Bank branches ²	1
Specialised credit institution	10
Cooperative credit institution	1
Financial enterprise	248
Financial enterprise equivalent to credit institution	16
Other financial enterprise	232
Financial holding company	2
Organiser (NOK)	1
Non-financial institution	475
Independent intermediary ³	460
Money market broker	14
Money market multiplier	4
Money market multiple agent	307
Money market trade multiple agent	135
Payment service provider	14
Electronic money issuer	1
Insurance	425
Insurance institutions	33
Insurance association	21
Insurance company	12
Insurance intermediaries ⁴	391
Insurance broker	354
Insurance multiple agent	37
Guarantee fund management ⁵	1
Funds	54
Occupational pension provider	1
Private pension fund	4
Voluntary fund	49
Voluntary healthcare and mutual fund	11
Voluntary healthcare fund	3
Voluntary mutual fund	2
Voluntary pension fund	33
Capital market	59
Investment fund manager	42
Alternative investment fund manager	34
UCITS fund manager	8
Investment firm	13
Clearing house, Central counterparty	2
Stock exchange	2
Total	1,297

¹ The members of the institutional group are under direct supervision of the MNB on 31 December 2021.

² Hungarian branch of a financial institution not domiciled in another third-country state

³ Independent intermediaries include registered and principal intermediation institution, and independent intermediaries institutions with other principal activities.

⁴ Insurance intermediaries include registered and principal institutions, and Insurance intermediaries institutions with other principal activities.

⁵ Compensation Account and Compensation Fund

Table 13			
Number of inspections conducted, by type of inspection and sectors			
<i>(pieces)</i>			
Type of inspection	Type of institution	Started in 2021	Closed in 2021
Prudential	Total	65	74
	Money market	17	25
	Insurance	7	10
	Funds	13	16
	Capital market	25	19
	Thematic audit	3	4
	<i>Number of involved institution</i>	<i>36</i>	<i>22</i>
Consumer protection	Total	286	330
	Money market	28	240
	Insurance	6	56
	Funds	202	4
	Capital market	32	20
	Thematic audit	18	10
	<i>Number of involved institution</i>	<i>18</i>	<i>0</i>
Market surveillance	Total	31	24
	Related to market surveillance	28	23
	Related to issuer oversight	3	1
Anti-Money Laundering	Total	6	3
ICAAP/ILAAP/BMA	Total	61	28

Table 14	
Amount of penalties imposed	
<i>(HUF millions)</i>	
Prudential fines	744.8
<i>Money market</i>	358.9
<i>Insurance</i>	170.9
<i>Funds</i>	83.2
<i>Capital market</i>	131.8
Consumer protection fines	211.3
Anti-Money Laundering fines	321
Market surveillance fines	141.5
Issuer supervision fines	7.1
Procedural fine	6.8
Licensing fine	0.6
Total	1,433.1

Table 15	
Measures taken in the money market sector	
<i>(pieces)</i>	
Number of prudential decisions and orders	1,711
Number of authorisation resolutions/rulings	831
Number of foundation permit	5
Number of operating licence	13
Number of operating change licence	8
Number of stock transfer licence	8
Number of shareholding licence	50
Senior Executives/ Board members licence	252
Number of withdrawal licence by an institution	26
Allow and approve amendment of articles of association and other regulations	12
Resolutions issued under CRR	25
Number of other authorisation decisions ¹	389
Number of substantive orders for authorisation	43
Number of enforcement decisions and orders	880
Number of decisions related to investigations	40
Number of revocation and suspension decisions by MNB sanctions	7
Ongoing supervisory decisions/Number of decisions containing measure	314
Money laundering prevention decisions and orders, number of reports	42
Number of consumer protection decisions and orders	421
Number of other enforcement decisions	56
¹ Including authorisation decisions related to special services intermediaries and to money exchange offices.	

Table 16	
Measures taken in the capital market sector	
<i>(pieces)</i>	
Number of prudential decisions and orders	775
Number of authorisation resolutions/rulings	700
Number of operating licence	8
Number of activity change permissions	7
Number of shareholding licenses	6
Senior Executives/ Board members licence	126
Number of withdrawal licence by an institution	5
Allow and approve amendment of articles of association and other regulations	8
Resolutions issued under CRR	10
Number of other authorisation decisions ¹	494
Number of substantive orders for authorisation	36
Number of enforcement decisions and orders	75
Number of decisions related to investigations	25
Ongoing supervisory decisions/Number of decisions containing measure	2
Money laundering prevention decisions and orders, number of reports	2
Number of consumer protection decisions and orders	29
Number of other enforcement decisions	10
Number of other enforcement orders	7
¹ Including authorisation decisions related to tied agents and intermediaries under the act regulating the form of collective investments.	

Table 17	
Measures taken in the insurance market sector	
<i>(pieces)</i>	
Number of prudential decisions and orders	370
Number of authorisation resolutions/rulings	220
Number of operating licence	6
Number of stock transfer licenses	6
Number of shareholding licenses	11
Senior Executives/ Board members licence	112
Number of withdrawal licence by an institution	14
Number of other authorisation decisions	4
Number of substantive orders for authorisation	67
Number of enforcement decisions and orders	150
Number of decisions related to investigations	10
Number of revocation and suspension decisions by MNB sanctions	2
Ongoing supervisory decisions/Number of decisions containing measure	37
Decision on the secondment of a supervisory commissioner	2
Number of consumer protection decisions and orders	94
Number of other enforcement decisions	5

Table 18	
Measures taken in the funds sector	
<i>(pieces)</i>	
Number of prudential decisions and orders	40
Number of authorisation resolutions/rulings	17
Number of operating licence	1
Number of stock transfer licenses	0
Number of withdrawal licence by an institution	1
Allow and approve amendment of articles of association and other regulations	9
Number of other authorisation decisions	5
Number of substantive orders for authorisation	1
Number of enforcement decisions and orders	23
Number of decisions related to investigations	16
Number of orders granting an interim measure	1
Number of consumer protection decisions and orders	6

Table 19	
Market surveillance and issuers supervision measures	
<i>(pieces)</i>	
Number of enforcement decisions and orders issued	461
Number of market surveillance decisions	12
Market surveillance enforcement orders	407
Number of issuer oversight decisions	36
Number of issuer supervision orders	6
Substantive rulings, orders, number of resolving discrepancies	1,015
Number of issuance decision	638
Number of issuance order	12
Number of resolving discrepancies	365

Table 20	
Licensing related to securities issuance	
<i>(pieces)</i>	
Number of issues and stock exchange listings	13
Number of stock exchange listings	10
<i>Stock</i>	7
<i>Bonds and mortgage bonds programme</i>	3
Offers	3

5 Explanation of abbreviations and terms specific to central banking

ABBREVIATIONS

APRC: Annual Percentage Rate of Charge

BGS: Bond Funding for Growth Scheme

BIS: Bank for International Settlements

BISZ Zrt.: BISZ Central Credit Information Plc.

BPM: Balance of Payment Manual

BSE: Budapest Stock Exchange

CCFHL: Certified Consumer-Friendly Housing Loans

CCFHI: Certified Consumer-Friendly Home Insurance

CCFPL: Certified Consumer-Friendly Personal Loans

CCIS: Central Credit Information System

CCyB: Countercyclical Capital Buffer

CMID: Central MTPL Itemised Database

DLT: Distributed Ledger Technology

EBA: European Banking Authority

EBRD: European Bank for Reconstruction and Development

EIOPA: European Insurance and Occupational Pensions Authority

ECB: European Central Bank

EMIR: Unified Monitoring and Information System

EMU: Economic and Monetary Union

ESCB: European System of Central Banks

ESMA: European Securities and Markets Authority

ESRB: European Systemic Risk Board

FGS: Funding for Growth Scheme

FNAON: Financial Navigator Advisory Office Network

FSB: Financial Stability Board

FSC: Financial Stability Council

GIRO: GIRO Clearing House Ltd.

HCSO: Hungarian Central Statistical Office

ICAAP: Internal Capital Adequacy Assessment Process

IFRS: International Financial Reporting Standards

ILAAP: Internal Liquidity Adequacy Assessment Process

IMF: International Monetary Fund

ISDA: International Swaps and Derivatives Association

KELER CCP: KELER CCP Central Counterparty Ltd.

KELER CSD: KELER Central Securities Depository Ltd.

LIRS: Interest Rate Swap (IRS) conditional on lending activity

MFAR: Mortgage Funding Adequacy Ratio

MTPL: Compulsory motor third-party liability insurance

MIRS: Interest Rate Swap (IRS) facility of monetary policy purpose

MNB: Magyar Nemzeti Bank

NPL: Non-Performing Loans

OECD: Organisation for Economic Co-operation and Development

MOF (PM): Ministry of Finance

SNA: System of National Accounts

SRB: Single Resolution Board

SSM: Single Supervisory Mechanism

TSA: Treasury Single Account

VIBER: Real-time gross settlement system, a payment system operated by the MNB

GLOSSARY

Access interface: Pursuant to the PSD2 requirements, all account-servicing payment service providers had to design an interface that, subject to specific rules, enables third-party providers to provide any one of the following services to customers.

AML Act: Act LIII of 2017 on Preventing and Combating Money Laundering and Terrorist Financing

AML/CFT: Anti Money Laundering and Combating the Financing of Terrorism

API (Application Programming Interface): Application Programming Interface With the help of a public API, it is possible to use the services of a programme system without having to know its internal operation.

Cash turnover: The sum of exchanges and payments to and from the central bank.

CLS (Continuous Linked Settlement): A clearing and settlement model that enables the elimination of FX settlement risks. It is based on a multi-currency payment versus payment (PvP) mechanism. The CLS is operated by the CLS Bank.

CSDR (Central Securities Depositories Regulation): Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012

Currency Interest Rate Swap (CIRS): Usually a medium or long-term transaction involving the exchange of different currencies, a series of interest payments on the principal and repayment of principals when the transaction is settled.

Duration: Average remaining maturity of bonds. It is an indicator measuring the level of risk associated with the bond portfolio.

ERM II, Exchange Rate Mechanism II: An exchange rate mechanism for establishing the conditions for an exchange rate policy co-operation between euro area countries and EU Member States not participating in the third stage of EMU. The ERM II is a multilateral system of fixed but adjustable exchange rates, where the mid-rate is surrounded by a normal, +/-15 per cent fluctuation band. All decisions in relation to the mid-rate and, as the case may be, a narrower fluctuation band, are made on the basis of a joint agreement between the Member State concerned, the euro area countries, the ECB and the other Member States participating in the mechanism.

FEER: Foreign Exchange Coverage Ratio – A ratio, expressing the open foreign exchange position within the balance sheet relative to the balance sheet total.

FFAR (Foreign Exchange Funding Adequacy Ratio): The ratio of the sum of stable foreign exchange funds and net foreign exchange swap stock with a maturity over one year and the weighted foreign currency denominated assets to be financed.

FGS Green Home Programme (FGS GHP): Programme launched under the Funding for Growth Scheme (FGS), as part of the MNB's Green Toolkit Strategy, to support the modernisation of the stock of Hungarian properties from an energy perspective and the implementation of green considerations in lending through financing the construction of new, highly energy-efficient, flats and detached houses.

FinTech: FinTech is a technology driven financial innovation that can result in new business models, applications or products, and can have a significant impact on financial markets and institutions, and on the financial services themselves.

Foreign exchange futures: A stock exchange transaction where the basis of future settlement is a certain amount of standardised (expressed-in-contract) foreign exchange specified at the time of the deal.

Foreign exchange swap: Usually a short-term transaction involving the exchange of different currencies and, when the transaction is settled, exchange of the currencies again at the price determined in the contract by the cross rate and the interest rate of the currencies.

FX swap: See Foreign exchange swap.

IDD (Insurance Distribution Directive): Directive (EU) 2016/97 of the European Parliament and of the Council on insurance distribution

IFR/IFD regulation: Regulation (EU) 2019/2033 of the European Parliament and of the Council of 27 November 2019 on the prudential requirements of investment firms and Directive (EU) 2019/2034 of the European Parliament and of the Council of 27 November 2019 on the prudential supervision of investment firms.

Infringements in connection with payment-related administrative procedures:

The infringements:

- with respect to Act LXXXV of 2009 on the Pursuit of the Business of Payment Services, the provision of information to customers prior to signing the framework contract, the format and content requirements of framework contracts, the amendment and termination of framework contracts, the opening of payment accounts, the ex-post information given in the case of the payment orders based on the framework contract, the authorisation and correction of payment transactions and liability rules,
- with respect to MNB Decree No 35/2017 (XII. 14.) on the execution of payment transactions, the secondary account identifier, the time of the start and end of the working day and the final submission deadline, the receipt and identification of payment orders, rejection of the execution of payment orders and payment transactions between payment service providers, the execution of payment orders between payment service providers, the rules concerning the value date, making the funds of the payment transaction available to the beneficiary, and the special rules concerning transfers,
- with respect to Government Decree No. 262/2016 (VIII. 31.) Korm. on the access to, and the characteristics and fees of, the basic payment account, the maximum fee chargeable,

- with respect to Government Decree No. 263/2016 (VIII. 31.) Korm. on payment account switching, the cancellation of payment accounts on the day specified in the power of attorney or at the end of the notice period as well as the transfer of the remaining balance,

- with respect to the Government Decree No. 144/2018 (VIII. 13.) Korm. on certain issues pertaining to the information about the fees related to payment accounts kept for consumers in accordance with Commission Implementing Regulation (EU) 2018/33 of 28 September 2017 laying down implementing-technical standards with regard to the standardised presentation format of the statement of fees and its common symbol according to Directive 2014/92/EU of the European Parliament and of the Council, the adequacy of the fee statement provided to the consumer (completeness, accuracy, detailed nature, sequence of statement), and the adequacy of the stipulated notice period's duration,

- with respect to Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplementing Directive (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication, general authentication requirements, the review of the security measures, the requirements pertaining to elements categorised as knowledge, the general obligations for access interfaces, the obligations for a dedicated interface and contingency measures,

- with respect to Regulation (EC) No 924/2009 of the European Parliament and of the Council of 16 September 2009 on cross-border payments in the Community and repealing Regulation (EC) No 2560/2001 amended by Regulation (EU) 2019/518 of the European Parliament and of the Council of 19 March 2019 amending Regulation (EC) No 924/2009 regarding certain charges on cross-border payments in the Union and currency conversion charges, the information on the currency conversion charges related to transfers.

IMF reserve quota: The freely drawable, i.e. not yet drawn portion of the IMF quota paid to the International Monetary Fund in SDR (Special Drawing Rights).

Interest rate swap (IRS): The exchange of fixed rate and variable rate interest on principal at pre-determined intervals, adjusted to certain market rates and conditions.

MAR (Market Abuse Regulation): Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse

MIFID II (Markets in Financial Instruments Directive): Directive 2014/65/EU of the European Parliament and the Council on markets in financial instruments.

MNB Act: Act CXXXIX of 2013 on the Magyar Nemzeti Bank

Monetary financial institutions: The central bank, financial institutions and money market funds together constitute this institutional category within financial corporations.

MREL: Minimum requirement for own funds and liabilities eligible for write-down and conversion.

O/N: Overnight deposit/loan

Option contract: For the owner of the foreign exchange option this means a right, but not an obligation, to buy or sell a certain amount of currency against another currency at a pre-determined rate, at or before a pre-determined date. If the holder of the option exercises this right, it will become an obligation for the seller (writer) of the option.

Payment system: In the case of supervised systems, a form of cooperation established based on an agreement between the cooperating parties for the operation of the system defined in Section 6(1)(27) of the Credit Institutions Act. It is part of the financial infrastructure. It includes means of payment, bank procedures and interbank payment systems that together enable the execution of payments.

PEPP: Pan-European Personal Pension Product

PRIIPS: Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance based investment products

PSD2 (Payment Services Directive 2): The revised Payment Services Directive. Directive 2015/2366/EU of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC

Repurchase and reverse repurchase transaction: An agreement on the transfer of the ownership right of a security with a repurchase obligation at a pre-determined price at a future date specified or to be specified at the time when the contract is concluded. During the term of the contract the buyer may either obtain the security which is the subject of the transaction and freely dispose over it (delivery repo transaction) or may not obtain it and may not freely dispose over it, in which case the security is deposited as a bail to the benefit of the buyer during the term of the contract (hold-in-custody repo).

Revaluation reserve: The revaluation reserve of the forint exchange rate and the revaluation reserve of foreign exchange securities are reserves that are part of the equity of the MNB. If the sum of the revaluation reserves is negative and exceeds the sum of the retained earnings and the profit for the year, the central government is liable to reimburse the difference by 31 March of the year following the current year to the credit of retained earnings. The amount of the reimbursement is recorded in the balance sheet of the current year as a receivable from the central budget.

– **Revaluation reserve due to forint exchange rate changes:** Unrealised exchange rate gains and losses on the forint exchange rate changes of foreign currency assets and liabilities are indicated in the forint exchange rate revaluation reserve, which constitutes a part of the equity.

– **Revaluation reserve of foreign exchange securities:** The valuation difference between the market value and cost rate of foreign exchange assets based on securities is indicated in the revaluation reserve of foreign exchange securities, which constitutes a part of the equity.

ROE: Return on Equity

SCAR: Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplementing Directive (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication

SEPA: Single Euro Payments Area, an area within which economic operators can effect and receive payments in euro anywhere, using one single payment account, in

the same manner as in their own respective countries. Geographically, the Area covers the 28 EU Member States, Iceland, Liechtenstein, Norway, Switzerland and Monaco.

SREP: Supervisory Review and Evaluation Process

VaR (Value at risk): Value at risk – a method for measuring risks. VaR quantifies the maximum amount of loss to be

expected at a given confidence level for a specific time horizon.

Third-party providers: The new players on the payment services market: account information service providers, payment initiation service providers and payment service providers issuing card-based cash-substitute payment instruments.

Part B)

**Audited financial statements of the Magyar
Nemzeti Bank 2021**

1 Independent auditor's report



Deloitte Auditing
and Consulting Ltd.

Dózsa György út 84/C.
1068 Budapest
Hungary

Postal address:
1438 Budapest,
Pf. 471, Hungary

Tel: +36 (1) 428-6800
Fax: +36 (1) 428-6801
www.deloitte.hu

INDEPENDENT AUDITOR'S REPORT

Opinion

We have audited the financial statements of Magyar Nemzeti Bank (the „Bank”) for the year 2021 which comprise the balance sheet as at December 31, 2021 – which shows an equal amount of total assets and total liabilities of HUF 26.307.422 million and loss for the year of HUF 57.094 million –, as well as the related profit and loss account for the year then ended and the notes to the financial statements including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Bank as at December 31, 2021 and its financial performance for the year then ended in accordance with Act C of 2000 on Accounting (the „Accounting Act”) effective in Hungary.

Basis for Opinion

We conducted our audit in accordance with the Hungarian National Standards on Auditing and the effective Hungarian laws and other regulations on audits. Our responsibilities under these standards are further described in the "The Auditor's Responsibilities for the Audit of the Financial Statements" section of our report.

We are independent of the Company in compliance with the relevant effective Hungarian regulations and the “Rules of conduct (ethical rules) of the auditor profession and the disciplinary process” of the Chamber of Hungarian Auditors and, in respect of matters not regulated therein, the Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (the IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the same ethical requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information: The Business Report

Other information includes the business report of the Bank for 2021. Management is responsible for the preparation of the business report in accordance with the relevant provisions of the Accounting Act and other regulations. Our opinion on the financial statements provided in the section of our independent auditor's report entitled „*Opinion*” does not apply to the business report.

Our responsibility in connection with our audit of the financial statements is to read the business report and, in doing so, consider whether the business report is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

Furthermore, in accordance with the Accounting Act, our responsibilities also include assessing whether the business report was prepared in accordance with the relevant provisions of the Accounting Act and other regulations, and to express an opinion on the above and on whether the business report is consistent with the financial statements.

In our opinion, the business report of the Bank for 2021 corresponds to the financial statements of the Bank for 2021 and the relevant provisions of the Accounting Act in all material respects. As the Bank is not subject to additional requirements under any other regulation in connection with the business report, we have not formulated an opinion on this matter.

In addition to the above, based on the information obtained about the Bank and its environment, we must report on whether we became aware of any material misstatements in the business report and, if so, on the nature of such material misstatements. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the Accounting Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Bank's ability to continue as a going concern, disclosing, as applicable, matters related to the going concern principle, and preparing the financial statements using the going concern basis of accounting. Management must apply the going concern principle, unless the use of this principle is precluded by any provision, or if any fact or circumstance prevails, which precludes the Bank to continue as a going concern.

Those charged with governance are responsible for overseeing the Bank's financial reporting process.

The Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives during the audit are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue, on the basis of the above, an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Hungarian National Standards on Auditing and the effective Hungarian laws and other regulations on audits will always detect a material misstatement when it exists. Misstatements can arise from fraud or error, and they are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the Hungarian National Standards on Auditing and the effective Hungarian laws and other regulations on audits, we exercise professional judgment and maintain professional scepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's preparation of the financial statements in accordance with the going concern principle and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify the opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in the Bank's internal control that we identify during the audit.

Budapest, April 27, 2022

The original Hungarian version has been signed.

Molnár Gábor
on behalf of Deloitte Auditing and Consulting Ltd.
and as a statutory registered auditor

Deloitte Auditing and Consulting Ltd.
1068 Budapest, Dózsa György út 84/C.
Registration number: 000083

Registration number of statutory registered auditor: 007239

2 Balance sheet of the Magyar Nemzeti Bank

HUF millions

Note	ASSETS	31 Dec 2020	31 Dec 2021	Change
1	2	3	4	4-3
	I. RECEIVABLES DENOMINATED IN FORINTS	6,812,269	10,953,788	4,141,519
4.3.	1. Receivables from the central government	1,113,627	3,302,769	2,189,142
4.7.	2. Receivables from credit institutions	5,144,510	6,309,756	1,165,246
4.10.	3. Other receivables	554,132	1,341,263	787,131
	II. RECEIVABLES DENOMINATED IN FOREIGN CURRENCY	13,128,310	14,932,652	1,804,342
4.9.	1. Gold and foreign exchange reserves	12,273,939	14,141,134	1,867,195
4.4.	2. Receivables from the central government	0	0	0
4.8.	3. Receivables from credit institutions	63,779	36,723	-27,056
4.10.	4. Other receivables	790,592	754,795	-35,797
	III. BANKING ASSETS	221,431	261,805	40,374
4.12.	of which: invested assets	220,438	259,464	39,026
4.14.	IV. DEFERRED EXPENSES/ACCRUED INCOME	141,193	159,177	17,984
	V. TOTAL ASSETS (I+II+III+IV)	20,303,203	26,307,422	6,004,219
Note	LIABILITIES AND EQUITY	31 Dec 2020	31 Dec 2021	Change
1	2	3	4	4-3
	VI. LIABILITIES DENOMINATED IN FORINTS	14,944,087	19,404,098	4,460,011
4.5.	1. Central government deposits	1,728,666	1,356,350	-372,316
4.7.	2. Deposits by credit institutions	5,084,832	8,475,400	3,390,568
	3. Banknotes and coins in circulation	7,164,366	7,675,234	510,868
4.11.	4. Other deposits and liabilities	966,223	1,897,114	930,891
	VII. LIABILITIES DENOMINATED IN FOREIGN CURRENCY	4,050,607	5,917,948	1,867,341
4.5.	1. Central government deposits	1,161,653	578,047	-583,606
4.8.	2. Deposits by credit institutions	164,359	211,592	47,233
4.11.	3. Other deposits and liabilities	2,724,595	5,128,309	2,403,714
4.13.	VIII. PROVISIONS	1,009	1,111	102
	IX. OTHER BANKING LIABILITIES	132,379	120,184	-12,195
4.14.	X. ACCRUED EXPENSES/DEFERRED INCOME	62,428	65,179	2,751
4.15.	XI. EQUITY	1,112,693	798,902	-313,791
	1. Share capital	10,000	10,000	0
	2. Retained earnings	202,909	208,333	5,424
	3. Valuation reserves	0	0	0
4.16.	4. Revaluation reserves due to exchange rate changes	586,408	654,452	68,044
4.16.	5. Revaluation reserves of foreign currency securities	57,952	-16,789	-74,741
	6. Profit/Loss for the year	255,424	-57,094	-312,518
	XII. TOTAL EQUITY AND LIABILITIES (VI+VII+VIII+IX+X+XI)	20,303,203	26,307,422	6,004,219

27 April 2022, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

3 Income statement of the Magyar Nemzeti Bank

HUF millions

Note	INCOME	2020	2021	Difference
1	2	3	4	4-3
4.18.	I. INTEREST AND INTEREST-RELATED INCOME DENOMINATED IN FORINTS	55,805	136,866	81,061
	1. Interest on receivables from the central government	8,064	66,970	58,906
	2. Interest on receivables from credit institutions	22,321	38,203	15,882
	3. Interest on other receivables	8,318	21,643	13,325
	4. Interest-related income	17,102	10,050	-7,052
4.18.	II. INTEREST AND INTEREST-RELATED INCOME DENOMINATED IN FOREIGN CURRENCY	299,503	204,623	-94,880
	1. Interest on foreign exchange reserves	77,781	54,131	-23,650
	2. Interest on receivables from the central government	0	0	0
	3. Interest on receivables from credit institutions	-40	-40	0
	4. Interest on other receivables	0	0	0
	5. Interest-related income	221,762	150,532	-71,230
4.19.	III. INCOME ARISING FROM EXCHANGE RATE CHANGES	294,151	153,119	-141,032
4.18.	IV. REALISED GAINS ARISING FROM FINANCIAL OPERATIONS	14,936	9,837	-5,099
4.21.	V. OTHER INCOME	23,189	27,458	4,269
	1. Fees and commissions	1,358	1,593	235
4.22.	2. Income other than fees and commissions	1,961	3,533	1,572
4.23.	3. Income from supervisory activities	19,870	22,332	2,462
4.13.	VI. PROVISIONS RELEASED	556	156	-400
4.13.	VII. REVERSED IMPAIRMENT	209	494	285
4.24.	VIII. OPERATING INCOME	278	240	-38
	IX. TOTAL INCOME (I+II+III+IV+V+VI+VII+VIII)	688,627	532,793	-155,834
Note	EXPENSES	2020	2021	Difference
1	2	3	4	4-3
4.18.	X. INTEREST AND INTEREST-RELATED EXPENSES DENOMINATED IN FORINTS	45,172	206,829	161,657
	1. Interest on central government deposits	6,249	23,252	17,003
	2. Interest on deposits by credit institutions	30,015	158,347	128,332
	3. Interest on other deposits	53	700	647
	4. Interest-related expenses	8,855	24,530	15,675
4.18.	XI. INTEREST AND INTEREST-RELATED EXPENSES DENOMINATED IN FOREIGN CURRENCY	269,475	207,181	-62,294
	1. Interest on central government deposits	-2,425	-3,190	-765
	2. Interest on deposits of credit institutions	-177	-507	-330
	3. Interest on other liabilities	3,713	-390	-4,103
	4. Interest-related expenses	268,364	211,268	-57,096
4.19.	XII. EXPENSES RESULTING FROM EXCHANGE RATE CHANGES	8,002	6,898	-1,104
4.20.	XIII. COST OF ISSUING BANKNOTES AND COINS	10,989	12,427	1,438
4.18.	XIV. REALISED LOSSES ARISING FROM FINANCIAL OPERATIONS	9,815	34,870	25,055
4.21.	XV. OTHER EXPENSES	5,108	7,718	2,610
	1. Fees and commissions	1,842	2,367	525
4.22.	2. Expenses other than fees and commissions	3,266	5,351	2,085
4.13.	XVI. PROVISIONS CHARGED	862	258	-604
4.13.	XVII. IMPAIRMENT	34,954	58,430	23,476
4.24.	XVIII. OPERATING COSTS AND EXPENSES	48,826	55,276	6,450
	XIX. TOTAL EXPENSES (X+XI+XII+XIII+XIV+XV+XVI+XVII+XVIII)	433,203	589,887	156,684
	XX. PROFIT/LOSS FOR THE YEAR (IX-XIX)	255,424	-57,094	-312,518

27 April 2022, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

4 Notes to the financial statements

4.1 MNB ACCOUNTING POLICIES

The Magyar Nemzeti Bank (MNB), the central bank of Hungary, is owned by the Hungarian State (the shareholder). Ownership rights are exercised by the minister in charge of public finances (the finance minister).

The MNB has been a member of the European System of Central Banks (ESCB) since the effective date of the Act promulgating the international treaty on the accession of Hungary to the EU, i.e. 1 May 2004.

The accounting policies of the MNB are based on the Act on Accounting (Act C of 2000), Act CXXXIX of 2013 on the Magyar Nemzeti Bank (hereinafter: the MNB Act) and Government Decree 221/2000 (XII.19) on the special reporting and accounting requirements applicable to the Magyar Nemzeti Bank (hereinafter: the MNB Decree).

The following sections present a brief description of the MNB's accounting system and the valuation and profit recognition rules, insofar as these differ from the general rules.

4.1.1 The MNB's accounting framework

One of the key accounting principles of the MNB is that transactions are booked for the period in which they occur unless the financial year is already closed. This is especially important for the accurate measurement of exchange rate gains and losses, in particular foreign exchange sales and purchases. Spot foreign currency transactions which involve foreign exchange conversions are recorded in the books on the transaction date. Assets and liabilities arising from such transactions affect the MNB's foreign currency position from the date of entering into the transaction. The same procedure is applied to recording the revaluation difference in the balance sheet relating to derivative transactions for hedging purposes.

On a daily basis, the MNB records:

- exchange rate differences arising from the revaluation of its foreign assets and liabilities and off-balance sheet derivative transactions recorded for hedging purposes;
- amortisation of the securities' price gains and losses; and
- accrued/deferred interest arising from on and off-balance sheet assets and liabilities from hedging transactions.

Pursuant to the MNB Decree, for the purpose of reporting data to the owner, the MNB must close accounts relating to its assets, liabilities and income and prepare trial balances on a quarterly basis, in accordance with the procedures specified in its accounting policies.

For internal use, the MNB compiles a balance sheet and income statement on a monthly basis; these are supported by:

- market valuation of foreign currency securities;
- breakdown and recording of realised and unrealised portions of foreign exchange gains and losses derived from daily revaluation; and
- charging of depreciation and amortisation.

Upon the quarterly closing of accounts, the MNB measures its off-balance sheet contingent and future liabilities arising from derivative transactions for other purposes and securities lending operations based on international agreements (in this case, the liabilities are equal to the purchase value of the collateral received) and other off-balance sheet liabilities. It also measures the receivables and securities in the balance sheet, and additionally measures the financial investments at the end of the year and at the second quarter. As a result of this measurement, the MNB recognises impairment losses as necessary and forms provisions for the balance sheet liabilities.

The balance sheet preparation date is the 15th working day of January in the year following the reporting year. For this report, the balance sheet preparation date was 21 January 2022.

By law, the MNB is also required to report to Parliament. The MNB submits a single report to both Parliament and the Ministry in charge of public finances (Ministry of Finance), which exercises the rights of ownership as laid down in the MNB Act. This takes the form of an Annual Report, which contains a business report describing the MNB's structure, operations and state of affairs during the reporting year, and the MNB's annual financial statements defined by the Act on Accounting, as adopted by the Board of Directors with the auditor's opinion. The Supervisory Board submits an opinion on the Annual Report and a report on such to the shareholder. The Annual Report is published in unabridged form on the internet in Hungarian and in English. The website is accessible at: <http://english.mnb.hu>.

Additionally, the Governor of the MNB also reports to the Parliament's committee responsible for economic affairs on the half-year activity of the MNB. This report is the Half-year Report, which contains a business report describing the MNB's structure, operations and half-year activity, as well as the half-year financial statements as defined by the Act on Accounting and compiled by the Board of Directors. The Half-year Report is also published on the internet in Hungarian.

Pursuant to the MNB Decree, the MNB is not obliged to draw up consolidated financial statements.

The financial statements of the MNB must be audited by the statutory auditor in compliance with the Act on Accounting. The registered auditor of the MNB is Gábor Molnár (Deloitte Kft.), Chamber membership number: 007239.

The person authorised to sign the Annual Report is Dr György Matolcsy, Governor of the Magyar Nemzeti Bank.

The person responsible for accounting services is Gábor Kalina, registration number: 194599.

4.1.2 Major valuation principles

Receivables from the central government

Securities stated under receivables from the central government are recorded in the balance sheet at amortised purchase price and include no interest. The difference between the purchase price excluding interest and the face value is shown in the MNB's income statement as a valuation gain or loss in proportion to the time elapsed.

Receivables from the central government also include any receivables associated with the reimbursement of revaluation reserves at year-end.

Receivables from credit institutions

Mortgage bonds and securities issued by credit institutions with government guarantees are recorded in the balance sheet under 'Receivables from credit institutions' at amortised purchase price net of interest. The market value difference at acquisition is shown in the MNB's 'Interest-related income' as a valuation gain or loss in proportion to the time elapsed.

Interest-free refinancing loans within the framework of the Funding for Growth Scheme (FGS, FGS+ and FGS GHP) and the base rate fixed loans provided to credit institutions with collateral (securities, large entity loan receivables) are recorded in the balance sheet at the disbursed amount.

Other receivables

Corporate bonds are recorded in the balance sheet under 'Other receivables' at amortised purchase price, net of interest. The market value difference at acquisition is shown in the MNB's 'Interest-related income' as a valuation gain or loss in proportion to the time elapsed.

Receivables from supervisory activities are recorded in the balance sheet, along with any related impairment. The MNB records supervisory fees imposed in line with the incoming data reported by the institutions and reports, and the penalties imposed are recorded in accordance with the final resolutions. Supervisory fees, penalties levied and used for support purposes defined by the MNB Act and fees from public proceedings are recorded as 'Income from supervisory activities'.

The balance of 'Other receivables' also contains employee loans and loans provided to other legal entities in the amount of the disbursements. The related interest income is stated under 'Interest on other receivables'.

Valuation of receivables

Impairment losses may not be recorded in connection with receivables from the central government.

'Receivables from credit institutions' and 'Other receivables' are tested for impairment and if the book value of the receivable is higher than its expected recovery, an impairment loss is recorded, in line with the MNB's impairment policy. This does not apply to receivables with market valuation and the collateralised monetary policy receivables.

With the exception of government bonds and bonds issued with government guarantees, securities that are denominated in forints and purchased for monetary policy purposes are tested for impairment in line with the corresponding rules, and impairment is recorded in proportion to the risk of losses. Other forint-denominated securities held for monetary policy purposes (mortgage bonds, corporate bonds) are tested for impairment separately for each portfolio (held-for-sale portfolio, held-to-maturity portfolio). With regard to the held-for-sale portfolio, the appropriate amount of impairment is defined as the negative difference between the book value and the market value, provided that such difference (loss) appears to be a permanent, significant amount. With regard to the held-to-maturity portfolio, the impairment methodology is based on the risk of non-performance and the related expected loss, ignoring the significance criteria.

Valuation of foreign currency assets and liabilities and the recording of exchange rate gains

In its books, the MNB records all foreign currency assets, including the precious metals held for central bank purposes based on the MNB Decree, and liabilities at the official exchange rate prevailing on the date of acquisition. If a foreign currency asset or liability is created as a result of foreign exchange conversion, the exchange rate gain or loss arising from the difference between the actual and the official exchange rate is recorded by the MNB as conversion income for that particular date and is recognised under 'Gains/losses from exchange rate changes' in the income statement.

The MNB carries out a daily revaluation of foreign currency assets and liabilities as well as off-balance sheet assets and liabilities arising from derivative transactions for hedging purposes, taking account of variations in the official exchange rate. As a result of this revaluation, balance sheet items denominated in foreign currency are stated in an amount converted at the official exchange rate prevailing on the balance sheet date. Banking assets and banking liabilities in foreign currencies (with the exception of foreign investments) and foreign currency accruals and derivative transactions for purposes other than hedging do not form part of the revaluation.

Income received in foreign currency is stated at the official exchange rate prevailing on the given date.

Daily accounting for accrued income is preceded by reversing the accrued income from the previous day. As a result, foreign currency accruals are recorded in the balance sheet at the official exchange rate without revaluation.

In respect of foreign exchange gains and losses arising in the course of daily revaluation, only realised exchange rate gains and losses can be stated as a profit item, while the unrealised result is reported under 'Equity' in the item 'Revaluation reserve due to exchange rate changes'.

Realised income in a particular currency arises as a result of a decrease in the net foreign currency position (in absolute terms). Realised income arises as the difference between the value of the change in the net foreign currency position at the official exchange rate and the average cost rate prevailing on that particular date.

Foreign currency securities

Foreign currency securities are stated at market price. The difference between the market value (mid prices applied by the instrument facilitating portfolio management) prevailing on the date of valuation and the amortised purchase value is recorded in the 'Revaluation reserve of foreign currency securities' as part of 'Equity'. Exchange rate gains or losses realised on sales are stated under 'Realised gains/losses arising from financial operations'.

The MNB measures its securities on the basis of market prices prevailing on the last working day of each month. However, if adequately liquid prices are not ensured on this day in respect of a certain foreign currency, the valuation of securities is based on the market prices available on the previous working day.

The foreign currency securities managed by the external trustee based on a mandate are also stated at market price, applying the prices received from the custodian.

Security repurchase transactions, based on international agreements, are recorded as credit/deposit transactions, while the related receivables or liabilities are stated as off-balance sheet items.

Securities lent through securities lending operations based on international agreements need not be removed from foreign exchange reserves; they are recognised as off-balance sheet items. Non-cash collateral and investments from cash collateral must be recorded as contingent liabilities under off-balance sheet items and if their market value is negative, and a provision of an equal amount must be created for the investments on a quarterly basis.

Accounting rules relating to the IMF quota

Part of the IMF quota subscribed in foreign currency and denominated in SDR as a callable loan is stated under foreign exchange reserves.

The part of the quota paid in forints and recorded in SDR is presented under 'Other foreign currency receivables' in the balance sheet. The related IMF forint deposit is reported on the liabilities side of the balance sheet. It is the MNB's duty to ensure at least annually that the amount of the IMF's forint deposit is equal to the amount of the quota paid in forints. As this deposit account is only formally a HUF account, it is reported under 'Other foreign currency payables' in the balance sheet.

The SDR allocation aims to increase the foreign exchange reserves of the IMF's members. The amount received increases the MNB's foreign exchange reserves, and creates a liability to the IMF without a maturity date on the liability side of the balance sheet. This transaction has an effect on profit and loss (interest must be paid on the SDR amount received) if it is utilised.

Accounting rules relating to derivatives

Based on transaction purpose, the MNB distinguishes between two groups of derivative transactions: hedging transactions, and derivatives for purposes other than hedging.

Hedging transactions are defined as transactions which reduce the risk arising from changes in the exchange rate or market value of a specific asset or liability or open position, are directly related to such, are announced as hedging transactions at the start of the contract and neutralise or significantly mitigate the risk that is intended to be hedged. Furthermore, derivatives with the government or non-resident counterparties to hedge these transactions are also regarded as hedging transactions. FX transactions for the purpose of setting the benchmark FX structure or decreasing in absolute terms the remaining average duration of the interest-bearing assets and liabilities, are deemed macro hedging transactions.

Derivatives are stated under off-balance sheet assets and liabilities. The aggregate revaluation difference of foreign currency assets and liabilities arising from hedging transactions is reported in the balance sheet (depending on the balance of such, either in 'Other foreign currency receivables or liabilities', or 'Foreign currency receivables from or liabilities to the central government or credit institutions'), including the interest accrued in proportion to the time elapsed (as accrued income or accrued expenses).

When derivative transactions for purposes other than hedging are closed, the income from such transactions is stated in the lines of income and expenses arising from exchange rate changes when foreign exchange transactions are involved, and in the lines of interest-related income and interest-related expenses for transactions linked to interest rate changes. While such transactions are not revalued, consistent with the principle of prudence, in reasonable cases, based on the information available at the balance sheet preparation date, a provision is formed on a quarterly basis, equal to the negative market value of the transaction.

Banking assets and liabilities

Banking assets and liabilities are stated on the respective sides of the balance sheet. These consist of the following:

- assets and liabilities not directly related to central bank functions and bank operations (such as settlements relating to taxes, contributions, payments to employees, creditors);
- liabilities arising from banknotes no longer accepted as legal tender but not yet exchanged;
- investments; and
- assets required for operating the organisation (such as intangibles, tangibles, and inventories).

The MNB's balance sheet does not state cash among liquid assets. The central bank is the exclusive issuer of banknotes and coins. Notes and coins held at the Cashier and the Depository are not in circulation and are therefore deducted from banknotes and coins on the liabilities side of the balance sheet.

Depreciation rates applied by the Magyar Nemzeti Bank

Per cent

Description	31 Dec 2021
Concessions, licences and similar rights	14.5–17
Trademarks patents and similar assets	10–50
Owned and managed buildings	2–3
Vehicles (cars) *	20
Telecommunication devices, office equipment, machines	10–50
Office equipment	5–50
Computer hardware	13–33
Cash-processing equipment	5–50
Instruments	20
Bank security devices	2–50
Other equipment and devices	3–50

* Residual value of vehicles: 20 per cent

The depreciation rates are determined individually based on estimated useful economic life. Depreciation is charged on a straight-line basis in every case. The Bank records no depreciation if the assets do not lose their value in use or if the value increases from year to year, given the particular nature of the assets (e.g. land, works of art, art treasures).

4.2 EFFECTS OF MACROECONOMIC TRENDS ON THE 2021 BALANCE SHEET AND INCOME STATEMENT OF THE MAGYAR NEMZETI BANK

In 2021, the MNB incurred a loss of HUF 57.1 billion. Maintaining the measures taken to mitigate the negative economic impacts of the coronavirus pandemic and then taking the necessary steps to restart the economy affected the central bank's balance sheet. The interest income of the central bank turned negative due to the tiered interest on preferential deposits and the interest rate increases made to curb the persistently rising inflation. The most significant profit item was once again income from exchange rate changes, but it no longer covered the interest and interest-related losses, expenses related to the operation of the MNB and the impairment losses. The balance sheet total as of 31 December 2021 amounted to HUF 26,307.4 billion, reflecting an increase of HUF 6,004.2 billion (30 per cent) compared to the end-2020 balance.

On the assets side, in addition to the rise in gold and foreign currency reserves and the asset purchases (government securities, bonds issued with government guarantees, mortgage bonds and corporate bonds), further increases in FGS loans and granting collateralised loans contributed to the expansion of the balance sheet total. On the liabilities side, the volume of forint deposits by credit institutions rose to the largest extent, especially one-week deposits. Liabilities in foreign currency rose significantly as a result of the repos drawn from international organisations (BIS and ECB) at the end of the year and due to the IMF's SDR allocation, which was moderated by the decline in the Government Debt Management Agency's foreign currency deposits related to repayments and foreign exchange conversions. The new two-week discount bonds issued in December increased the balance sheet total and the balance of banknotes and coins in circulation also expanded. The forint deposits of the central government declined, and the MNB's equity also fell; this change was mainly due to the dividend payment and loss in 2021.

The net interest and interest-related result came in at a loss of HUF 72.5 billion in 2021 after a gain of HUF 40.7 billion in 2020. The forint interest and interest-related result showed a loss of HUF 70 billion, down by HUF 80.6 billion compared to the previous year. The dynamic expansion of interest-bearing forint liabilities, the tiered interest on preferential deposits and the multi-step hike in the base rate from 0.6 per cent to 2.4 per cent all resulted in an increase in interest paid on forint deposits by credit institutions. This effect was only partially mitigated by the increase in forint interest income from the asset purchase programme. The FX interest and interest-related loss was HUF 2.6 billion, down HUF 32.6 billion on the gain in 2020. On the one hand, this is due to the fact that interest income on foreign exchange reserves fell short

of the previous year's level, while on the other hand, the result of forward transactions concluded to cover the risk of reserves was lower.

Net income from exchange rate changes, driven partly by the volume of foreign currency sales and partly by the difference between the official exchange rate and the average cost rate of the given currencies, continued to be a significant profit item in 2021. Realised net gains on exchange rate changes amounted to HUF 146.2 billion in 2021, a decrease of HUF 139.9 billion compared to the outstanding level in 2020. Contributing factors in this regard included the lower conversion volume following the debt management transactions of the Government Debt Management Agency and the decrease in the difference between the official and the average cost rate.

For more details on the factors affecting net income, see Section 3.12. of the Business Report.

4.3 FORINT RECEIVABLES FROM THE CENTRAL GOVERNMENT

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Government bonds maturing within 1 year	0	0	0
	Government bonds maturing within 1 to 5 years	1,954	175,623	173,669
	Government bonds maturing in over 5 years	1,111,673	3,127,146	2,015,473
I.1.	Total receivables from the central government	1,113,627	3,302,769	2,189,142

The balance of forint receivables from the central government increased to HUF 3,302.8 billion by the end of 2021. This growth was produced by the continuous purchases in the government securities purchase programme starting in 2020 and running until mid-December 2021, when the Monetary Council decided to close this programme. Compared to the end of 2020, the face value of the stock of fixed-rate, typically long-term government bonds in the portfolio increased by HUF 2,273.4 billion as a result of purchases and repurchases by the Government Debt Management Agency at the end of the year, while the related positive exchange rate difference decreased by HUF 45.1 billion. The repurchased portfolio consisted of the variable-rate Government Debt Bond with a face value of HUF 39.2 billion. The majority of government securities as at 31 December 2021 had a maturity of more than 5 years.

4.4 FOREIGN CURRENCY RECEIVABLES FROM THE CENTRAL GOVERNMENT

Neither at end-2020 nor at end-2021 was any amount listed in the item for foreign currency receivables from the central government. The balance of currency swaps with the central government showed a net credit balance, and thus these items were stated as 'Foreign currency liabilities of the central government' (see Section 4.5).

4.5 FORINT AND FOREIGN CURRENCY LIABILITIES OF THE CENTRAL GOVERNMENT

Forint deposits of the central government

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Single Treasury Account (KESZ)	1,727,352	1,355,080	-372,272
	Deposit by Government Debt Management Agency (ÁKK Zrt)	404	234	-170
	Public sector instant payment accounts	852	978	126
	Other	58	58	0
VI.1.	Forint deposits of the central government	1,728,666	1,356,350	-372,316

The balance of central government forint deposits declined by HUF 372.3 billion. The change was mainly in the KESZ, due to budgetary and financing processes.

Foreign currency liabilities of the central government

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Foreign currency deposits of the central government	1,012,114	345,521	-666,593
	Currency swaps with the central government	149,539	232,526	82,987
VII.1.	Foreign currency liabilities of the central government	1,161,653	578,047	-583,606

The total amount of the foreign currency deposits and currency swaps of the central government was HUF 578 billion on 31 December 2021, which fell by HUF 583.6 billion compared to the end of 2020. The decline of HUF 666.6 billion in government foreign currency deposits was triggered by the debt management activities of the Government Debt Management Agency. Among the hedging transactions concluded with the central government, only the EUR/USD interest-bearing currency swaps continued to have an outstanding amount.

Foreign currency liabilities of the central government, broken down by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2020	31 Dec 2021	
	– within 1 year	1,072,851	345,521	-727,330
	– within 1 to 5 years	63,365	191,070	127,705
	– over 5 years	25,437	41,456	16,019
VII.1.	Foreign currency liabilities of the central government	1,161,653	578,047	-583,606

4.6 NET POSITIONS VIS-À-VIS THE CENTRAL GOVERNMENT

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
I.1.—VI.1.	Net forint position	-615,039	1,946,419	2,561,458
II.2.—VII.1.	Net foreign currency position	-1,161,653	-578,047	583,606
	Total	-1,776,692	1,368,372	3,145,064

4.7 FORINT RECEIVABLES FROM AND LIABILITIES TO CREDIT INSTITUTIONS

Forint receivables from credit institutions

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	FGS refinancing loans	2,152,180	2,865,189	713,009
	Covered mortgage bonds	682,879	671,415	-11,464
	Collateralised loans	2,263,480	2,623,373	359,893
	Securities issued with government guarantees	49,142	153,005	103,863
	Other receivables	5,378	5,252	-126
	Total gross receivables from credit institutions	5,153,059	6,318,234	1,165,175
	Impairment loss for receivables from credit institutions	-8,549	-8,478	71
I.2.	Total receivables from credit institutions	5,144,510	6,309,756	1,165,246

Forint receivables from credit institutions totalled HUF 6,309.8 billion at the end of December 2021, an increase of HUF 1,165.2 billion compared to the end of 2020. The change of more than 20 per cent was still related to use of central bank instruments launched in 2020 to mitigate the negative economic effects of the coronavirus pandemic, in spite of the fact that the central bank decided to close several crisis management instruments in the last third of 2021. The balance of *FGS loans* changed the most during 2021 (with an increase of HUF 713 billion). The end-2021 stock of FGS Go! that closed at the end of September was HUF 880.8 billion higher than at the end of 2020, thanks to utilisation during the year. As a part of the Green Monetary Policy Toolkit Strategy, the MNB launched the Green Home Programme in October 2021, from which HUF 7.3 billion was used by the end of the year. The remaining HUF 175.1 billion negative difference was due to maturities. At the end of July 2021, the MNB also terminated the utilisation of the long-term *collateralised credit instrument*; the amount of these loans had expanded continuously until then, and remained at HUF 2,634.4 billion for the rest of the year.

The central bank decided to launch the Green Mortgage Bond Purchase Programme, under which it will purchase HUF-denominated fixed-rate green mortgage bonds in line with international standards and with an original maturity of at least 5 years on the primary and secondary markets from the beginning of August 2021. In addition, Mortgage Bonds under the MNB Rollover Facility are available again. Mortgage bonds purchased under the Green Programme and mortgage bonds stemming from the renewal of maturing portfolios were only partially able to mitigate the decrease in the portfolio due to maturities, so the total volume of mortgage bonds was HUF 11.5 billion lower than at the end of the previous year. During 2021, the MNB purchased securities from credit institutions issued with government guarantees and worth HUF 103.9 billion. The item 'Other receivables' contains the amount of the overdue receivables from credit institutions under liquidation.

Gross forint receivables from credit institutions by remaining maturity

HUF millions

Remaining maturity	Balance		Change
	31 Dec 2020	31 Dec 2021	
– matured	5,378	5,252	-126
– within 1 year	157,066	196,698	39,632
– within 1 to 5 years	3,772,111	4,514,839	742,728
– over 5 years	1,218,504	1,601,445	382,941
Total gross receivables from credit institutions	5,153,059	6,318,234	1,165,175

Forint liabilities of credit institutions

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Current accounts	1,860,596	1,369,371	-491,225
	O/N deposits	84,742	570,690	485,948
	One-week deposits	3,049,000	6,447,280	3,398,280
	Instant payment accounts	90,494	88,059	-2,435
VI.2.	Deposits of credit institutions	5,084,832	8,475,400	3,390,568

The item 'Deposits of credit institutions' contains the liquidity-absorbing instruments with an interest rate either pegged to the base rate, or independent of the base rate and with a tiered interest rate; all of which had a maturity of less than one year. The balance of deposits increased by 67 per cent compared to end-2020, amounting to HUF 8,475.4 billion as of 31 December 2021. The development of one-week deposits was decisive in this growth, amounting to HUF 6,447.3 billion by the end of 2021. Overnight deposits rose by HUF 486 billion over the same period. The balance of current accounts changed to a similar extent, but in the opposite direction, decreasing by HUF 491.2 billion by end-2021. Within this, preferential deposits decreased by HUF 238.8 billion, while the combined balance of bank account deposits containing required reserves and margin deposits declined by HUF 252.4 billion.

4.8 NET POSITIONS VIS-À-VIS CREDIT INSTITUTIONS

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
I.2.—VI.2.	Net forint position	59,678	-2,165,644	-2,225,322
II.3.—VII.2.	Net foreign currency position	-100,580	-174,869	-74,289
	Total	-40,902	-2,340,513	-2,299,611

Net liabilities to credit institutions increased overall by HUF 2,299.6 billion to HUF 2,340.5 billion by end-2021. The change was almost entirely in net forint liabilities (see Section 4.7).

Net foreign currency liabilities to credit institutions rose by HUF 74.3 billion compared to the end of 2020, amounting to HUF 174.9 billion as of 31 December 2021. Within this, the decline in credit institutions' foreign currency deposits and the increase in foreign currency deposits placed by domestic credit institutions at the MNB worsened the net foreign currency position, while the aggregate change in the balance of foreign currency swaps with credit institutions slightly improved it.

Foreign currency receivables from and liabilities to credit institutions, broken down by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2020	31 Dec 2021	
	– within 1 year	44,922	20,306	-24,616
	– within 1 to 5 years	284	4,209	3,925
	– over 5 years	18,573	12,208	-6,365
II.3.	Foreign currency receivables from credit institutions	63,779	36,723	-27,056
	– within 1 year	164,359	211,592	47,233
	– within 1 to 5 years	0	0	0
	– over 5 years	0	0	0
VII.2.	Foreign currency liabilities to credit institutions	164,359	211,592	47,233
II.3.-VII.2.	Net foreign currency position	-100,580	-174,869	-74,289

4.9 GOLD AND FOREIGN EXCHANGE RESERVES OF THE CENTRAL BANK

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Gold reserve	570,550	1,799,194	1,228,644
	Reserve position in the IMF	128,159	137,296	9,137
	Foreign currency deposits	3,161,631	4,044,768	883,137
	Foreign currency securities	8,412,142	8,143,037	-269,105
	Foreign currency repo transactions	1,457	16,839	15,382
II.1.	Gold and foreign exchange reserves	12,273,939	14,141,134	1,867,195

For statistical purposes, the MNB regularly publishes the amount of foreign exchange reserves. According to the statistical rules, foreign exchange reserves also include accrued interest, and consequently foreign exchange reserves differ in amount according to statistical and accounting rules.

Excluding accrued interest, foreign exchange reserves amounted to HUF 14,141.1 billion as of 31 December 2021, exceeding the figure for end-2020 by HUF 1,867.2 billion. The amount of foreign exchange reserves was increased by EUR transfers from the European Commission, the SDR allocation made by the IMF in August, new foreign currency bonds issued by the state, and changes in cross rates. The difference between the value of the swaptenders providing euro liquidity announced at the end of 2021 and the repurchase agreements drawn down only had a temporary effect on the changes of the reserve level. At the same time, owing to disbursements by the Government Debt Management Agency to repay debt, the foreign exchange expenditures of the (Hungarian State) Treasury and the maturity of FX swaps providing forint liquidity to credit institutions, the reserves decreased. As a result of these factors, the stock of foreign exchange reserves denominated in euros rose by EUR 4.7 billion to EUR 38.3 billion by end-2021. The MNB tripled Hungary's gold reserves during 2021.

The end-2021 balance of foreign currency securities contained the securities managed by an external trustee based on a mandate amounting to HUF 949.2 billion (11.7 per cent in total).

4.10 OTHER FORINT AND FOREIGN CURRENCY RECEIVABLES

Other forint receivables

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Total other gross forint receivables	595,313	1,440,453	845,140
	Impairment loss for other receivables	-41,181	-99,190	-58,009
I.3.	Other forint receivables	554,132	1,341,263	787,131

The aggregated balance of other gross forint receivables showed a balance of HUF 1,440.5 billion on 31 December 2021, 99 per cent of which was accounted for by the central bank's purchases of securities as part of the monetary policy instruments. The balance of receivables from supervisory activities amounted to HUF 9.6 billion at end-2021, and an impairment loss was recognised for 97.7 per cent of this, in line with the MNB's regulations. The item 'Impairment loss for other forint receivables' also contains impairment on securities, which represents 6.9 per cent of the portfolio. The total amount of preferential property loans and personal loans granted by the MNB to its employees rose to HUF 6 billion by end-2021.

Other foreign currency receivables

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Forint payment of IMF quota	702,705	747,072	44,367
	Foreign hedging transactions*	87,396	6,806	-80,590
	Other	491	917	426
II.4.	Other foreign currency receivables	790,592	754,795	-35,797

* The revaluation difference of hedging derivative transactions is stated in net terms, in accordance with the MNB Decree.

The forint payment of the IMF quota rose owing to the 6.4 per cent weakening of the forint exchange rate against the SDR. The item 'Foreign hedging transactions' includes the net debit balance of swap and forward transactions with non-resident counterparties concluded by the MNB.

4.11 OTHER FORINT DEPOSITS AND LIABILITIES**Other forint liabilities**

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	International financial institutions' forint deposits	954,119	1,085,372	131,253
	Discount Bill issued by the MNB	0	796,000	796,000
	Other legal entities' bank accounts	9,505	13,586	4,081
	Other legal entities' instant payment accounts	1,452	1,329	-123
	Other liabilities	1,147	827	-320
VI.4.	Other forint deposits and liabilities	966,223	1,897,114	930,891

The amount of other forint deposits and liabilities increased by HUF 930.9 billion to HUF 1,897.1 billion as of 31 December 2021. The central bank discount bill, issued in December, played a dominant role in the change. The MNB intends to support the efficient sterilisation of liquidity in the financial system with these short-term discount bills announced on a discretionary basis. In addition, the balance of the bank accounts of other domestic and foreign legal entities also increased the total amount of other liabilities.

Other foreign currency liabilities

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Repo transactions	1,398,448	2,952,000	1,553,552
	IMF deposit	1,127,152	2,047,309	920,157
	Foreign deposits	118,298	72,947	-45,351
	Foreign hedging transactions*	79,997	56,033	-23,964
	Other liabilities	700	20	-680
VII.3.	Other foreign currency liabilities	2,724,595	5,128,309	2,403,714

* The revaluation difference of hedging transactions is stated in net terms, in accordance with the MNB Decree.

The balance of other foreign currency liabilities increased by HUF 2,403.7 billion to HUF 5,128.3 billion as of 31 December 2021. Most of the change was related to repo calls from international organisations (BIS and ECB), which totalled up to HUF 2,952 billion at end-2021 (HUF 1,553.6 billion more than at end-2020) and only lasted a few days. The stock of the IMF deposits rose by HUF 920.2 billion, mainly due to the SDR allocation (see the following table), and partly due to exchange rate changes. The HUF 45.4 billion decrease in the amount of foreign deposits can basically be explained by the fall in the accounts reflecting changes in the market value of forward transactions. The aggregate credit balance of swap and forward transactions with non-resident counterparties concluded by the MNB decreased by HUF 24 billion.

Other foreign currency liabilities by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2020	31 Dec 2021	
	– within 1 year	2,265,205	3,797,555	1,532,350
	– within 1 to 5 years	17,762	29,731	11,969
	– over 5 years	17,180	1,614	-15,566
	– without maturity	424,448	1,299,409	874,961
VII.3.	Other foreign currency liabilities	2,724,595	5,128,309	2,403,714

The item 'Liabilities without maturity' includes liabilities derived from SDR allocations carried out by the IMF. The SDR 991.1 million allocation transferred in 2009 expanded by SDR 1,859.4 million in August 2021. The remaining part of the rise can be explained by exchange rate changes.

Currency structure of other foreign currency liabilities – without foreign hedging transactions

HUF millions

Description	Balance		Change
	31 Dec 2020	31 Dec 2021	
– EUR	1,572,780	3,040,873	1,468,093
– USD	-74,786	-15,876	58,910
– JPY	60,614	0	-60,614
– SDR	521,070	1,441,195	920,125
– Other	564,920	606,084	41,164
Other foreign currency liabilities	2,644,598	5,072,276	2,427,678

Most of the item 'Other' amounting to HUF 606.1 billion on 31 December 2021 consists of the forint coverage of the IMF quota adjusted by revaluation.

4.12 INVESTMENT ASSETS

In addition to intangibles, tangibles and capital expenditure (HUF 43.7 billion), investment assets also include shares in investments (HUF 11.7 billion in foreign investments and HUF 204.1 billion in domestic investments).

Changes in the gross value, depreciation, and net value of intangibles, tangibles and capital expenditure

HUF millions

	Assets							Intangibles, tangibles and capital expenditure
	Intangible assets		Tangible assets				Capital expenditure and advances given	
	Rights and intellectual property	Software under development	Buildings and accessories	Equipment	Cultural goods	Assets of banknote and coin		
Gross value								
31 Dec 2020	21,257	667	14,753	19,889	11,456	245	1,402	69,669
Commissioning/ acquisition	1,979	1,301	897	10,114	42	3	-735	13,601
Acceptance of assets free of charge								0
Other addition/ reclassification								0
Retirement	-9	-4	-4	-522			-12	-551
Selling				-6				-6
Transfer free of charge				-571	-6			-577
Other disposal/ reclassification	-5			-54				-59
31 Dec 2021	23,222	1,964	15,646	28,850	11,492	248	655	82,077
Details of depreciation								
31 Dec 2020	15,514	0	6,115	12,256	0	0	0	33,885
Ordinary depreciation	2,272		442	2,955				5,669
Other addition due to reclassification	1							1
Derecognition	-14		-4	-1,129				-1,147
Decrease due to reclassification				-1				-1
31 Dec 2021	17,773	0	6,553	14,081	0	0	0	38,407
Balance								
31 Dec 2020	5,743	667	8,638	7,633	11,456	245	1,402	35,784
31 Dec 2021	5,449	1,964	9,093	14,769	11,492	248	655	43,670
Change	-294	1,297	455	7,136	36	3	-747	7,886

The net book value of state-owned, managed buildings (3 buildings and 2 plots of land) was HUF 56 million as of 31 December 2021. The equipment increased mostly due to the installation of IT networks in the new buildings and the purchase of other IT equipment, while it decreased due to the charitable transfer and retirement of office and IT equipment that became superfluous because of the removal.

Foreign investments and dividends from investments

HUF millions

Description	Ownership share (%)		Book value		Dividends received	
	31 Dec 2020	31 Dec 2021	31 Dec 2020	31 Dec 2021	2020	2021
BIS	1.43	1.43	8,846	9,385	0	1919
<i>SDR millions</i>			10	10		
<i>CHF millions</i>			14	14		
European Central Bank	1.55	1.55	2,296	2,320	-	-
<i>EUR thousands</i>			6,287	6,287		
SWIFT	0.03	0.03	17	17	0	0
<i>EUR thousands</i>			46	46		
Total investments			11,159	11,722	0	1919

Ownership distribution in the ECB as of 31 December 2021

National Central Banks (NCBs)	Subscribed capital	Paid-up capital	Capital key %
	EUR thousands		
Nationale Bank van België/ Banque Nationale de Belgique	320,745	298,518	2.9630
Deutsche Bundesbank	2,320,817	2,159,988	21.4394
Eesti Pank	24,800	23,082	0.2291
Central Bank of Ireland	149,082	138,751	1.3772
Bank of Greece	217,767	202,676	2.0117
Banco de España	1,049,820	977,069	9.6981
Banque de France	1,798,120	1,673,514	16.6108
Banca d'Italia	1,495,637	1,391,992	13.8165
Central Bank of Cyprus	18,944	17,631	0.1750
Latvijas Banka	34,304	31,927	0.3169
Lietuvos banka	50,953	47,422	0.4707
Banque centrale du Luxembourg	29,000	26,991	0.2679
Central Bank of Malta	9,234	8,594	0.0853
De Nederlandsche Bank	515,941	480,188	4.7662
Oesterreichische Nationalbank	257,678	239,822	2.3804
Banco de Portugal	206,054	191,775	1.9035
Banka Slovenije	42,391	39,453	0.3916
Národná banka Slovenska	100,824	93,837	0.9314
Suomen Pankki – Finlands Bank	161,715	150,508	1.4939
Subtotal for euro area NCBs	8,803,826	8,193,738	81.3286
Bulgarian National Bank	106,431	3,991	0.9832
Česká národní banka	203,445	7,629	1.8794
Danmarks Nationalbank	190,423	7,141	1.7591
Hrvatska narodna banka	71,391	2,677	0.6595
Magyar Nemzeti Bank	167,658	6,287	1.5488
Narodowy Bank Polski	653,127	24,492	6.0335
Banca Națională a României	306,229	11,484	2.8289
Sveriges riksbank	322,477	12,093	2.9790
Subtotal for non-euro area NCBs	2,021,181	75,794	18.6714
Total NCBs	10,825,007	8,269,532	100.0000

Hungary joined the European Union on 1 May 2004, as a result of which the MNB became a member of the ESCB. The ESCB comprises the European Central Bank (ECB) and the national central banks of the EU Member States. The Eurosystem is composed of the ECB and the national central banks of Member States that have already adopted the euro. Pursuant to the provisions of Article 28 of the Statute of the ESCB and the ECB (hereinafter referred to as 'the Statute'), the MNB became an owner of the ECB. Subscriptions depend on shares which are fixed in accordance with Article 29 of the Statute and must be adjusted every five years based on demographic and GDP data provided by the European Commission. Shares can also change with a new accession to the EU, a Member State leaving the EU, or due to a capital increase.

On 1 February 2020, due to the Bank of England's withdrawal from the ESCB, the subscriptions were adjusted again, resulting in the MNB's capital key rising to 1.5488 per cent and its subscribed capital increasing to EUR 167.7 million.

Pursuant to Article 47 of the Statute, non-euro area NCBs are required to pay 3.75 per cent of their subscribed capital to the ECB as a contribution to the operational costs of the ECB. As a non-euro area NCB, the MNB is not entitled to receive any share of the distributable profits of the ECB, nor is it liable to fund any loss of the ECB.

The MNB's participation in the ECB is presented in the sub-item 'Investment assets' under 'III. Banking assets' in the balance sheet of the MNB. The value of the investment (i.e. paid-up capital) amounted to EUR 6.3 million (HUF 2.3 billion) in the MNB's balance sheet as at 31 December 2021.

Domestic investments and dividends from investments

HUF millions

Description	Ownership share (%)		Book value		Dividends received	
	31 Dec 2020	31 Dec 2021	31 Dec 2020	31 Dec 2021	2020	2021
Pénzjegynyomda Zrt. 1055 Budapest, Markó utca 13–17.	100.0	100.0	11,827	11,827	690	0
Magyar Pénzverő Zrt. 1239 Budapest, Európa u. 1.	100.0	100.0	1,309	1,309	0	0
Pénzügyi Stabilitási és Felszámoló Nonprofit Kft. 1055 Budapest, Bajcsy-Zsilinszky út 78.	100.0	100.0	50	50	-	-
MNB-Biztonsági Zrt. 1123 Budapest, Alkotás utca 50.	100.0	100.0	1,317	1,317	0	0
GIRO Zrt. 1054 Budapest, Vadász utca 31.	100.0	100.0	14,779	14,779	0	0
MNB-Ingatlan Kft. 1013 Budapest, Krisztina körút 32.	100.0	100.0	132,008	162,302	0	0
MNB-EduLab Kompetencia Kft. 1013 Budapest, Krisztina körút 55.	-	100.0	-	280	-	0
Budapesti Értéktőzsde Zrt. 1054 Budapest, Szabadság tér 7.	81.4	81.4	11,555	11,555	0	0
KELER Zrt. 1074 Budapest, Rákóczi út 70–72.	53.3	53.3	643	643	0	0
KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	0.1	0.1	7	10	0	0
Total investments			173,495	204,072	690	0

Participations of domestic investments

Description	Participations		
	Name Headquarters	Ownership share (%)	Share capital (HUF millions)
		31 December 2021	
Pénzjegynyomda Zrt.	DIPA Diósgyőri Papírgyár Zrt. 3535 Miskolc, Hegyalja út 203/1.	100.0	4,196
GIRO Zrt.	BISZ Központi Hitelinformációs Zrt. 1205 Budapest, Mártonffy utca 25–27.	100.0	217
Budapesti Értéktőzsde Zrt.	KELER Zrt. 1074 Budapest, Rákóczi út 70–72.	46.7	4,500
	KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	0.1	2,623
KELER Zrt.	KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	99.8	2,623
MNB-Ingatlan Kft.	Optimum-Gamma Ingatlanbefektetési Kft. 1013 Budapest, Krisztina körút 32.	100.0	4

Pénzjegynyomda Zrt. (Hungarian Banknote Printing Plc.) produces forint banknotes, secure documents in paper and plastic card format, banderole, securities, and provides document personalisation services for domestic and foreign clients. The company's primary aim is to produce banknotes in adequate quantity and excellent quality, as well as to increase foreign penetration in market segments other than banknote production and to develop integrated IT systems and services related to the products. The company is a prominent actor in the production and personalisation of important domestic documents. The production of banknotes ordered by the MNB and the fulfilment of civil orders for personalised documents was a high priority in 2021. Pénzjegynyomda Zrt.'s subsidiary, **DIPA Diósgyőri Papírgyár Zrt.** (DIPA Zrt., Diósgyőr Papermill Plc.), is the sole security paper manufacturer in Hungary, the primary function of which is to produce domestic banknote papers. At the centre of the company's product strategy are quality products bearing high-level security elements. In addition to banknote papers, DIPA Zrt. produces papers for a significant share of documents used in public administration, base papers for tickets, as well as papers for passports and documents for numerous countries, in relation to which it also offers solutions providing complex protection against forgery. In its international relations as well, the company strives to boost customer satisfaction based on traditions and innovative solutions, and to stabilise or improve its results. The coronavirus pandemic and the declared state of emergency brought a decline in the demand for domestic personalised documents and a gradual increase in export orders in 2021. The companies still deem the replacement of expired, renewable documents a priority.

Based on MNB orders, the primary duty of **Magyar Pénzverő Zrt.** (Hungarian Mint Plc.) is to produce circulation coins for secure cash turnover, as well as collector and commemorative coins issued by the MNB as legal tender. Utilisation of the company's free capacity allows for the production of non-legal tender, collector coins and other medals on the basis of its own coin programme and customised orders, while since 2019 the company has produced the national awards on behalf of the President's Office. As part of its commercial activities, the company is the primary distributor of commemorative and collector coins and banknotes, medals, circulation coin series and other packaged products, and import gold investment products in Hungary and abroad, both as a wholesaler and retailer. The investment programme of the shareholder's strategy ending in 2020 was completed, and state-of-the-art technology was installed. From 2021 the company is continuing its operation in accordance with the new shareholder's strategy for 2021–2025. In line with the shareholder's environmental strategy, the company started preparations for introducing the ISO 14.001 environmental management system by the end of the strategic period. Under the MNB's collector coin issuing programme, the plan covered 16 thematic schemes but a record issuance of 19 topics took place, more than 95 per cent of the 234,500 coins offered were sold during the year.

Pénzügyi Stabilitási és Felszámoló Nonprofit Kft. (PSFN Kft., Financial Stability and Liquidator Non-profit Ltd.) is a company exercising public service functions with the exclusive right to perform the liquidation or winding-up proceedings of financial

institutions and to phase out venture capital funds. It participates in the resolution process of financial institutions and performs supervisory commissioner work for financial institutions with suspended authorisation for operations. When assigned to a financial institution as a supervisory commissioner, PSFN Kft.'s main duty is to perform tasks related to administration and operational management. If the prudent and legal operation of the financial institution is not ensured, despite the supervisory measures by the MNB or the designation of supervisory commissioners, the company performs the liquidation or winding-up proceedings for the institution following the withdrawal of its authorisation for operations by the MNB, in the interests of a smooth exit from the market. The primary purpose of these procedures is to enforce creditors' interests and to satisfy their claims, prior to the end of the termination proceedings. PSFN Kft. performs its functions for the public good, protecting the interests of the customers of financial services. Its express objective is to terminate financial institutions in accordance with a uniform approach and methodology, emphasising prudence and transparency, to complete resolutions as quickly as possible, bearing in mind the complex nature of the undertaking and the interests of customers, and to maximise creditors' recovery.

MNB-Biztonsági Zrt. (MNB-Security Services Plc.) performs personal guarding and protection activities, i.e. the company carries out the personal guarding and protection of the office objects and premises of the MNB with armed security guards under legal obligation. Additionally, it is involved in performing the tasks of money and valuables transport and the maintenance tasks of CIT vehicles. Beyond its main activity with armed security guards, MNB-Biztonsági Zrt. carries out tasks of guarding and protecting and securing events for the central bank with personal and property protection guards, along with accompanying consignments that require security surveillance. MNB-Biztonsági Zrt. performs evaluative/analytical and advisory activities related to the guarding and security tasks to be performed by the central bank and helps the MNB prepare preventive measures. Moreover, the company provides information security and technical security support for the central bank and also performs operating tasks related to the reception and call centre as well as to personal, physical and information security of the MNB's subsidiaries. MNB-Biztonsági Zrt. operates the workplace buffets and provides catering services for the MNB and its employees. The company does not provide services to other parties.

GIRO Zrt. operates the payment system for domestic interbank forint credit transfers and direct debits, the so-called Interbank Clearing System. The key objectives in its strategy include stable and safe operation, development of clearing services, implementation of new services, and increasing the competitiveness of clearing fees. The company's most important development so far has been the implementation of the instant payment system which, starting from 2 March 2020, ensures the settlement of domestic electronic payments up to HUF 10 million within 5 seconds 24 hours a day, every day of the year. The launch of the instant payment service marks a new era in Hungarian payments. The scope of the innovative payment solutions based on the central infrastructure provided by GIRO and the MNB is constantly expanding, offering an improving service quality in more and more payment situations to customers.

MNB-Ingatlan Kft. (MNB-Real Estate Ltd.) leases and operates real estate, and provides real estate management and development services for the MNB and its subsidiaries. The company owns the Bölcs Vár, the MNB Felügyeleti Központ és Pénzmúzeum, the MNB Budai Központ, and the MNB Képzési, Szabadidő- és Sportközpont in Balatonakarattya via the investment in Optimum-Gamma Ingatlanbefektetési Kft. The real estate development of the MNB Felügyeleti Központ és Pénzmúzeum involved renovating the property, creating office and museum space, and constructing an underground parking garage. The MNB Budai Központ is where the staff will work during the renovation of the Head Office Building. The MNB Képzési, Szabadidő- és Sportközpont is currently under construction. Due to the gradual increase of the capital and reserves by a total of HUF 30.3 billion during the year, the book value of the investment amounted to HUF 162.3 billion as at 31 December 2021. The capital and reserves were increased to provide financing for the purchases and developments related to the real estate investments, also for acquiring works of art to be displayed in the building. In early 2022, a HUF 1.6 billion addition to capital and reserves financed the acquisition of **Optimum-Omega Ingatlanbefektetési Kft.** (Optimum-Omega Real Estate Investment Ltd.) that owns the Burg Hotel.

MNB-EduLab Kompetencia Központ Kft. (MNB-EduLab Competence Centre Ltd.) was founded by the MNB on 28 May 2021 and came into being on the basis of a digital educational platform development project. The company prioritises making an efficient contribution to the founder's CSR-targets. MNB-EduLab Kft. develops educational video content within the 'beconomist' project and publishes them via a dedicated platform. The company has also taken on other content development projects and education development tasks. As of 22 February 2022, MNB-EduLab Kft. is responsible for

the Magyar Pénzmúzeum és Látogatóközpont (Hungarian Money Museum and Visitor Centre). The company plans to extend the range of comprehensive organisational development and educational services provided for the MNB and its subsidiaries. As part of this, the company identifies the needs, acquires and resells learning materials, organises courses, and provides the buyer with proposals on how to integrate the theory into organisational knowledge.

With the strategic ownership of **Budapesti Értéktőzsde Zrt.** (BÉT, Budapest Stock Exchange Plc.), the basic aim of the MNB is to develop the market and achieve an adequately sized, effectively operating capital market in Hungary, since a developed capital market and diversified financial intermediary system form the basis for a competitive economy and sustainable growth. In 2021, BÉT adopted a new strategic policy for the period 2021-2025, with the main elements: BÉT IPO, focus on profitability (proper subsidiary strategy, identification of new business segments, integration of ESG considerations into operations), making the most of core business growth potential, creating secure IT operations supporting the business strategy. The BÉT IPO is one of the key elements of the strategic goals of the main shareholder, the MNB. It is expected to attract new investors in the interests of the success of the Hungarian and the regional capital markets, and has many other positive aspects (such as efficiency, transparency, wide range of shareholders, fundraising opportunities, marketing). In 2021, there was spectacular development on the corporate bond market. BÉT launched a corporate bond index family consisting of two indices, and the Government Debt Management Agency introduced the government bonds issued abroad and denominated in EUR to the Xbond platform. In May, an industrial company issued green bonds for the first time in Hungary, then in June, with the introduction of another green bond, the number of marketable corporate bonds on the XBond platform, launched in 2019 in connection with the MNB's Bond Funding for Growth Scheme, increased to 50. During the second half of the year the Xtend platform welcomed 3 more issuers. The number of participants in the ELITE programme rose to 50. The company has a minority interest in the KELER Group, consisting of **KELER Zrt.** and **KELER KSZF Zrt.**, in which the MNB holds a majority share. Therefore, as the majority owner of the Budapest Stock Exchange, the MNB holds a strategic share in the KELER Group as well. As the operator of the back-office infrastructure of the Hungarian securities market, the KELER Group settles, guarantees and clears BÉT stock exchange transactions and transactions with any dematerialised securities issued in Hungary. BÉT's subsidiary, Budapest Institute of Banking Zrt., was sold during 2021.

KELER Zrt. (KELER Plc.) provides central depository services in the Hungarian capital market and acts as a specialised credit institution. KELER is the issuer of Hungarian ISIN codes and participates as a provider in all domestic securities issues. In December 2020, the company received a CSDR licence from the MNB, in accordance with the European regulation on central depositories. Previously, at the beginning of 2017, the company entered the TARGET2-Securities (T2S) securities settlement platform operated by the ECB, which aims to make cross border security trading more efficient. To enable the participants of the domestic capital market to fully enjoy all the advantages offered by T2S, KELER is implementing the KELER Service Development Programme (KSDP), in which the IT infrastructure of the company will be renewed. The first phase of the programme went live at end-2021, it modernised the core process and tracking of securities settlement, and also the treatment of depository master data, reports and fees.

As a subsidiary of KELER, **KELER KSZF Zrt.** (KELER KSZF Plc.) handles the clearing service and CCP function in Hungary. As a clearing house, the company accounts the spot and derivative transactions traded on the Budapest Stock Exchange, and as a CCP, it also guarantees that the transactions are completed. In addition to the capital market segment, transactions with electricity and natural gas trading also became significant in recent years. In several markets (e.g. the Hungarian power exchange HUPX), KELER KSZF Zrt. provides its services as a member of ECC AG, headquartered in Leipzig, while in other markets (e.g. the Central-European gas exchange CEEGEX) it acts as a CCP. The book value of the MNB's investment in KELER KSZF increased to HUF 10 million as at 31 December 2021 due to the impairment test of the company.

Invoicing to **domestic affiliates** is carried out on a market basis or with regard to prime cost, the charging of fees is based on the valid regulatory fee schedules (MNB decree, public notices).

Equity of domestic investments

The latest data available upon the compilation of the Annual Report are shown in the following table.

HUF millions

Investment	Share capital	Reserves	Profit/loss for the year	Equity
	31 December 2021			
Pénzjegynyomda Zrt.	11,827	7,060	1,277	20,164
Magyar Pénzverő Zrt.	1,309	2,073	526	3,908
Pénzügyi Stabilitási és Felszámoló Nonprofit Kft.	50	3	0	53
MNB-Biztonsági Zrt.	1,066	212	-52	1,226
GIRO Zrt.	7,496	10,371	14	17,881
MNB-Ingatlan Kft.	14	161,094	626	161,734
MNB-EduLab Kompetencia Kft.	50	230	-80	200
Budapesti Értéktőzsde Zrt.	541	7,593	586	8,720
KELER Zrt.	4,500	20,610	1,521	26,631
KELER KSZF Zrt.	2,623	6,425	407	9,455

MNB's receivables from and liabilities to affiliated companies

HUF millions

Investment	Receivables	Liabilities
	31 December 2021	
Pénzjegynyomda Zrt.	136	615
Magyar Pénzverő Zrt.	14	21
Pénzügyi Stabilitási és Felszámoló Nonprofit Kft.	0	1,033
MNB-Biztonsági Zrt.	12	276
GIRO Zrt.	0	10
MNB-Ingatlan Kft.	1,541	700
Budapesti Értéktőzsde Zrt.	0	1
KELER Zrt.	20	32
KELER KSZF Zrt.	5	0
Total	1,728	2,688

Receivables from Pénzjegynyomda Zrt. and MNB-Biztonsági Zrt. arose solely, and receivables from Magyar Pénzverő Zrt. mostly, from the refinancing of employee real estate loans. Receivables from MNB-Ingatlan Kft. resulted from deposits related to rent, while receivables from KELER Zrt. and KELER KSZF Zrt. were related to the collateral required for BÉT trading.

Liabilities to Pénzjegynyomda Zrt. and Magyar Pénzverő Zrt. stemmed from the invoicing of produced banknotes, circulation and commemorative coins. Liabilities to PSFN Kft. were related to the subsidy agreed to finance the company's operation in 2022; the amount was paid and recorded as expenditure in January 2022.

The table mainly presents short-term receivables and liabilities. However, receivables from KELER Zrt. and KELER KSZF Zrt. will exist until the end of the MNB's clearing membership, and receivables from rent-related deposits and real estate loans of subsidiaries' employees will be settled in accordance with the conditions of the underlying contracts.

4.13 PROVISIONS AND IMPAIRMENT LOSSES

HUF millions

B/S line	Description	31 Dec 2020	Interim changes		31 Dec 2021
		Impairment losses / provisions	Increase	Use / Reversal	Total impairment losses / provisions
1	2	3	4	5	3+4+5
I.2.	Forint receivables from credit institutions	8,549	3	-74	8,478
I.3.	Other forint receivables	41,181	58,427	-418	99,190
III.	Invested financial assets	3,119		-2	3,117
III.	Other receivables	71			71
VIII.	Off-balance sheet liabilities	1,009	258	-156	1,111
	– litigation related liabilities	832	106	-112	826
	– FGS+ refinancing loans	133			133
	– derivatives	44	152	-44	152
	Total	53,929	58,688	-650	111,967
	Effect of the recognition of impairment losses/provisions on the profit/loss (VI.+VII.)-(XVI.+XVII.)		58,688	-650	58,038

On 31 December 2021, the cumulated balance of provisions and impairment losses stood at HUF 112 billion owing to the increase during the year.

In relation to forint receivables (B/S line I.2 and I.3), an impairment loss totalling HUF 58 billion was recognised in 2021, due to the increasing balance of monetary policy securities.

The reversal of impairment connected to KELER KSZF Zrt. had no considerable impact on the impairment of invested financial assets.

In connection with litigation-related contingent liabilities, the provision at the end of 2021 was nearly unchanged compared to the end of 2020.

The provision created for the negative market value of the open derivative transactions was HUF 0.2 billion at end-2021.

4.14 DEFERRED EXPENSES/ACCRUED INCOME AND ACCRUED EXPENSES/DEFERRED INCOME

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2020	31 Dec 2021	
	Due to banking transactions	138,209	155,515	17,306
	Due to internal operation	2,984	3,662	678
IV.	Deferred expenses/accrued income	141,193	159,177	17,984
	Due to banking transactions	61,943	64,479	2,536
	Due to internal operation	485	700	215
X.	Accrued expenses/deferred income	62,428	65,179	2,751

Deferred expenses, accrued income, accrued expenses and deferred income include interest received/charged and interest related income/charges and expenses incurred in the reporting period because of banking transactions, independently of the date of financial settlement.

4.15 CHANGES IN EQUITY

HUF millions

B/S line	Description	31 Dec 2020	31 Dec 2021	Change
XI.1.	Share capital	10,000	10,000	0
XI.2.	Retained earnings	202,909	208,333	5,424
XI.3.	Valuation reserves	0	0	0
XI.4.	Revaluation reserves due to exchange rate changes	586,408	654,452	68,044
XI.5.	Revaluation reserves of foreign currency securities	57,952	-16,789	-74,741
XI.6.	Profit/loss for the year	255,424	-57,094	-312,518
XI.	Equity	1,112,693	798,902	-313,791

The share capital consists of a single registered share with a nominal value of HUF 10 billion.

The increase of HUF 5.4 billion in retained earnings is the net effect of the transfer of the 2020 profit of HUF 255.4 billion and the payment of the HUF 250 billion dividend to the state budget in April, as approved by the Board of Directors.

For more details on revaluation reserves, see Section 4.16.

4.16 REVALUATION RESERVES

HUF millions

B/S line	Description	31 Dec 2020	31 Dec 2021	Change
XI.4.	Revaluation reserves due to exchange rate changes	586,408	654,452	68,044
XI.5.	Revaluation reserves of foreign currency securities	57,952	-16,789	-74,741
	Total revaluation reserves	644,360	637,663	-6,697

Revaluation reserves due to exchange rate changes are determined by the amount of revalued foreign exchange holdings and the difference between the official and average cost rate. The depreciation of the forint relative to 2020 year-end increased the revaluation reserves, with the balance changing by HUF 68 billion to HUF 654.5 billion. The MNB took on foreign exchange rate exposure mainly in the euro: as at 31 December 2021, the exchange rate was 369 HUF/EUR, and the average cost rate was 344.36 HUF/EUR.

Revaluation reserves of foreign currency securities are calculated as the difference between the market value and the amortised book value of securities. The market value difference on the securities in the MNB's portfolio showed a negative balance of HUF 16.8 billion as at 31 December 2021.

4.17 OFF-BALANCE SHEET MNB LIABILITIES AND OTHER SIGNIFICANT OFF-BALANCE SHEET ITEMS

Hedging transactions and derivatives for purposes other than hedging

HUF millions

No.	Description	31 Dec 2020			31 Dec 2021		
		Receivables	Liabilities	Net market value	Receivables	Liabilities	Net market value
1.	Interest rate swap transactions	2,639,105	2,639,105	69,792	2,659,054	2,659,054	-135,895
	– IRS facility of monetary policy (MIRS)	1,099,617	1,099,617	21,263	1,099,617	1,099,617	-142,086
	– IRS contracted with domestic credit institutions	358,830	358,830	13,432	175,200	175,200	-14,587
2.	Futures	109,331	22,263	-3	54,644	37,156	-328
3.	FX swap, FX futures and forward transactions	8,669,557	8,617,794	48,031	9,105,606	9,163,930	-99,418
	– FX swaps with domestic banks providing HUF liquidity	1,622,161	1,658,420	-47,508	518,904	528,777	-17,700
	– FX swaps with domestic banks providing EUR liquidity	1,098,676	1,089,970	8,927	1,989,648	1,984,640	6,226
4.	Currency swap transactions (including transactions without capital swap)	3,372,710	3,544,754	-217,374	2,945,305	3,059,273	-213,522
	– Currency swap transactions linked to FGS	129,511	110,636	22,271	106,386	89,956	29,513
5.	Total hedging transaction (1+2+3+4)	14,790,703	14,823,916	-99,554	14,764,609	14,919,413	-449,163
6.	TBA transactions	191,077	41,863	705	252,224	14,235	87
7.	Futures	94,084	0	-13	30,697	0	86
8.	Total derivative transactions for purposes other than hedging (6+7)	285,161	41,863	692	282,921	14,235	173
9.	Total (5+8)	15,075,864	14,865,779	-98,862	15,047,530	14,933,648	-448,990

The above table includes all types of off-balance sheet receivables and liabilities arising from derivative transactions; it also includes FX swaps, interest-bearing currency swaps, FX futures and forward transactions for hedging purposes, which are part of the net foreign currency position and are recorded in the balance sheet, except for interest-bearing currency swaps without a capital swap. Hedging transactions reduce risks related to the net foreign currency position arising from cross-rate fluctuations and from interest rate changes, and support the creation of the benchmark foreign currency structure.

Just over half of the interest rate swaps are transactions with foreign partners for hedging purposes linked to specific bond issuances, which are concluded with the aim of achieving the interest structure deemed desirable by the MNB. The tenders of the monetary policy interest rate swaps (MIRS) launched in early 2018 were terminated at the end of the same year, the balance at end-2019 remained unchanged at end-2021. Since 2014 and in relation to the self-financing programme, the MNB has concluded interest rate swap transactions with domestic credit institutions to reduce their interest rate risk. The balance of such swaps decreased due to maturities.

Bond futures transactions are hedging transactions maturing within 1 year to reduce the average remaining duration of the reserve portfolios.

FX swap, FX futures and forward transactions are primarily the main instruments for hedging foreign exchange risk, based on expectations related to foreign exchange rate changes; their aim is to achieve the targeted foreign currency position. FX swaps providing forint liquidity and FX swaps providing EUR liquidity are for monetary policy purposes; the MNB holds

these tenders on an ad hoc basis for domestic credit institutions depending on liquidity. Since June 2021 the MNB has not transacted FX swaps providing forint liquidity.

Currency swaps are used to manage foreign exchange and interest rate risks jointly over the long term. From the end-2021 balance, 26 per cent of the currency swap transactions consisted of transactions without a capital swap maturing in 2023, and the EUR/HUF swaps linked to FGS refinancing loans amounted to 3 per cent.

The derivatives for purposes other than hedging have a maturity within 1 year. The remaining maturity of hedging transactions is presented in the following table.

Liabilities from derivative transactions by remaining maturity

HUF millions

Remaining maturity	Balance		Change
	31 Dec 2020	31 Dec 2021	
– within 1 year	9,864,128	8,175,962	-1,688,166
– within 1 to 5 years	3,676,762	5,477,024	1,800,262
– over 5 years	1,283,026	1,266,427	-16,599
Liabilities from hedging transactions	14,823,916	14,919,413	95,497

Other off-balance sheet liabilities

HUF millions

Description	Balance		Change
	31 Dec 2020	31 Dec 2021	
FGS credit facilities	301,685	642,776	341,091
Credit facilities to subsidiaries	1,031	1,939	908
FGS+ related contingent liabilities	133	133	0
Litigation-related contingent liabilities	1,563	1,567	4
Guarantees	1,822	1,994	172
Other off-balance sheet liabilities	11	2	-9
Total	306,245	648,411	342,166

The contracts concluded but not yet disbursed in the framework of FSG *fix* and FSG *Go!* are reported as off-balance sheet liabilities, as credit facilities.

Credit facilities to subsidiaries include the funds still available from the contracted amount for employee housing loans of Pénczjegynyomda (Hungarian Banknote Printing Plc.), Pénczverő (Hungarian Mint Plc.) and MNB-Biztonsági Zrt. (MNB-Security Services Plc.).

In accordance with the contracts concluded in the framework of FGS+, the MNB reimburses credit institutions up to 50 per cent of the capital loss of credit institutions arising from SME loans, subject to a portfolio-level limit. FGS+ related contingent liabilities are used to record the expected reimbursement for which provisions have been made, in line with the qualification rules.

The majority of the legal proceedings are proceedings against penalty resolutions connected to supervisory activities and include indemnity cases. The related contingent liabilities are used to record paid but litigated penalties and other expected compensations connected to legal proceedings for which provisions have been made.

The item 'Guarantees' consists of export guarantees, to which an irrevocable indemnity bond is always linked. When exercising a guarantee, the MNB has the right to a reverse guarantee if needed. In 2021, the increase in the balance was caused by exchange rate changes.

Recording off-balance sheet securities transactions

HUF millions

Description	Balance		Change
	31 Dec 2020	31 Dec 2021	
Face value of securities lent – automatic securities lending	6,357	23,939	17,582
Face value of securities lent – agency securities lending	216,668	270,257	53,589
Purchase cost of the non-cash hedge arising from security lending transactions	18,987	22,543	3,556
Purchase cost of investment of cash hedge arising from security lending transactions	205,179	253,816	48,637
Market value of investment of cash hedge arising from security lending transactions	205,179	253,816	48,637
Face value of securities bought under repo transactions	1,412	16,328	14,916
Face value of securities sold under reverse repo and blocked for ECB repo transactions	1,394,246	2,953,651	1,559,405

4.18 NET INTEREST INCOME AND REALISED NET INCOME OF FINANCIAL OPERATIONS

Net forint and foreign currency interest and interest-related income

HUF millions

P/L line	Description	2020	2021	Change
(I.1.+II.2.)—(X.1.+XI.1.)	Central government	4,240	46,908	42,668
(I.2.+II.3.)—(X.2.+XI.2.)	Credit institutions	-7,557	-119,677	-112,120
(I.3.+II.1.+II.4.)— (X.3.+XI.3.)	Other	82,333	75,464	-6,869
	Net profit/loss from interest	79,016	2,695	-76,321
	Forint securities	-8,659	-21,275	-12,616
	Foreign currency securities	-35,142	-38,965	-3,823
	Derivative transactions for hedging and other purposes*	5,424	-14,976	-20,400
	Other	22	0	-22
(I.4.+II.5.)—(X.4.+XI.4.)	Net interest-related profit/loss	-38,355	-75,216	-36,861
(I.+II.)—(X.+XI.)	Net interest and interest-related income	40,661	-72,521	-113,182

* For details on derivative transactions for hedging and other purposes, see the related table in this section.

In 2021, the MNB recorded a net interest and interest-related loss of HUF 72.5 billion, representing a decline of HUF 113.2 billion compared to the profit for end-2020.

Net interest income amounted to a profit of HUF 2.7 billion, decreasing by HUF 76.3 billion compared to end-2020, as a combined effect of the following:

The main negative factors in net interest income were:

- an increase of HUF 128.3 billion in interest expenses on the forint deposits of credit institutions, stemming from the rise in the amount of deposits and from the higher interest rates of liquidity-absorbing instruments. The latter can be explained by the preferential deposit facility bearing tiered interest in the first half of the year and by the increasing interest rate of the one-week deposits in the second half of the year;

- a decrease of HUF 23.7 billion in interest income on foreign exchange reserves compared to 2020, related to the development of foreign exchange market returns and to the change in the structure of the reserves;
- an increase of HUF 17 billion in interest paid on the forint deposits of the central government.

The main positive factors in net interest income were:

- forint interest income received from the central government was HUF 58.9 billion higher compared to 2020, stemming from the larger stock of government bonds (which was, however, reduced by the increase in the amortised net purchase price loss of HUF 6.4 billion, recognised among net interest-related expenses);
- an increase in interest income on loans to credit institutions and mortgage bonds in the amount of HUF 15.9 billion, as a result of long-term collateralised loans and the mortgage bond purchase programme (that said, the amortised net purchase price loss, recognised among net interest-related expenses, rose by HUF 1.2 billion in 2021, compared to the previous year);
- an increase of HUF 13.3 billion in interest income on other forint receivables, as a result of the corporate bonds purchased under the Bond Funding For Growth Scheme (however, this effect was mitigated by the increase in the amortised net purchase price loss by HUF 5 billion, recognised among net interest-related expenses).

Net interest-related income fell by HUF 36.9 billion. This item mainly includes the amortisation of the purchase price difference of securities and the net gain or loss on derivative transactions which are not related to exchange rate changes.

Negative interest income/expenses in net forint and foreign currency interest and interest-related income

HUF millions

P/L line	Description	2020		2021	
		Total	of which: Negative sums for interest	Total	of which: Negative sums for interest
	INCOME				
II.	Interest and interest-related income denominated in foreign currency	299,503	-22,803	204,623	-24,172
II. 1.	Interest on foreign currency reserves	77,781	-6,765	54,131	-17,096
II. 3.	Interest on receivables from credit institutions	-40	-40	-40	-40
II. 5.	Interest-related income	221,762	-15,998	150,532	-7,036
	EXPENSES				
X.	Interest and interest-related expenses denominated in forints	45,172	-145	206,829	-34
X. 2.	Interest on deposits by credit institutions	30,015	-145	158,347	-34
XI.	Interest and interest-related expenses denominated in foreign currency	269,475	-7,722	207,181	-5,411
XI. 1.	Interest on central government deposits	-2,425	-2,481	-3,190	-3,193
XI. 2.	Interest on deposits by credit institutions	-177	-178	-507	-507
XI. 3.	Interest on other liabilities	3,713	-784	-390	-784
XI. 4.	Interest-related expenses	268,364	-4,279	211,268	-927

Note: Table includes only P&L lines affected by negative sums for interest.

In accordance with the interest structure stated in the MNB Decree, negative interest income and expenses are recorded in the original P&L lines related to assets/liabilities (in net terms). For example, interest income on deposits of the central government, arising from negative yields, is recorded in line 'XI. 1 Interest expense on central government deposits'. This method caused the negative balances in the statements.

Details on income from derivative transactions for hedging and for purposes other than hedging represented in interest-related income

HUF millions

Description	2020	2021	Change
Interest margin on interest rate swaps	23,611	19,646	-3,965
Net interest result of currency swaps	-17,613	-21,816	-4,203
Net interest result of FX swaps, FX futures and forward transactions	-4,826	-10,864	-6,038
Net interest result of futures transactions	-21	-8	13
Net interest-related result of hedging transactions	-2,131	0	2,131
Net interest and interest-related result of other transactions	6,404	-1,934	-8,338
Net result of derivative transactions	5,424	-14,976	-20,400

The decrease of HUF 4 billion in interest income on interest rate swaps stemmed from the fact that the contraction in the interest margin on interest rate swaps concluded with domestic credit institutions – due to the maturity of part of the stock and the change in market interest rates – was greater than the increase in that concluded with foreign partners.

Currency swap transactions include derivative transactions concluded with the Government Debt Management Agency, with foreign partners and with domestic credit institutions. The transactions concluded with foreign partners are mainly hedge transactions concluded with the Government Debt Management Agency. The transactions concluded with domestic credit institutions include the currency swaps related to Pillar II of the FGS. In 2021, the average amount of transactions concluded with the Government Debt Management Agency and with foreign partners was also lower compared to the previous year. Net interest income on currency swaps reflected a loss of HUF 21.8 billion, which was HUF 4.2 billion higher compared to the loss for 2020.

Hedge FX swaps include short-term transactions concluded with foreign partners, with the Government Debt Management Agency and with domestic credit institutions. FX futures and forward transactions comprise short-term transactions concluded with foreign partners. Net interest expenses on these transactions increased by a total of HUF 6 billion, which was mainly related to net interest expenses on FX swaps concluded with foreign partners and on FX swaps providing euro liquidity.

Net interest-related income on hedge transactions includes the exchange rate gains or losses on swap transactions and the option fee of option transactions. In 2021, there was no such transaction.

Net interest and interest-related income on other transactions decreased by HUF 8.3 billion because of TBA transactions and bond futures transactions other than hedging.

Realised gains/losses from financial operations

HUF millions

P/L line	Description	2020	2021	Change
	Realised gains on covered mortgage bonds	1	0	-1
	Realised gains on coupon-bearing bonds denominated in foreign currency	14,935	9,837	-5,098
IV.	Realised gains from financial operations	14,936	9,837	-5,099
	Realised losses on bonds issues by the Hungarian government	0	20,803	20,803
	Realised losses on bonds issued by enterprises	0	8	8
	Realised losses on coupon-bearing bonds denominated in foreign currency	9,815	14,059	4,244
XIV.	Realised losses from financial operations	9,815	34,870	25,055
IV.-XIV.	Net financial gains/losses	5,121	-25,033	-30,154

In 2021, net realised losses from financial operations arose from sales of bonds denominated in forints and foreign currency owing to the increase in forint and US dollar market returns. Realised losses from financial operations were also affected by an individual transaction, the repurchase of government securities initiated by the Government Debt Management Agency for the purpose of withdrawing securities. The transaction did not affect the government securities market. The net result decreased by HUF 30.2 billion relative to the net gain in 2020.

4.19 COMPONENTS OF INCOME FROM THE REVALUATION OF FOREIGN EXCHANGE HOLDINGS

Description	2020	2021
Net income from exchange rate changes (realised and conversion spread)*	286,149	146,221
Change in revaluation reserves in the balance sheet** (due to unrealised revaluation net income)	398,607	68,044
Total effect of exchange rate changes	684,756	214,265
* P/L line: III.-XII.		
** Revaluation reserves due to exchange rate changes (balance sheet line XI.4.).		

In 2021, the total net exchange rate change effect was a gain of HUF 214.3 billion. The MNB realised a gain of HUF 146.2 billion on sales related to a decrease in the daily net FX position, while the revaluation reserve amount was increased by unrealised exchange rate gains of HUF 68 billion during the year. Foreign currency sales occurred in 2021 mainly in relation to the debt management transactions of the Government Debt Management Agency.

For more details on revaluation reserves, see Section 4.16.

4.20 COST OF ISSUING BANKNOTES AND COINS

P/L line	Description	2020	2021	Change
	Cost of banknote production	6,261	7,582	1,321
	Cost of coin production	3,959	3,512	-447
	Cost of production of commemorative and collector coins	769	1,333	564
XIII.	Cost of issuing banknotes and coins	10,989	12,427	1,438

The total cost of issuing banknotes and coins amounted to HUF 12.4 billion in 2021, an increase of HUF 1.4 billion compared to the figure for 2020.

The cost of banknote production amounted to HUF 7.6 billion in 2021, with an increase of HUF 1.3 billion compared to 2020 due to the rise in production volume. The cost of coin production was HUF 3.5 billion, down HUF 0.5 billion compared to the previous year. This contraction stemmed from decreasing demand for coins owing to the pandemic, which had an impact on the volume of production as well.

The cost of producing commemorative and collector coins amounted to HUF 1.3 billion, reflecting an increase of HUF 0.6 billion compared to 2020. The collector coin issuing programme for 2020 included three international events, which were postponed to 2021 due to the coronavirus pandemic. The increase in volume of issued coins as well as in commodity prices contributed to the increase in costs.

4.21 OTHER INCOME/EXPENSES

HUF millions

P/L line	Description	2020	2021	Change
V.1.	Income from fees and commissions	1,358	1,593	235
XV.1.	Expenses of fees and commissions	1,842	2,367	525
	Net income from fees and commissions	-484	-774	-290
V.2.	Income from other than fees and commissions	1,961	3,533	1,572
XV.2.	Expenses of other than fees and commissions	3,266	5,351	2,085
	Net income from other than fees and commissions	-1,305	-1,818	-513
V.3.	Income from supervisory activities	19,870	22,332	2,462
V.-XV.	Other net results	18,081	19,740	1,659

Net income from fees and commissions includes the balance of income from and expenses on fees and commissions linked to payment services, income from fees related to account management, cost of securities trading as well as expenses on fees related to holding foreign currency reserves. Income from commissions related to payment services and to account management increased in 2021 due to higher rates, while the rise in expenses on commissions was mainly caused by the rise in the fees connected to safe custody, to nostro account management and in the fees paid to KELER for securities trading resulting from the increase in the volume and number of transactions.

For more details on income other than fees and commissions, see Section 4.22.; in respect of income related to supervisory activities, see Section 4.23.

4.22 INCOME OTHER THAN FEES AND COMMISSIONS

HUF millions

P/L line	Description	2020	2021	Change
	Dividends from investments	690	1,919	1,229
	Income related to coins and commemorative coins	879	1,466	587
	Recommitment of financial money transfer	139	78	-61
	Income from assets assigned free of charge	24	26	2
	Other income	229	44	-185
V.2.	Income from other than commissions and charges	1,961	3,533	1,572
	Expenses related to coins and commemorative coins	792	1,393	601
	Financial money transfer	2,435	3,811	1,376
	Expenses related to public proceedings	7	44	37
	Expenses from assets assigned free of charge	11	70	59
	Other expenditures	21	33	12
XV.2.	Expenses from other than commissions and charges	3,266	5,351	2,085
V.2.-XV.2.	Net income/expenses from other than commissions and charges	-1,305	-1,818	-513

Dividends from investments increased by HUF 1.2 billion compared to 2020. Due to the circumstances of the coronavirus pandemic, the Annual General Meeting of the BIS in 2020 decided to postpone the dividend payment, then in 2021 BIS paid a dividend of EUR 5.4 million (HUF 1.9 billion) to the MNB, which is double the amount paid in previous years.

Net income related to coins and commemorative coins depends on the commemorative coin programme, and arises mainly from the difference between the income from sales of commemorative coins and expenses related to the removal of the coins' face value. Related income and expenses are almost equal, since by agreement, the sale of commemorative coins is accounted with Magyar Pénzverő Zrt. at face value, except when the production cost exceeds the face value (the latter is typical for gold coins). In 2021, net income arose mainly from the issue of the gold commemorative coin 'Stephen I of Hungary' and 'Saint Elizabeth of Hungary'.

The item 'Financial money transfer' includes donations to professional organisations and foundations, as well as to organisations for charitable and other purposes. In 2021, the MNB gave HUF 3.8 billion as donations, this was HUF 1.4 billion lower than in the previous year. The highest amounts were related to PSFN Kft. and to Pénziránytű Alapítvány (foundation for financial education). HUF 0.9 billion was paid for the annual operation of PSFN Kft. in 2021, based on the approved financial plan of the company, from which HUF 0.4 billion was paid back at the end of December as an unused donation, while HUF 0.5 billion was disbursed to Pénziránytű Alapítvány. During the year, HUF 0.1 billion was also returned to the MNB as an unused donation affecting previous years.

4.23 INCOME FROM SUPERVISORY ACTIVITIES

<i>HUF millions</i>				
P/L line	Description	2020	2021	Change
	Supervisory fee and default interest	16,642	20,451	3,809
	Received penalties and reimbursement from public proceedings	3,047	1,626	-1,421
	Administrative service fee from public proceedings	172	247	75
	Late payment surcharge for supervisory claims	3	3	0
	Other income arising from administrative procedures	6	5	-1
V.3.	Income from supervisory activities	19,870	22,332	2,462

The main component in income from supervisory activities is supervisory fees received from the supervised institutions obliged to pay such fees. In 2021, the income arising from the assessment of the minimum charges for the entire year and of the variable-rate fees due quarterly amounted to HUF 20.5 billion, while in 2020 the set fee obligation amounted to HUF 16.6 billion. Income from penalties imposed by the MNB and from reimbursements totalled HUF 1.6 billion.

4.24 OPERATING INCOME AND EXPENSES

HUF millions

P/L line	Description	2020	2021	Change
	Income from assets and inventories	11	12	1
	Income from subcontracted services	132	77	-55
	Income from invoiced services	115	128	13
	Other income	20	23	3
VIII.	Total operating income	278	240	-38
	Expenses of materials	17,687	21,601	3,914
	Cost of materials	486	626	140
	Services contracted	17,167	20,931	3,764
	– Maintenance, operation and rent of properties	2,852	4,573	1,721
	– Maintenance and rent of equipment	582	1,051	469
	– Postal and telecommunication services	885	1,045	160
	– Consultancy services	1,500	1,548	48
	– IT systems services	2,975	3,645	670
	– Membership fees	877	1,067	190
	– Guarding services, transport of banknotes and coins	2,425	3,037	612
	– Advertisements, market research	4,244	3,753	-491
	– Other, non-significant services*	827	1,212	385
	Other services	34	44	10
	Personnel-related costs	26,058	27,722	1,664
	Depreciation	4,684	5,668	984
	Transfer of costs of other activities	-455	-563	-108
	Total operating costs	47,974	54,428	6,454
	Expenses incurred on assets and inventories	111	52	-59
	Expenses incurred on subcontracted services	127	74	-53
	Expenses incurred on invoiced services	115	127	12
	Other expenses	499	595	96
	Total operating expenses	852	848	-4
XVIII.	Total operating costs and expenses	48,826	55,276	6,450
VIII.-XVIII.	Net operating expenses	-48,548	-55,036	-6,488

* In particular, 'Other, non-significant services' contains preparation of publications, travel and hotel services, services for education, translation and audit, as well as distribution of commemorative coins.

In 2021, net operating expenses amounted to HUF 55 billion, an increase of HUF 6.5 billion (13.4 percent) compared to 2020.

Operating expenses in 2021 rose by HUF 6.5 billion (13.5 percent) compared to the previous year. 2021 expenditures were increased mainly by expenses of materials, but the amount of personnel-related costs and depreciation also rose compared to 2020.

Expenses of materials in 2021 exceeded the expenses incurred in 2020 by HUF 3.9 billion (22.1 percent).

As part of expenses of materials, the increase in the costs of services contracted was decisive, especially the 'Maintenance, operation and rent of properties'. In addition, the costs of 'IT systems services', 'Guarding services, transport of banknotes

and coins', 'Maintenance and rent of equipment' and 'Other, non-significant services' increased, in smaller amounts than mentioned above. At the same time, the fees of 'Advertisements, market research' fell.

- The increase in the cost of 'Maintenance, operation and rent of properties' was mainly caused by the pro rata rental and operation of new properties (MNB Budai Központ, MNB Felügyeleti Központ és Pénzmúzeum), as well as the maintenance and rental costs of properties still in use for most of 2021. (The building of the headquarters on Szabadság Square was handed over to the reconstruction contractor in December 2021, and the building at Krisztina körút 39, whose rent increased, was rented by the MNB for the whole year.)
- The increase in the costs of 'IT systems services' is basically the effect of the additional costs due to the IT investments previously implemented (functional expansions, higher availability levels, automation of existing processes), and of the maintenance and support contracts concluded in previous years. In addition, the MNB continued to pay special attention to maintaining and increasing IT security, which was also accompanied by rising expenditures.
- The cost of 'Guarding services, transport of banknotes and coins' was higher compared to 2020 mainly due to the increase in the fee for guard protection services.
- The cost of 'Maintenance and rent of equipment' in 2021 increased most notably in the repair and maintenance costs of IT equipment, mainly due to the rise in producer subsidy fees and the increased use of parts and supplies. These expenditures were also increased by the operating costs of asset protection systems for the new buildings.
- The costs of 'Other, non-significant services' increased compared to 2020, which was mainly due to freight and transport costs, office relocations, the one-off expenditure of precious metal transport, as well as an increase in the fees of domestic courier services. In addition, the cost of producing publications exceeded the previous year, mainly due to the delay in republishing the renewed Financial Navigator Booklets from 2020.

The financial statements and audit costs (due diligence based on accounting documents, occasional financial/accounting analyses, consulting) also declined compared to the previous year. They amounted to HUF 31 million, of which the MNB's annual audit fee was HUF 26 million in 2021.

- The costs of 'Advertisements, market research' in 2021 decreased, mainly due to the reduction in the use of communication services, since some of the costs for 2020 were one-off expenditures and some of them were incurred in 2021 at a lower value than before.

Personnel-related costs increased by HUF 1.7 billion (6.4 per cent) compared to 2020. The major factor in this regard was the decision by the MNB Board of Directors to increase the annual wage bill by 5 per cent from 1 January 2021 and under set conditions from 1 July 2021, in order to secure and retain highly skilled employees in the long run. Over and above this, in 2021, in view of the pandemic, the MNB Board of Directors decided to give staff an extra Széchenyi Recreation Card benefit under the Government Decree on tax relief required to mitigate the economic impact of the coronavirus pandemic; in connection with this, the social contribution tax exemption was extended until the end of December 2021, which reduced personnel-related costs. The average headcount rose by 4 per cent. Entertainment costs were 10.3 per cent higher than the amount in 2020, but some major international events were cancelled or were organised online owing to the pandemic.

The depreciation and amortisation of tangible and intangible assets in 2021 was 21 percent higher than the previous year. This is mainly due to the predominantly IT investments made in 2021, within which the acquisition of IT infrastructure equipment for new buildings and the renewal of Microsoft licenses were significant.

Prime cost transfers are intended to ensure that the total amount of operating expenses reflects only actual expenses incurred by the MNB, while some specified costs are required by the MNB decree to be accounted as other expenditure. The transfer amounts increased compared to the previous year, mainly because the transfer of costs related to the instant payment system appeared throughout the year, partly as a new element. In addition, the transfer of general operating costs because of VIBER was higher than in the previous year, largely due to price changes.

4.25 INFORMATION ON WAGES AND NUMBER OF STAFF, REMUNERATION OF EXECUTIVE OFFICERS

Wage and headcount data

HUF millions

Description	2020	2021	Change (%)
Payroll costs incurred on staff	18,275	19,566	7.1
Other staff costs*	646	624	-3.4
Payroll	18,921	20,190	6.7
Other payments to personnel	3,352	3,750	11.9
Social contribution tax	3,378	3,351	-0.8
Contribution to vocational training	297	316	6.4
Contribution to rehabilitation	99	105	6.1
Sick-allowance	11	10	-9.1
Taxes on personnel-related payments	3,785	3,782	-0.1
Payments to personnel	26,058	27,722	6.4

* Other wage costs include absence payments for notice periods and amounts paid to staff off payroll and non-MNB workers.

Persons

Description	2020	2021	Change (%)
Average number of staff	1,470	1,529	4.0

Remuneration of executive officers

HUF millions

Bodies	2021
Monetary Council*	425
Supervisory Board	222

* Includes the salaries and other payments to internal and external members of the Monetary Council in an employment relationship with the MNB pursuant to Article 9 (4) c) of the MNB Act.

Loans of executive officers

Bodies	Amount of loans	Outstanding at 31 Dec 2021	Maturity	Rate of interest
	HUF millions			
Monetary Council	120	84	01 Oct 2031	Floating*
Supervisory Board	-	-	-	-

* The preferential interest rate for housing loans is the central bank base rate, the interest rate for personal loans is the central bank base rate +1 per cent.

4.26 OTHER MAJOR EVENTS AFFECTING 2021 AND AFTER THE REPORTING PERIOD

The coronavirus pandemic and its effects

The MNB plays a significant role in the Hungarian economy as the institution responsible for implementing monetary policy and supervising the financial intermediary system, as well as the central element in the cash supply and payment systems. Accordingly, based on the operational risk management and business continuity management strategy, as well as the pandemic action plan and the decisions made following the declaration of the state of emergency, the MNB is prepared to ensure business continuity at the high level expected and to operate vital systems during the coronavirus period as well.

The health emergency declared by the World Health Organization (WHO) at the end of January 2020 in connection with the spread of the coronavirus pandemic continued in 2021. During this period, the MNB sought to minimise the effects of the pandemic on the MNB to protect the health of its employees and ensure business continuity. During the fourth wave of the pandemic in autumn 2021, the MNB again increased the rate of home office work and restricted appointments in person to prevent the spread of infection. In the field of cash logistics, it introduced regular mandatory testing to maintain the continuity of cash supply. The COVID work group continuously followed up on the fulfilment of the vaccination obligation imposed by the Governor.

In the first months of 2021 the monetary policy steps were determined by the economic effects of the coronavirus pandemic and the recovery of the economy. The measures and programs of the central bank made a large contribution to the successful restart of the Hungarian economy. The central bank launched an interest rate hike cycle from the middle of the year to manage the rising inflation, and it also began to phase out the instruments used for crisis management. The MNB continued to raise interest rates in the last months of the year as well and responded flexibly to the strengthening of money and commodity market risks. In addition, in December it completed the process of closing crisis management programs.

After the reporting period, the MNB will continue to monitor the pandemic, its economic effects, and the responses given by the MNB as the institution responsible for implementing monetary policy and supervising the financial intermediary system.

International circumstances

The war between Ukraine and the Russian Federation broke out after the reporting period. The MNB, as the institution responsible for implementing monetary policy and supervising the financial intermediary system, as well as the central element in the cash supply and payment systems, pays special attention to and constantly monitors the international sanctions introduced and expected to be introduced in connection with the war, and the effects of these sanctions on the economic situation. It monitors these effects on the systems as a whole as well as on its own operation.

As a consequence of the Russian-Ukrainian war, the importance of compliance risk analysis increased within the risk management profile of the MNB. The monitoring of the changes to sanctions and restrictive measures and the prompt application of regulations relevant to the MNB were given high priority within the framework of complying with international standards. The MNB monitors existing partners and in the case of ad hoc business relationships it develops procedures taking all factors into account, in order to reduce the risks.

The economic and financial sanctions imposed as a result of the Russian-Ukrainian war limited the operation of Russia's Sberbank and its group. On 1 March 2022, the Single Resolution Board, the resolution organisation of the European Union, banned the continued operation of Sberbank Europe AG based in Austria, the parent company of the Hungarian Sberbank Magyarország Zrt. After the insolvency of the parent company was declared, the MNB withdrew the operating licence of Sberbank Magyarország Zrt. and ordered its liquidation. These events had no effect on the other members of the domestic financial system, which continued to serve their customers safely and as usual. Since then, the MNB has been monitoring the liquidity and cash flows of the entire Hungarian banking system. To ensure the stability of the

financial sector and to maintain confidence in it, it is important that the responses given by the MNB to the situation are as consistent as possible.

The withdrawal of the operating licence of Sberbank Magyarország Zrt. on 2 March 2022 and the start of its liquidation affected its transactions with the MNB as well. The claims of the MNB (mainly FGS loans) are backed by collateral. Securities collaterals were withdrawn. In the future, the MNB will monitor the liquidation process.

The MNB will continue to monitor the war conflict, the sanctions imposed, their economic effects and the responses given by the MNB as the institution responsible for implementing monetary policy and supervising the financial intermediary system.

27 April 2022, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

ANNUAL REPORT
2021 BUSINESS REPORT AND FINANCIAL STATEMENTS
OF THE MAGYAR NEMZETI BANK

Print: Prospektus Kft.

H-8200 Veszprém, Tartu u. 6.

mnb.hu

©MAGYAR NEMZETI BANK

H-1013 BUDAPEST, KRISZTINA KÖRÚT 55.