ANNUAL REPORT

2018

ANNUAL REPORT

2018 BUSINESS REPORT AND FINANCIAL STATEMENTS OF THE MAGYAR NEMZETI BANK

2018

Published by the Magyar Nemzeti Bank

Publisher in charge: Eszter Hergár

H-1054 Budapest, Szabadság tér 9.

www.mnb.hu

ISSN 1216-6197 (print)

ISSN 1585-4604 (on-line)

Contents

Part A)
2018 Business Report of the Magyar Nemzeti Bank 5

1 The Governor's foreword 7

2 A brief overview of the Magyar Nemzeti Bank 12
2.1 Objectives, basic and other tasks of the MNB 12
2.2 Bodies and management of the MNB 13
2.3 Organisation of the MNB 16
2.4 The MNB as a member of the European System of Central Banks 16

3 Review of the MNB's performance in 2018 21
3.1 Monetary policy 21
3.2 Stability of the financial intermediary system 27
3.3 Supervision and consumer protection 31
3.4 Resolution 43
3.5 Payment and securities settlement systems 44
3.6 Foreign exchange reserve management 47
3.7 Cash logistics activity 50
3.8 Statistical services 55
3.9 The MNB's activity in the area of social responsibility 57
3.10 The MNB's environmental sustainability activity 59
3.11 Factors shaping the communication of the MNB 62
3.12 The MNB's income in 2018 62
3.13 Financial performance of the MNB 64
3.14 Introduction of the ESCB Committees 67
3.15 Research activity of the MNB 69
3.16 Publications and conferences organised by the MNB 70

4 Additional information on the supervisory activity of the MNB in 2018 76
4.1 Institution oversight 76
4.2 Inspections completed 76
4.3 Licensing and legal enforcement 77
4.4 Market surveillance and issuers supervision 80
4.5 Consumer protection and customer service 81
4.6 Administrative representation at proceedings 83

5 Explanation of abbreviations and terms specific to central banking 84

Part B)

Audited financial statements of the Magyar Nemzeti Bank 87

1 Independent auditor's report 89

2 Balance sheet of the Magyar Nemzeti Bank 92

3 Income statement of the Magyar Nemzeti Bank 93

4 Notes to the financial statements 94

4.1 The MNB's accounting policy 94

4.2 Effects of macroeconomic trends on the 2018 balance sheet and income statement of the Magyar Nemzeti Bank 98

4.3 Forint receivables from the central government 99

4.4 Foreign currency receivables from the central government 99

4.5 Forint and foreign currency liabilities of the central government 99

4.6 Net positions vis-à-vis the central government 100

4.7 Forint receivables from and liabilities to credit institutions 101

4.8 Net positions vis-à-vis credit institutions 102

4.9 Gold and foreign exchange reserves of the central bank 103

4.10 Other forint and foreign currency receivables 104

4.11 Other deposits and liabilities 104

4.12 Invested assets 106

4.13 Provisions and impairment losses 113

4.14 Prepaid expenses/accrued income and accrued expenses/deferred income 113

4.15 Changes in equity 114

4.16 Revaluation reserves 114

4.17 Off-balance sheet liabilities and other significant off-balance sheet items of the MNB 115

4.18 Net interest income and realised net income of financial operations 117

4.19 Components of income from the revaluation of foreign exchange holdings 120

4.20 Cost of issuing banknotes and coins 120

4.21 Other income/expenses 121

4.22 Income other than fees and commissions 121

4.23 Income from supervisory activities 122

4.24 Operating income and expenses 123

4.25 Information on wages and number of staff 125

Part A)
2018 Business Report of the Magyar Nemzeti Bank

1 The Governor's foreword

The already dynamic expansion of the Hungarian economy accelerated in 2018 as GDP growth reached 4.9 per cent, while annual inflation was at 2.8 per cent. In 2018, the Monetary Council of the Magyar Nemzeti Bank maintained loose monetary conditions by applying unconventional instruments and by fine-tuning them to achieve the medium-term inflation target in a sustainable manner and to stimulate the real economy accordingly. In the Monetary Council's assessment, loose monetary conditions contribute to the achievement of the primary mandate of the central bank. As indicated by the September announcement, the MNB was also prepared for the gradual and cautious normalisation of monetary policy, which would begin depending on long-term inflationary developments. The Monetary Council closely monitors incoming macroeconomic data and decides to adjust monetary conditions depending on such. In December, the Monetary Council emphasised that core inflation excluding indirect tax effects might rise further in the following quarters as well, which is assessed by the Monetary Council in terms of the sustainable achievement of the inflation target. Consequently, the incoming data of the period ahead will be of key relevance.

On 18 September 2018, the Monetary Council decided to launch a new programme of the Funding for Growth Scheme called FGS fix, the primary objective of which is to improve the structure of SME lending. The new programme was launched with an allocation of HUF 1,000 billion at the beginning of 2019 and its main parameters and arrangement are identical with the earlier phases of the Funding for Growth Scheme, however the new programme may be considered to be more targeted. It is a novelty that the additional liquidity stemming from the loan volume disbursed under the framework of the FGS fix is sterilised at the base rate by the preferential deposit facility, the function of which has changed.

In the Monetary Council's assessment, it was necessary to maintain loose monetary conditions throughout 2018, in order to achieve the inflation target over the medium term and to stimulate the real economy to a corresponding degree. Accordingly, the Monetary Council determined the target band of the quarterly crowding-out effect to be at least HUF 400–600 billion in each quarter of 2018, and starting from March it also decided that the degree of actual crowding out must ensure that the loose monetary conditions that had evolved are sustained. In 2018, the Monetary Council left the base rate as well as the overnight and one-week collateralised lending rates unchanged at 0.9 per cent and the overnight central bank deposit rate at –0.15 per cent. Between January and May 2018, the central bank's forint liquidity providing swap holdings increased from HUF 1,518 billion to HUF 1,987 billion and remained at this level until the end of the year.

With the decisions of the Monetary Council taken in September 2018, the MNB prepared for the gradual and cautious normalisation of monetary policy. The central bank instruments that have an impact on short-term yields became simpler and more transparent as a result of the Monetary Council's decision to phase out the 3-month deposit facility at the end of 2018, while the role of the policy instrument was taken over by the statutory reserves. The MNB announced its strategic framework for policy instruments, describing the roles to be played by unconventional monetary policy instruments in shaping monetary policy in the future. Looking ahead, the central bank made it clear that it would formulate the monetary conditions necessary for the sustainable achievement of the inflation target through the optimal combination of two instruments, the forint liquidity providing swap instrument and the interest rate corridor.

Within the framework of the fine-tuning of the unconventional instruments with an impact on long-term yields and in line with the introduction of the Funding for Growth Scheme Fix, the monetary policy IRS instrument (MIRS) and the mortgage bond purchase programme were phased out by the end of 2018. The MIRS closed the year with a stock amounting to HUF 1,100 billion, whereas the closing of the mortgage bond purchase programme took place in two steps: secondary and primary market purchases lasted until 30 September 2018 and end-2018, respectively. Within these, the MNB purchased fixed-rate mortgage bonds that complied with the conditions of the programme with a total value of HUF 381 billion. Both the MIRS and the mortgage bond purchase programme achieved the set targets. The new instruments introduced in January supported the extension of the loose monetary conditions to long maturities and the stability of the market, contributed to the development of the mortgage bond market and – together with other central bank programmes and regulations – to the reduction of banks' interest rate

risk and thus to the further spread of long-term, fixed-rate mortgage loans.

Verification of compliance with the lending commitments made by the banks in 2017 within the Market-based Lending Scheme (MLS) took place at end-February 2018, after the annual lending data was available. The MNB established that all 16 banks with LIRS transactions at end-2017 had fulfilled their commitments. As a result of the commitments, banks reached a performance of around 250 per cent at the sectoral level. Partly due to banks' commitments, the growth rate of corporate loans outstanding reached 10 per cent in 2017, and the loans outstanding of the SME sector including the self-employed expanded by 12 per cent.

The vulnerability of the Hungarian financial system continued to decline in 2018, as presented in a comprehensive manner in the *Financial Stability Reports*. The Hungarian banking sector is stable, and its shock absorbing capacity is strong in terms of both liquidity and loss absorbency. The growth in the banking sector's balance sheet total and the favourable macroeconomic environment help the banking sector to finally overcome the vulnerabilities that can be considered the legacy of the period following the outbreak of the 2008 global financial crisis. Due to the favourable macroeconomic fundamentals, Hungary was less affected by the market turbulences seen last year. The profitability of the Hungarian banking sector continues to be outstanding in an international comparison, but the 2018 profit was slightly below the level realised during 2017, primarily due to a decline in the volume of reversals of provisions.

Price increases continued in the Hungarian real estate market. According to the MNB housing price index published in the *Housing Market Report*, the annual dynamics of housing prices in Budapest significantly exceeded the growth rate observed in the country. As a result of the strong rise in housing prices in the capital, the risk of overvaluation of residential real estates in Budapest increased; therefore, it is extremely important to analyse the real estate market continuously and deeply. At the same time, the impact of the risks originating from the domestic housing market on the stability of the banking sector is mitigated by the fact that borrowing is still related to more than half of the residential real estate transactions, price increases were not accompanied by a wide spreading of risky lending, and in Hungary the level of housing loans as a percentage of GDP is low in European and regional comparisons.

In 2018, the MNB's macroprudential activity continued to focus on developments in systemic cyclical and structural risks, monitoring market participants' adjustment to previously introduced measures and the methodological developments supporting this, as well as fine-tuning the set of macroprudential instruments. Noteworthy measures include those to intended to reduce households' interest rate risk, especially the differentiation of the debt-service-to-income (DSTI) ratio requirement according to interest rate risk, as well as the further development of the 'Certified Consumer-Friendly Housing Loan' framework. From the liquidity side, the reduction of cyclical systemic risks is fostered by the Interbank Funding Ratio (IFR) that entered into force on 1 July 2018, which reduces banks' excessive dependency on funds from financial enterprises. At the same time, the Mortgage Funding Adequacy Ratio (MFAR), which was revised at end-2018, contributes to the reduction of the forint maturity mismatch, and also facilitates deepening of the domestic mortgage bond market. In order to promote the competitiveness of the banking sector as well as to safely exploit the possibilities stemming from digitalisation and technological progress, the MNB also pays special attention to the development of an innovative regulatory environment that stimulates competition and increases efficiency. Accordingly, it created a Financial Innovation Platform (Innovation Hub) and a Financial Innovation Testing Environment (Regulatory Sandbox) in 2018 among the first ones in the region.

The performance of the supervisory duties in 2018 was characterised by a forward-looking, strategic approach and rapid response. Continuing to apply its revised methodology in practice, the MNB performed the oversight of the financial intermediary system in a proactive manner. In its activity as an authority, the MNB switched over to electronic administration in line with the expectations formulated by the legislator.

Numerous measures contributed to stability and sound growth, such as the transition to International Financial Reporting Standards (IFRS) and the special treatment of data provisions in the case of credit institutions, the supervision of operations according to the ethical life insurance regulation and Solvency II in the field of insurance, the control of reliable institutional operation and of the requirements implemented on the basis of the regulatory frameworks (the MiFID II Directive and the MIFIR Regulation) concerning the regulated markets in the capital market and the monitoring of institutional compliance with the 'ethical' concept in the field of consumer protection. The wide spread of Certified Consumer-Friendly Housing Loans – as widely available, easy-to-understand, favourably priced housing mortgage loans with clear conditions, accessible through simple and fast administrative procedure – and the control of compliance with the terms and conditions of application were top priorities for the central bank in 2018.

As part of the supervisory strategy that is in line with the development of information technology and the spread of digitalisation, the MNB undertook a leading role in facilitating the introduction of financial innovations and fintech solutions in a regulated environment.

The central bank applied its methodology, which was further developed in accordance with the renewed regulatory environment and takes a risk-oriented approach, in an intensive manner while performing its supervisory tasks aiming at preventing money laundering and the financing of terrorism.

As a result of the MNB's cooperation with its partner organisations and certain economic agents with a view to enhancing financial literacy, its informational materials and messages were delivered via several campaigns – in the standardised format of the Financial Navigator – to a wide range of members of the public.

In 2018, acting as a resolution authority, in order to prepare for possible future crisis situations, the MNB formulated the methodological framework based on which the individual bank resolution plans can be elaborated and which takes into account the current costs of the resolution planning and the advantages arising during a crisis event in an adequately balanced form. Accordingly, the MNB elaborated its methodologies for determining the MREL requirement, for establishing the public interest resolution condition and for the identification of critical functions. In addition, in line with the approved schedule, it prepared and revised the resolution plans, and procedures aiming at resolvability assessment also including on-site inspections were launched at several institutions. In relation to a resolution event that took place in the past, during the asset separation a significant portion of the portfolio taken over by the MSZVK Group (Hungarian Resolution Asset Manager) was sold in June 2018, allowing for the complete prepayment of the loan outstanding vis-à-vis the Resolution Fund. Regarding the collective guarantee funds, on the basis of the relevant EU regulation the MNB determined the regular annual fees of the member institutions of the Resolution Fund and participated in the planning of the stress test that examines the ability of the National Deposit Insurance Fund (NDIF) to contribute to resolution financing as well as in the examination of the objectivity of execution. The MNB took an active part in working out the international resolution regulation through the working groups of the relevant EU authorities.

Establishment of the instant payment system progressed as scheduled in 2018, and thus the target date of 1 July 2019 to introduce the new payment service did not change. In 2018 Q1, following the selection of the supplier, the installation of the central infrastructure started in GIRO Zrt. In parallel with that, the MNB also started the creation of the central bank functions of the instant system and its functions that support banks' liquidity management. Preparations for the instant payment service are also underway at the market participants concerned.

In order to facilitate compliance with EU payments legislation, the European Banking Authority (EBA) issued detailed guidelines concerning the formulation of safety measures related to the operational and security risks of payment services, and the MNB issued the guidelines in the form of a recommendation. In order to allow adequate time for preparations, the MNB has expected the payment service providers concerned to apply the recommendation since 1 November 2018.

Compliance with the provisions of the EU regulation concerning the activity of KELER CCP is personally inspected at least once a year by KELER CCP's authorisation college, which consists of international members. The 2018 inspection was performed in December, as a result of which the college established that the operation of KELER CCP continues to comply with the provisions of the regulation. The key issues of the annual meeting included the review of cybersecurity, IT operations and capital market default procedures related to the central counterparty.

The MNB's international reserves increased by EUR 4.0 billion during the year and thus amounted to EUR 27.4 billion at end-December 2018. During the year, the rise in the level of FX reserves mainly stemmed from EU transfer inflows from the European Commission. Further contributors to the rise, *inter alia*, were the MNB's FX swap transactions, i.e. transactions related to the FX pillar of the third phase of the Funding for Growth Scheme, and the amount of foreign currency received during the forint liquidity providing swap tenders, which was reduced by disbursements serving the purpose of debt repayment. Last year, the MNB brought home its gold reserve and increased it by a factor of ten, boosting its bullion holdings from 3.1 tons to 31.5 tons.

On 31 December 2018, the total value of currency in circulation amounted to HUF 5,998 billion, representing an increase of 17 per cent, or HUF 884 billion, compared to the end of the previous year. Forint cash holdings rose substantially in 2018 again, with currency holdings for saving purposes and the growth in consumption as the main underlying reasons. The two highest-value banknote denominations continue to play a dominant role in cash turnover: at end-2018 they jointly accounted for 70 per cent

of the volume and 95 per cent of the value of all banknotes in circulation.

In 2018, the MNB performed cash transactions for its customers, i.e. credit institutions and the Hungarian Post, in a value of HUF 2,994 billion.

In line with the trend of previous years, the counterfeiting of forint banknotes continued to decline further in 2018; the number of forint banknote counterfeits eliminated from cash circulation was merely 450. In 2018, counterfeiting of higher denominations (mainly the 10,000-forint and 20,000-forint banknotes) remained most typical, accounting for 81 per cent of all counterfeit forint banknotes.

In the period between 2014 and 2019, in the context of the programme 'Progress and tradition', the MNB is renewing the banknote series presently in circulation. Of the banknote series consisting of six denominations, the HUF 10,000 note was renewed first, in 2014, followed by the HUF 20,000 note in 2015. The 2000-forint and 5000-forint denominations were renewed in 2017, and the old versions were withdrawn in 2018. The new 1000-forint banknotes were issued from 1 March 2018, spreading dynamically in cash circulation. Accordingly, on 31 October 2018 the MNB withdrew the old versions of the 1000-forint denomination. As the last member of the new banknote series, the legal issuance of the 500-forint note was on 4 July 2018; this denomination has been appearing in cash circulation since 1 February 2019, as required by the turnover.

Pursuant to the MNB Act and in the spirit of the sales policy valid since 2014, in order to foster coin collection, the central bank issued 24 commemorative coins on 12 topics in 2018. Two of these were gold commemorative coins, 10 were silver commemorative coins and 12 were non-ferrous metal commemorative coins (of the latter, one on a topic of its own and 11 as non-ferrous metal versions of the precious metal coins). In 2018, the MNB also put into circulation three new commemorative versions of the 50-forint circulation coin.

As an important milestone of the project aiming at the creation of a standard, good-quality central bank credit register, the decree requiring data reporting was issued in November 2018. The prospective data reporting, which is in conformity with the data collection models that represent a strategic direction internationally as well and contain elementary-level data, was formulated following efficient and intensive discussions with the credit institutions sector on the data reporting requirements.

The MNB realised a profit of HUF 47.8 billion in 2018. The interest income shows rising profits, which is attributable to the favourable impact of monetary policy measures and FX reserve management on the profit/loss.

Actual operating costs amounted to HUF 40,762 million in 2018, exceeding the expenses incurred in the previous year by 8.7 per cent.

Firstly, the increase in cost compared to the amount recorded in 2017 was attributable to personnel costs, as based on the decision of the MNB's Executive Board the 2017 wage bill limits – which also cover the acknowledgement of extraordinary performances – increased by 8.25 per cent as of 1 January 2018, in order to provide for and retain highly trained staff in the long run. In addition, the 1.6-per cent increase in average headcount and the 2.3-per cent decline in contributions also had an impact on the difference. Secondly, general operating costs were also up, mainly as a result of a rise in IT and operating costs.

Including advance payments for investment purposes, the financially realised value of investment implemented in 2018 was HUF 10,633 million, the majority of which was capital expenditures, mostly consisting of IT spending, related to the usual course of business.

In 2018, the environmental sustainability activity of the MNB was determined by the medium-term (2017–2019) environmental strategy adopted in 2017. The focus of the strategy is on the environmentally sound development of the MNB's buildings and further improvement in the environmental performance of the cash supply chain. Implementation of the environmental strategy is supported by an environmental protection programme (strategic action plan) comprised of 15 points.

In the medium-term environmental strategy, the MNB made the commitment in respect of its buildings to maintain and strengthen the 'Very Good' rating of the international environmental assessment method and rating system (BREEAM In-Use) for the headquarters building, classified as a national monument, and for the Logistics Centre. The developments of the necessary related measures planned for 2018 were implemented.

Regarding the further enhancement of the environmental performance of the cash supply chain, in the medium-term strategic period of 2017–2019 the focus will be on the survey of the environmental performance of the third

segment of the cash supply chain, i.e. the cash logistics providers. Accordingly, a project was launched for mapping the environmental performance of cash logistics service providers and calculating their carbon footprint. The project resulted in a model covering all the three elements of the cash supply chain (cash production; MNB internal logistics; cash logistics service providers). The carbon footprint per individual banknote was determined with the help of the model. The model allows the monitoring of the changes in the carbon footprint of the cash supply chain year by year.

In order to achieve the goals set in its Corporate Social Responsibility Strategy, the central bank worked to renew and enhance education (primarily tertiary education) and the system of economics and financial training as well as to support scientific activity and financial education in 2018. The educational programmes supported by the MNB and its foundations are partly its own initiatives, and in part realised through institutional partnerships.

The MNB's full compliance with the relevant legislation in the area of environmental protection was ensured in 2018 as well, and the MNB also renewed its EMAS and BREEAM certificates in 2018.

In order to supply the general public with continuous and comprehensive information, in 2018 the MNB issued 323 press releases, held more than 30 press conferences and published 50 professional articles in the printed press, on online portals and on its own website. Similarly to the previous years, the information provided by the central bank primarily focused on the most important decisions concerning the MNB's basic tasks, the monetary policy and financial stability. The communication covered information on the most important central bank decisions, disclosure of the outcomes of the meetings of the Monetary Council and the results of supervisory inspections and procedures.

The 2018 campaign communication focused on publishing information to call attention to the 'Certified Consumer-Friendly Housing Loan' programme. The aim of the campaign was to call attention to the possibility of taking out certified loans, to popularise the MNB's own calculator that allows searching among certified loans and to indirectly encourage households to choose the safer, fixed-rate loans. The disclosure of information on the steps of the banknote replacement programme was regular and continuous in 2018 as well, and the smaller campaigns to increase financial awareness and consumers' knowledge also continued.

The MNB continuously developed its new types of communication tools as well: the number of those taking an interest in the central bank's social networking sites grew steadily, and today the MNB keeps contact with already more than 42,000 permanent followers.

2 A brief overview of the Magyar Nemzeti Bank

Company name: Magyar Nemzeti Bank

Registered Office: 1054 Budapest, Szabadság tér 8–9.

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

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.

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 their 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 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 performance of their tasks.

The basic tasks of the MNB are as follows:

– it defines and implements the 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 the 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 responsibilities, 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;

– via the Financial Arbitration Board, it administers the out-of-court resolution of disputes related to the establishment and fulfilment of contracts for services, established between consumers and the organisations of the financial intermediary system.

Any further tasks of the MNB shall be defined by acts and, in relation to the supervision of the system of financial intermediation, by legal regulations adopted pursuant to the authorisation of 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 CXCIV of 2011 on the Economic Stability of Hungary, the Governor of the MNB is a member of the Fiscal Council (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 duties of the FC 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 V of 2013 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 in charge of public finances. 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 amendment of the Statutes as well as on the appointment, dismissal 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 the 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 2018, the Monetary Council elected Márton Nagy, Deputy Governor, as deputy chairman.

In 2018, the members of the Monetary Council were:

– Dr György Matolcsy, Governor, Chairman of the Monetary Council from 4 March 2013,

– Márton Nagy, Deputy Governor from 1 September 2015,

– Dr Ferenc Gerhardt, Deputy Governor from 22 April 2013,

– Dr László Windisch, Deputy Governor from 2 October 2013,

– Dr Gusztáv Báger, from 6 July 2015,

– Dr Kolos Kardkovács, from 12 September 2016,

– Dr György Kocziszky, from 5 April 2011, and re-elected from 6 April 2017,

– Dr Bianka Parragh, from 23 March 2017,

– Gyula Pleschinger, from 5 March 2013.

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 during the 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 control activities;

– makes decisions within the framework of performing the MNB's resolution tasks concerning the decisions ordering resolution and applying resolution measures, as well as in administrative proceedings related to performing the 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 acts of the European Union, in administrative proceedings related to exercising the 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;

– makes decisions in the administrative proceedings related to performing the MNB's macroprudential tasks, as well as 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 Governor responsible for monetary policy and lending incentives, the Deputy Governor responsible for the supervision of financial institutions and consumer protection as well as the Deputy Governor responsible for statistics and the financial infrastructure,

– as executives appointed by the Governor of the MNB, the Executive Director for Monetary Policy and Economic Analysis, the Executive Director for Financial Institutions Supervision, the Executive Director for Licensing and Legal Enforcement and the Executive Director for Macroprudential Policy, as well as

– 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:

– 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 professional 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, dismissal 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 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 of such on the MNB's profit and loss. Accordingly, the Supervisory Board compiles the report on the annual accounts as specified in the Act on Accounting within the above limitations.

The members of the Supervisory Board as defined in the MNB Act are its Chairman elected by the Parliament, three additional members elected by the Parliament, the representative of the minister in charge of public finances and an expert appointed by this minister. The Chairman of the Supervisory Board elected by the Parliament is nominated by the parliamentary panels of the governing parties, whereas the other members elected by the 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 the Parliament terminates.

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

Members of the Supervisory Board in 2018:

– 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 Executive Board and the members thereof, the Director General, and, in their capacity as the top level executors of the decisions, the executive directors.

In 2018, modifications of the MNB's organisational structure were introduced in relation to areas controlled by the Governor, the Deputy Governor Monetary Policy and Lending Incentives, the Deputy Governor Financial Institutions Supervision and Consumer Protection, the Deputy Governor Statistics and Financial Infrastructures, as well as by the Director General. The primary objective of the modifications was to enhance efficiency.

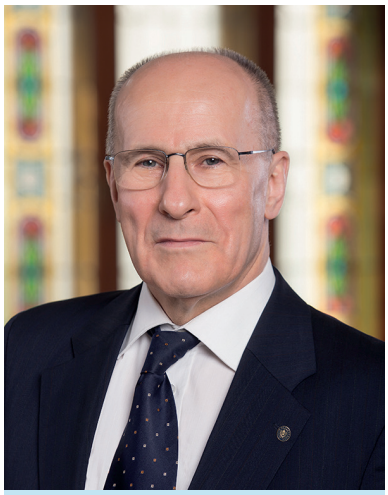
The work organisation as at 31 December 2018, developed as a result of the organisational changes for the fulfilment of the tasks, is illustrated in the **organisation chart** on page 20.

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 third decision-making body of the ECB is the General Council, which is responsible for maintaining an institutional relationship between the Eurosystem and the central banks of non-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 have adopted the euro.

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

Dr György Matolcsy
Governor,
Chairman of the Monetary Council



Dr Ferenc Gerhardt
Deputy Governor,
Member of the
Monetary Council

Márton Nagy
Deputy Governor,
Deputy Chairman of the
Monetary Council

Dr László Windisch
Deputy Governor,
Member of the
Monetary Council

Members of the Monetary Council of the Magyar Nemzeti Bank

Dr Gusztáv Bágér
Member of the Monetary Council

Dr Kolos Kardkovács
Member of the Monetary Council

Dr György Kocziszky
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

The number of ESCB members did not change in 2018.

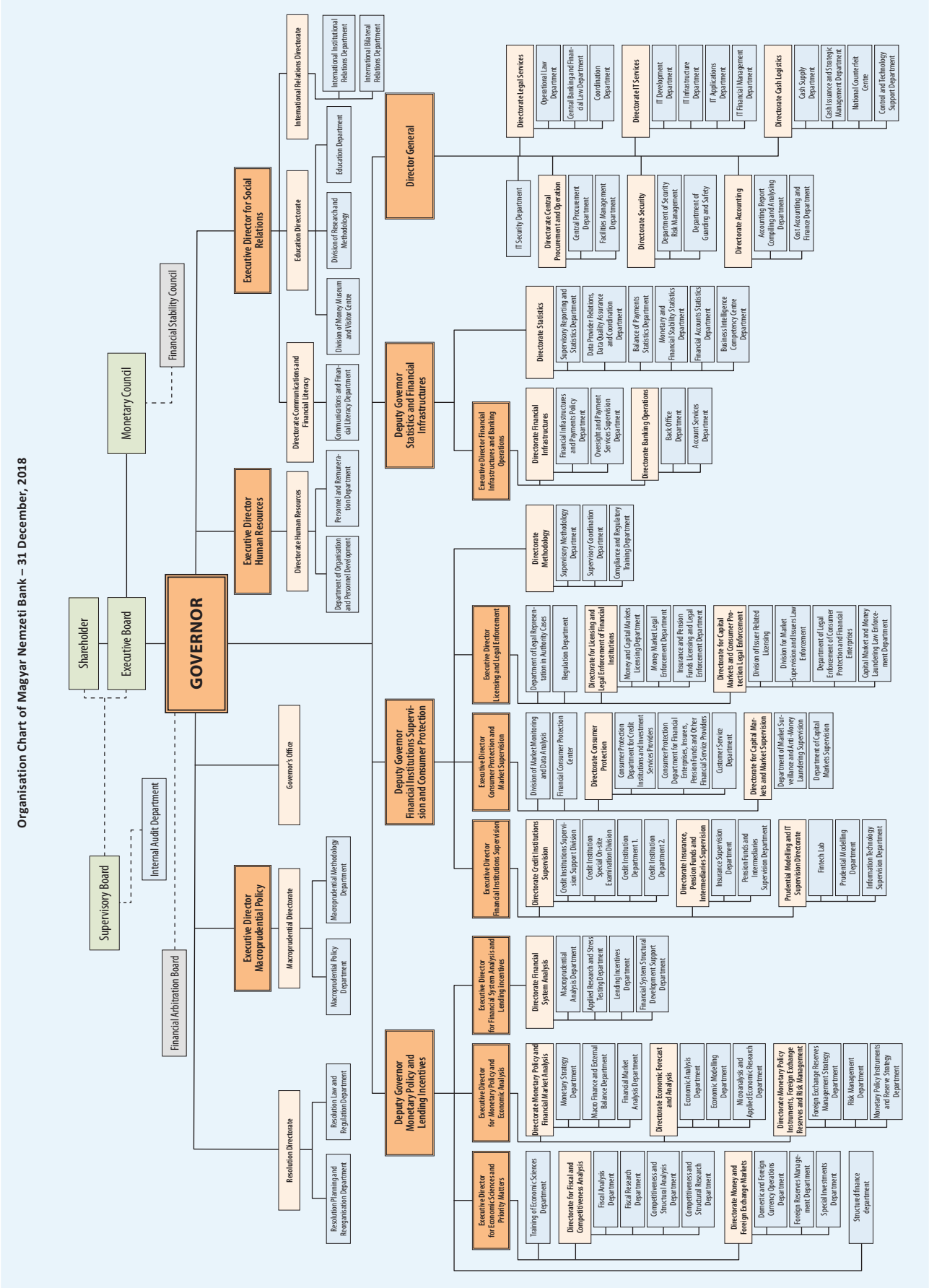
The ESCB members are also the owners of the ECB. The respective ownership shares of Member States are determined according to their shares in the GDP and total population of the EU (on the basis of statistical data compiled by the European Commission). Since 1 July 2013, the paid-up capital of the ECB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

Currently, euro area central banks subscribe to 70 per cent of the ECB's capital, while the remaining 30 per cent is divided among the central banks of non-euro area Member States. These latter central banks pay a pre-defined 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 a new Member State joins the EU. The last adjustment of the capital keys took place in the second half of 2013. Consequently, on 1 January 2014, the share of the MNB in the ECB's paid-up capital increased from 1.3740 per cent to 1.3798 per cent and remained unchanged in 2015–2018.

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. (For a detailed description of the ESCB Committees and the activities of the various fora assisting them, see Chapter 3.14.) 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.

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 2018, the ESCB committees continued to be useful fora for the exchange of professional experience.

Organisation Chart



3 Review of the MNB's performance in 2018

3.1 MONETARY POLICY

In 2018, the Monetary Council of the MNB ensured that loose monetary conditions were maintained by applying unconventional instruments and fine-tuning them to achieve the medium-term inflation target in a sustainable manner and to stimulate the real economy accordingly. Over the long term, the central bank can contribute to economic growth and a benign macroeconomic environment by price stability and by ensuring the stability of the financial system.

International financial market developments

On the whole, risk tolerance declined during 2018. In line with the risk-averse attitude, both developed and emerging market risk indices deteriorated. Looking at the year as a whole, the main stock exchange price indices fell, while bond markets were also characterised by strong capital withdrawals on the whole, especially in the latter half of the year. The euro mostly depreciated against other developed market currencies, and only appreciated against the British pound. During the year, the key factors for the markets were the trade dispute between the United States and China, domestic political events in Italy and concerns related to the fiscal deficit targets of the Italian government, uncertainty about Brexit, emerging market turbulences (Turkey, Argentina), changes in oil prices and expectations related to the monetary conditions of the Federal Reserve (Fed) and the ECB. Of the world's leading central banks, the Fed continued its monetary policy normalisation with interest rate hikes, while the monetary policy environment is expected to remain expansive in the euro area. The monetary policy stances of the central banks of the Central and Eastern European region were varied during the year.

In the first half of the year, risk tolerance tended to decline on the international money and capital markets. Sentiment was primarily affected by the tightening monetary policy stance of the world's leading central banks and the ensuing rise in interest rate expectations. In the first quarter, developed market yields rose, and international money markets were characterised by fluctuating sentiment. In line with expectations, the Fed raised the base rate by 25 basis points in March, while the ECB left its accommodating monetary conditions unchanged. In the second quarter, global financial market sentiment was volatile: in addition to market expectations, it was mainly affected by the trade policy developments between the United States and China as well as events in European domestic politics (internal affairs in Italy, uncertainties about Brexit). In June, the Fed continued to gradually tighten monetary conditions with another interest rate hike of 25 basis points. The significant appreciation of the US dollar and the rise in the 10-year US yield to above 3 per cent resulted in fading risk tolerance in the emerging markets, leading to higher yields and capital withdrawals in these markets. In the period under review, the ECB announced the end of its asset purchase programme in December 2018, and thus following that it will have a smaller impact on the long-term segment of the yield curve. Nevertheless, according to the ECB's communication, the policy rates will remain unchanged at least through the summer of 2019, which continues to suggest a loose monetary policy environment in the euro area.

Financial market sentiment was volatile in the latter half of the year, driven by geopolitical risks as well as developments related to emerging countries (especially the turbulences experienced in Turkey and Argentina) and increasing tensions in the periphery countries of the euro area (mainly in Italy). During the period, financial markets were characterised by risk aversion in relation to mounting expectations of interest rate hikes in the United States. In the summer months, the deterioration in investor sentiment led to a rise in yields in international financial markets. International financial market sentiment deteriorated further in the final quarter of the year. Risk tolerance was influenced by expectations related to the monetary policies of the world's leading central banks as well as by news on international trade policy and changes in oil supply. In addition, developments related to the Italian budget, uncertainties about the Brexit agreement and the worsening prospects of global economic growth had a major impact on market sentiment. The Fed raised the policy rate in two more steps in the second half of the year. Looking ahead, however, market expectations moderated, and based on December quotes no more than one tightening move is expected in 2019. In line with its earlier communication, in December 2018 the ECB closed its asset purchase programme. Based on market prices, the first tightening step is expected to be taken in the first quarter of 2020. Monetary policy stances of the central banks in the region were varied during the year. The Czech central bank tightened monetary conditions in five steps, raising

the policy rate to the current level of 1.75 per cent, while the Romanian central bank carried out interest rate hikes on three occasions in 2018, with corresponding amendment of the interest rate corridor. The Polish central bank did not change the monetary conditions during the year.

Domestic economic environment

Average annual inflation was 2.8 per cent in 2018. At the start of the year, inflation was around 2 per cent, followed by a rise to above 3 per cent in the summer months in parallel with the accelerating price dynamics of fuels. In autumn, as a result of volatile movements in global commodity prices, inflation was more volatile than usual, and thus the consumer price index stood at 3.8 per cent in October, before sinking to 2.7 per cent by December. In the second half of the year, the rise in indicators of underlying developments capturing persistent trends continued, which was attributable to buoyant domestic demand, increasing wage dynamics and the indirect effects of the oil price increase. The expansion of the Hungarian economy, which had been dynamic until then as well, accelerated in 2018, as the GDP rose by 4.9 per cent. However, if the assumptions of the current forecast hold, economic growth is expected to decelerate gradually from 2019. The external debt of the country declined considerably in 2018, and its financing capacity remained high. The stable fundamentals are supported by the low fiscal deficit and the declining government debt-to-GDP ratio. In the autumn months of 2018, items sensitive to global commodity price movements resulted in higher-than-usual volatility in inflation, and this volatility is expected to continue in the short run. Over the monetary policy horizon, the Monetary Council pays even greater attention than usual to the changes in the measures of underlying inflation capturing persistent inflationary trends. Looking ahead, core inflation excluding indirect tax effects may rise to above 3 per cent in early 2019 after which it is expected to be close to the target over the monetary policy horizon.

Conventional monetary policy measures

The Monetary Council did not change the policy rate in 2018, leaving the base rate, the overnight collateralised lending rate and the 1-week collateralised lending rate at 0.9 per cent since the May 2016 interest rate decision, while the overnight deposit rate is –0.15 per cent. In 2018, the average liquidity to be crowded out amounted to at least HUF 400–600 billion. In the Monetary Council's assessment, the current loose monetary conditions contribute to fulfilling the primary mandate of the central bank. Nevertheless, in its September announcement the Monetary Council indicated that – similarly to the practices of the world's leading central banks – the MNB was also prepared for gradual and cautious normalisation of monetary policy, which would begin in line with persistent developments in inflation. In the third quarter of 2018, in order to simplify the central bank instruments that have an impact on short-term yields, the Monetary Council decided to phase out the 3-month deposit facility at end-2018, and thus the holdings of HUF 75 billion of the policy instrument declined to zero in December 2018. The role of the policy instrument is being taken over by the required reserves. The decision contributes to simplifying the set of instruments and increasing transparency. When formulating the monetary policy in the future, the central bank will not amend the 1-per cent value of the required reserves.

Unconventional monetary policy measures

In January 2018, the Monetary Council introduced two unconventional instruments in order to allow the loose monetary conditions to have an effect on the long section of the yield curve as well. Firstly, the MNB introduced a monetary policy interest rate swap instrument (MIRS), which was available unconditionally with 5-year and 10-year maturities. The Monetary Council set the first-quarter amount of the instrument at HUF 300 billion, and then at HUF 600 billion for the first half of the year. Following that, in June 2018 the MNB decided on an amount of HUF 900 billion for the first three quarters. In addition, the central bank decided to launch a targeted mortgage bond purchase programme, within which it purchased mortgage bonds with original maturities of 3 years or more. The spreads on mortgage bonds compared to government securities market yields declined considerably with the help of this instrument. The decrease in financing cost stimulated primary market issues and facilitated the spread of fixed-rate loans.

According to the September announcement of the Monetary Council, the MNB was prepared to normalise monetary policy. The first step in this process was transforming the set of unconventional tools. Based on the MNB's new framework, the set of unconventional instruments affecting short-term yields was simplified, and looking ahead the central bank will shape monetary conditions using an optimal combination of two tools: the stock of swap instruments providing forint liquidity and the interest rate corridor. Additionally, within the framework of fine-tuning the unconventional instruments affecting long-term yields, the Monetary Council decided to phase out the MIRS and the mortgage bond purchase programme at the end of 2018. Based on this decision, the allocation amount

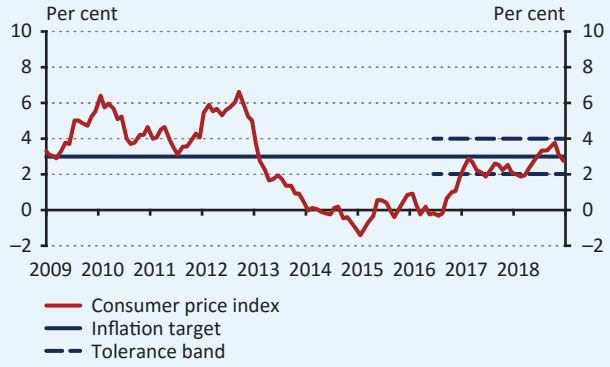
of the MIRS was HUF 1,100 billion. The mortgage bond purchase programme was closed in two steps: secondary market purchases ended on 30 September 2018 and primary market purchases were ended in December 2018. The MNB is launching the Funding for Growth Scheme Fix (FGS fix) in early 2019.

Inflation developments in 2018

In 2018, inflation was almost continuously within the ±1 percentage point tolerance band around the 3-per cent inflation target, and was close to 3 per cent in the second half of the year. Developments in inflation during the year were mainly determined by prices of fuel and unprocessed food. In the latter half of the year, volatile items sensitive to global commodity price movements resulted in higher-than-usual fluctuations in domestic inflation. On a year-on-year basis, inflation peaked in October, followed by steep declines in November and December. Annual inflation in December was 2.7 per cent, while average annual inflation amounted to 2.8 per cent in 2018.

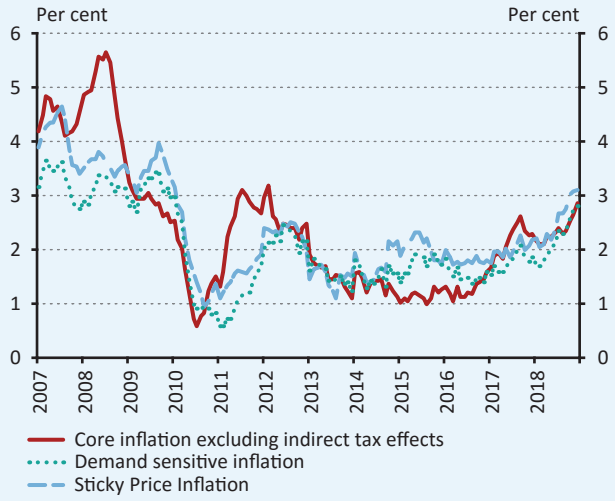
The measures capturing underlying inflation were around 2 per cent in the first half of 2018, followed by a gradual rise. In the case of core inflation excluding indirect tax effects, the increase was primarily attributable to developments in the inflation of market services. The cost side inflationary effect of the dynamic, double-digit rise in wages was attenuated by a further reduction of the social contribution tax in early 2018. The expanding consumption targeted durable goods, and thus the inflationary effect was reduced by the structure of consumption growth.

Chart 1
Inflation target and inflation developments



Sources: HCSO and MNB.

Chart 2
Underlying inflation indicators



Source: MNB.

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

	2016	2017	2018	2018			
				Q1	Q2	Q3	Q4
Core inflation	1.4	2.3	2.5	2.4	2.4	2.4	2.7
Unprocessed food	0.4	0.9	6.9	5.4	5.0	8.0	9.1
Fuel and market energy	-6.3	7.1	8.2	-0.2	9.0	15.8	8.3
Regulated prices	0.2	0.3	0.1	-0.2	-0.1	0.1	0.6
Inflation	0.4	2.4	2.8	2.0	2.7	3.4	3.2
Inflation with constant tax rate	0.6	2.8	3.2	2.4	3.1	3.9	3.6

Note: 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.

Changes in monetary policy instruments

Funding for Growth Scheme

On 18 September 2018, the Monetary Council decided to launch a new programme of the Funding for Growth Scheme called FGS *fix*, which has the primary objective of improving the structure of SME lending. The new programme was launched with an allocation of HUF 1,000 billion in early 2019 and it is identical with the previous phases of the FGS in terms of its most important parameters and the mode of implementation. Accordingly, the MNB provides forint refinancing to credit institutions at a 0 per cent interest rate, and they can lend these funds to SMEs at an interest margin of up to 2.5 per cent for financing new investment. The FGS *fix* can be considered more targeted than the earlier phases of the FGS. It is not the intention of the MNB to increase the amount of liquidity in the banking system with the new scheme; therefore, the MNB wishes to withdraw the surplus money arising from the disbursements under the FGS fix from the system (sterilisation) with the preferential deposit scheme, which now has a new function.

The MNB's set of monetary policy instruments

In 2018, the Monetary Council left the base rate as well as the overnight and 1-week collateralised lending rates unchanged at 0.9 per cent and the overnight central bank deposit rate at –0.15 per cent.

Central bank instruments affecting short-term yields

In the Monetary Council's assessment, it was necessary to maintain the loose monetary conditions throughout 2018 for the medium-term achievement of the inflation target and for a corresponding degree of stimulation of the real economy. According to the Monetary Council's decision, the quarterly target level of banking sector liquidity crowded out of the central bank instruments bearing an interest equalling the base rate was at least HUF 400–600 billion in each quarter of 2018. In parallel with the decline in the net forint liquidity of the banking sector, in the individual quarters the average of the crowded out banking sector liquidity amounted to HUF 928 billion, 724 billion, 547 billion and 393 billion, respectively. The portion of the liquidity crowded out of the 3-month deposit appearing in sterilisation instruments was tied up in the overnight deposit and the preferential deposit, in the latter case with increasing recourse at the beginning of the month and declining recourse to it in the second half of the month, as had become usual in the previous period. The maximum liquidity allowed to be placed in the preferential deposit was HUF 489 billion during the period, while the annual average of actual deposits amounted to HUF 466 billion. O/N deposits, which are of key importance in terms of the impact of the crowded out liquidity, tended to decline in the period under review (except for the end of the year), and their annual average amounted to HUF 635 billion.

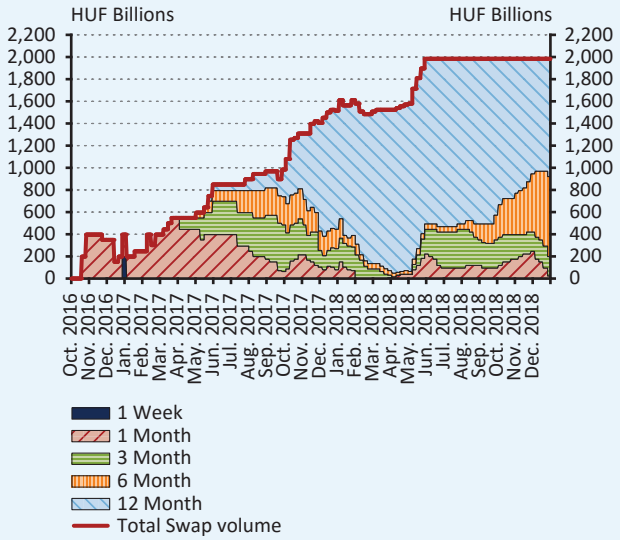
Although in Q1 the actual crowding out exceeded HUF 600 billion, i.e. the upper bound of the designated target band, according to the Monetary Council's subsequent assessment this was necessary to maintain loose monetary conditions. Taking into account the developments observed in Q1, with the same targeted band of crowding out, in March – and subsequently in every quarter – the Monetary Council also stipulated that the degree of crowding out should ensure that the loose monetary conditions that had evolved were maintained over the longer term. In Q4, the crowded out banking sector liquidity was just below the lower bound of HUF 400 billion, but it was sufficient to sustain the monetary conditions.

The early January holdings of HUF 75 billion of the 3-month deposit were maintained by the MNB until October. Pursuant to the Monetary Council's decision, the central bank did not hold any tenders in Q4. As a result, declining by monthly steps of HUF 25 billion, the holdings decreased to zero by 19 December. The offers submitted in the deposit tenders fluctuated in a narrow band of HUF 97–128 billion.

In 2018, the changes in liquidity were determined by the tenders of the central bank fine-tuning swap instruments. In order to maintain the loose monetary conditions and the related crowding out effect, until May the MNB offset the autonomous liquidity effects by increasing the central bank's forint liquidity providing swap holdings: central bank swaps outstanding rose from HUF 1,518 billion at the beginning of the year to HUF 1,989 billion by end-May. Then, adjusting to changing market conditions, the central bank maintained the level of the holdings until the end of the year by renewing the expiring transactions.

Similarly to the previous year, the weekly tenders for the forint liquidity providing central bank fine-tuning FX swaps were held with maturities of 1, 3, 6 and 12 months. In growing order of the maturities, during the year the MNB held 44, 30, 20 and 32 tenders, respectively, offering amounts of HUF 1,360 billion, 996 billion, 597 billion and 866 billion and allotting HUF 1,306 billion, 772 billion, 772 billion and 1,065 billion, respectively.

Chart 3
Central bank fine-tuning swaps outstanding



Source: MNB.

Taking into account inflation developments and changes in the international monetary policy environment, in its 18 September announcement the Monetary Council declared that – similarly to the practices of leading central banks – the MNB was prepared for the gradual and cautious normalisation of monetary policy, and presented the future strategic framework for the unconventional monetary policy tools affecting short-term yields. The set of unconventional instruments affecting short-term yields became simpler, and the fine-tuning of unconventional tools affecting long-term yields also took place. The central bank instruments that have an impact on short-term yields became more transparent as a result of the termination of the 3-month deposit facility at end-2018, while the role of the policy instrument was taken over by the minimum reserves. Looking ahead, it was stipulated that the MNB would formulate the monetary conditions necessary for the sustainable achievement of the inflation target through the optimal combination of two instruments: the forint liquidity providing swap instrument and the interest rate corridor.

In line with the MNB's monetary policy stance, short-term yields were at low levels both in interbank and other relevant markets. The HUFONIA, which measures the level of interest rates on the overnight market, was very close to 0 per cent during the year, similarly to the other relevant short-term yields. The annual average of the indicator was –1 basis point, reaching its minimum of –18 basis points on 29 June and its maximum of +11 basis points on 15 October.

The 3-month reference yields, which are of key importance in terms of interest rate transmission, remained at low levels throughout the year. From the low of 2–3 basis points early in the year, 3-month BUBOR quotations rose to their annual peak of 30 basis points by the beginning of July, closing at 13 basis points at the end of the year following a slow downward trend. Yields on the 3-month discount treasury bill followed a similar path: the values ranging from –1 to –4 basis points observed at the start of the year essentially stagnated until end-April. The temporary rise in yields from early May peaked at 24 basis points on 26 June, finishing the year at 0 basis point after a slow decrease. The implied forint yields calculated from the 3-month swap transactions started the year at +6 basis points and rose to +50 basis points by 4 July. Then, following fluctuations, they reached their lowest value of –30 basis points on 3 October, closing the year at +30 basis points. The yield derived from the forward rate agreements (FRAs) concerning the 3-month BUBOR expected in a year fluctuated between 17 and 39 basis points in the first quarter of the period, between 21 and 135 basis points in the second quarter, between 86 and 164 basis points in the third quarter and between 94 and 149 basis points in the fourth quarter. The closing value at the end of the year was 97 basis points.

Central bank instruments affecting long-term yields

The two instruments approved by the Monetary Council in November 2017 with an impact on long-term yields, i.e. the MIRS and the mortgage bond purchase programme, were launched with the first MIRS tender and secondary market mortgage bond purchases in mid-January 2018. According to the conditions of the mortgage bond purchase programme, purchases took place both in the primary and secondary markets, in line with the conditions specified in the terms and conditions. In the primary auctions, the MNB typically gave binding offers for 50 per cent of the indicative amount given by the issuer. The MNB started the auction purchases in the mortgage market in early March 2018.

The MNB introduced the MIRS as a general type of instrument. Based on the decision of the Monetary Council, the annual limit for the MIRS instrument for 2018 was HUF 1,100 billion. There were no conditions attached to having recourse to the MIRS. In the tenders organised every two weeks, the instrument had a positive impact on the IRS and government securities markets, and facilitated the spread of fixed-rate loans. Following the first MIRS tender, the MNB amended the terms and conditions for the monetary policy interest rate swap facility, and then announced the MIRS instrument at fixed-price tenders. The fixed-price tender – at which the MNB accepted the offers with the interest rate indicated in the call for tenders – allowed a more efficient yield-orienting role.

At the 50 tenders of the MIRS instrument held in 2018, for the maturities of 5 years and 10 years HUF 360 billion and HUF 740 billion were accepted, respectively. Until end-September, the central bank purchased eligible mortgage bonds with a nominal value of HUF 125 billion in the secondary market. In the primary market, at 35 auctions, the MNB purchased mortgage bonds with a nominal value of HUF 256 billion. Thus, the total value of the central bank's purchases amounted to HUF 381 billion.

Both the MIRS and the mortgage bond purchase programme achieved the set targets. The new instruments introduced in January supported the extension of the loose monetary conditions to long maturities and the stability of the market, contributed to the development of the mortgage bond market and – together with other central bank programmes and regulations – to the reduction of banks' interest rate risk and thus to the further spread of long-term, fixed-rate mortgage loans. Until the announcement of the phasing out, the spread on mortgage bond yields compared to government securities yields sank into negative territory over the whole section of the yield curve, while low financing costs considerably supported new issues. All five mortgage banks participated in the mortgage bond purchase programme, issuing fixed-rate mortgage bonds with a nominal value of nearly HUF 550 billion, thus significantly increasing the share of long-term, stable funds in the financing of mortgage loans. With the stock exchange introduction of the newly issued mortgage bond series, the programme further strengthened the role of the Budapest Stock Exchange in the domestic capital market.

In September 2018, within the framework of fine-tuning the unconventional instruments affecting long-term yields, the Monetary Council decided to phase out the MIRS instrument and the mortgage bond purchase programme by end-2018. The mortgage bond purchase programme was closed in two steps: primary market purchases continued until end-2018 and secondary market purchases until 30 September 2018. The liquidity issued within the Funding for Growth Scheme Fix introduced in 2019 is sterilised by the MNB with a preferential deposit facility, the interest rate on which equals the base rate. All of this contributes to creating a sound structure for SME lending, while having a neutral impact on developments in liquidity.

The verification of compliance with the 2017 lending commitments undertaken as part of the Market-based Lending Scheme (MLS) by banks occurred at the end of February 2018, after the annual lending data were available. In the MLS, the size of additional lending undertaken equalled one quarter of the lending IRS (LIRS) concluded with the MNB. The MNB established that all 16 banks with LIRS transactions at end-2017 fulfilled their commitments. The total active LIRS holdings of the banking sector amounted to HUF 906 billion. As a result of the commitments, at the sector level, banks achieved performance of around 250 per cent. In 2017, partly due to banks' commitments, the growth rate of corporate loans outstanding reached 10 per cent, and the loans outstanding of the SME sector including the self-employed expanded by 12 per cent. On a voluntary basis, none of the credit institutions reduced their respective commitments for 2018.

Forint liquidity management of the banking system

In 2018, the net forint liquidity of the banking system (3-month deposits, balance on payment accounts, value of preferential and overnight deposits reduced by central bank loans) declined in total by HUF 519 billion to HUF 1,224 billion. The liquidity impact of the balance of the Treasury Single Account (TSA) related to budgetary processes reduced the banking system's liquidity by HUF 428 billion, while the growth in cash holdings tightened liquidity by HUF 964 billion. In addition, the MNB's operations (including the expanding effect of mortgage bond purchases and fine-tuning swaps as well as the reducing effect of the FGS) increased the banking sector's liquidity by HUF 907 billion in total.

Looking at the reserve adequacy, slightly excessive reserve holdings were observed from January to September: credit institutions subject to minimum reserve requirements exceeded their reserve requirement by a monthly average of HUF 22 billion. Excessive reserves amounted to HUF 65 billion in October. In the last two months of the year, excessive reserves declined to HUF 45 billion on average.

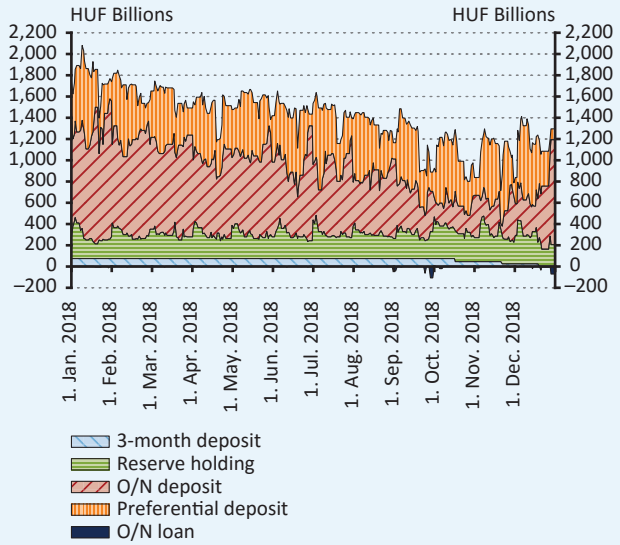
During the whole year, banks participating in the MLS used the preferential deposit facility close to the theoretical upper limit of HUF 489 billion. In the individual quarters of the period, the average sum total of preferential deposits amounted to HUF 469 billion, 475 billion, 466 billion and 453 billion, respectively.

O/N deposits decreased in line with the steadily declining trend of interbank liquidity within the year: average holdings in the individual quarters amounted to HUF 928 billion, 724 billion, 547 billion and 347 billion, respectively. As a result of the liquidity augmenting effect of the tangible increase in budgetary expenditures in December, net O/N deposits increased to nearly HUF 1,000 billion to close the year.

During the year, as a result of the banking sector's excess liquidity, counterparty banks only relied on the central bank's loan instruments to a limited degree. In parallel with the decline in liquidity within the year, both the value and

number of loans borrowed increased slightly in 2018 H2: O/N loans were disbursed on 30 occasions in the first half-year, with an average amount of HUF 1.5 billion, whereas in the second half-year the average transaction size was HUF 9 billion on 44 occasions. Banks did not use any 1-week loans.

Chart 4
Recourse to the central bank's monetary policy instruments



Note: excluding forint liquidity providing fine-tuning FX swaps.
Source: MNB.

Instruments managing foreign exchange liquidity

In 2018, the MNB did not have any active, FX liquidity providing instruments.

In line with the BUBOR quotations and other money market yields, swap market yields were at low levels in 2018. The yields at shorter maturities up to one month continued to fluctuate around 0 per cent for the whole year. The swap market volatility typical at the end of quarters remained moderate in the year as a whole. As a result of the international financial market turbulence that started in May, implied interest rates at the highlighted longer maturities (from three months up to one year) rose to higher levels, before following a fluctuating and overall slightly downward trend for the rest of the year compared to the highs at end-June and early July.

In the case of EUR/HUF foreign exchange swap market spreads, similarly to the previous year, short-term quotes were close to zero and slightly negative on average: the annual average spread from the overnight to the 3-month maturities ranged between –11 and 0 basis points. The 6-month and 12-month maturities remained in the slightly positive domain, at 2 and 12 basis points, respectively. At maturities up to one week, with lower volatility, prices showed some outliers. The outliers varied, both in the positive and negative directions, around the values of 100–530 basis points, including the end of the year, when around 530 basis points was the typical value at 1 week. In the case of longer maturities, spreads were similarly volatile compared to the previous year, with medium or smaller outliers in both directions: the annual maximum values on 3-month, 6-month and 12-month maturities were –130, +35 and +53 basis points, respectively, compared to absolute values of 70–80 basis points a year earlier.

3.2 STABILITY OF THE FINANCIAL INTERMEDIARY SYSTEM

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 supports the maintenance of the stability of the financial intermediary system, the enhancement of its resilience and its sustainable contribution to economic growth and the economic 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 the tasks imposed on it, 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.

The domestic banking sector is stable, its shock-absorbing capacity can be deemed strong both in terms of the liquidity situation and loss absorbency. The growth in the balance sheet total of the banking sector and the favourable macroeconomic environment have helped the banking sector to finally overcome the vulnerabilities that can be considered the legacy of the period following the outbreak of the 2008 global financial crisis. The rising balance sheet total, the expansion in lending and improving macroeconomic fundamentals have a positive impact on the non-performing loan ratio, the size of loan losses and the operating expense-to-assets ratio. Profitability, which is outstanding in an international comparison as well, further strengthens banks' capital position, but the profit structure already signals a decline in banks' profitability.

The risks affecting the functioning of the Hungarian banking system and their possible mitigation were presented in detail in the Financial Stability Reports, which evaluate the risks to financial stability regularly and in a comprehensive manner. In 2018, there was a slight increase in external risks jeopardising the functioning of the banking sector. Capital flows, which

reversed due to the normalisation of monetary policy in developed countries and the change in investors' risk tolerance, as well as the increase in geopolitical tensions, resulted in wide-ranging market turbulences of varying degrees across the emerging countries. Due to more favourable macroeconomic fundamentals, the countries of the CEE region were less affected by the market disruptions last year. Nevertheless, the banking sectors of numerous European countries are still struggling with the legacy of the crisis, which is reflected in their persistently weak lending activity and market valuation. The globally low interest rate environment leads to price increases for real assets. As a consequence, the overvaluation of real estates has already become a risk in several EU Member States. In European countries where macroeconomic fundamentals are weaker, increasing indebtedness also carries a high risk due to the repricing of financing costs.

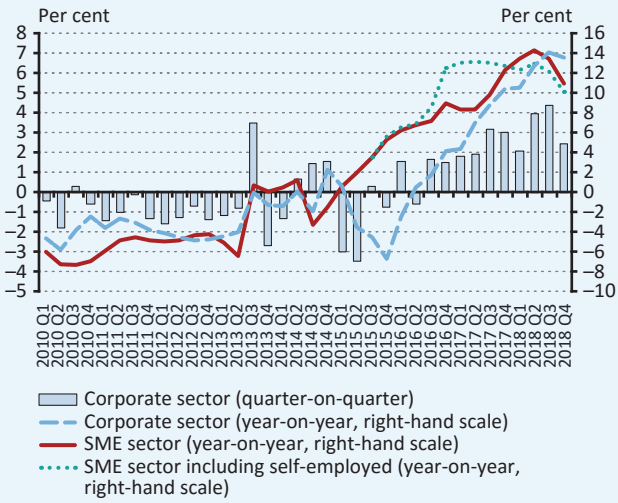
Housing prices rose further last year. Moreover, the increase in housing prices in Budapest accelerated, as a result of which the risk of overvaluation of residential properties in the capital increased considerably. At the same time, the ensuing risks are mitigated by the fact that the rise in prices was not accompanied by a wide-ranging spread in risky lending, and thus the impact of a potential housing price adjustment on banks' stability would be moderate. In addition to the prudential supervision of lending, the MNB also regularly consults real estate market participants and closely monitors as well as thoroughly analyses real estate market developments. A further risk is that structural anomalies have arisen in corporate and household lending in recent years. Since the closing of the third phase of the Funding for Growth Scheme corporate lending has expanded with an undesired structure, as few SMEs have had access to long-term, fixed-rate funds in the credit market. In household lending, in turn, the risk is that most of the loans outstanding still feature interest rates variable within a year. The profitability of the domestic banking sector continues to be outstanding in an international comparison, but the 2018 profitability was slightly below the level of 2017, primarily due to a decline in the volume of reversals of provisions. The profitability of the banking sector may decline further with the writing back of provisions coming to an end. However, a reduction of operating expenses may permanently improve banks' operating profits. One of the relevant ways is the widespread application of digital solutions, which is supported by the regulatory environment as well.

Key developments in the financial system

The quarterly publication *Trends in Lending* provides a detailed overview of the developments in lending in Hungary. Corporate lending continued to expand dynamically in 2018. As a result, based on transactions and compared to the previous year, loans outstanding increased to a degree (13.6 per cent) that exceeds the desirable growth band of 5–10 per cent (Chart 5). Annual growth in lending to SMEs amounted to 10.1 per cent including the transactions of the self-employed, while the annual growth rate was nearly 11 per cent excluding the loans to the latter. However, the structure of the expansion in corporate loans has not been the desired one in recent years.

This is because, following the phasing out of the FGS, the share of long-term, fixed-rate loans dropped, and domestic SMEs' relevant data also fell short of the ratios observed in developed countries in an international comparison. Consequently, the Monetary Council decided to launch the new programme of the Funding for Growth Scheme entitled FGS fix on 18 September 2018. The MNB expects that the new FGS scheme will primarily affect the structure of lending, influencing the volume of SME loans outstanding only to a smaller extent. This means that only one fifth of the loans granted within the scheme may be additional, and around two thirds of the available amount will refinance loans that would have variable rates without the new programme.

Chart 5
Growth rate of outstanding loans of the overall corporate sector and the SME sector



Note: Transaction-based data, prior to 2015 Q4, data for SMEs are estimated based on banking sector data.

Source: MNB.

According to banks' responses to the Lending Survey, credit conditions in the large corporations and SME segments eased slightly in 2018. Banks explained this with an increase in competition among banks and with efforts to reach market share targets. In the second half of the year, the increase in corporate credit demand exceeded market expectations. Looking ahead, banks anticipate rising demand for corporate loans, and with the favourable

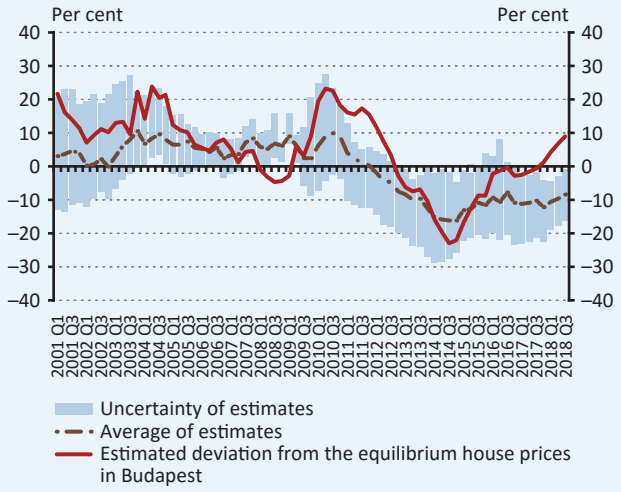
outlook for the real estate market they expect a further increase in real estate loans.

Developments in household lending were also characterised by an increase in loans outstanding in 2018; on a transaction basis, household loans outstanding vis-à-vis the credit institutions sector as a whole expanded by 7.3 per cent. Banks faced expanding demand both for housing loans and consumer loans, accompanied by a significant increase in average loan amounts and a moderate rise in maturities in both segments. The interest rate spread on actual transactions declined last year, while the interest rate spread on fixed-rate housing loans decreased to below the spread on variable-rate loans. Amendment of the payment-to-income (PTI) ratio, effective from 1 October 2018, did not have a material impact on the volume of housing loan disbursements, but the tightening diverts demand towards loans with longer interest rate fixation periods, thereby reducing the interest rate risk borne by households. The ratio of certified consumer-friendly housing loans within monthly new disbursements of loans with an interest period longer than five years rose to 68 per cent by the end of the year, while the share of housing loans with interest fixed for more than one year increased to 95 per cent. Compared to the previous year, the volume of newly issued housing loans expanded by 31 per cent, amounting to 52 per cent of the total annual disbursement. The level of lending for housing purposes as a percentage of GDP is low in Hungary both in European and regional comparisons, hence there is still ample room for expansion in lending.

In 2018, prices on the domestic housing market continued to rise. According to the MNB housing price index published in the *Housing Market Report*, the annual dynamics of housing prices in Budapest exceeded the growth rate observed in country settlements; thus, the former increased by some 23.5 per cent in the past one year, while annual rises of 17.3 and 5.0 per cent were observed in towns and villages, respectively, at the end of 2018 Q3. As a result of the major rise in housing prices in the capital, the risk of overvaluation of residential real estates in Budapest increased (Chart 6). Therefore, especially because of the still strong demand and the decline in supply expected as of 2020, the continuous, thorough examination of real estate market risks has become increasingly important. At the same time, the impact of the risks arising from the domestic housing market on the stability of the banking sector is mitigated by the fact that more than half of the housing transactions are still concluded without borrowing, while the sound pickup in housing loans is ensured by the MNB's debt cap rules.

The Hungarian commercial real estate market was very buoyant again in 2018. The financing activity of credit institutions increased dynamically. Nevertheless, the high ratio of FX loans may carry risks in the case of lower quality commercial real estate occupied by tenants with income in local currency only and of sectors more sensitive to business cycles.

Chart 6
Deviation of house prices from the estimated level justified by the fundamentals, nationally and in Budapest



Source: MNB.

Following the trend from recent years, the non-performing loan portfolio of the credit institutions sector continued to decrease in 2018, although there are still several credit institutions with non-performing portfolios of substantial size. The cleaning of these loan portfolios requires further actions by the banks. The decrease in the non-performing portfolio was mostly attributable to portfolio cleaning and the classification of transactions into better rating categories both in the corporate and the household segments. As a result of this, loans over 90 days past due no longer pose a major risk to the credit institutions sector. Banks' portfolio cleaning, the improving economic environment and the pick-up in lending all contributed to the major decline in the weight of the problems caused by non-performing loans. The ratio of loans over 90 days past due was 4.5 per cent in the household segment, while it amounted to 2.3 per cent in the corporate segment at end-December 2018. The ratio of non-performing loans (NPL ratio) calculated with the non-performing loan definition in a broader sense was 5.5 per cent in the case of corporate loans and 7.0 per cent in the case of household loans. For total loans outstanding, this ratio amounted to 6.1 per cent. It is remarkable that financial enterprises managed to reduce their respective non-performing loan portfolios in spite of the purchases of receivables.

In 2018, the banking sector achieved outstanding profits both in regional and international comparisons, although

the amount of profits fell short of the 2017 operating profit. Of the main profit/loss items, a significant change was only seen in the profitability of financial transactions, while only a slight improvement was observed in the case of profits from commissions and fees. The largest – roughly 50 per cent – decrease occurred in the profit improving effect of net loan loss provisioning, which indicates the fading of the reversals of provisioning. Operating costs increased, while interest income and revenues from dividends declined. In contrast to previous periods, the decrease in interest income occurred in parallel with rising revenues and expenditures, which is attributable to an increase in the costs of funds. Based on international experiences, increasing the balance sheet total and the wide-ranging application of digital solutions will play a prominent role in improving cost-effectiveness in the years to come. Although the capital adequacy of the credit institutions sector is still high, the total consolidated capital adequacy ratio of 17.1 per cent at end-September represents a moderate decline compared to December 2017. The decrease is primarily attributable to the growth in the total risk exposure value. All credit institutions meet the statutory capital adequacy of 9.875 per cent valid for 2018 together with the capital conservation buffer. The sector has a high free capital buffer, although nearly 70 per cent of it is still concentrated at three institutions.

The central bank conducted the eleventh *Market Intelligence survey* in 2018, within the framework of which MNB staff members visited 10 credit institutions to discuss the efficiency of the strategy and business model of the given institution, the condition of the Hungarian banking sector as well as the expected trends in lending and the changes in the main determinants of the future of the sector with representatives of the institutions. The findings of the survey were presented in the May issue of the *Financial Stability Report*.

Macroprudential activity of the MNB

The MNB defines macroprudential policy for the stability of the entire system of financial intermediation with the objective to enhance its resilience and to ensure its sustainable contribution to economic growth. The MNB actively monitored the contribution of the financial intermediary system to cyclical systemic risks in 2018 as well. With the reduction of the identified cyclical risks as necessary, the financial intermediary system is able to finance the economy without extreme fluctuations. At present, in the ascending phase of the financial cycle, the developments in the risks arising in household lending, especially the interest rate risk of housing loan disbursements to households require attention, in addition to the general monitoring of the effectiveness of the already introduced macroprudential measures. In addition to its other stimulating measures, the MNB supports the spread of mortgage loans granted with a lower interest rate risk through the Certified Consumer-friendly Housing Loan programme. Maintaining the favourable restructuring of household loan disbursements is also ensured by the debt cap rules, which were amended as of 1 October 2018. Pursuant to these, customers must have an income buffer that is proportionate to their interest rate risk exposure. The amendment also contributes to the reduction of the interest rate risk of the already borrowed loans, as debt cap rules do not have to be applied upon contract amendment and loan refinancing as well as upon extending the interest rate fixation period.

The MNB has been operating the framework of the countercyclical capital buffer (CCyB), which serves to boost the through-the-cycle resilience of the financial intermediary system, since January 2016. As no major change in the level and dynamics of cyclical systemic risks could be identified in the quarterly revisions, the MNB maintained the 0-per cent level in 2018 as well.

The MNB revised its set of liquidity and financing instruments in 2018. In 2018 H1, the Financial Stability Council decided to introduce the Interbank Funding Ratio (IFR), which is a targeted macroprudential measure that reduces financing risks. The aim of the MNB Decree that entered into force on 1 July 2018 is to prevent the evolution of banks' excessive dependency on funds from financial enterprises. In parallel with the introduction of the new requirement, the MNB revised the regulation on the Foreign Exchange Funding Adequacy Ratio (FFAR) that applies to the maturity mismatch in credit institutions' foreign exchange positions, bringing the regulation even closer to international standards. In order to further deepen the mortgage bond market and further strengthen credit institutions' long-term forint borrowing, at the end of 2018 the MNB also revised the regulation on the Mortgage Funding Adequacy Ratio (MFAR). In addition to raising the required MFAR level to 25 per cent, the MNB increased the quality requirements regarding eligible mortgage bonds. The amendments enter into force on 1 February 2019 and 1 October 2019.

The MNB has already put into force various measures in order to increase the resilience of the financial intermediary system. In June 2018, it revised the Systemic Risk Buffer (SyRB) rates, which serve the management of the systemic risk related to problematic project loans and had been in force since 1 July 2017. Due to the further cleaning of the problem portfolios, as of 1 July 2018, the MNB determined

a systemic risk buffer only for one bank in an individual decision. Maintaining the buffer ensures the shock absorbing capacity of the institution concerned, and may reduce the probability of a repeated future accumulation of problem assets.

Based on the methodology approved by the Financial Stability Council, the MNB performed the annual review of other systemically important institutions (O-SII) in 2018 as well. Taking into account the end-2017 consolidated balance sheet data, the scope of systemically important institutions did not change; eight domestic institutions are still systemically important. With a view to increasing the shock absorbing capacity of these institutions, the MNB prescribed an additional capital buffer for them between 0.5 and 2 per cent, to be built up gradually in the period that commenced on 1 January 2017 and lasts until 2020.

In order to increase the competitiveness of the domestic financial intermediary system as well as to facilitate faster, simpler and cheaper serving of consumers in line with today's requirements, the MNB was among the first in the region to set up a dedicated framework for the regulatory support of the safe spread of FinTech innovations. The MNB Innovation Hub (Financial Innovation Platform) was launched in March 2018. Through the platform, market participants can receive guidance from the regulatory authority on how their innovative solutions can be applied in the current regulatory framework. Within the Innovation Hub, during 2018 the MNB supported financial institutions and FinTech firms in the clarification of legal requirements arising in connection with their financial innovations with regard to a number of initiatives. The launching of the MNB Regulatory Sandbox (Financial Innovation Testing Environment) also supports the safe spread of FinTech innovations in the financial system in a way that does not jeopardise financial stability. In the test environment created at end-2018, financial institutions that comply with predetermined conditions may meet certain requirements set forth in MNB decrees with derogations for a limited period of time during the testing of an innovative solution under tight monitoring and the highlighted protection of consumers.

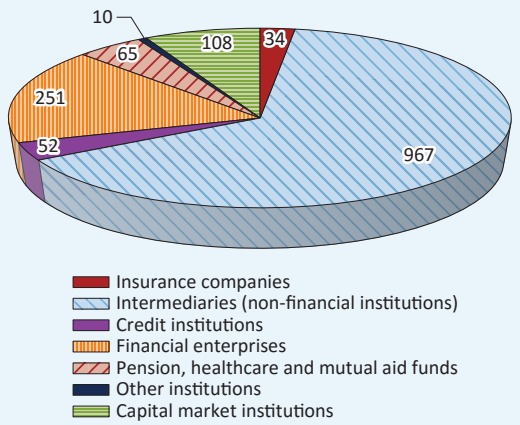
The MNB's experts implemented various important developments to support operation of the toolset aimed at the early recognition and efficient management of financial stability risks. Several of these were published in the form of studies, such as the research on the determination of the credit-to-GDP gap, which is an important measure of lending overheatedness, with a multivariate methodology, or the analysis that examines the efficiency of the Hungarian banking sector in a regional comparison.

The experts of the central bank monitored the systemic risk evaluations and the international regulatory developments affecting the financial intermediary system in 2018 as well, and participated in various European institutions' working groups dealing with macroprudential policy, of which the professional work in the European Systemic Risk Board (ESRB) and the European Banking Authority (EBA) deserves special attention.

3.3 SUPERVISION AND CONSUMER PROTECTION

Based on data from 31 December 2018, the MNB is responsible for the prudential supervision of 1,487 institutions; the distribution of the institutions by type is shown in Chart 7. The reasons for the (approx. 3.7 per cent) decline in the number of supervised institutions compared to the previous year were the concentration developments taking place in the markets. During the year, 146 prudential, 26 market surveillance and 4 issuer oversight related inspections were launched, and 141 prudential, 22 market surveillance and 3 issuer oversight related inspections were closed. In the period under review, the MNB issued a total 2,317 prudential licensing and legal enforcement decisions, while in the market surveillance and issuer oversight and licensing areas 1,087 official decisions were made in total. During the actions related to the inspection procedures, prudential fines amounting to HUF 970 million as well as market surveillance and supervisory fines of HUF 448 million were imposed.

Chart 7
Number of supervised institutions by type on 31 December 2018
(pieces)



Source: MNB.

Supervision of money market institutions

Within the framework of the inspection procedures conducted among financial market participants, the investigations closed with the application of various measures that were in line with the weight of the revealed infringements of the law covered, *inter alia*, 27 banks, 1 mutual savings bank, 3 branch offices, 4 mortgage loan institutions, 3 home savings and loan associations, 2 financial enterprises, 2 payment institutions and 13 financial market multi-agents. During the inspection procedures conducted among financial institutions, penalties amounting to a total HUF 508 million were imposed in addition to the measures applied.

Within the framework of the supervision of credit institutions, financial enterprises and payment institutions, the MNB launched 67 investigations and closed 68 inspections. During the year, internal liquidity adequacy assessment processes (ILAAP[1]) were launched at 10 credit institutions, of which 6 processes were closed as well. Concerning institutions' capital adequacy, 10 internal capital adequacy assessment processes (ICAAP[2]) were launched, of which 8 were closed by the end of the year.

As a result of the inspection procedures conducted among credit institutions, prudential institutional fines amounting to a total HUF 458.4 million were imposed in 2018. The MNB is still determined to act against the forms of unlawful conduct and institutions that fail to comply with the provisions of its earlier resolutions. Of the infringements found, penalties were imposed particularly due to the breach of provisions of law related to the capital requirement, transaction rating, client rating, collateral rating, data reporting, prevention and hindrance of money laundering and terrorist financing as well as for failures to comply with measures set forth in previous resolutions.

In accordance with the recommendation of the European Banking Authority (EBA), the business model-based approach has come to the fore in the MNB's supervisory activity as well. The findings of business model analyses carried out on the basis of the new methodology and the revealed risks were presented by the MNB to the managements of the supervised institutions at prudential meetings. The MNB's early warning system supports forward-looking supervision, meant to limit and manage the future build-up of anticipated future risks, which also monitors – in addition to the potential infringements – the developments in the financial indicators tailored to the operation of credit institutions.

The supervisory review and evaluation process of banks' internal capital adequacy assessment process (ICAAP-SREP[3]) and the validation of the internal models necessary for calculating the capital requirement are of utmost importance for the stability of the financial intermediary system. During the year, the MNB conducted the review in respect of all banks with a bearing on the stability of the financial intermediary system, and launched validation processes, at the banks' request, in the case of several risk models. In the future, the MNB will also examine smaller institutions' ICAAP processes with increased attention, ensuring financial stability by that as well. Large banks' sensitivity to stress was also examined by the supervisory authority in the year under review, and capital recommendations were issued following the performance of a single supervisory stress test in the case of institutions where it was justified by declines in capital under the stress.

The special features of the risk and regulatory environment related to real estate and real property financing project loans raised the need for the MNB to formulate recommendations with regard to the management of financial organisations' risks related to real estate and the valuation of real property project financing loans, in order to support application of law by institutions and foster good practices. To this end, during the reporting period, with the involvement of the sector the MNB elaborated and issued its recommendation regarding the management of financial organisations' real estate related risks. The elements of the recommendation which were most emphasised and thus elaborated to the highest level of detail include the requirements related to appraisers, the content of appraisals and the methodology employed for assessing market value, all of which helps to improve the quality and reliability of appraisals. Experiences in recent years highlighted the fact that real property financing project loans are very sensitive to economic cycles, and thus the high concentration and lack of adequately prudent risk management of such loans can lead to substantial losses. In order to manage these risks, with the involvement of the sector, a recommendation was formulated on certain issues involving the valuation and management of real property financing project loans. The recommendation provides guidance on the MNB's expectations in relation to the monitoring, valuation and management of clients with

[1] Internal Liquidity Adequacy Assessment Process
[2] Internal Capital Adequacy Assessment Process
[3] Supervisory Review and Evaluation Process

such exposures. These two recommendations – as well as the one issued by the ECB that formulates requirements vis-à-vis institutions that have large non-performing portfolios – are closely correlated: based on the lessons from the crisis, their aim is to prevent the evolution of persistently large non-performing portfolios, which threaten the stability of the system.

The MNB closely monitored the changeover of credit institutions to the International Financial Reporting Standards (IFRS) and IFRS 9.[4] (In the credit institutions sector, 14 credit institutions from 2017 and another 25 credit institutions from 2018 transitioned from the Hungarian accounting to the application of the international reporting standards accepted by the EU, and thus the credit institutions applying IFRS already account for 86 per cent of the total assets of the sector.) The credit institutions that had applied IFRS changed over to the application of the new IFRS 9 as of 1 January 2018. In order to survey the impacts of IFRS 9 on the credit institutions sector, the central bank conducted a multi-round questionnaire survey, the findings of which were discussed with the Hungarian Banking Association and auditors. Various issues were identified that make it difficult to compare the data shown in the reports prepared by the institutions. One of the main reasons for the differences is the calculation of loan losses, and within that the methodologies of the macroeconomic scenarios that are mandatory pursuant to IFRS 9 as well as of the classification into the category of problematic assets. Considering this, in an executive circular[5] the MNB called the attention of the sector to the application of good practices identified in these two areas.

In view of one of the most significant structural changes in the sector, the MNB continued to closely monitor the situation of the integration of cooperative credit institutions. In 2017, the amendment to the Act on the Integration of Cooperative Credit Institutions clarified the responsibilities and powers of the organisations of the group, and as a result of the series of mergers only 13 mutual savings banks remained by the beginning of the reporting period. With the standardisation of the internal rules and operations, the restructuring of Takarék Csoport continued in 2018. Based on the experiences of the mergers, the 5-year strategy of Takarék Csoport was revised and amended in order to achieve efficient and profitable operations in the future. The aim of the strategy is to create an integrated commercial bank organised on the basis of a new operating model with standardised processes by uniting the business activities of the member institutions.

The central bank closely monitored the fulfilment of the credit institutions' reporting obligations in 2018 again, putting great emphasis on the reliability of data supply underlying the analyses and the improvement of data quality. Within the framework of on-site procedures, the MNB examined this subject matter at several institutions and took measures on a number of occasions regarding amendments to inadequate data and corrections of report compilation processes. In addition to data reporting, another key area was the examination of the changeover to the IFRS, the provisions in the MNB's recommendation on creating and operating internal defence lines as well as the evaluation practice of collateral and the verification of compliance with the provisions of law to prevent excessive indebtedness of households. In order to control the above, several on-site targeted inspections were conducted even among the institutions that were not subject to comprehensive examinations in 2018. The MNB has set the goal of reacting to the problems that arise within the shortest possible time; accordingly, when consumers report systemic problems or in the case of suspected fraud, the MNB gathers information on the situation by conducting immediate targeted inspections and takes urgent measures for the elimination of the shortcomings, as necessary.

At the end of the reporting period, due to facts that had become known during inspection procedures and in order to protect the legal and economic interests of those concerned, a temporary measure was also applied in the money market sector. Within the framework of this measure, in the case of a bank that functions as an insignificant-size participant in the Hungarian market, in parallel with appointing a supervisory commissioner, the MNB ordered a limitation on deposit disbursements and banned the undertaking of guarantees and bank guarantees or the undertaking of any other banking liabilities, the granting of investment loans as well as the undertaking of obligations originating from non-bank operations.

In 2018, in the area of money market licensing, at the request of the institutions, the establishment permit of a mortgage bank and the activity licence of a payment institution were withdrawn. A fund service provider received a permit as a payment institution in the second half of the reporting period. The institution applied for the permit in order to comply with Government Decree No. 76/2018 (IV.12.) on the Rules of Issuance and Use of the Széchenyi Recreation Card, the provisions of which stipulate that only payment service providers are entitled to issue SZÉP cards.

[4] International Financial Reporting Standards – Financial Instruments
[5] Executive Circular on using macroeconomic information and the factors indicating a significant increase in credit risk under the IFRS 9 standard

Table 2
Number of inspections conducted at credit institutions, financial enterprises and payment institutions

Type of entity	Type of inspection	Closed in 2018		Started in 2018	In progress on 31 Dec 2018
		Started in 2017	Started in 2018		
Credit institutions (and Branches)	Comprehensive	5	4	9	5
	Targeted	12	11	26	15
	Thematic	1	0	1	1
	Follow-up	3	1	4	3
	Validation and SREP	3	8	10	2
	ILAAP	5	6	10	4
	Supervisory inspection	1	1	2	1
Financial enterprises	Targeted	3	1	2	1
	Thematic	1	0	0	0
Payment service providers	Comprehensive	0	2	3	1

On 13 January 2018, the amendment of the act on certain payment service providers in line with the PSD2[6] Directive entered into force. According to the new rules, new services that had appeared as a result of technological development that had taken place in payments (the account information and payment initiation services) were defined as payment services in order to adequately protect consumers, and thus carrying out these activities became subject to licensing and registration. The amendment also prescribed further operating conditions to be met by the institutions which were already active. Accordingly, regarding the payment institutions and the issuers of electronic money that were already on the market as of 13 January 2018, in the first half of the year the MNB examined whether the active institutions complied with the amended legal provisions. By 13 July 2018, the supervisory authority evaluated the applications submitted by the payment institutions and issuers of electronic money with a permit, and issued resolutions on compliance for all of the institutions.

In addition, in relation to the licensing procedures conducted in 2018 with regard to financial institutions, the acquisition of qualifying holdings in credit institutions and non-resident entities, the transfers of holdings and the licensing procedures conducted on the basis of the CRR[7] also need to be mentioned. The transformation of the cooperative integration continued, within the framework of which the ownership structure of the individual member institutions changed.

In the area of the licensing of financial enterprises, matters relating to acquisitions of qualifying holdings accounted for the vast majority of the procedures. The permitting of the provision of safe-deposit boxes as a new activity arose in the case of several financial enterprises, as customers indicated that there was growing demand for this service in the reporting period.

Supervision of insurance companies, funds and intermediaries

In the insurance sector, 12 new inspections started and 14 inspections were concluded in 2018. The penalties imposed in 2018 in connection with the inspection procedures conducted at insurance market participants amounted to a total HUF 267.2 million.

In 2018, the MNB conducted business model-based inspections at four insurers. Although the central bank identified minor shortcomings in these inspections, on the whole it can be said that the inspected institutions have strategies which are in line with the external environment, realistically feasible with the available resources, consider the potential risks and guarantee sustainable profitability for the insurer, and their business plans are harmonised with the strategy, the fulfilment of which is continuously backtested.

The most important provisions of the MNB's ethical life insurance regulation, and as a result of these provisions

[6] Directive (EU) 2015/2366 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

[7] The CRR (Capital Requirements Regulation): Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No. 648/2012

various amendments to laws as well as a recommendation issued by the central bank back in 2016 and relating to unit-linked insurances entered into force in 2017. As the next step in implementing the ethical concept, the commission ceiling rules became even tighter as of 1 January 2018. The MNB inspects compliance with the new regulatory environment on a continuous basis; focus areas of the inspections include the analysis and backtesting of the product development steps taken. In the case of domestic insurance companies, the experiences collected in the reporting period are positive on the whole, but it must be taken into account that the new regulatory environment exerts its full effect over the long term. The Insurance Distribution Directive (IDD[8]), which entered into force throughout the EU in 2018, was transposed into the Insurance Act[9] in Hungary by the original deadline of 23 February 2018. Following a grace period of half a year, the primary target area of the comprehensive inspections that were launched during autumn was the review of compliance with the new regulatory environment.

On 1 January 2018, the new EU-level regulation on packaged products (PRIIPs[10] Regulation) entered into force. Compliance with the regulation is verified by the central bank in the case of life insurances with a savings purpose as well.

Populating the itemised database IT system for compulsory motor third party liability (MTPL) insurance started in the second quarter of the reporting period. The basic function of the system is to receive the itemised MTPL data handled by insurance companies which are to be submitted to the MNB and to create possibilities of query, thus supporting analytical and actuarial activities as well as fostering better-founded calculations by market participants (by making the data available in a limited manner in line with competition rules), to stimulate market competition in this manner as well.

During the year, the MNB took various steps in the area of supporting the digitalisation of the domestic insurance sector. Firstly, using questionnaires and personal interviews, it assessed domestic insurers' innovative ideas. Secondly, it initiated the establishment of a record system based on blockchain technology, which in the first round will cover insurance policies related to loans.

In the course of comprehensive audits, the MNB inspected compliance with the Solvency II regulation, focusing on continuous operation through the corporate governance topics, key functions and the operation of the institution's own risk and solvency assessment process. In addition, the central bank also inspected the adequacy of insurers' capital and reserve calculations with special care. In accordance with the 'Prudent Person Principle' related to insurers' investment activity within the framework of the Solvency II rules, the MNB continued to inspect the adequacy of the investment strategy and regulation with special care and assessed the investment activity, also focusing on profitability and liquidity aspects. The supervisory authority treated it as a priority to inspect the composition and quality of the assets constituting the cover for the regulatory capital and for the insurance technical reserves. The procedures revealed shortcomings in the control of supervisory data supply, the investment policies and the assessment of corporate decisions.

In the reporting period, the sector-specific findings concerned infringements related to the contractual terms of the distributed products and customer information documents, as well as to customer information and complaint management. In addition, irregularities were also identified in relation to outsourcing contracts, product plans, provisioning and accounting policies, portfolio management and registration systems.

Of the infringements identified, penalties were imposed regarding in particular the operation of the risk management and compliance functions within corporate governance, the handling of group insurance portfolios, IT security and supervisory data supply as well as for the breach of legislative provisions concerning the calculation of insurance technical reserves, outsourcing, the content elements of insurance contract terms and conditions as well as the provision of information to clients and complaint management.

In the year under review, within the framework of international supervisory cooperation, the European Insurance and Occupational Pensions Authority (EIOPA) paid two visits to the central bank and reviewed the prudential and consumer protection practices of insurance supervision in Hungary. Both reports issued by EIOPA were positive, identifying several good supervisory practices.

In relation to prospective developments in the insurance sector (and partly in the case of voluntary pension funds),

[8] Insurance Distribution Directive – Directive (EU) 2016/97 of the European Parliament and of the Council on insurance distribution
[9] Act LXXXVIII of 2014 on the Insurance Business
[10] Packaged Retail and Insurance-based Investment Products – Regulation (EU) No. 1286/2014 of the European Parliament and of the Council on key information documents for packaged retail and insurance-based investment products

the MNB issued its publication entitled 'The 10-year vision of the insurance sector in 7 points' in February 2018. Some of the points in the publication contain trends considered to be desirable as well as goals formulated as requirements, which may serve as sector-level strategic plans or guidance for market participants.

In 2018, the MNB withdrew the operating permit of one insurance association on request, and authorised a combination via merger of three Hungarian insurers that belonged to the same group of companies. The MNB permitted a Hungarian private equity fund and its trustee as well as private persons with qualified interest in the latter to acquire qualified interest in two insurance companies limited by shares, which had a parent–subsidiary relationship. At the request of one of the insurers concerned in the acquisition of a qualified interest, during the reporting period the MNB allowed the insurer to amend its activity and to pursue insurance activities in other sectors as well, in addition to the insurance sectors already allowed.

As a result of the amendment to the Insurance Act that entered into force on 1 January 2018, it became possible for insurance brokers to transfer their contracts of agency for insurance mediation to another broker, with previous notice to the MNB. Since the entry into force of the change in legislation, the MNB has received 18 notifications concerning the transfer of holdings. Some of the transfers of brokers' holdings were followed by the termination of activity. In the year under review, the number of resolutions permitting the termination of insurance mediation exceeded the number of new licences.

In the funds sector, one targeted and 13 comprehensive inspections were commenced in 2018. Including the inspections not finished in 2017, 15 inspections were closed, entailing the imposing of fines amounting to a total HUF 12 million. Due to serious violations of law, the operating licences of two smaller institutions were withdrawn before their liquidation started. The financial sector concentrated further with the withdrawal of these two operating licences and with the decision of a fund to merge, and the voluntary liquidation of three small institutions was completed as the result of a longer process.

In the course of these inspections, the MNB continued to identify various problems related to the regulation and organisation of delegate elections, shortcomings in the internal control system, the compliance of rules and the violation of accounting rules. The supervisory procedures revealed mistakes and shortcomings of medium or serious degree on several occasions in the areas of IT security as well as the prevention of money laundering and terrorist financing. During the examination of benefit payments, it was mainly the regulation and practice of mutual aid funds that did not comply with the relevant legislation.

Of the infringements identified, penalties were imposed in particular with regard to the contents of the statutes as well as shortcomings in the functioning of management and control bodies, due to violation of the legislation concerning investments, the performance of fund services and settlements with members, fund accounting and complaint management as well as in relation to IT security.

Within the framework of renewing the fund supervision methodology, the MNB applied the business model based approach to funds for the first time during the reporting period. With regard to the sustainability of operations, the supervisory authority examined the viability of the business model, i.e. the degree of functional sustainability of the fund over the long run. The risk map of institutions was also changed to incorporate new, sector-specific risks concerning the funds.

As in previous years, the MNB examined and made public the degree of fees and costs charged by voluntary pension funds to their members in 2018 again. In addition to the fee burden indicator prepared on the basis of previous years' calculation method, an adjusted fee burden indicator was compiled, which is more reliable, provides a more realistic picture and is more comparable to other financial products. In the adjusted fee burden indicator, the value of the operating fee burden part is not influenced by the steady growth in the assets of the fund; this value is determined by the ratio of the fees deducted for operational purposes to the total amount of membership fees. The MNB did not modify the methodology of the investment fee burden part of the adjusted fee burden indicator as the asset and deposit management fees are charged in proportion to the assets of the fund. The values of the adjusted fee burden indicator calculated on the basis of the newly formulated methodology can be compared with the values of the long-term (20-year or even 30-year) total cost indicator (TCI) used for presenting the costs of pension insurance products. Using the 2017 cost parameters for voluntary pension funds and applying the methodology of the TCI[11] Decree on insurance products, the voluntary pension fund TCI values calculated for a period of 30 years fall within a band of 0.19–1.50 per cent, similarly to the values of the

[11] MNB Decree 55/2015 (XII. 22.) on the calculation and publication of the total cost indicator

Table 3
Number of inspections conducted at insurance companies, funds and intermediaries

Type of entity	Type of inspection	Closed in 2018		Started in 2018	In progress on 31 Dec 2018
		Started in 2017	Started in 2018		
Insurance companies	Comprehensive	9	4	10	6
	Follow-up	0	1	1	0
	Targeted	0	0	1	1
Pension, healthcare and mutual aid funds	Comprehensive	5	9	13	4
	Targeted	0	0	1	1
	Follow-up	1	0	0	0
Intermediaries	Targeted	4	2	10	8
	Thematic	1	0	0	0

adjusted fee burden indicator. Based on the developments in the adjusted fee burden indicator, the fee charged declined by 27.7 per cent in 15 years, and its present value in the sector is 0.81 per cent (0.49 investment fee and 0.32 operating fee).

Within the framework of integrated prudential and consumer protection supervision, in addition to 10 new and 6 closed prudential targeted inspections, the thematic inspections launched at the 11 independent money market intermediaries were closed in the intermediary area in 2018. The fines related to the inspections amounted to HUF 48.9 million in total.

In the review period, the inspection of money market intermediaries focusing on key subjects was a matter of priority, with special regard to data reporting and provision of information to customers. During the inspection of several money market intermediaries, the MNB verified the obligation of providing information as well as the provision of at least three offers to the client, and found several cases of violations of the law.

According to the findings of a targeted inspection conducted at an independent money market intermediary with a significant market share, in the course of its intermediary activity the company also used the work of several natural persons employed by it who did not fully comply with the professional and personal requirements of financial intermediation, but still carried out actual intermediary activities (the company operated a so-called 'recommender system'). In addition, the intermediary did not have the minimum number of – i.e. at least three – principals required by the relevant legislation; for an extended period of time it mediated certain financial products on behalf of only one, and even later on behalf of only two financial institutions. Moreover, the inspection found shortcomings in terms of data reporting, complaint management, document archiving as well as keeping records concerning the people performing the intermediation, customer complaints and internal professional training and education. Due to the numerous and significant infringements, the central bank imposed a supervisory penalty of HUF 30 million on the company.

In its thematic inspection of 11 independent money market intermediaries, the central bank checked compliance with the legal provisions on the commissions of the multi-agent mortgage loan intermediaries concerned as well as the possible application of fees charged to customers as compensation for activity other than intermediation. The inspection did not find any significant errors, and the commissions did not exceed the maximum amount set by law. Some intermediaries, however, received illegal additional benefits from their respective banks for conference organisation, room rent or organisation of professional consultation days, while others made mistakes in their agency contracts and records. As a result of the inspection, the supervisory authority imposed fines of HUF 1.2 million in total on four market participants.

Supervision of capital market institutions

In 2018, the MNB launched 43 new inspections and closed 36 audits and administrative inspections at capital market participants, in the context of which it imposed institutional and personal fines in a total amount of HUF 133.9 million. During the year, it also conducted 14 operative inspections, where the MNB obtained data from the individual institutions within the framework of on-site inspections conducted without prior notification.

From January 2018, the MNB started the inspection of the practices followed by investment service providers from the aspect of compliance with the regulatory framework outlining the requirements applicable to regulated

markets (MiFID II/MiFIR[12]). Based on the experiences from the inspections, in relation to compliance with the new legislative environment various questions concerning the interpretation of the law arose (including, *inter alia*, the subject of providing sales incentives by third parties to distributors), and therefore, in the second half of the year, consultations started between capital market participants and the MNB on the development of business practices that conform with the regulatory requirements.

In the case of investment service providers, the supervisory authority continues to pay special attention to checking the continuous availability of the assets owned by customers. In March 2018, in order to strengthen the supervisory activity, the MNB set up a dedicated organisational unit that verifies, within the framework of targeted inspections, the practice related to the management of customers' assets and the availability of customers' assets, and explores the risks, if any, related to the protection of customer claims.

With regard to the fund management sector, supervisory goals continued to cover the verification of investment decisions, including the taking and implementation of such decisions as well as the continuous monitoring of investments, and the examination of risk management and capital adequacy. In line with the increasing role of property fund managers and real estate funds in the financial intermediary system, through comprehensive audits and continuous oversight the MNB continued to devote special attention to reviewing real estate transactions, liquidity management and compliance with investment limits. As in previous years, in September 2018 the MNB published the table that presents the total expense ratio (TER[13]) concerning the 2018 cost burden of public investment funds in a breakdown by fund (series).

In the area of capital market licensing, one novel aspect was the performance of licensing procedures pursuant to the provisions of the MiFID II regime replacing the MiFID I[14] regulation and applied from 2018. The new rules significantly amended the previous practice of licensing. The EU legislation, most of which is to be applied directly, requires further conditions of licensing, covering in particular the scope of documents to be made available during the licensing procedure to be evaluated by the MNB, and it also regulates the organisation of investment enterprises in a detailed manner. The capital market regulation also changed considerably in relation to cross-border notifications, and additionally the EU legislator established new licensing procedures, such as the permitting of deferred publication on the basis of the MiFIR or the licensing of data providers. In the year under review, this EU legislation was applied in practice as well, mainly in the types of matters concerning the permitting of activities, obtaining a qualified interest and personal authorisation. The new licensing requirements for investment service provision activities were also applied in the investment fund manager and credit institutions sectors.

Table 4
Number of inspections conducted at capital market institutions

Type of entity	Type of inspection	Closed in 2018		Started in 2018	In progress on 31 Dec 2018
		Started in 2017	Started in 2018		
Investment fund managers (exc. venture capital fund managers)	Comprehensive	9	0	12	12
	Targeted	0	0	1	1
	Follow-up	1	2	2	0
	Supervisory inspection	1	0	1	1
Venture capital fund managers	Comprehensive	3	2	9	7
Stock exchange	Comprehensive	1	0	0	0
Investment firms	Comprehensive	4	0	10	10
	Targeted	1	0	0	0
	Supervisory inspection	0	5	5	0
	Targeted	4	3	3	0

[12] MIFID II/MIFIR – 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; Regulation (EU) No. 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No. 648/2012

[13] TER – Total Expense Ratio

[14] Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC

A large number of investment fund management operating and activity permits were issued in 2018 again. Within the group of investment fund managers, many of these permits were acquired by alternative investment fund managers, including venture fund managers in several cases. In addition, the number of procedures for the expansion of the scope of activities of investment fund managers and the number of registered non-commercial fiduciary asset management relations was significant.

Market surveillance and oversight of issuers

The MNB remains committed to taking temporary measures in the early phase of surveillance procedures and filing criminal charges, if justified, as well as to using detailed media communications that inform the public and also contain preventive messages to market participants. As a result of the measures taken, illegal activities became known in a very early stage, and thus the early actions of the authority allowed for the prevention of high-volume financial damages and negative impacts on the market. In 2018, the MNB launched 26 market surveillance inspections and closed 22, as a result of which market surveillance penalties amounting to more than HUF 384.2 million and supervisory penalties of HUF 63.9 million were imposed.

In order to create a more transparent capital market, which is a supervisory objective, the MNB continued to apply a steadfast policy of actions of a preventive nature and deeper-than-ever content analyses. Accordingly, within the framework of continuous oversight, issuers were called upon to publish statements concerning the content of their announcements on 83 occasions. Within the framework of the continuous oversight of issuers of publicly issued securities, by conducting 3 targeted inspections, in 28 resolutions the central bank imposed penalties amounting to HUF 34.9 million in 2018. Similarly to 2017, stock exchange trading was suspended and cancellations from the product list took place on four occasions in the review period. It can be established that as a result of more intensive supervisory activity, the issuers of publicly issued securities became significantly more disciplined in terms of the disclosure requirements, and the frequency of delays in connection with the provision of regular information declined considerably.

In the area of issuance licensing, the supervisory authority granted authorisation for the publication of prospectuses for 8 bond programmes and the stock exchange admission of 5 equities. Public bids for the purchase of two listed companies were approved. 80 new investment funds were registered and 2 financial groups were exempted from the development of the risk management procedures for the exchange of collaterals under EMIR.[15]

Supervisory activity related to the prevention of money laundering and terrorist financing

One of the focal points of the oversight activity in 2018 concerned the inspections connected to the prevention of money laundering and terrorist financing and the implementation of pecuniary and financial restrictive measures as well as other administrative duties related to the topic. In 2018, the MNB initiated a total of 23 inspections covering money laundering activities and concerning 33 institutions; 15 of these inspections were launched as part of prudential comprehensive inspections, 6 as part of follow-up and 2 within the framework of independent, targeted inspections. In the context of the aforementioned requirements, the supervisory authority imposed substantial supervisory fines in several cases, in the total amount of some HUF 70 million.

The new regulatory framework that entered into force in 2017 not only established broader requirements for the financial sector, but also introduced the risk-based supervisory procedure. According to the methodology finalised in the year under review, at the supervised institutions the central bank regularly identifies the risks related to money laundering and terrorist financing, and analyses and evaluates them together with other available information. In the future, with risk analysis and targeted selection, the supervisory authority will increase its capacity dedicated to independent procedures, and will launch further independent inspection procedures in relation to fighting money laundering and terrorist financing.

With the spread of continuously changing new technologies, financial service providers' need to establish online customer relations and for the option of carrying out online customer due diligence increased. The renewed regulatory framework allowed the establishment of business relations through the electronic communication system previously audited by the MNB. As a result of the technology and the opportunities provided by the regulation, more and more institutions are able to conduct real-time online customer due diligence (via video connection) and to operate administrative systems independent of space, in accordance with the requirements of our times.

[15] EMIR (European Market Infrastructure Regulation) – 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

Consumer protection

In 2018, the MNB continued its series of thematic inspections regarding the verification of compliance with the fair bank set of rules with the examination of 16 institutions. The inspections of whether or not the provision of broad-based verbal and written information prior to the concluding of contracts as required by law has taken place (concerning in particular the most important characteristics of the loan, impacts on the consumer's income, consequences of non-payment, the interest rate risk and the rights of prepayment and withdrawal) did not reveal any systemic problems, but infringing practices were found at certain market participants. In the case of certain loan transactions involving the negligent institutions, it was not possible to subsequently substantiate the provision of information documents, personal information materials about mortgage loans were incomplete, and in several cases the practice of unilateral interest rate amendment also did not fully comply with the relevant legal provisions.

As a result of the certified consumer-friendly housing loan (CCHL) initiative launched by the MNB in 2017, by the end of December 2018 nearly 30,000 consumers had opted for CCHL products, which have a long interest rate period, transparent terms and conditions, and are made available in a fast administrative procedure. The total value of such loans outstanding exceeded HUF 340 billion in December 2018. In the review period, several elements of the CCHL terms and conditions were fine-tuned and supplemented, and thus loans with state interest rate subsidy became eligible. Starting from October 2018, the interest rate on all CCHLs is fixed for at least 5 years; in addition, some details of the administrative procedure were amended, while there were further improvements in standardisation and transparency. Through its regular consumer protection inspections and continuous oversight activity, the MNB continuously monitored compliance with the provisions governing CCHL products and had the institutions concerned resolve the deficiencies that occurred.

The new regulatory framework governing investment firms and regulated markets (MiFID II/MiFIR) applies from 3 January 2018. One of the main objectives of the regulation is to ensure increased protection for investors and better transparency of financial markets. Accordingly, many new consumer protection provisions entered into force, the application of which was reviewed by the MNB within the framework of continuous oversight at many market participants in the year under review.

As part of the consumer protection aspect of the MiFID II/MiFIR regulatory system, the individual national supervisory authorities and the European Securities and Markets Authority (ESMA) were enabled to take product intervention steps. Exercising its right, in the case of retail customers the ESMA introduced prohibition and restriction provisions for certain structured products, in view of their significant risk, the possible high leverage, the aggressive and sometimes misleading sales practices as well as the expected value of these investments' yield, which is negative in many cases.

In the area of insurance, the main task in 2018 was transposing the new EU legislation (IDD and PRIIPs) into the Hungarian legal system and facilitating its application. In the period of introduction, the MNB implemented supportive supervision, within the framework of which, during the inspections and other procedures, it facilitated compliance with regulatory requirements by communicating with the market participants concerned.

Within the framework of continuous consumer protection oversight, in addition to the recurring inspection topics, the central bank reviewed and analysed the conduct and procedures of the institutions in relation to almost 50 individual topics. As a result of this – upon identifying undesirable market practices – the supervisory authority issued 105 consumer protection warnings, which resulted in the efficient, immediate elimination of phenomena and information content alarming for consumers. Inspections of the undesirable market practices, which were also detected in the course of continuous oversight, were closed with measures and penalty resolutions in several cases. Investigations of suspected infringements were performed within the framework of 19 targeted inspections aimed at complaint management, the calculation and communication of the annual percentage rate of charge, the calculation of the payment-to-income ratio and at the identification of unfair commercial practices to the detriment of consumers. In addition to enterprises with registered offices in Hungary, in the capital market in particular, the measures and inspections also affected non-resident service providers engaged in cross-border activities.

In 2018, within the framework of 2 thematic inspections and 5 comprehensive inspections the MNB examined the proper provision of information related to MTPL claim settlement as well as compliance with the provisions of the decree on the content elements of the life insurance needs analysis form and the implementation of the recommendation on fair life insurance at 12 institutions.

Consumers' petitions and complaints initiating consumer protection inspections also contained important information for the central bank, which were investigated – if the statutory conditions for launching a procedure were fulfilled – in 285 cases.

In 2018, due to infringements identified during its consumer protection and prudential inspections, the MNB imposed consumer protection fines in the total amount of HUF 244.3 million in 188 cases, while it imposed procedural penalties in an additional amount of HUF 3.2 million due to institutions' lack of willingness to cooperate and for hindering inspections.

The central bank pays special attention to ensuring that the general contract terms and conditions applied in the consumer contracts of financial organisations comply not only with the consumer protection provisions of the sectoral legislation but also with the civil law requirements of good faith and fairness. Following previous years' analyses of vehicle financing and mortgage loan contracts, also paying attention to the dynamic expansion in payment card turnover, in 2018 the MNB started to analyse the general terms and conditions of credit card contracts concluded with consumers in terms of fairness. Covering almost the entire market, the investigation concerns a number financial institutions and is expected to be completed in 2019. In addition, the supervisory authority also took steps for the elimination of a provision in an insurance contract that had been qualified unfair in a verdict, against insurance companies not affected by the lawsuit but applying similar conditions in their contracts.

In 2018, in the financial market and insurance mediation areas those consumer protection inspections conducted within the framework of prudential inspections were of key importance, within the framework of which the examination of customer information and complaint management continued to be high priority matters in terms of consumer protection. In the year under review, consumer protection fines amounting to HUF 2.3 million were imposed during consumer protection inspections conducted in 4 new and 1 completed prudential inspections. In addition to the ex officio inspections, 8 consumer protection procedures were launched upon request, affecting both financial market and insurance intermediaries; these procedures mainly examined the existence of customer information and adequate professional prudence. In the completed consumer protection procedures the MNB imposed sanctions on the order of one hundred thousand forints, due to deficiencies in the information provided by intermediaries prior to the concluding of contracts and due to shortcomings in connection with complaint management.

Customer service activity

Customers can reach the customer service of the MNB via five channels, i.e. in person, over the phone, by e-mail, at the e-government customer portal and by petitions submitted on paper. In 2018, the customer service received 24,333 enquiries and 2,363 petitions in total. The breakdown of customer petitions and enquiries by sector does not differ substantially from what was observed in previous years: somewhat more than half of them concerned the financial market, nearly one quarter of them the insurance sector, four per cent the capital market and one per cent the funds sectors, while the remaining part cannot be linked to any sector (e.g. bitcoin). The number of enquiries and complaints received in respect of non-resident institutions rendering cross-border services, branch offices of institutions headquartered in Hungary, representative offices and other institutions was negligible. Within the financial market, nearly forty per cent of the enquiries and complaints were related to lending, while almost one third of the cases concerning the insurance sector were related to compulsory motor third-party liability insurance. The complaints and customer service enquiries were mainly based on the settlements concerning contracts, service quality, deficiencies in the provision of information and various administrative errors.

Financial Consumer Protection Centre

The objective of the Financial Consumer Protection Centre is to develop a conscious consumer society, to reduce the damage and risks stemming from wrong consumer decisions, and thus to enhance financial literacy in Hungary as well as to make the MNB's role in financial consumer protection better known.

The set of tools under trademark protection available under the title 'Financial Navigator' and developed to transmit financial consumer protection information that is useful in everyday life in an efficient and easy-to-understand manner consists of information booklets, one-minute and longer educational films, a website, search and compare applications facilitating product selection and a mobile application. The information materials deal with current subjects related to financial products and services and are determined on the basis of life situations, also reacting to current events in the market that are of high interest. In order to help consumers immediately recognise the contents prepared for consumer protection information among the various publications, reports and information materials of the central bank, the MNB elaborated a new, standard appearance for the Financial Navigator system. As a result of the visual concept that was prepared, in the future these materials may appear with individual graphic design, which matches and connects to the general identity of the MNB, but is still well identifiable and distinguishable. Simultaneously with the new appearance, the Financial Navigator received a new slogan as well: 'Showing the way in finances'.

The preconditions for conscious financial decisions include the gathering of adequate information in advance and the comparison of various offers. In order to facilitate that, various search and compare applications are available from the website of the central bank, which are independent, their data are from information provided within the data reporting obligation of market participants, and they give information about authorised service providers. The Financial Navigator applications were renewed in 2018 in order to improve user experience, allow easier handling, i.e. in order to facilitate the gathering of financial information.

In 2018, the MNB opened a new channel for the transmission of financial knowledge to the widest possible audience. As a result, since the summer of 2018 the aforementioned online contents have been available on a mobile platform as well. The Financial Navigator mobile application helps comfortable and fast collection of information *inter alia* with the latest news and exchange rate data, the embedded versions of the online applications, a customer service appointment reservation function and a financial dictionary.

In order to reach as many consumers as possible, in 2017 the MNB concluded cooperation agreements with the key participants in the commercial and services sector, who joined the MNB's communication activity aimed at the enhancement of financial literacy, providing free access to the channels and interfaces available to them, and supplementing their own corporate social responsibility strategy. In 2018, four thematic campaigns were conducted, in the course of which consumers saw seasonal financial consumer protection messages not only on the MNB's consumer protection campaign site, but also on the partners' online interfaces, and in nearly 800 stores and 500 post offices. During the campaigns almost 1.5 million leaflets and 8,000 posters were displayed. In addition to communications targeting the general public, the activity targeting the partners' employees needs to be emphasised, as it allows the direct and interactive reaching of tens of thousands of consumers. In addition to the appearance in internal publications, TV chains and on intranet interfaces, personal relations were also established and information was given personally as well at company events and on family days. The importance of reaching employees is reflected in the transfer of information with targeted and deeper content, which potentially provides greater help.

The Financial Advisory Office Network, which was established to strengthen financial consumer protection and represent consumers' rights, went nationwide in May 2018. In line with the changes in appearance presented above, its name was modified to Financial Navigator Advisory Office Network. In order to enable consumers to easily identify the office network at external counselling events organised at county seats and outside county seats, the Network received a logo of its own on the basis of the Financial Navigator appearance in December 2018. In 2018, the experts of the Office Network handled 20,721 customer enquiries and held external counselling events for consumers on 317 occasions.

In spring 2018, the MNB's second creative contest organised for universities on the topic of financial consumer protection, entitled *Financial affairs at advanced level – be creative*, was successfully concluded. The most creative concepts at the seven universities participating in the cooperation were selected by an expert jury, and the winning competitors also received cash awards. Within the framework of the Civil Network Programme, the central bank regularly provides NGOs with tender opportunities in traditional financial consumer protection topics, and in 2018 the tenders were also linked to the award-winning works of the university creative contest. During the year, eight projects – including financial consumer protection educational programmes – of six NGOs were implemented as a result of the support provided by the MNB. The central bank continuously provided consultation opportunities, fora and workshops for NGOs.

The importance of financial literacy and knowledge and the related skills and abilities is reflected in the work related to the national strategy 'Wisely with money', which was adopted in December 2017 with an aim to enhance financial literacy. In line with the Action Plan approved in 2018, the MNB assumed a significant role in the implementation, in view of the fact that due to its responsibility for financial stability, consumer protection, information and communication duties, it had already been a key actor in the enhancement and promotion of financial literacy and awareness.

Other official and recording activity

With its IT-supported system, the MNB maintained the framework conditions for the official examinations of intermediaries in 2018 as well. The upward trend from previous years continued, and in 2018 the number of examinees appearing at the examinations organised by the training organisations was close to 20,000. In the year under review, in addition to off-site inspections, the MNB examined the regularity of the training, the exam rooms with computers and the examinations within the framework of 15 on-site inspections. According to the experiences of the inspections, although there were some minor irregularities, performance of the activity was in compliance with the law.

In 2018, the Core Data Repository, which contains the data of the supervised and registered institutions, received 11,804 forms as a result of the core data notifications from organisations and people under the supervision of the financial intermediary system; in addition, data registrations were carried out on the basis of 6,618 documents in connection with authorisation and supervisory procedures.

3.4 RESOLUTION

During the year, taking into account international practices, the MNB formulated its methodologies for calculating the minimum requirement for own funds and eligible liabilities (MREL requirement), for the public interest test, and for identifying critical functions. In addition, it revised the Resolution Handbook, in which the internal rules for the MNB's resolution functions are laid down. The institutions were able to express their views regarding the proposed framework of the calculation methodology of the MREL requirement during a public market consultation.

In 2018, in order to prepare for possible future crisis situations, acting in its capacity as resolution authority, the MNB drew up and revised the resolution plans in accordance with the approved timeline. The objective of resolution planning is the elaboration of the resolution strategy taking into account the structure and operation of the given credit institution or investment firm (hereinafter jointly: institution), in order to enable the resolution authority to have a scenario for the handling of crisis situations that cannot be or cannot be adequately managed with market and/or supervisory tools.

To support resolution planning, procedures aimed at the assessment of resolvability (including on-site inspections) were launched at several institutions. One of the main tasks of these procedures is to assess which crisis management strategy (liquidation or resolution) is credible and feasible in the case of the given institution or group, to what extent the chosen strategy serves the achievement of one or more resolution objectives and whether there are any material impediments regarding its implementation. In order to facilitate the planning process and to measure the amount of own funds and eligible liabilities (MREL) of the institution, the MNB also requested data submissions. The objective of meeting the individual and group-level MREL requirements to be set forth in the resolution plans is to have an adequate amount of funds available for loss-absorbing or for recapitalisation that becomes necessary during resolution.

In the case of banking groups domiciled in Hungary which also have cross-border group members, the MNB – as the group-level resolution authority – reviewed the group resolution plan. Furthermore, in the first half of 2018, as a result of extensive preparatory work, an unanimous joint decision regarding the adoption of the plan was made together with the respective foreign resolution authorities.

The MNB also actively participated in the preparation of resolution plans as host resolution authority of the Hungarian affiliate banks of banking groups domiciled in the European Union and formally accepted the group resolution plans and the joint decisions concerning the determination of the group-level MREL requirement. These joint decisions were made with the coordination of the Single Resolution Board (SRB) regarding institutions domiciled in the Banking Union, and in other cases within the framework of resolution colleges coordinated by the resolution authorities of other Member States. During the year, the MNB also prepared the resolution plans of seven domestic institutions subject to simplified resolution planning obligations.

Almost the entire asset and real estate portfolio managed by MSZVK Magyar Szanálási Vagyonkezelő Zrt. (MSZVK Hungarian Resolution Property Management Private Company, or MSZVK) was sold in June 2018, much earlier and with a better result than planned. The earlier-than-planned portfolio reduction was allowed by favourable changes in the market of non-performing loans, and thus, reacting to the positive market sentiment, the MNB, as the party exercising the ownership rights over MSZVK, made the decisions resulting in the successful implementation of the transaction. All of this allowed the total repayment of the loan taken from the Resolution Fund in 2015 as well as the related interest and further costs in July 2018.

Regarding collective funds, the MNB acted in compliance with the relevant EU legislation in 2018. It calculated the member institutions' regular annual ex-ante contributions for 2018 payable to the Hungarian Resolution Fund on the basis of the respective EU regulation, took part in the planning of the stress test examining the ability of the Hungarian National Deposit Insurance Fund (OBA) to contribute to resolution financing and also in the monitoring of the objectivity regarding its implementation. The MNB's leaders delegated by the Resolution Directorate were involved in the work of the Boards of Directors of the Resolution Fund and of the OBA.

In order to deepen the international network of relations in the field of resolution and to collect know-how, the MNB was once again actively involved in the work of various EU authorities in 2018. It participated in various working groups of the EBA, EIOPA and ESMA dealing with the preparation of future regulations concerning resolution.

In the course of the year at various events for professionals, MNB's experts held presentations concerning the resolution framework and current Hungarian and international topics related to resolution.

3.5 PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

Efficiency of Hungarian financial infrastructures

Implementation of the instant payment system

In 2018, development of the new payment system progressed as scheduled and thus the instant payment service will be available in Hungary from 1 July 2019. In the first quarter of 2018, after the selection of the supplier, the installation of the central infrastructure commenced at GIRO Zrt. In parallel with this, the MNB also commenced setting up the instant payment system's central bank functions and the functions supporting liquidity management. Preparations for the instant payment service are also in progress at the stakeholders.

There is continuous information sharing in the project with regard to the instant payment service and the operation of the central system; the MNB and GIRO cooperate closely with market participants in numerous working groups. In addition, a broad range of information is available among the continuously updated frequently asked questions published on the MNB's sub-page dedicated to the instant payment system. During the working group meetings and consultations arranged regularly in the course of 2018, GIRO and the MNB held in-depth consultations with market participants on the technical and operational details of the central system and the overlaid services and finalised them based on feedback from the stakeholders. In 2018, the MNB worked out the modification of liquidity management rules necessary for the efficient operation of the new payment system. The modified rules enable participating payment service providers to set aside a sufficient amount of liquidity for the smooth execution of instant payment transactions at all times. In addition, the MNB set up the operational arrangements of the central bank functions relevant to the instant payment system and notified the institutions concerned of the changes.

Moreover, in line with the June decision of the Steering Committee, the formulation of the basic-level instant payment brand for the credit transfer function also commenced in the past year. With the involvement of the project's communication working group and additional communication experts, the creation of the brand name and the visual elements is in progress. The brand to be created supports communication related to basic-level services while also enabling market participants to offer the ancillary services relying on the system under their own brand names. Moreover, at the end of the year the development of a communication strategy supporting the introduction of the new service also began. The strategy defines the exact messages – as well as their respective communication channels – that should reach specific user groups in the six months preceding the launch of the service and thereafter.

The MNB held numerous consultations with GIRO Zrt. and the stakeholders participating in the working groups, in the interests of standardising the basic-level business processes of the ancillary services relying on the instant payment system. A standardised set of rules will provide the means for interoperability between the services developed by the market participants, which facilitates the use of the services for the broadest possible range of users. The formulation of open standards for the most frequently used data entry solutions began, helping to ensure that all market participants launch instant payment transactions in a standardised manner.

MNB opinions published in relation to the new Payment Services Directive (PSD2[16]) on the 'PSD2 – Frequently Asked Questions and Answers' website

In consideration of the numerous inquiries received by the MNB in relation to PSD2 and in view of the broad range of stakeholders, the MNB launched its Frequently Asked Questions and Answers page, which contains the questions received by the MNB and the answers provided to them. The purpose of the list is to communicate the MNB's position on certain PSD2-related issues to all market participants. So far, the MNB has published its position in relation to a total of 59 questions in six topics (data supply, strong customer authentication and secure communication, responsibility issues, authorisation, rules of execution and miscellaneous). The list is updated continuously with new questions and information received.

[16] PSD2: Directive (EU) 2015/2366 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.

Meetings of AMI-SeCo NSG in 2018

The Hungarian working group engaged in securities clearing and settlement and collateral management – the Hungarian AMI-SeCo NSG – held meetings on three occasions in 2018. With the involvement of market participants, financial infrastructures and regulatory authorities, the main topic of the forum was to determine how to harmonise with European standards and improve the efficiency of the Hungarian processes of corporate action management. KELER Zrt., the Budapest Stock Exchange and the MNB developed a reform package, which was discussed and approved by the working group before negotiations commenced with the relevant ministries. Since the speedy implementation of the proposals is a priority interest of the Hungarian capital market, the MNB continues to support the process carried out under the direction of KELER Zrt. In addition, AMI-SeCo NSG also discussed current European events within its competence, including the harmonisation of collateral management processes as the next step in the standardisation project.

Security of financial infrastructures

Public consultation on cyber resilience oversight expectations (CROE)

In the third quarter of 2018, the ECB launched a public consultation on the draft of the cyber resilience oversight expectations prepared by the ECB's cybersecurity working group, in which the MNB is also an active participant. The proposed expectations are intended to improve the cyber resilience of financial infrastructures: highly skilled cyber attackers imply a constant threat, and since the infrastructures feature extensive interconnections, the system can be compromised through multiple entry points. Moreover, existing automations and recovery systems may even facilitate, as the case may be, the spread of malware and incorrect data. The expectations laid down in the CROE are based on the guidance published by the International Organisation of Securities Commissions (IOSCO) in 2016. Several MNB experts attended the CROE training provided by the ECB in October 2018 with the objective of facilitating participants' better understanding of the CROE and the acquisition of practical knowledge in relation to the CROE. The ECB is formulating the process for oversight assessments against the CROE in the fourth quarter of 2018. After the assessment process has been completed, the MNB will incorporate the CROE's expectations into its own oversight methodology.

In 2018, the annual review of KELER CCP's EMIR license and the annual comprehensive supervisory inspection of the central counterparty were carried out as scheduled

In order to ensure compliance with EMIR,[17] KELER CCP – as an institution performing central counterparty activity within the European Union – was required to undergo a re-licensing process in 2014, which was performed by a licensing college composed of international members. Under EMIR requirements, KELER CCP is required to comply with the requirements on a continuous basis. Compliance is reviewed by the licensing college at least once a year in person; moreover, it is also required to regularly report any major operational changes that affect the licensed activity. The 2018 review was carried out in December, as a result of which the college concluded that the operation of KELER CCP continues to comply with the EMIR requirements. The key topics of the annual meeting included the overview of cybersecurity in relation to the central counterparty, IT operation and capital market default procedures. In addition to the MNB, the Hungarian Energy and Public Utility Regulatory Authority and the European Securities Market Authority (ESMA), members of KELER CCP's college include the authorities of those countries which have delegates at KELER CCP; thus the Irish, Belgian and British financial supervisory authorities were also represented at the meeting. In accordance with its obligations laid down in the Act on the MNB, in 2018 the central bank once again conducted an annual comprehensive supervisory inspection at KELER CCP as per the EMIR regulation. As part of the inspection, the central bank uncovered numerous deficiencies that concerned, among others, the risk management methodology and organisational requirements of the central counterparty. The MNB imposed a fine of HUF 16 million on KELER CCP in relation to the deficiencies, and called on the central counterparty to eliminate the deficiencies. Following the inspection KELER CCP started to eliminate the deficiencies without delay.

The MNB issued a recommendation on measures for the operational and security risks of payment services

With the technological progress in recent years, many new market participants (FinTech) and an increasing number of innovative payment products and services have appeared in the financial sector. Since the technological solutions applied in the provision of online services may involve risks due to the nature of the internet, for the safety of users

[17] Regulation (EU) No. 648/2012 on OTC derivatives, central counterparties and trade repositories

it has become indispensable to set up common security requirements across the European Union and ensure high-quality consumer protection for the use of these services. In this context, it should be ensured that all payment service providers, including those providing the two new payment services – the payment initiation service and the account information service – develop a framework containing appropriate risk mitigation measures and control mechanisms to manage the operational and security risks associated with the payment services they provide.

In order to facilitate compliance with the European Union's legal provisions on payment services, the EBA has issued detailed guidelines on the security measures for the operational and security risks of payment services. The MNB published these guidelines in the form of a recommendation. Providing sufficient time for the preparations, the MNB expects the payment service providers concerned to apply the recommendation from 1 November 2018.

Legal interpretations and inspections

In 2018, the central bank issued 22 legal interpretations and professional opinions on payments based on administrative and customer inquiries. In three cases, at the request of the Ministry of Finance, the MNB provided an opinion focusing on payment issues in relation to draft legislation. As regards the remaining 19 cases, the MNB issued legal interpretations or provided professional opinion in response to inquiries by credit institutions, other business organisations or attorneys.

In 2018, the MNB conducted inspections in the context of payment-related administrative procedures at 4 banks, 1 EEA credit institution branch, 3 cooperative credit institutions, 1 payment service provider, 2 payment institutions and 1 negotiable voucher issuer. In 2018, the MNB concluded 13 payment service control procedures, comprising inspections at 4 banks, 4 cooperative credit institutions, 1 payment service provider, 2 payment institutions and 2 voucher issuers. Of the completed procedures, a total fine of HUF 106.1 million was imposed in 8 cases, in addition to prescribing corrective measures. In addition, due to the failure to fulfil the prescribed obligations by the deadline, in 3 cases the MNB repeatedly required the service providers to carry out the measures prescribed in the resolution, imposing a total fine of HUF 8.8 million. Accordingly, the MNB imposed a total of HUF 114.9 million in fines due to breaches established in the MNB's payment-related administrative procedures. The breaches concerned:

– with respect to Act LXXXV of 2009 on the Pursuit of the Business of Payment Services, the provision of information to customers, the framework contract, the opening of payment accounts, the rectification of payment transactions, liability rules, and the queueing of official transfer orders and credit transfers based on remittance summons,

– with respect to MNB Decree No. 18/2009 (VIII. 6.) on the execution of payment transactions, the receipt and authentication of the payment order, the sequential order, rejection, queueing, and partial execution of processing, the special rules concerning official transfer orders and remittance summons, the execution of payment transactions between payment service providers and making the funds available to the payee and value date rules,

– with respect to Act CCXXXV of 2013 on certain payment service providers, voucher issuers' notification of the voucher issuance activity, the rules of their operation and provisions on the protection of their customers,

– the provisions of MNB Decrees No. 50/2015 (XII. 9.) and No. 50/2016 (XII. 12.) on the data reporting obligations to the central bank's information system primarily to enable the MNB to carry out its basic duties, concerning the data supply bearing the MNB ID code P54,

– the rules on unblending and on the provision of information to the payee on individual card-based payment transactions as set out in Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions, and

– with respect to Government Decree No. 263/2016. (VIII. 31.) on payment account switching, concerning the availability of the account switching authorisation, the cancellation of the previous payment account and the provision of information on account switching.

As part of the inspection, the MNB also examined compliance with Government Decree No. 262/2016 (VIII. 31.) on access to basic payment accounts and the features of and charges payable for basic payment accounts, and found no breaches. Of the control procedures completed, 7 procedures had commenced in 2017, and of the control procedures commenced in 2018, in the case of 6 procedures a decision was made in 2019.

Miscellaneous information

Publications related to payments and payment systems

A paper on the acceptance and use of payment cards in the Hungarian retail sector was published in the March 2018 issue of the Financial and Economic Review. The analysis was based on a receipt-level, detailed dataset derived from the online cash register database of the National Tax and Customs Administration. The main finding of the study is that store size is the most important factor in payment card acceptance, although the correlation is not linear.

The September 2018 issue of the Financial and Economic Review published a study on the remittances of Hungarians living and working abroad to the households remaining in the home country. In the course of 2017, in conjunction with the Hungarian Central Statistical Office the MNB conducted a survey on this subject under the title 'Family Assistance'. Initial results indicate, among other things, that around one fifth of the emigrants and more than 65,000 households in Hungary are affected by the phenomenon, and support from abroad is an important source of income for a significant portion of households.

A study entitled 'An introduction to official transfer orders as a method of payment and possible future improvements' was published in the December 2018 issue of Economy and Finance, presenting the features of the payment method, as well as the obstacles to its more effective functioning and its untapped potential.

Conferences and professional presentations

In 2018, the central bank delivered professional presentations at two conferences on the new information technology security requirements to be introduced under the PSD2. Moreover, the MNB held a presentation on the development of the instant payment system infrastructure at the event organised by the Hungarian Banking Association for the executive officers of Hungarian banks.

3.6 FOREIGN EXCHANGE RESERVE MANAGEMENT

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,
- to meet the state's transaction-related foreign currency needs.

Market participants continue to pay special attention to developments in foreign exchange reserves. The MNB also regularly reviews the desirable level of reserves and, if necessary, takes measures – within the permitted limits – to reach the adequate level. Throughout 2018 the foreign exchange reserves exceeded the safe level expected on the basis of the Guidotti-Greenspan rule, which is closely monitored both by the central bank and investors.

In terms of transaction goals, servicing the management of government debt continued to be the most important objective last year. The Debt Management Agency supported its debt management policy of rolling over the expiring foreign currency liabilities essentially from forint by offering higher issuances in the forint market. Through the negative net foreign currency issuance, the Government Debt Management Agency repaid the expiring foreign currency debt by the foreign currency purchased from the central bank to the debit of its increased forint deposit. 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 in 2018. The aforementioned transaction goals were satisfied smoothly in 2018 as well.

On the other hand, in the course of managing the required volume of foreign exchange reserves, the MNB makes efforts, even in the international low interest environment, to enforce yield considerations at all times, i.e. as a responsible asset manager to retain and, if possible, even increase the value thereof.

Reserve size

The level of Hungary's international reserves rose by EUR 4.0 billion in 2018 and amounted to EUR 27.4 billion at the end of the year.

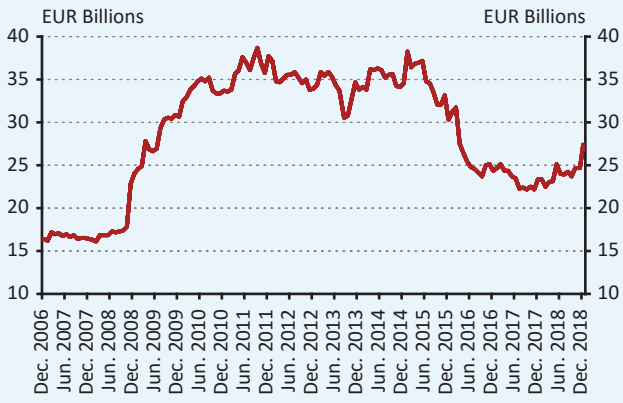
The Government Debt Management Agency's items serving the repayment of debt, particularly the net foreign currency financing of the government and net foreign currency

interest expenditures, reduced the foreign exchange reserves by nearly EUR 3 billion overall. The change was primarily the combined result of the bond maturities with original face values of USD 1.25 billion in February and EUR 1.5 billion in June, bond issuances in March, October and December with face values of JPY 30 billion, EUR 1 billion and RMB 2 billion, respectively, and other items.

The EU transfers received from the European Commission in the net amount of EUR 4.6 billion resulted in an increase in the reserves. The cash movements related to the foreign exchange swaps concluded under the foreign currency pillar of the third phase of the FGS and the forint liquidity providing FX swap tenders boosted the reserves by almost EUR 1.3 billion. Payment flows of around EUR 600 million in relation to the MNB's derivative transactions and the almost EUR 100 million increase in the foreign currency deposits of Hungarian credit institutions also raised the level of the reserves. The EUR 400 million change in mark-to-market values of foreign currency assets other than the euro and of the euro-denominated price of gold increased the level of reserves even further.

In October 2018, the MNB purchased gold in the amount of around EUR 1 billion, raising its bullion holdings from 3.1 tons to 31.5 tons. Like the foreign exchange reserves, monetary gold is also part of the international reserves.

Chart 8
Developments in the size of foreign exchange reserves



Financial performance and risks of foreign exchange reserves

In carrying out its core tasks as stipulated in the MNB Act, i.e. managing the country's foreign exchange reserves, the MNB inevitably faces financial risks. The basic principles are 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 yield level while continuously keeping the risks at the pre-defined low level.

Similarly to the core duties of the central bank, the Monetary Council is also 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, 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 by the risk management unit, independently of portfolio management.

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 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 ISDA (International Swaps and Derivatives Association) and related CSA (Credit Support Annex) 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 (Global Master Repurchase Agreement), 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 the course of reserve management, the MNB also considers the foreign currency liquidity requirement of the monetary policy instruments.

In the decreasing yield environment resulting from the global crisis that commenced in 2008, most central banks realised a profit on their foreign exchange reserves as a result of the typically rising prices of the bonds managed in the central banks' portfolios. With the government bonds and other bonds of predominantly high credit rating in its portfolios, as a result of the decreasing yield environment the MNB also benefited from this process through the revaluation of the positions. In the ensuing interest environment, which is close to zero or even negative in certain markets, the largest challenge faced by the central bank in reserve management was to ensure the preservation of capital (in the euro area the expected yield of the assets relevant for central banks remained negative even in 2018). In the past period, in respect of the global central banks the focus shifted to the normalisation of monetary policies and in connection with that, the normalisation of yields. Following the Fed, the ECB also moved towards monetary tightening. The potential normalisation of the interest rate levels and rising interest rates are advantageous in the longer run in terms of the performance of the reserves due to the higher level of the anticipated yields, but in the short run, they generate losses. Without any modification of the investment strategy, these impacts together would result in a decrease in the reserve level in the short run. 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 line with the reserve holding objectives and bearing in mind the conservative investment framework, the MNB continued to diversify its investments in 2018.

In 2018, the MNB basically managed the foreign exchange reserves in six currencies (EUR, USD, JPY, GBP, AUD, RMB), in a variety of portfolios. The MNB assumes exchange rate exposure predominantly 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 portfolio, containing government securities only, as an index-linked portfolio strictly following the benchmark. From the end of 2012 – in the form of a mandate given to an external asset manager and custodian – US agency mortgage backed securities (MBS) also form part of the MNB's investment strategy. In 2018, an additional three, actively managed MBS mandates were created also with the involvement of external asset managers, which further increased the size of the asset class. Besides the diversification, building up the exposure also raised the expected return on the reserves. The strategic average duration (target duration) of the reserve portfolios was around 1 year. Keeping in view national strategic aspects, in October 2018 the MNB raised its gold reserves tenfold from 3.1 tons to 31.5 tons. After the substantial increase, repatriation of the gold reserves was also carried out. Gold has special significance in the foreign reserves due to its international and regional role in the central bank's reserves, its national strategic importance and its ability to strengthen confidence and play a stabilising role in a potential crisis situation or in the event of structural changes in the international financial system.

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.

In 2018, the Fed raised the federal funds rate on four occasions, in March, June, September and December by 25 basis points on each occasion, to the band of 2.25–2.5 per cent. The economic growth of the euro area decelerated compared to the dynamics of 2017. The ECB did not change the base rate during the year. At the end of the year, the Governing Council decided to conclude the net asset purchases; however, by the end of 2018 it had not commenced downsizing the central bank's balance sheet. The euro yield curve, a determinant of reserve performance, twisted during the reporting period: at short-term maturities it shifted upwards by 5–15 basis points to a varying degree at each maturity; over one year, it declined by 1–20 basis points and resided in the negative band up to the eight-year maturity. The US dollar yield curve moved upwards and flattened further: yields rose by 75–120 basis points at short-term maturities and by 10–50 basis points at maturities over one year.

Despite market processes that remained unfavourable for reserve management, in 2018 the MNB achieved a near-zero performance on the gold and foreign exchange reserves, which represents an improvement compared to 2017. The performance of bond portfolios was negative overall, but it still slightly outstripped the performance of the benchmark. Gold and foreign currency open positions achieved a positive result. 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's reputation were avoided.

In respect of the future performance of the foreign exchange reserves, it continues to pose a risk that the yields on highly-rated assets may move from an extremely low level due to a yield increase, turning the performance of the reserve portfolios negative, which would worsen the reserve performance over the short run due to the revaluation loss arising from the depreciation of existing bonds. On the other hand, due to the short duration of the reserves, the medium-term impact of this is already positive, as the expiring reserve components can be reinvested at a higher yield level.

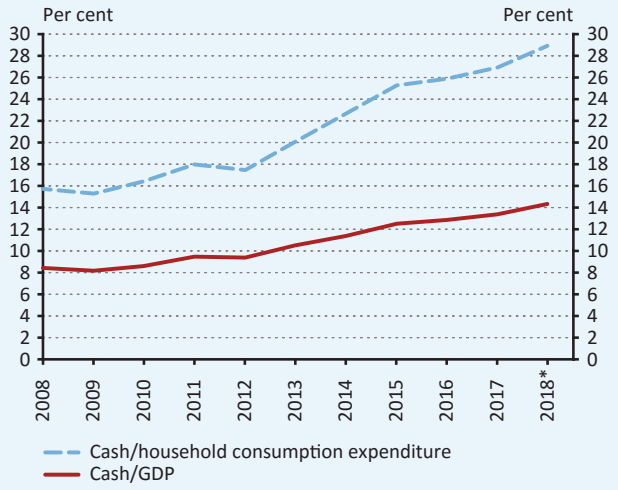
3.7 CASH LOGISTICS ACTIVITY

Currency in circulation

On 31 December 2018, the total currency in circulation amounted to HUF 5,998 billion, representing a 17-per cent increase of HUF 884 billion compared to the end of the previous year.

The sharp increase in forint cash holdings observed since 2012 continued in 2018 again, with currency holdings for saving purposes and growing consumption identified as the main contributors to the expansion. As a result of the growth, at the end of 2018 cash holdings amounted to 14.4 per cent of GDP, representing a dynamic increase compared to the end of 2017.

Chart 9
Cash/GDP and cash/household consumption expenditure



** The 2018 GDP figure and the household consumption expenditure data are MNB estimates.*

Source: MNB.

The change in the volume of banknotes in circulation varies by denomination, which may also reflect the one-off effect of the withdrawal of old banknotes resulting from the replacement of banknotes. The dynamic growth in the stock was limited almost exclusively to the 20,000-forint banknotes, the volume of which rose by almost 24 per cent in the past year. The growth in the stock of 500-forint banknotes was negligible, at only 4 per cent, while in the case of all other denominations the volume in circulation increased to varying degrees: in the case of the 2,000-, 5,000- and 10,000-forint banknotes, an increase of 10, 18 and 6 per cent was registered, respectively, while the share of the 1,000-forint denomination fell by 7 per cent in 2018.

The two largest banknote denominations still play a dominant role in cash turnover: at the end of 2018 they jointly accounted for 70 per cent of the volume and 95 per cent of the value of all banknotes in circulation.

Compared to the end of previous year, the volume of the forint coins in circulation expanded by 8 per cent on average.

Chart 10
Breakdown of banknotes in circulation by quantity at the end of 2018

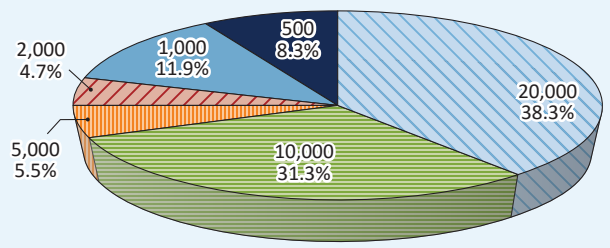


Chart 11
Banknote and circulation coin manufacturing
(gross expenditure)

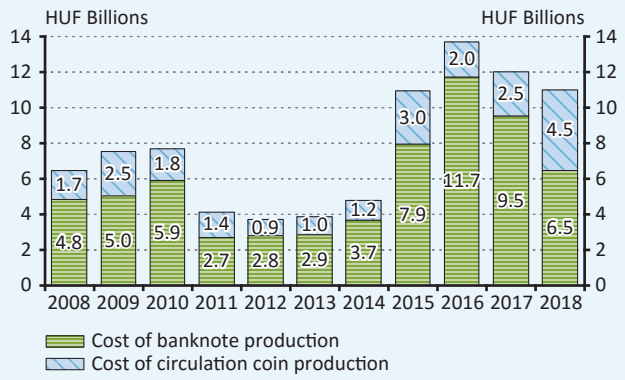


Table 5
Banknotes and coins in circulation[18]
(figures as at 31 December 2018 and 31 December 2017)

	2018				2017			
Banknotes	**Volume**	**Value**	**Ratio (%)**		**Volume**	**Value**	**Ratio (%)**	
	Million pieces	**Billion HUF**	**Volume**	**Value**	**Million pieces**	**Billion HUF**	**Volume**	**Value**
20,000 forint	200.1	4,002.3	38.3	67.7	162.1	3,242.5	34.4	64.4
10,000 forint	163.6	1,636.5	31.3	27.7	154.1	1,540.6	32.6	30.6
5,000 forint	28.7	143.7	5.5	2.4	24.4	122.2	5.2	2.4
2,000 forint	24.4	48.8	4.7	0.8	22.1	44.1	4.7	0.9
1,000 forint	62.4	62.4	11.9	1.0	67.5	67.5	14.3	1.3
500 forint	43.3	21.6	8.3	0.4	41.5	20.7	8.8	0.4
Total	**522.5**	**5,915.2**	**100.0**	**100.0**	**471.7**	**5,037.8**	**100.0**	**100.0**
Coins	**Volume**	**Value**	**Ratio (%)**		**Volume**	**Value**	**Ratio (%)**	
	Million pieces	**Billion HUF**	**Volume**	**Value**	**Million pieces**	**Billion HUF**	**Volume**	**Value**
200 forint	153.2	30.6	8.2	42.1	139.8	28.0	8.0	41.7
100 forint	193.4	19.3	10.3	26.6	181.7	18.2	10.5	27.1
50 forint	182.7	9.1	9.7	12.5	165.2	8.3	9.5	12.3
20 forint	336.2	6.7	18.0	9.2	310.6	6.2	17.9	9.3
10 forint	384.0	3.8	20.5	5.3	358.1	3.6	20.6	5.3
5 forint	623.4	3.1	33.3	4.3	581.0	2.9	33.5	4.3
Total	**1,872.8**	**72.8**	**100.0**	**100.0**	**1,736.3**	**67.1**	**100.0**	**100.0**

[18] The table does not include holdings of commemorative coins and commemorative banknotes issued by the central bank, which – as legal tender – form part of the means of payment in circulation, but in accordance with their role, do not participate actively in the execution of cash turnover.

Banknote and coin production

In order to meet the increasingly strong cash demand and replace unfit and hence, destroyed banknotes and coins, the central bank has banknotes and coins produced.

The MNB's expenditures related to cash production amounted to gross sum of HUF 11 billion in 2018, down almost 9 per cent compared to 2017. The decrease in expenditure can be attributed to declining production needs as the banknote issuance programme is drawing to a close. At the same time, owing to the sharply increasing demand for coins, coin manufacturing represents a growing share in the central bank's cash production expenditures.

Distribution of cash

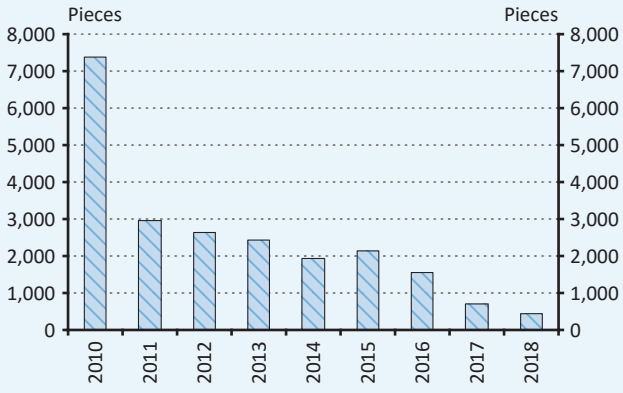
In 2018 – primarily in connection with the replacement of banknotes – the MNB managed cash turnover for its clients, i.e. credit institutions and the Hungarian Post, in the total amount of HUF 2,994 billion; within that it distributed 257 million banknotes to its clients, while 187 million banknotes were delivered to the central bank.

In the past year, the MNB scrapped 89 million end-of-life banknotes, and replaced them with new, high quality means of payment.

Prevention and reduction of counterfeiting

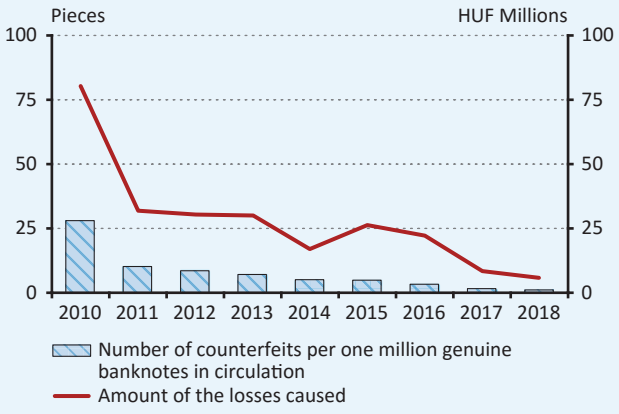
In line with the trend of previous years, the counterfeiting of forint banknotes was reduced further; only 450 forint banknote counterfeits were eliminated from cash circulation in 2018.

Chart 12
Annual trends in the number of counterfeit forint banknotes eliminated from circulation



Last year, the number of counterfeit banknotes for each one million genuine banknotes in circulation per year was 0.86, which is an extremely favourable value by international standards.

Chart 13
Trends in counterfeits for each one million genuine banknotes and the value of the resulting damage



Besides the replacement of forint banknotes, the free educational activity performed by the MNB in respect of banknotes contributes significantly to maintaining the low counterfeit indicator. In addition to the printed educational materials provided by the central bank and also published on the internet, in 2018 the MNB's experts trained more than 2,350 retail cashiers on the features of banknotes and the possibilities of verifying the genuineness of banknotes, thereby also ensuring the efficient identification of counterfeit banknotes.

As in previous years, the counterfeiting of higher denominations (mainly the 10,000-forint and 20,000-forint banknotes) remained most typical in 2018, accounting for 81 per cent of counterfeit forint notes.

Table 6
Denomination breakdown of forint banknote counterfeits discovered in 2018

Denominations	500	1,000	2,000	5,000	10,000	20,000
Breakdown (%)	4.7	9.8	0.9	3.6	38.4	42.7

No considerable change took place in the 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 cash office environment using combined checks with UV-A and UV-C light.

The occurrence of counterfeit foreign currency is still negligible, although it shows a slightly increasing trend. The central bank's experts inspected 2,070 various foreign currency counterfeits in 2018, including 1,401 counterfeit euro banknotes.

Cash distribution administrative inspections

In 2018, the MNB inspected compliance with the provisions of the MNB Act on cash issuance, of the Banknote Decree[19] and of the MNB decrees on the central bank data supply[20] at 9 banks, 2 cooperative credit institutions, 3 cash processing providers and 1 payment institution. The purpose of the cash distribution administrative inspections was to ensure the proper quality of the forint banknotes in circulation, the mitigation of operational risks to ensure smooth cash circulation and the provision of fair services by the credit institutions to households. In 2018, the Cash Logistics Directorate launched 15 administrative control procedures, 11 of which were closed in 2018 and 4 procedures will be completed in 2019. Of the 11 procedures concluded in 2018, measures were taken in 10 cases – letters of warning calling upon the inspected institutions to arrange training and to ensure full compliance with the MNB Act and the Banknote Decree in the future – while 1 procedure was closed without identifying any infringement. Of the procedures launched in 2017, 9 administrative procedures were closed in 2018, of which 1 procedure ended without the detection of any infringement, and in 8 cases the inspection was concluded with a letter of warning.

During the administrative inspections, the MNB detected the violation of certain rules[21] pertaining to the operation of banknote handling machines, the supply of UV-A/C equipment to credit institution cash-offices, the action plan for the management of extraordinary situations occurring in cash distribution, the exchange of forint banknotes withdrawn from circulation, the handling of incomplete or damaged banknotes, and the denomination exchange and exchange of forint banknotes fit for circulation and of banknotes qualifying as legal tender but unfit for circulation. The most common infringements were related to the violation of the provisions of the MNB Act and the Banknote Decree on the handling of incomplete and damaged banknotes.

Redesign of Hungarian banknotes

In the period 2014–2019, the MNB is renewing the banknote series and issues redesigned, contemporary banknotes that will also satisfy the cash distribution requirements of the cash processing machines and automated teller machines, while at the same time providing state-of-the-art protection against counterfeiting.

Of the series comprising 6 denominations, the first banknote redesigned by the MNB was the 10,000-forint note in 2014, followed by the 20,000-forint banknote in 2015. The 2,000- and 5,000-forint denominations were renewed in 2017, and the old versions were withdrawn from circulation in the same year. The redesigned 1,000-forint notes were released on 1 March 2018, and since they gained ground dynamically in cash circulation, the MNB withdrew the old 1,000-forint versions on 31 October 2018. The last member of the upgraded banknote series, the 500-forint note was released on 4 July 2018 by MNB Decree, and the denomination appears in cash circulation gradually from 1 February 2019, aligned with payment needs.

By the end of 2018, 83 per cent of the banknotes in circulation had already been replaced with redesigned notes.

Table 7
Withdrawal and exchange deadlines of banknote denominations

Date of withdrawal	Exchange deadline	Denomination
31 October 2019	31 October 2039	
31 October 2018	31 October 2038	
31 December 2017	31 December 2037	
31 July 2017	31 July 2037	
31 July 2017	31 July 2037	

[19] MNB Decree No. 11/2011 (IX. 6.) on the processing and distribution of banknotes and on technical tasks relating to the protection of banknotes against counterfeiting

[20] MNB Decrees No. 27/2017 (XI. 21.) and No. 50/2016 (XII. 12.) on the data reporting obligations to the central bank's information system primarily to enable the MNB to carry out its basic duties

[21] Article 23 (3) and (8) of the MNB Act, Article 5 (2)–(3), Article 6 (1), Article 8 (1), (3) and (4), Article 18 (2), Article 19 (1)–(2), Article 20 (3)–(4), Article 21 (1)–(2), Article 22 (1) and (3), and Section 2.1.1 of Annex 2

After the date of withdrawal of individual denominations, the cash-desks of credit institutions and the Hungarian Post will exchange the withdrawn forint banknotes for legal tender for another three years and the MNB for 20 years, free of charge.

Issuance of collector coins and commemorative versions of 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 – in line with the practice of foreign central banks – issues collector coins with the aim of creating a worthy memorial of Hungary's major historic, cultural and scientific anniversaries, events and persons in a lasting form for succeeding generations. The collector coins are not meant for circulation.

Since 2014, the MNB has issued all collector coins made of precious metal also in a cheaper, non-ferrous metal version, with a view to promoting the coins' value-conveying, attention-raising and educational roles in a wider circle. This purpose is also served by the MNB's decision with regard to the distribution of collector coins at face value, namely, that silver and non-ferrous metal collector coins are available at face value for 3 months and for 1 year after issue, respectively.

Based on statutory powers and in the spirit of the sales policy in place since 2014, in 2018 the central bank issued 24 collector coins in 12 topics. Of these, 2 were gold coins, 10 were silver coins and 12 were non-ferrous metal collector coins (of which 1 coin had an independent theme, and 11 coins were issued as the non-ferrous metal versions of precious metal coins).

The MNB's 2018 collector coin issuance programme commenced on 30 January 2018 with the issuance of the 'Artúr Görgei' silver collector coin with a face value of HUF 10,000 and its non-ferrous metal version with a face value of HUF 2,000. The double occasion for the issuance of the collector coin is the 170th anniversary of the start of the 1848–1849 Hungarian Revolution and War of Independence and the 200th anniversary of the birth of one of the most prominent military leaders who fought in the War of Independence.

To honour the 2018 FIFA World Cup organised by Russia, on 23 February 2018 the MNB issued a silver collector coin with a face value of HUF 5,000 and the non-ferrous metal version thereof with a face value of HUF 2,000. Since 1981 the MNB has regularly dedicated collector coins to the most renowned event in football.

As the most valuable piece of the 2018 collector coin issuance programme, on 13 March a gold collector coin entitled the 'Golden Florin of Albert' was issued with a face value of HUF 50,000 in normal and piedfort (four times the weight of a normal coin) sizes. The collector coins are also accompanied by their non-ferrous metal version with a face value of HUF 2,000. All three collector coins are additions to the 'Hungarian gold florins from the Middle Ages' series launched in 2012.

On the occasion of the 2018 IIHF World Championship Division I Group A, on 18 April 2018 the MNB issued a commemorative version of the HUF 50 circulation coin in 2 million copies. (Of these, 12,000 coins were put into circulation in decorative packaging as first day mint – in BU finish –, and 3,000 coins in special proof finish as part of the 2018 circulation coin series).

To honour the 175th anniversary of composing music to the Appeal, the MNB issued a particularly large, silver collector coin and its non-ferrous metal version on the anniversary of the premiere, on 10 May 2018. The issuance of the silver and the non-ferrous metal collector coin with a respective face value of HUF 20,000 and HUF 2,000 is intended to highlight the everlasting lines of the Appeal, the message of Hungary's second national anthem that remains relevant to this day.

In honour of the Year of the Family, on 25 May 2018 the central bank issued a new HUF 50 commemorative circulation coin along with a silver and a non-ferrous metal collector coin with a face value of HUF 10,000 and HUF 2,000, respectively. The new, commemorative legal tender entered circulation in 2 million pieces, of which 12,000 coins were issued as first-day mint in a decorative packaging.

On 22 June 2018, the MNB continued the Hungarian Castles series launched in 2004 by issuing a silver collector coin named 'Eger Castle' with a face value of HUF 10,000 and its non-ferrous metal version with a face value of HUF 2,000. They are the latest coins in the series of collector coins depicting the castles of Visegrád, Diósgyőr, Munkács, Gyula, Siklós, Kőszeg and Szigetvár.

The only non-ferrous metal collector coin in the 2018 issue programme with an independent coin design was issued on 23 June 2018 as part of the series depicting Hungarian

national memorial sites. The non-ferrous metal collector coin issued in bronze coated finish with a face value of HUF 2,000 in honour of the Fiumei Road Cemetery follows the presentation of the National Memorial Sites of Somogyvár-Kupavár, Mohács and the New Public Cemetery in Rákoskeresztúr, and the Special National Memorial Site of the Parliament Building and its neighbourhood.

To mark the 200th anniversary of the birth of Ignác Semmelweis, on 30 June 2018 the MNB issued a silver collector coin named 'Ignác Semmelweis Anniversary Year' with a face value of HUF 10,000 and the non-ferrous metal version thereof with a face value of HUF 2,000.

In honour of scientist and inventor György Hevesy, on his birthday on 1 August 2018 the MNB issued silver coin of HUF 5,000 and the non-ferrous metal version thereof with a face value of HUF 2,000. The special, oval-shaped collector coins were added as the fifth member in the series presenting Hungarian Nobel Prize winners launched in 2012 after the coins commemorating Albert Szent-Györgyi, Jenő Wigner, Róbert Bárány and Richárd Zsigmondy. The occasion of the issuance was that Hevesy was awarded the Nobel Prize in Chemistry 75 years ago for 'the use of radioactive isotopes as indicators'.

On 16 October 2018, the MNB issued a silver collector coin named 'The End of World War I' with a face value of HUF 10,000 and its non-ferrous metal version with a face value of HUF 2,000. By issuing the collector coin, the MNB paid homage to the heroic efforts and the sacrifice made by Hungarian soldiers on the anniversary marking the end of the Great War. As a technical novelty heretofore not applied to forint collector coins, the non-ferrous metal collector coin is tarnished by machine in a special metallic coloured finish to highlight the mood of the thematic scheme.

On the occasion of the Wrestling World Championship held in Hungary, the MNB issued a commemorative version of the HUF 50 circulation coin on 17 October 2018. The special metal coin entered circulation in 2 million pieces, of which 12,000 pieces were issued as first-day mint in a decorative packaging (in BU finish).

On 12 November 2018, the MNB issued a silver collector coin with a face value of HUF 10,000 and its non-ferrous metal version with a face value of HUF 2,000 named '450 Years of the Unitarian Church' to commemorate the 450-year existence of the only church founded in Hungary and the Diet of Torda where an edict was adopted to promote religious freedom.

On 19 November 2018, the MNB closed the 2018 collector coin programme with the issue of the silver and corresponding non-ferrous metal collector coins named 'Matthias Corvinus Anniversary Year'. The particularly large HUF 20,000 and 2,000 coins commemorate the 575th anniversary of Matthias Corvinus' birth and the 560th anniversary of his enthronement.

3.8 STATISTICAL SERVICES

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 2018, the MNB issued six decrees related to data reporting in 2019; one of these primarily contains data reporting ordered for the fulfilment of the MNB's basic tasks,[22] supplemented by four decrees ordering data reporting primarily necessary for the fulfilment of supervisory tasks.[23] In addition – in order to ensure its speedy announcement – the MNB Decree on the data reporting obligations to the central bank's information system with respect to specific credit transaction data was published in separate legislation.[24] In 2018, the effective MNB decrees related to the data supplies were modified on two occasions due to changes in the domestic legislative environment and in order to ensure the receipt of data necessary for carrying out the MNB's basic duties and its tasks related to the supervision of the financial intermediary system.[25]

[22] MNB Decree No. 38/2018 (XI. 14.)
[23] MNB Decrees No. 36/2018 (XI. 13.), No. 37/2018 (XI. 13.), No. 39/2018 (XI. 14.) and No. 40/2018 (XI. 14.)
[24] MNB Decree No. 35/2018 (XI. 13.)
[25] The amendments affected the MNB Decrees enacted for the fulfilment of the MNB's core and supervisory duties [MNB Decrees No. 48/2016 (XII. 12.), No. 27/2017 (XI. 21.) and No. 28/2017 (XI. 22.)]

Results of the MNB's credit institution data collection projects

In 2017, pursuant to the decision of the MNB's Executive Board, a project was launched for the purpose of developing a uniform **Central Bank Credit Register** (HITREG) synthesising the central bank's analytical and supervisory requirements. The project reached an important milestone with the November 2018 publication of the data supply decree, which requires the credit institution sector to supply, for the first time in February 2020, credit data pertaining to the end of December 2019. In formulating the decree, within the framework of the HITREG working group set up in conjunction with the Banking Association, the MNB's experts held consultations with data suppliers in order to precisely communicate the data requirements. The high-quality, uniform central bank credit register will offer wide-ranging analysis opportunities for monitoring lending developments and in the longer term, it also facilitates the replacement of aggregated statistics. Another step in the same direction is the ECB's new, Credit Register (AnaCredit) data collection, which establishes a database harmonised across Europe. Euro area countries are required to supply data for the first time with a reference date of 30 September 2018. Although the MNB is planning to join the AnaCredit system at a later date, the AnaCredit requirements have already been incorporated into the data collection of the new central bank credit register, enabling data suppliers to also take into account these requirements during the HITREG developments. After the publication of the decree, the task for 2019 is to work out the detailed methodological requirements, to formulate the verification rules and to carry out the related development tasks for smooth data receipt and processing.

Developments related to the financial accounts

As the latest step in the compilation of retrospective statistics, the MNB issued the publication *Financial Accounts of Hungary 1970–1989* in May 2018 along with the relevant time series. The publication extended the span of Hungarian financial account statistics – which present the financial wealth and financing processes of the national economy and specific economic sectors – by an additional twenty years. Thereafter, the MNB expanded the scope of data dissemination further, and will continue to do so, both in terms of level of detail and the backdating of the time series. The purpose of the publication is to produce long, interconnected time series on the financial position of the Hungarian economy, also covering periods not previously covered by comprehensive financial statistics. As regards thematic statistical publications, the 2017 release of the volume entitled *Financial savings of households based on micro- and macro-statistical data* was followed by a comprehensive publication on the financial position and financing processes of non-financial corporations entitled *Financial accounts of non-financial corporations, micro- and macro-statistical data.* The processing of the data of the second Hungarian household finance and consumption survey (HFCS) conducted at the end of 2017 was completed in 2018, and relying on the results, the MNB also updated the publication on households' wealth distribution.

Supervisory statistics

In 2018, the most important tasks concerning the supervisory data supply of credit institutions were related to the accounting changes. Except for members of the Cooperative Integration, from 1 January 2018 changing over from the Hungarian accounting standards to the application of the International Financial Reporting Standards (IFRS) became mandatory even for those credit institutions which had opted to postpone the changeover in 2017. Simultaneously, the introduction of the new IFRS 9 standard entailed not only the modification of data reporting that contains consolidated financial information (FINREP), but also changes in the IFRS-based, non-consolidated data supplies introduced in 2017 based on such. In view of the significant changes, the MNB placed special emphasis on maintaining adequate data quality. Moreover, with respect to credit institution publications founded on prudential data, the MNB is switching over from the entity-level dissemination of data to the application of a consolidated approach in the publication of time series and related information documents. With data pertaining to end-2018, the new publication was published, for the first time, in March 2019 on the MNB's website.

In the insurance sector, the standard EU regulation of Solvency II (SII) entered into force on 1 January 2016, and the XBRL-based data supply relying on the SII necessitated the transformation of the central bank's monitoring system, which became complete by the time of the 2018 Q1 risk assessment. Thus, the supervisory monitoring system that covers all risks measurable by indicators has been put in place in respect of the insurance sector.

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 Bank for International Settlements (BIS), the International Monetary Fund (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 October 2018, the international working group set up two years earlier by the IMF Committee on Balance of Payments Statistics (BOPCOM) for the development of a statistical data collection for special purpose entities successfully completed its tasks. In line with its mandate, in the first year of its operation the working group explored the existing international practices related to the statistical accounting of special purpose entities, taking account of their features regarding data collection, processing and publication. Based on the findings, in the second year the working group proposed an international statistical definition for special purpose entities. Moreover, it developed a draft questionnaire for the collection of statistical data in relation to the operation of SPEs, which enables the IMF to formulate the details of its data collection to be launched in 2021.

Data quality, administrative inspections

In 2018, the MNB received more than 400 thousand reports from around 5,500 data suppliers. As in previous years, in 2018 the MNB audited compliance – i.e. the timely submission of the reports and the data quality – with the reporting requirements specified on the basis of the MNB decrees specifying data supply to the central bank information system and by the directly applicable EU legal acts (hereinafter together: reporting regulations) in the form of continuous inspections. Based on the continuous inspection of compliance with the data supply requirements, in addition to resolutions imposing measures, notices and letters of warning, in 2018 the MNB imposed fines on 58 data suppliers on 74 occasions due to the omission or late performance of reporting obligations. During the year one administrative control procedure was launched against one credit institution; the conclusion of the procedure is in progress.

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

The Pallas Athena Public Thinking Programme forms a key element of the MNB's Social Responsibility Strategy which was developed on the basis of the MNB's Statute. In the implementation of the programme, the central bank considers it to be its task to enhance financial literacy, financial awareness, the underlying economic and social thinking, as well as the related institutional system and infrastructure. With a view to achieving the set goals, the MNB works to renew and enhance education (primarily tertiary education) and the system of economics and financial training, and to support scientific activity and financial literacy. The educational programmes supported by the MNB and its foundations are partly its own initiatives, and partly realised through institutional partnerships.

Aside from the previously established cooperation with universities (Corvinus University of Budapest, Budapest Business School, the University of Sopron, the University of Miskolc, Károli Gáspár University of the Reformed Church in Hungary), in 2018 the MNB entered into a cooperation agreement with the University of Nyíregyháza as well. Upon the closure of the 2018/2019 academic year, the MNB reviewed the professional and financial performance of the cooperation programmes; the parties jointly evaluated the programmes and enhanced them in accordance with the objectives and the experiences so far. The MNB renewed its cooperation agreements with the universities for the 2018/2019 academic year.

The cooperation between the MNB and the Corvinus University of Budapest (BCE) has been continuous since 2015 and has become the central bank's largest education programme over time. In 2018, this cooperation was also extended to the area of international business administration. With the professional support of and under the coordination of the MNB, BCE and Fudan University of Shanghai launched a Double Degree MBA Programme in February 2019. Inter-institution coordination for the programme is provided by the central bank. With the professional involvement of the MNB, the Corvinus-MNB International Executive Project Center has been also established at the BCE, for programme coordination and the development and further extension of international relations.

In cooperation with John Von Neumann University and as a dual corporate partner thereof, the MNB participates in the training of students in Business Management bachelor

courses. At present, more than 30 dual students are obtaining professional skills and experience in the context of these courses.

As part of the implementation of the MNB's corporate social responsibility strategy, for the 2018/2019 academic year the MNB has announced, for the third time, the *MNB Scholarship of Excellence* for students of economics participating in bachelor and master programmes relevant to the central bank's activity. In the 2018/2019 academic year almost 500 students of 27 Hungarian higher education institutions were granted the scholarship.

In 2018, the cooperation between the MNB and TDK-ért Közhasznú Alapítvány ('For the Scientific Students' Circle' Non-Profit Foundation) continued. The purpose of the cooperation is, among other things, to improve financial awareness and support interdisciplinary scientific fields.

The *MNB Summer School of Economics* was organised, for the second time, in the summer of 2018, attracting foreign students from numerous countries. The practice-oriented professional programme also provided an excellent opportunity for international networking.

With the financial and professional participation of the MNB, as an incentive for the continuing education of the Tiszaroff sub-region the *'Tiszaroff Scholarship Tender'* has been announced each year since 2015 to support students in higher education. Under the title *'Tiszaroff Further Education Scholarship Tender',* in 2017 the programme was extended to the support of the studies of high school students. In the spring semester of the 2017/2018 academic year 74 university students (including 2 PhD students) and 38 high-school students won scholarships, while in the autumn semester of the 2018/2019 academic year 69 university students (including 2 PhD students) and 40 high-school students won scholarships.

Between 13 March and 11 June 2018, in cooperation with the University of Sopron the MNB organised a travelling exhibition on the history of Hungarian currencies named *'From the dénár to the forint'.* Showcasing around 500 items, the exhibition featured valuable and rare objects of interest presenting the history of Hungarian currencies. In September 2018, a temporary exhibition entitled *'Coins of Kings – Coinage at the Buda Court in the Middle Ages'* was opened in the House of Wisdom with the participation of the central bank. 200 coins from the MNB's collection were shown at the exhibition, accompanied by coin artefacts uncovered during the excavation of the building, owned by the Budapest History Museum.

In parallel with the organisation of temporary and travelling exhibitions, the MNB began formulating the concept for the MNB's future Money Museum and Visitor Centre. According to the plans, the facility will open in 2020 with a broad spectrum of programmes and unique attractions offered to all ages. Relying on state-of-the-art technological features, the facility will contribute to enhancing the

Table 8
Art treasures acquired under the Depository Programme in 2018

Work of art	Acqisition cost	Placement
A painting by Mihály Munkácsy (1844-1900) entitled Poros út I. (Dusty Road I)	HUF 500 million	Hungarian National Gallery
14 paintings by painter and graphic designer Lajos Vajda (1908-1941)	HUF 181.5 million	Hungarian National Gallery
A painting by Kossuth- and Munkácsy prize winning painter, Tibor Csernus (1927-2007) entitled Saint-Tropez	HUF 110 million	Hungarian National Gallery
A painting by József Rippl-Rónai entitled Medgyessy Ferenc Rippl-Rónai szobrával (Ferenc Medgyessy with the Statue of Rippl-Rónai)	45 million	Hungarian National Gallery
A painting by Jan Van Der Heyden (1637-1712) entitled View of a Small Town Square	EUR 400 thousand	Museum of Fine Arts, Budapest
A painting by Giovanni Battista Pittoni (1687-1767) entitled The Death of Saint Joseph	HUF 20 million	Museum of Fine Arts, Budapest
A painting by Willem Adriensz Key (1515/16 – 1568) entitled Portrait of a Gentleman	EUR 58 thousand	Museum of Fine Arts, Budapest
A painting by Sébastien Bourdon (1616-1671) entitled The Holy Family with a Washerwoman	EUR 250 thousand	Museum of Fine Arts, Budapest
A series of eight portraits by an unknown painter depicting Hungarian historical figures (ca. 1700)	EUR 400 thousand	Hungarian National Museum
A collection of 8 paintings by Soma Orlai Petrich entitled Szép Ilonka (Beautiful Helen)	HUF 32 million	Petőfi Literary Museum

financial awareness of the population, particularly targeting younger generations. The Facebook page and homepage of the Money Museum have been operational since autumn 2018, featuring the future museum's preliminary visual plans drawn up for inspirational purposes.

With the implementation of its Depository Programme, the MNB contributed to the preservation of cultural heritage. The purpose of the programme is to reclaim for Hungary the largest possible portion of art treasures of significant artistic value, created by Hungarian or foreign artists and taken abroad or under foreign ownership in previous historical periods, and to prevent the dispersion of the most important works of art held in domestic estates by purchasing these items. Purchases made in 2018 under the programme are shown in Table 8.

In 2018, more than 413,000 visitors viewed the art treasures purchased and displayed in various Hungarian public collections under the Programme. A list of the most popular acquisitions:

– On display at the permanent exhibition of the Hungarian National Gallery are, among others, Tiziano Vecellio's Virgin Mary with Child and Saint Paul, Lajos Gulácsy's The Mulatto and the Sculpturesque White Woman, János Vaszary's Christianity, Dezső Orbán's Great Nude, and Abraham van Beijeren's Still-Life with Fruit, Sea Food, and Precious Tableware, which attracted 234,000 visitors annually.

– The permanent, interactive exhibition 'Muster of Arms' in the István Dobó Castle Museum of Eger had 84,000 visitors. One of the greatest sensations of the exhibition is the presentation of rare pieces from the Péterváry weapon collection.

– 53,000 people went to see Mihály Munkácsy's monumental painting Christ in front of Pilate in the Déri Museum of Debrecen.

– 40,000 people were attracted by Miklós Barabás's Portrait of Sándor Petőfi displayed at the permanent exhibition of Petőfi Literary Museum as one of the most prestigious pieces of the Ferenc Kiss collection.

Special mention should be made of the travelling exhibition *'Emperors' Treasure Trove'* in the Janus Pannonius Museum of Pécs, showcasing the Transylvanian silver coin tallérs – known as the Törő collection – acquired by the MNB under the Programme. As part of the exhibition, 48 gold coins of the MNB's Banknote and Coin Collection were also on display.

Detailed descriptions and educational videos of the items and collections acquired under the MNB's Depository Programme – which was launched in 2014 and concluded as planned in 2018 – are available on the central bank's homepage under the Depository Programme menu option at https://www.mnb.hu/a-jegybank/ertektar-program (in Hungarian only).

In addition to the above, once again in 2018 the MNB participated, to the best of its capacity, in the preservation of Hungary's intellectual and cultural heritage (e.g. Museum of Fine Arts, Pannonhalma Archabbey Non-Profit Foundation, Kortárs Folyóirat Kiadói Kft.), and supported specialist training and financial education (e.g. Hungarian Economic Association, Association of Business and Scientific Societies, Association of the Professional Organisations Public Servants). It contributed to improving the equal opportunities of disadvantaged groups and to alleviating the difficulties arising from extraordinary life situations (e.g. Hungarian Red Cross, Hungarian Maltese Charity Service, International Children's Safety Service, Hungarian Interchurch Aid).

3.10 THE MNB'S ENVIRONMENTAL SUSTAINABILITY ACTIVITY

The MNB's environmental sustainability activity was defined by its environmental strategy adopted in 2017. For the period 2017–2019, the environmentally-conscious development of buildings and the enhancement of the environmental performance of the cash supply chain are the focus of the strategy.

In 2014, the MNB set the goal for its head office to achieve, by the end of 2016, the 'Very good' building certification in the international environmental rating system (BREEAM In-Use), which was one grade higher than the rating at that time. The external audits of the comprehensive building rating (MNB Head Office, Logistics Centre) was performed at the end of 2016 and the MNB managed to obtain the 'Very good' rating for the building of its Head Office as well. The objective of the environmental strategy for the period 2017–2019 was to have the 'Very good' rating confirmed for the Head Office building and to maintain the 'Very good' rating obtained for the building of the Logistics Centre. In 2018, the certificates of both buildings were renewed.

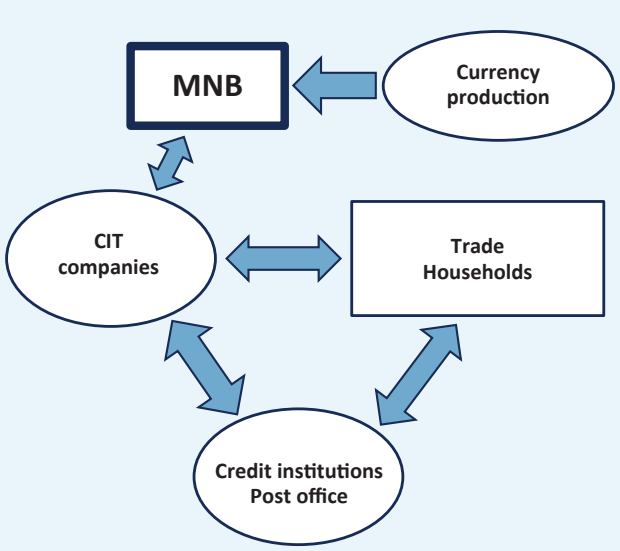
Reduction of the environmental pollution of the cash supply chain

From an environmental sustainability perspective, the implementation of the project entitled 'Carbon footprint of the cash supply chain' was a major achievement of 2018, concluding almost a decade of work. After the assessment

of the environmental burden of Hungary's cash supply, a model was developed that allows for the monitoring of the per unit carbon dioxide emission of the entire process. This is a major professional achievement: the environmental burden was identified along the entire cash supply chain, and the uniform model provided the means for the comprehensive assessment of environmental performance.

The cash supply chain can be divided into three main elements: cash logistics activity within the MNB (distribution, processing), cash production (activity of subsidiaries involved in production) and the activity of cash logistics service providers.

Chart 14
Route of cash in the economy



Enhancement of the cash logistics process within the MNB

Relocating the cash logistics activities to the Logistics Centre while significantly increasing the degree of automation demanded, by definition, the creation of a new, up-to-date workflow that also offered benefits from the aspect of environmental sustainability. After they had become operational, the processes were fine-tuned in consideration of environmental criteria.

In collaboration with cash logistics providers, the process of cash distribution was also enhanced:

– the changeover to high-volume coin transportation reduced the frequency of deliveries, which significantly alleviated the environmental burdens entailed by the process,
– in cash processing there was a sharp decline in packaging waste (packaging accessories).

As the first step of the 'greening' of the cash supply chain, the MNB implemented a number of measures internally which rendered its cash processing and distribution activities more environmentally friendly.

Cash production, subsidiaries involved in production

The assessment of the environmental performance of MNB subsidiaries involved in domestic cash production was one of the undertakings of the environmental strategy adopted in 2014. All three subsidiaries involved in cash production operate a quality control system, and Pénzjegynyomda Zrt. and DIPA also hold an ISO 14001 (environmental management) certificate.

As the second step in the efforts to render the cash supply chain more environmentally conscious, a project was launched to review the environmental impact of cash production activity and to evaluate the environmental performance of the subsidiaries involved in cash production (DIPA Diósgyőri Papírgyár Zrt., Pénzjegynyomda Zrt., Magyar Pénzverő Zrt.).

In relation to improving the environmental performance of its subsidiaries, the MNB took an important step forward in extending the Eco-Management and Audit Scheme to the subsidiaries. At the end of 2017, Pénzjegynyomda and DIPA obtained an EMAS certificate equivalent to that of the MNB, which guarantees that the environmental impacts of domestic cash production are kept under continuous and adequate control.

Cash logistics providers/suppliers

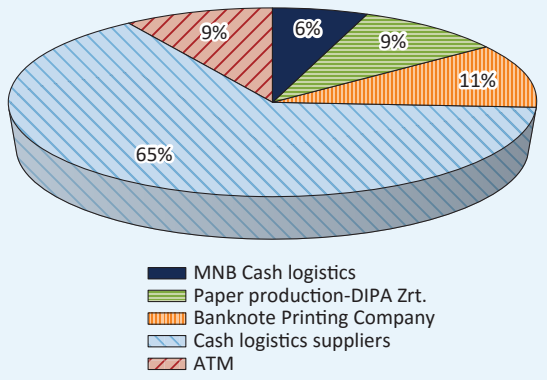
In the third step, in 2017 the MNB launched a project for the purpose of developing a carbon dioxide equivalent-based performance assessment scheme for cash logistics providers, as was the case with the subsidiaries. Since the carbon footprint of the MNB's internal logistical processes and cash production has already been quantified, one of the objectives of the project is to ensure that the MNB has environmental indicators in place for the entire cash supply chain, with special regard to CO_2 emissions.

The project established that in 2018 almost two thirds of the total CO_2 emissions of the cash supply chain were related to the activity of cash logistics suppliers. In 2018, the total CO_2 emissions of the entire cash supply chain amounted

Table 9
Changes in total energy consumption

Total energy consumption	2016 base				2018				Change from 2016 base (%)
	Head Office Building	MNB Logistics Centre	Krisztina krt. Building	Total	Head Office Building	MNB Logistics Centre	Krisztina krt. Building	Total	
Electricity consumption (GWh)	2,886	2,379	1,397	**6,662**	3,031	2,701	1,352	**7,084**	**6.3**
Heating, hot water energy consumption (GWh)	1,855	890	1,257	**4,002**	1,896	981	1,161	**4,037**	**0.9**
Fuel energy consumption (GWh)	501			**501**	467			**467**	**–6.9**
Total energy consumption (GWh)				**11,165**				**11,588**	**3.8**
Unit energy consumption (GWh/person)				**9.4**				**9.2**	**–2.9**

Chart 15
Percentage share of the carbon footprint of the cash supply chain



to 16,000 tons; i.e. 3.5 times the CO_2 emissions linked to the energy consumption of the buildings used by the MNB.

Energy indicators

The trends in the MNB's environmental performance are mostly determined by energy consumption and particularly by energy consumption related to the operation of the buildings. As regards the total energy consumption of the properties included in our environmental management system (Head Office, Logistics Centre, business site at Krisztina krt.), it can be stated that the hidden reserves of the system have been identified in recent years, and a number of measures were implemented resulting in energy savings. In respect of the targets set for the reduction of energy consumption, it is difficult to formulate a responsible commitment due to the extreme weather conditions accompanying global warming; nevertheless, the MNB is making continuous efforts to improve specific energy consumption. In 2018, total energy consumption rose mainly as a result of the works related to the replacement of the bank security system in the Head Office and in the building of the Logistics Centre, which implied a direct increase in electricity consumption. The energy used for heating practically stagnated, while the streamlining of the motor vehicle fleet resulted in a 6.9-per cent decline in fuel consumption.

The decrease in the per capita total energy consumption that characterised the previous years continued, with a 2.9-per cent decline registered at the end of 2018 compared to the baseline of 2016 specified in the environmental strategy.

Waste management

In 2018, the volume of selectively collected plastic and paper waste increased, which raised the recycling rate. The volume of communal waste also increased as a result of the reconstruction works carried out in the buildings. The MNB managed to transfer all electronic devices and equipment to a charity organisation for recycling purposes; therefore, the MNB did not generate such waste in 2018. In addition, there was a sharp decline in the volume of hazardous waste.

Water management

Consumption-reducing devices (perlators) were installed in the sanitary units of the buildings, which lowered consumption by more than 6 per cent.

As a result of global warming, the quantity of groundwater used for cooling the head office and watering the lawn at the Logistics Centre rose significantly.

Environmental burden related to travel

The rules on the use of taxi service were tightened, which resulted in a decline in the volume of travel. In addition, a decrease was registered in the case of foreign assignments involving air and passenger car travel. In 2018, the MNB replaced 90,000 kilometres of travel by the use of video conferences, saving nearly 20 tons of CO_2 emissions.

Operating the environmental management system (KÖVHIR) allows the MNB to continuously monitor the environmental factors that result in significant environmental impacts and intervene, as necessary, to improve the environmental performance year by year.

3.11 FACTORS SHAPING THE COMMUNICATION OF THE MNB

In order to supply the general public with continuous and comprehensive information, in 2018 the MNB issued a total of 323 press releases, held more than 30 press conferences and published 50 professional articles in the printed press, on online portals and on its own website.

As in previous years, the MNB's communication focused on key decisions concerning the core tasks of the MNB, monetary policy and financial stability. Communication comprised the presentation of the most important decisions of the central bank, the publication of the outcomes of the Monetary Council's meetings and the presentation of the results of supervisory audits and procedures. Warnings about the necessary precautions to identify risk related to financial operations also formed part of the supervisory communication. The key objective of the information was to present and describe the targeted central bank programmes and measures supporting the economic policy of the government and the economic growth of Hungary along with important professional decisions.

Once again, the MNB regularly published professional articles in 2018. The purpose of the articles was to present the MNB's activity more thoroughly and with a higher level of detail, to describe the background of professional decisions and processes in an easy to understand form, and to bring closer the work and achievements of the various functional areas to the general public. Cooperation with the major and competent professional and economic portals and media outlets played an important role in the publication of 50 articles with professional content.

The focus of the campaign communication of 2018 was the publication of notices and information documents concerning the 'Certified Consumer-Friendly Housing Loan' programme. The objective of the campaign was to call attention to the opportunity of taking recourse to certified housing loans, to promote the MNB's own calculator that facilitates searching among the certified loans and indirectly, to encourage households to take out safer, fixed-interest loans. The information documents published as part of the communication campaign appeared in television and radio broadcasts, and in the form of advertisements in the online and printed press. The communication activity performed throughout the year also contributed to the continuously increasing recourse to Certified Consumer-Friendly Housing Loans and hence, to increasing the share of fixed-rate housing loans, i.e. it encouraged less risky borrowing.

In 2018, notices on newly released banknotes and raising awareness among households and participants of the commercial sectors about the actual withdrawal dates were given special focus in the provision of information on the specific steps of the banknote replacement programme. The central bank notified the general public of all relevant information through the press, in the form of notices and press conferences and by displaying posters in commercial premises directly.

For the purpose of enhancing the financial awareness and knowledge of consumers, in 2018 the MNB also provided the population with a broad range of important, useful information through its seasonal campaigns, brochures and short films. The MNB provided regular, detailed information on its value creating initiative supplementing the traditional central bank activities, including the educational programmes implemented through university cooperation and the activities performed with a view to adding to the domestic art treasures within the framework of the Depository programme.

In addition, the MNB enhanced its new-generation communication tools as well: the number of visitors to the central bank's social media sites increased continuously, and today the MNB keep in contact with more than 42,000 followers on this interface.

3.12 THE MNB'S INCOME IN 2018

In 2018, the MNB recorded a profit of HUF 47.8 billion. In 2018, the following main developments had an effect on the balance sheet and the profit:

– the level and composition of foreign exchange reserves defined by monetary policy, and foreign currency purchases and sales 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, the foreign exchange conversions performed by the Hungarian State Treasury for purposes not related to debt financing, replenishment of central bank gold reserves;

– developments in instruments absorbing forint liquidity, which are correlated with changes in foreign exchange reserves and the MNB's net foreign currency receivables;

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

No.	Description (P/L line)	2017	2018	Change
1	Net interest and interest-related income (I+II)-(X+XI)	10.7	27.1	16.4
2	- net forint interest and interest-related income (I-X)	11.8	23.6	11.8
3	- net foreign exchange interest and interest-related income (II-XI)	-1.1	3.5	4.6
4	Realised gains/losses arising from financial operations (IV-XIV)	1.2	-7.5	-8.7
5	Income arising from exchange rate changes (III-XII)	61.4	74.0	12.6
6	Other constituents of net income* (V+VI+VII+VIII)-(XIII+XV+XVI+XVII+XVIII)	-35.0	-45.8	-10.8
7	**Profit/loss for the year (1+4+5+6)**	**38.3**	**47.8**	**9.5**
	Selected items of equity in the balance sheet			
8	Retained earnings	162.2	200.4	38.2
9	Revaluation reserves due to unrealised foreign exchange gain/loss	28.0	169.6	141.6
10	Revaluation reserves due to changes in the market value of the foreign currency securities	3.9	6.6	2.7

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

– monetary policy instruments supporting the banks' lending activity: the mortgage bond purchase programme, the Funding for Growth Scheme, interest rate swap tenders;

– changes in forint interest rates and international foreign exchange interest rates; and

– changes in the forint exchange rate.

Net interest and interest-related income amounted to HUF 27.1 billion, which represents a further improvement of HUF 16.4 billion compared to the previous year. The return of net interest income to positive territory can be attributed to the change in the central bank's balance sheet in recent years, partly as a result of the self-financing programme. In 2018, both the forint and foreign exchange interest income showed a gain, which can be explained – besides the balance sheet structure – by the favourable impact of monetary policy actions and foreign exchange reserves management on the profit/loss.

Net forint interest and interest-related income amounted to HUF 23.6 billion, surpassing the 2017 result by HUF 11.8 billion. In the short run, the new monetary policy instruments introduced in 2018 – monetary policy interest rate swap tenders and the mortgage bond purchase programme – raised forint interest income. The average balance of interest-bearing forint liabilities (forint deposits of the central government, reserve requirement, liquidity-absorbing instruments) declined further in 2018 primarily as a result of the increase in the share of cash holdings in the balance sheet. Although the central bank base rate did not change in 2018, the realignment of liquidity absorbing deposits from 3-month deposits to O/N deposits prompted by the quantitative limit resulted in lower interest expenditures, exerting a favourable impact on forint interest and interest-related income.

Foreign exchange net interest and interest-related income amounted to HUF 3.5 billion, which translates to a HUF 4.6 billion improvement compared to the loss recorded for 2017. The favourable change in the result can be predominantly attributed to the rise in the interest income on the foreign exchange reserves, which partly reflects the increase in the level of the reserves and partly the change in some elements of the investment strategy.

The realised gains from financial operations contain, for the most part, gains and losses realised from changes in the market price of securities generated upon the sale of the securities. In relation to the increase in US dollar yields during the year, this profit/loss category turned negative in 2018. In 2018, the realised loss arising from financial operations amounted to HUF 7.5 billion.

Income arising from exchange rate changes is determined by the difference between the forint's official exchange rate and its cost rate on the one hand and by the volume of foreign currency sales – predominantly in relation to the debt management transactions of the Government Debt Management Agency – on the other hand. The rise in the cost rate continued during the year, but at the same time the depreciation of the forint widened the difference between the official and the cost rates which stood at higher levels than in the previous year for most of the year. The realised income from exchange rate changes rose compared to 2017 and stood at HUF 74 billion.

Other components of net income include operating income, costs and expenses, the costs of issuing banknotes and coins, creation and release of provisions, income from supervisory activity and income/expenses from fees and commissions and other income/expenses. Net expenditures resulting from these items rose by HUF 10.8 billion, amounting to HUF 45.8 billion in 2018.

The MNB's equity amounted to HUF 434.4 billion on 31 December 2018. Its size was determined by the volume of retained earnings, the level of the revaluation reserves and the developments in the profit/loss for the year.

Revaluation reserves due to forint exchange rate changes rose by HUF 141.6 billion compared to end-2017. This is because the difference between the official rate and the cost rate widened, and the portfolio of the foreign currency assets subject to revaluation also increased. Revaluation reserves due to exchange rate changes stood at HUF 169.6 billion on 31 December 2018.

On 31 December 2018, unrealised gains on foreign currency securities marked to market amounted to HUF 6.6 billion, which exceeds the previous year's level by HUF 2.7 billion.

3.13 FINANCIAL PERFORMANCE OF THE MNB

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

Operating costs

Actual operating costs in 2018 amounted to HUF 40,762 million, which is 0.9 per cent below the approved budget (excluding central reserves) and 8.7 per cent above the expenditures incurred in 2017.

The year-on-year cost increase affected both personnel expenditures and general operating costs.

In the case of personnel expenditures, the difference predominantly reflects the Board of Directors' decision to raise the 2017 wage bill limits – which are intended to cover the recognition of extraordinary performance – by 8.25 per cent from 1 January 2018. In addition, the 1.6-per cent increase in the average headcount and the 2.3-per cent reduction in contributions also had an impact on the difference.

Within general operating costs, IT and operational costs showed the largest increase.

Personnel costs

In 2018, personnel costs (HUF 24,119 million) exceeded the previous year's figure by 7.9 per cent (by HUF 1,772 million).

In order to ensure and retain highly qualified personnel over the long term, the 2017 wage bill limits of the wage management areas – within the wage bill management scheme – were raised by 8.25 per cent from 1 January 2018. Average headcount rose by 1.6 per cent, mainly as a result of filling the vacant positions of functional areas. As regards the contributions of personnel costs, the saving generated compared with the costs of 2017 is linked to a 2.5-per cent reduction in the contribution rates.

In the reporting period, there were no material changes in the wage structure and the remuneration system compared to the previous year.

In addition to the items mentioned above, the difference in personnel costs is also related to an event of international significance. In the first half of 2018, the MNB hosted the Annual Conference of the International Organization of Securities Commissions (IOSCO[26]), and a number of one-

Table 11
Operating costs of the MNB in 2018

Description	Actual data for 2017	Budget for 2018	Actual data for 2018	Index (2018 actual / 2018 budgeted)	Index (2018 actual / 2017 actual)
	HUF millions			Per cent	
1. Staff expenditures	22,347	24,304	24,119	99.2	107.9
2. General operating costs	15,161	16,831	16,643	98.9	109.8
Total	**37,508**	**41,135**	**40,762**	**99.1**	**108.7**

[26] International Organization of Securities Commissions

off expenses arose in connection with the event. Moreover, a number of additional events also gave rise to previously unincurred representation costs.

General operating costs

In 2018, general operating costs (HUF 16,643 million) were 9.8 per cent higher than in 2017 (up HUF 1,482 million); the changes in the components can be attributed to the following reasons.

IT costs rose by HUF 618.7 million (27.2 per cent) compared to the previous year. Predominantly, this reflects the increased costs of the services used in relation to the IT systems, as an effect of decisions made and maintenance and support service agreements concluded in previous years. Moreover, the operating costs of the new systems introduced by the completed IT projects in the second half of 2017 were now incurred for the whole year of 2018.

Compared to 2017, *operating costs* were higher (HUF 411 million, up 6.9 per cent), which resulted, on the one hand, from a rise in real estate leases. The increase primarily reflects the lease-back of some areas of the Eiffel Palace real estate sold in 2017 and the leases of the international offices opened abroad since last year. Moreover, in 2018 the costs associated with expert (evaluating/analysing and security technology supporting) activities performed by MNB-Biztonsági Zrt. in relation to bank-security were incurred for the whole year of 2018.

Other expenses in 2018 were up 1.7 per cent (HUF 73 million) compared to the expenses recorded in 2017, primarily as a result of a significant increase approved by the MNB's Board of Directors in the expenses of communication services linked to the communication campaign promoting the Certified Consumer-Friendly Housing Loan Programme (and the banknote replacement) in the social media. The extra costs resulting from the above were mitigated by the decrease compared to 2017 in other expert expenses (related to complex research/analysis, consultancy and paper-writing tasks), and in the costs of other foreign assignments and legal expert 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 – decreased significantly. On the one hand, this is related to the sale of the Eiffel Palace building in 2017, as the transferred depreciation of the areas leased up to then no longer reduced operating expenses in 2018. At the same time, operating expenses were reduced by some expenditures of the IOSCO Conference that were offset by revenues (e.g. entry fee).

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 the normal operations, the approved capital expenditure budget for 2018 amounted to HUF 10,633 million. In relation to the Corporate Social Responsibility Programme, the MNB supported the purchase of art treasures as part of the Depository Programme, for the implementation of which the approved capital expenditure plan included a separate appropriation (the MNB's Board of Directors decided on the conclusion of the Depository Programme in August 2018). In 2018 HUF 8,165 million was paid for capital expenditures, the vast majority of which – with the exception of the HUF 934,000 payment of the Depository Programme – was linked to normal operations.

A large portion of the capital expenditures in 2018 was incurred in relation to various IT projects and the purchase of IT equipment, of which the largest items included the following capital expenditures:

– renewal of network devices;

– renewal of central data storage systems;

– continuation of the STAFIR programme (integration of statistical and supervisory IT systems);

– renewal, modernisation and expansion of the security and information technology systems of the MNB Head Office;

– procurement of user workstations;

– renewal of Microsoft licenses;

– procurement of servers for the support of VIBER services.

The most important real-estate related projects in 2018 included the rainwater drainage solution installed for the Logistics Centre, the continuation of the 3rd and 4th floor window replacement of the Szabadság tér historic monument and real-estate related projects aimed at the modernisation and enhancement of bank security.

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. The MNB provides stable employment and 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, and 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. All of this helps the employees realise their individual interests in harmony with the interests of the institution.

Based on the human resource strategy, highly educated and motivated employees can be secured 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. The MNB still considers it important to employ highly qualified, knowledgeable, dedicated and loyal employees, who enable the central bank to take active part in the changes arising in line with the renewing domestic economic and social interests and values.

Once again in 2018, the MNB elaborated a training plan, as part of which it prepared a Training Catalogue with a view to providing a pool of highly qualified employees. Employees typically attended professional trainings, personal skills development programmes, domestic leadership trainings and language trainings, which – tailored to individual needs – served the participants' development in terms of efficiency, approach as well as the development of cooperation skills.

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. 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 in the bank.

In 2018, the human resource area continued the development of HR systems, which supported the integration of new entrants, 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 give proposals.

With its multi-component fringe benefit system, the MNB provided a wide range of benefits to its employees in 2018 and also preserved its family welfare scheme. In this context, it provided special support for families and contributed to the mitigation of burdens related to the occurrence of unexpected situations in life. For the preservation of the personnel's health, a complete medical check-up programme was available for each employee once a year.

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 an acknowledgement of its Child-focus and Family-friendly Programme, once again in 2018 the MNB won the title of 'Family-friendly Workplace' presented by the Ministry of Human Capacities. 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.

Changes in staff number

The headcount of the MNB in 2018 was shaped by the labour-intensiveness of the tasks to be completed.

As a result of staff turnover, natural migration and quality-driven replacements, 167 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, 206 persons were recruited and added to the MNB's statistical headcount in 2018, including the employees returning from inactive payroll.

As the combined balance of the decreases and increases, the closing headcount of 2018 was 1,446, exceeding that of 2017 by 39 persons.

In 2018, the average staff number of the MNB was 1,434.2 employees, exceeding that of the previous year by 22.9 persons.

In dual education, the MNB supported and accepted 45 students as trainees.

The average age of employees in 2018 was 40.

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 by the internal regulations of the Director General and the Business Management Manual, in accordance with the effective Act on Public Procurement.

The procurement needs arising in 2018 resulted in a total of 820 procedures. The total value of the procedures amounted to HUF 9,895.2 million, of which the value of the contracts concluded by the MNB as a result of successful public procurement procedures was HUF 8,538.4 million.

No legal remedy was sought in relation to the procurement procedures concluded; the tasks were performed by the deadline without any reputation risk.

Operational risk management

The successful implementation of the MNB's strategic objectives and the protection of its good reputation and assets are crucially 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 line with such practices. For the purpose of monitoring international best practices, the MNB joined the International Operational Risk Working Group, the international organisation supporting the development of the operational risk practice and cooperation of central banks.

In order to be able to adequately fulfil its fundamental tasks in critical situations as well, the MNB has efficient business continuity management in place. In this context, it continuously updates its business continuity and disaster recovery plans, the reliability of which is tested every year. The live integrated test performed in respect of the operation of the payment system and foreign reserve management bears the utmost importance.

3.14 INTRODUCTION OF THE ESCB COMMITTEES

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 joint 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 2018, 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): COMCO has been an ESCB committee since July 2007 (only euro area NCBs participate in the work of this committee). 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/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.

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

Financial Stability Committee (FSC): The FSC has been operational since 2011, when the Banking Supervision Committee (BSC) ceased to operate. 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): The group operates under the name of MIPC since 1 April 2016; previously it had been known as the Payment and Settlement Systems Committee (PSSC). 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 Member States where the euro is yet to be introduced, 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.

Organisational Development Committee (ODC): The ODC was set up in July 2013 with only euro area members. 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.

Risk Management Committee (RMC): The RMC was set up in September 2010 and comprises euro area members only. 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.

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 central banks of euro area Member States.

Human Resources Conference (HRC): Established in 2005, 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 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 2018, four papers prepared by the MNB's researchers and analysts were published in prestigious international journals, and another study was accepted for publication in 2019. The MNB study published in the December issue of *Labour Economics* examines the impact of wage changes in the public sector. The paper published in *Public Choice* analyses whether fiscal rules contribute to the maintenance of sound fiscal policy. The *Journal of Financial Stability* also published a study co-authored by an MNB staff member, on the topic of how to explore the interconnectedness between financial institutions based on partial data records, and on how to safeguard against the resulting spillovers of financial crises. The study written by the MNB's author and published in the *Journal of Network Theory in Finance* addresses a similar topic, examining the effects of contagions originating in interbank markets. Finally, a paper on monetary policy transmission through the effect of VAT changes which was co-authored by an MNB expert was accepted for publication in 2019 in the *American Economic Journal*: *Macroeconomics*.

In addition to the above, the ECB's *Occasional Papers* series also published a study co-authored by an MNB staff member on European financial and business cycles. Of the Hungarian journals, the *Economic Review* accepted for publication an MNB study on housing loans; two papers were published in the *Statistical Review* on Hungary's financial accounts in the period of 1949–1989; and the *Public Finance Quarterly* published four central bank studies on the use of cash and cards, on green bonds, on incentivising tax systems and on the renewal of the economics profession. Numerous applied research results were also published in the MNB's internal publications. The MNB *Working Papers* series and the MNB *Occasional Papers* series each published three papers on topics of central bank relevance, while the 2018 issues of the *Financial and Economic Review* contained 13 studies, one essay, eight book reviews and four conference reports written by MNB staff members. In addition to its Hungarian and English language issues, starting from 2018 the *Financial and Economic Review* also publishes a collection of studies in Chinese language.

3.16 PUBLICATIONS AND CONFERENCES ORGANISED BY THE MNB

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

Housing Market Report

The MNB's publication entitled *Housing Market Report* presents the current trends in the Hungarian housing market semi-annually. 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 to 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- and long-term prospects of economic activity.

Macroprudential Report

The purpose of the annual *Macroprudential 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 dimensions 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. This publication is released once a year, in Hungarian and English.

Financial Consumer Protection Report

The MNB publishes its *Financial Consumer Protection Report* once a year, online and in printed form. The purpose of the publication is to inform the institutions of the financial system and the public on current financial consumer protection issues, thereby also enhancing the risk awareness of the stakeholders, while at the same time maintaining and strengthening confidence in the financial system. The *Report* provides a detailed description of the MNB's financial consumer protection, administrative and customer service activities and the priority cases that affected a wide range of consumers in the period under review.

Insurance, Funds and Capital Market Risk Report

The MNB publishes its *Insurance, Funds and Capital Market Risk Report* once a year. The publication is limited to the presentation of the risks of insurers, funds, non-banking group financial enterprises and intermediaries. It provides primarily a more in-depth analysis of the sectors which are not or only briefly discussed by the *Financial Stability Report*, and therefore it does not contain findings about the credit institution sector discussed in detail in the former. The main objective of this publication is to increase the risk awareness of those active in the supervised markets and to strengthen confidence in these sectors.

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, 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 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 the developments in the budgetary 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 CXCIV 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 Stability Act and makes them available for 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 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.

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

The *Semi-annual Report* is published once a year in September. The report is the central bank's business report pertaining to the first half of the year.

Interim Report: Quarterly Report on the MNB's Activities

The *Interim Report* is published twice a year, 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.

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.

Analyses, studies, statistics

MNB Occasional Papers

This series presents economic analyses related to the MNB's monetary policy decision-making process. It is intended to increase the transparency of monetary policy. Accordingly, in addition to studies describing the technical details of forecasting, this series also covers economic issues that arise during the preparatory work for decision-making. The *MNB Occasional Papers* series primarily presents practical (applied) research related to the central bank's professional areas, summarises recent advances in the international literature a central bank relevant 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. Since the autumn of 2005, this series has only been available in English.

Financial and Economic Review

The *Financial and Economic Review* is a journal in social science with a history of over a decade. Since the end of 2014, the journal has been edited and published quarterly by the MNB in separate volumes in Hungarian and in English. Starting from 2018, 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. It is available on the website of the Financial and Economic Review (http://english.hitelintezetiszemle.hu/).

MNB Handbooks

The MNB considers the development of financial literacy in Hungary as one of its priority tasks, hence, relying on its available means, it intends to facilitate education in the field of economics as well as the widening and enhancement of financial literacy. In May 2016, the central bank launched a series called '*MNB Handbooks*' on economic, financial and monetary policy matters in both Hungarian and English.

Other publications

Budapest Institute of Banking (BIB)

No competitive financial system could be managed without cutting-edge market information. And neither can such knowledge be maintained in the absence of internationally recognised quality education. The BIB publication is an educational and scientific booklet on a diversified spectrum of education, supplemented with modern financial and economic information.

Financial Navigator Papers

Published by the Financial Consumer Protection Centre (FCPC), this series of thematic booklets provides assistance in orientation and on financial issues. The booklets are available in the branches and customer service offices of various financial institutions and in the customer reception areas of the Financial Navigator Advisory Office Network. In accordance with changes in legislation and ensuring that the wording remains clear and easy-to-understand, the FCPC regularly updates the contents of the booklets. Taking notice of the results of various reports and research performed in a specific period, as well as noteworthy current news and events in the field of finance, the FCPC also conducts continuous research on topics that merit printed publication. In 2018, a new booklet was added to the series: the information booklet on the Financial Navigator Advisory Office Network. Its updated graphic design already reflected the new image of the Financial Navigator.

Flyers and posters

The Financial Navigator Partners, i.e. leading participants of the Hungarian commercial and services sector, offer numerous publication opportunities for the FCPC's communication campaigns and accordingly, flyers and posters of various sizes can be displayed in almost 800 stores and around 500 post offices for individual campaigns. Aligned with the current campaign message, campaign publications call attention to the contents of the Financial Navigator as tools assisting in making informed decisions and facilitating product comparison.

MNB book series

In 2015, the central bank launched a new series of books on the subjects of economic and monetary policy.

Bearing the title *'Banks in History: Innovations and Crises'*, the fourth volume of the series was published in 2018 thanks to the editorial contributions of Barnabás Virág and Gergely Fábián. In this work, the MNB details the key milestones in the evolution of today's banking systems, placing special emphasis on the financial innovations of different eras and prominent actors in economic history. The papers in this volume track the changes in the role of money and banks from the birth of the first written documents to the present day. They also present the innovations that expedited the development of financial affairs, as well as those that yielded no results. The book does not only describe the history and progress of banks, but also helps readers navigate through the current challenges faced by the financial system and the still ongoing evolution of the responses. The MNB is planning to publish further volumes of the book series.

In parallel with the book series, the book entitled '*Modern Central Banking Practice*' was published at the end of 2017, edited by Balázs Vonnák, senior training and research expert of the central bank and master lecturer at the Corvinus

University of Budapest, MNB Department. This volume is the first book in Hungarian to present the theoretical and practical aspects of modern central banking. Its purpose is to convey to the central bankers, economic policy-makers and macroeconomists of the future basic knowledge in the Hungarian language about one of the key participants of economic policy.

Gold Book

Thanks to the historic decisions of the Monetary Council, in spring 2018 the MNB transported back to Hungary the central bank's gold reserves and raised the volume of the reserves almost tenfold in October. The Gold Book published in October 2018 is intended to present and commemorate these two events. The exclusive publication provides an overview of all information that should be known about this precious metal, and presents the theories about its origins and its role in history and in human society. Within the volume, separate chapters are dedicated to the history of gold mining and production in Hungary, changes in the role of gold as a reserve asset and the current role of gold at national central banks. In addition, readers of the Gold Book are also given an account of the rescue of the MNB's gold reserves in the last few months of World War II and the adventurous story of the gold train carrying the stock of gold reserves. The volume also explains why it is important to bring in line the current volume of the gold reserves with the level registered in 1946 when it provided coverage for the introduction of the forint.

Collection of studies entitled '*Hungary and RMB Internationalisation*'

As a result of the cooperation between the Chinese Academy of Social Sciences and the MNB, a collection of English-language studies entitled '*Hungary and RMB Internationalisation*' was published in April 2018. This volume presents the steps taken in Hungary and in Europe in relation to the internationalisation of the RMB and the dimensions of the process relevant to the financial sector (issuance of Panda Bonds, digitisation, FinTech, regulatory challenges), and explores developments in the financial cooperation between Hungary and China, and analyses the role of the RMB in international finance. The Chinese-language version of the publication was published in May under the sponsorship of CASS.

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 arranges international conferences, internal events and cultural events.

International conferences

The majority of the international, professional conferences that typically last for several days usually involve 70–100 persons, although the number of participants in some events reached 200–300 guests. The international conferences are primarily held in the building of the MNB.

The most important international conference events organised in 2018 were as follows:

Lamfalussy Lectures Conference

The objective of this annual event launched in 2014 under the name *'Lamfalussy Lectures Conference'* 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 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. The award is presented annually at a gala ceremony linked to the conference.

Organised for the fifth time in February 2018, the conference was dedicated to discussing the main events and challenges of the global economic realignment in two sections (East and West). Speeches were delivered by the following lecturers and panellists: Li Yang, President of the Institute of Finance and Development at the Chinese Academy of Social Sciences; Guntram B. Wolff, the Director of Bruegel; Alicia García-Herrero, Senior Fellow at Bruegel; Park In-Kook, Chair of the Korea Foundation for Advanced Studies; Lawrence J. Lau, Professor at the Lau Chor Tak Institute of Global Economics and Finance of the Chinese University of Hong Kong; Renwei Huang, Dean of the Institute of Belt and Road & Global Governance of Fudan University Shanghai, President of the High-Level Think Tank Scientific Committee of the Shanghai Academy of Social Sciences; Marco Buti, Director-General for Economic and Financial Affairs at the European Commission; Reza Moghadam, Vice-Chairman for Global Capital Markets at

Morgan Stanley; John Lipsky, a Senior Fellow with the Johns Hopkins School of Advanced International Studies; Thomas Wieser, former President of the Eurogroup Working Group and of the EU Economic and Financial Committee.

Once again in 2018, the conference was held at an external location in Budapest and was attended by more than 500 guests.

Budapest Renminbi Initiative conference

In April 2018, the MNB organised its international conference within the framework of the Budapest Renminbi Initiative for the fourth time. At the event – with a representative of the Chinese central bank among the lecturers – domestic and foreign policy-makers, senior executives and experts of the economic and financial sectors discussed the current status of Sino-Hungarian economic, commercial and financial relations and possible steps forward both in deepening and raising existing relations to a higher level and in establishing new relationships.

IOSCO Annual Conference

The annual professional conference of the International Organization of Securities Commissions (IOSCO) was held in the Budapest Congress Centre on 7–11 May 2018. IOSCO is an international professional organisation responsible for the global-scale regulation of the operation of capital markets, comprising securities commissions from around the world. Organised by the MNB in Budapest, this was the first time that the event was held in the Central and Eastern European region. In 2018, the main topics of the conference were the following: the challenges of FinTech and digitisation; passive and active management strategies from the perspective of investors; issues concerning SMEs' access to the capital market.

2018 Offsite Meeting of the Human Resources Conference (HRC)

Composed of senior staff members from the human resources area of EU central banks and the ECB, the offsite meeting of the Human Resources Conference (HRC) committee was organised by the MNB and held in Budapest on 13–15 June 2018.

At the meeting, participants discussed current issues concerning the human resources area of EU central banks and were offered a sightseeing tour of Budapest after the meeting.

Pre-Forum Session of the Shanghai Forum 2019

Organised as a joint effort by the MNB and Fudan Development Institute (FDDI), the pre-forum session of Shanghai Forum 2019 was held on 5 October 2018 in Budapest. Attendees of the event reviewed the status of global governance and Asia from the perspective of Central and Eastern European countries. The main panel discussion of the forum entitled 'Role of the CEE region in the new world order' was closely related to the focus of the professional conference to be arranged in 2019 in Shanghai. The February 2019 launch of the Fudan–Corvinus double degree MBA programme was also announced at the event. This university course is intended to strengthen cooperation between China and Hungary in the fields of economics and education.

Central European Covered Bond Conference

The series of professional events entitled 'Central European Covered Bond Conferences' was launched in 1997 in Warsaw, and in November 2018 it was held, for the fourth time in its history, in Budapest in the joint organisation of the Association of German Mortgage Banks (Verband deutscher Pfandbriefbanken – VdP), the Hungarian Banking Association and the MNB. In addition to representatives from German and Central and Eastern European regional supervisory authorities and mortgage banks, consulting and rating agencies and the EBRD were also represented. Current regulatory and market trends affecting European mortgage bond markets were discussed at the event, in the form of brief presentations and panel discussions. The conference had more than 100 attendees and attracted significant international interest.

16+1 China – CEEC Central Bank Governors' Meeting

Organised jointly by the MNB and the Chinese central bank, the first '16+1' summit of central bank governors was held in Budapest on 9–10 November 2018. In addition to the highest-ranking executive of the Chinese central bank, attendees included the central bank governors of four Central and Eastern European countries (Bosnia and Herzegovina, Croatia, Lithuania, Romania), the deputy governors of six regional countries (Bulgaria, the Czech Republic, Estonia, Montenegro, Poland, Serbia), while three central banks were represented at the level of senior or middle management (Latvia, Slovakia, Slovenia). The ECB also delegated an observer to the meeting.

Following the ceremonial opening, the central bank delegations participated in round-table discussions dedicated to the following main topics: economic developments and outlook of China and the countries of the Central and Eastern European region, possibilities for financial cooperation between central banks, and the exploration of further opportunities for existing and potential future cooperation.

The meeting was an extremely important milestone in the relationship between the Chinese central bank and the central banks of Central and Eastern European countries, through which the MNB also launched a new series of events.

Other international events

BESS at MNB lectures

14 March 2018: John Earle (George Mason University) High Growth Entrepreneurship

21 March 2018: Christoffer Kok (European Central Bank) The nexus between macroprudential and monetary policies in the Monetary Union: should monetary policy lean against the wind?

4 April 2018: Paolo Gelain (Federal Reserve Bank of Cleveland) Output gap, monetary policy trade-offs and financial frictions

17 May 2018: Rebecca Stuart (Central Bank of Ireland) Plotting interest rates: the FOMC's projections and the economy

28 May 2018: Roger Farmer (University of Warwick, NIESR, UCLA) Keynesian Economics Without the Phillips Curve

Courses of the central bank's 'Budapest School for Central Bank Studies' Training Centre

Spring courses 2018

Fabio Canova (Norwegian Business School): Practical DSGE Models March 26–29 2018

Paolo Gelain (Cleveland Fed), Francesco Furlanetto (Norges Bank): New Keynesian models with search and matching frictions, financial frictions and banks. Transmission and policies. April 3–6 2018

Summer courses 2018

Dimitris Korobilis (University of Essex): Econometric techniques for large data sets. July 23–27 2018

Mathias Trabandt (Freie Universitat Berlin): Macroeconomics at the Zero Lower Bound. 30 July – 3 August 2018

4 Additional information on the supervisory activity of the MNB in 2018

4.1 INSTITUTION OVERSIGHT

As at 31 December 2018, the MNB performed oversight of 1,487 institutions according to the breakdown in Table 12.

4.2 INSPECTIONS COMPLETED

The MNB carries out the inspections on the basis of an annual planning system, according to detailed daily schedules.

In preparing the inspection plans, the MNB considers the following criteria:

– the cycle plan of supervisory inspections defined in the MNB Act;

– the risk rating of the institutions and the resource requirements and inspection duration determined accordingly;

– the supervisory scoring system designed to establish the order of institutions to be inspected, also in consideration of other individual characteristics of the institutions concerned; and

– the available resources.

The number of prudential on-site inspections and their breakdown by sector and inspection type are summarised in Table 13.

Table 12
Number of institutions supervised as at 31 December 2018

Capital market	**108**
Investment fund manager	79
Investment firm	13
Trust (Fiduciary asset manager)	12
Clearing house	1
Central counterparty	1
Stock exchange	2
Funds	**65**
Private pension fund	4
Voluntary funds	60
Voluntary healthcare fund	3
Voluntary pension fund	38
Voluntary mutual fund	5
Voluntary healthcare and mutual fund	14
Occupational pension provider	1
Financial market	**841**
Non-financial institutions	537
Electronic money issuer	1
Independent intermediary	528
Special services intermediary	1
Payment service provider	7
Financial institutions	303
Credit institutions	52
Bank	28
Specialized credit institution	11
Cooperative credit institution	13
Financial enterprises	251
Financial enterprise equivalent to credit institutions	2
Other financial enterprises	249
Organizer (NOK)	1
Insurance	**473**
Insurance institutions	34
Insurance association	12
Insurance company	22
Insurance intermediaries	438
Insurance broker	397
Insurance multiple agent	41
Advocacy	1
Total	**1,487**

Table 13
Inspection statistics

Number of prudential on-site inspections	2017		2018		2019 (planned)	
	Comprehensive	Other*	Comprehensive	Other*	Comprehensive	Other*
Large banks and bank groups	3	33	3	31	4	19
Small and medium-sized banks	5	7	4	11	4	9
Integration (acceded credit institutions)	0	4	1	4	0	3
Specialized credit institutions	0	8	1	6	2	1
Branch of banks	1	2	0	1	0	3
Financial enterprises	0	6	0	2	2	0
Payment service providers	1	0	3	0	2	1
Insurance companies	9	0	5	2	5	7
Insurance associations	7	1	5	0	5	0
Intermediaries	0	7	0	10	0	6
Funds	13	3	13	1	14	5
Capital market institutions	19	12	31	12	36	21
Occupational pension provider	0	0	0	0	0	0
Total	**58**	**83**	**66**	**80**	**74**	**75**

**Including the ICAAP-BMA and ILAAP inspections.*

4.3 LICENSING AND LEGAL ENFORCEMENT

The licensing and legal enforcement activity of the MNB comprises the entire spectrum of legal activities linked to the supervision of the financial intermediary system, including the execution of all authorisation procedures related to the overseen institutions and the performance of the legal enforcement tasks of the prudential inspection activity.

The statistics on the licensing and prudential legal enforcement activities of the MNB are shown in Tables 14–17, broken down by sector.

Table 14
Measures taken in the financial market sector
(Pieces)

Prudential measures	
Resolutions closing supervisory proceedings	121
out of which: resolutions imposing fines	106
Other prudential measures, resolutions	197
Rulings	25
Total amount of fines (million HUF)	**508.1**
Authorisation resolutions/rulings	
Authorisation of the foundation of credit institutions	0
Refusal of the foundation of credit institutions	0
Authorisation of the operation of credit institutions	0
Refusal of the operation of credit institutions	0
Withdrawal of authorisation for the foundation of credit institutions	1
Authorisation of the operation of payment service provider	5
out of which: PSD2 Art. 109 compliance verification proceeding	4
Authorisation of the electronic money issuing activity of electronic money issuers	1
out of which: PSD2 Art. 109 compliance verification proceeding	1
Authorisation of the foundation and the operation of financial enterprises	5
Refusal of the foundation and the operation of financial enterprises	0
Authorisation of the operation of financial enterprise equivalent to credit institutions	0
Withdrawal of authorisation for operations of financial enterprises	4
Resolutions concerning the amendment of the scope of activities	6
Authorisation of the election of senior executives	231
out of which: credit institutions' senior executives	109
Refusal of the election of senior executives	0
Approval of the amendment of agency contract	187
Authorisation of multiple special services intermediary	0
Authorisation of multiple agents	6
Authorisation of brokers	1
Resolutions concerning mortgage credit intermediaries	8
Authorisation of the employment of intermediaries	23
Resolution withdrawing the activity license of intermediaries	14
Authorisation of the amendment of the bylaws	8
Authorisation of other regulations	14
Authorisation of the acquisition of qualifying holdings	37
Refusal of the acquisition of qualifying holdings	0
Authorisation of merger and division	3
Authorisation of transformation	0
Authorisation of the acquisition of qualifying holdings in a nonresident enterprise	6
Authorisation of the transfer of client accounts	7
Resolutions issued under CRR	27
out of which: - Resolution concerning the calculation of capital adequacy of operational risk - Resolution concerning the calculation of capital adequacy of credit risk - Resolution concerning Tier1, additional Tier1 and Tier2 capital instruments - Resolution concerning supervision on a consolidated basis - Resolution concerning liquidity - Resolution concerning inclusion of interim or year-end profit	 2 1 7 7 0 1
Other resolutions	62
Rulings	162
Total amount of resolutions and rulings	**1,161**

Table 15
Measures taken in the capital market sector
(Pieces)

Prudential measures	
Resolutions closing supervisory proceedings	27
out of which: resolutions imposing fines	22
Other prudential measures, resolutions	12
Rulings	26
Total amount of fines (million HUF)	**133.9**
Authorisation resolutions/rulings	
Authorisation for activities	15
Withdrawal of Authorisation for operations	4
Authorisation of regulations	14
Authorisation of senior executives	141
Authorisation of the acquisition of qualifying holdings	3
Registration of intermediaries	203
Cancellation of intermediaries	304
Rulings	100
Other resolutions	34
Total amount of resolutions and ruings	**883**

Table 16
Measures taken in the insurance sector
(Pieces)

Prudential measures	
Resolutions closing supervisory proceedings	18
out of which: resolutions imposing fines	9
Other prudential measures, resolutions	62
Rulings	13
Total amount of fines (million HUF)	**267.2**
Authorisation resolutions/rulings	
Authorisation of executive officers	50
Authorisation of professional executives	10
Withdrawal of authorisation for operations	12
Other resolutions	27
Authorisation of activities closely related to insurance activities	2
Authorisation of the activities of insurance intermediaries	5
Rulings	18
Total amount of resolutions and rulings	**217**

Table 17 Measures taken in the funds sector *(Pieces)*	
Prudential measures	
Resolutions closing supervisory proceedings	15
out of which: resolutions imposing fines	13
Other prudential measures, resolutions	5
Rulings	10
Total amount of fines (million HUF)	**12,0**
Authorisation resolutions/rulings	
Authorisation of executive officers	2
Authorisation of professional executives	0
Withdrawal of authorisation for operations	3
Other resolutions	15
Rulings	7
Total amount of resolutions and rulings	**57**

4.4 MARKET SURVEILLANCE AND ISSUERS SUPERVISION

The summary data on measures required within the framework of the MNB's market surveillance activity in 2018 are presented in Tables 18–19.

Table 18 Market surveillance and supervision related measures *(Pieces)*	
Market surveillance and supervisory measures	
Resolutions related to market surveillance	25
out of which: resolutions imposing fines	20
Rulings related to market surveillance	318
Resolutions related to issuers supervision	51
Rulings related to issuers supervision	6
Other resolutions and rulings	0
Fines - market surveillance (million HUF)	384.2
- related to unauthorised and unreported activities	288.6
- related to insider dealing and unlawful market manipulation	1.45
- related to compliance with company takeover rules	94.1
Fines - supervisory (million HUF)	63.9
- related to issuers supervision	34.9
Total amount of fines (million HUF)	**448.1**
Total amount of resolutions and rulings	**400**

Table 19
Licensing related to securities issuance
(Pieces)

Licensing related to securities issuance	
Number of issues	11
- stock	3
- bonds and mortgage bonds program	8
Number of stock exchange listings	13
- stock	5
- bonds and mortgage bonds	8
Number of resolutions related to issuers	631
Number of rulings	30
Number of applications to be put in order	337
Total amount of resolutions and rulings	**1,022**

4.5 CONSUMER PROTECTION AND CUSTOMER SERVICE

Tables 20–21 contain a summary related to the MNB's administrative activity performed in 2018 in the area of financial consumer protection.

Table 20
The MNB's consumer protection administrative activity, number of procedures

Type of entities	Targeted inspections ex officio	Thematic consumer protection inspections ex officio	Inspected entities	Inspections along with prudential inspections	Consumer protection inspections by request
Credit institutions: Bank	5	1	10	0	160
Credit institutions: Cooperative credit institution	2	0	0	0	4
Financial enterprise equivalent to credit institutions	11	0	0	0	31
Independent intermediary (financial market)	1	0	0	3	4
Insurance	1	0	0	3	74
Capital market	0	0	0	3	10
Funds	0	0	0	5	2
Total:	**20**	**1**	**10**	**14**	**285**

Table 21
The MNB's consumer protection administrative activity, result of the procedures

Sector/measures	Financial market	Insurance	Capital market	Funds	Total
Rulings	**384**	**119**	**21**	**4**	**528**
out of which: substantive	94	34	7	2	**137**
non substantive	290	85	14	2	**391**
Resolutions	**211**	**57**	**16**	**5**	**289**
out of which: without breach of law	68	25	8	0	**101**
with breach of law	143	32	8	5	**188**
Total amount of consumer protection fines (million HUF)	**237.5**	**7.8**	**2.2**	**0.0**	**247.5**

Tables 22–24 show the main data related to the activity of the Financial Consumer Protection Centre.

Table 22
Distribution of customer inquiries and requests received by channel of submission

Channel of receipt	No.	%
Mail	2,363	8.8
E-mail	5,622	21.1
Personal	2,607	9.8
Phone	16,104	60.3
Total	**26,696**	**100.0**

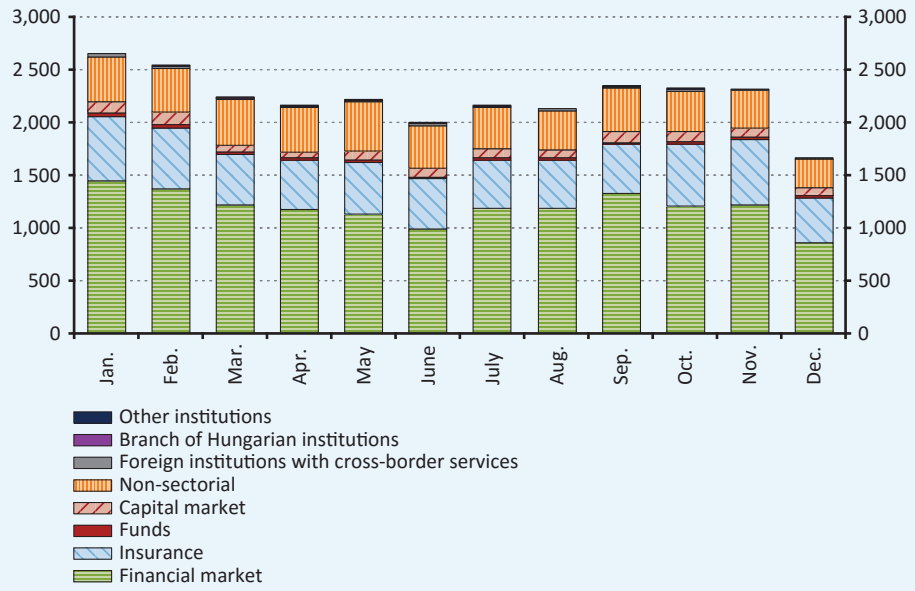
Table 23
Customer inquiries and requests broken down by sectors

Sector	No.	%
Financial market	14,310	53.6
Insurance	6,121	22.9
Funds	263	1.0
Capital market	1,058	3.9
Non-sectorial	4,744	17.8
Foreign institutions with cross-border services	185	0.7
Branch of Hungarian institutions	1	0.0
Other institutions	14	0.1
Total	**26,696**	**100.0**

Table 24
Number of customer inquiries and requests broken down by sector and quarter

Sector	Q1	Q2	Q3	Q4	2018 - Total
Financial market	4,038	3,305	3,693	3,274	**14,310**
Insurance	1,656	1,425	1,390	1,650	**6,121**
Funds	90	63	55	55	**263**
Capital market	299	224	267	268	**1,058**
Non-sectorial	1,271	1,295	1,178	1,000	**4,744**
Foreign institutions with cross-border services	50	42	48	45	**185**
Branch of Hungarian institutions	1	0	0	0	**1**
Other institutions	4	5	3	2	**14**
Total	**7,409**	**6,359**	**6,634**	**6,294**	**26,696**

Chart 16
Number of customer inquiries and requests in a sectoral and monthly breakdown



4.6 ADMINISTRATIVE REPRESENTATION AT PROCEEDINGS

Administrative representation at proceedings comprises the representation of the MNB in the assertion of claims of public interest, as well as litigation and non-litigious proceedings related to the MNB's administrative decisions passed in the context of its supervisory and consumer protection activities, and also the representation of the Financial Arbitration Board in litigation launched for the abrogation of the FAB's resolutions or recommendations, and keeping records pertaining to such procedures.

Table 25
Cases commenced in 2018, broken down by type and sector

Type	No.	%	Sector	No.	%
Judicial review of resoultions	15	71.4	Financial market	9	42.8
Judicial review of rulings	5	23.8	Capital market	10	47.6
Other administrative decisions	1	4.8	Insurance	1	4.8
			Non-sectorial	1	4.8
Total	**21**	**100.0**	**Total**	**21**	**100.0**

5 Explanation of abbreviations and terms specific to central banking

Abbreviations

AFCA: Asia Financial Cooperation Association

BIS: Bank for International Settlements

BISZ Zrt.: BISZ Central Credit Information Plc.

BREEAM: Building Research Establishment Environmental Assessment Methodology

BSE: Budapest Stock Exchange

CCIS: Central Credit Information System

CCyB: Countercyclical Capital Buffer

CEBS: Committee of European Banking Supervisors

EBA: European Banking Authority

EIOPA: European Insurance and Occupational Pensions Authority

ECB: European Central Bank

EMU: Economic and Monetary Union

ESCB: European System of Central Banks

ESRB: European Systemic Risk Board

ESMA: European Securities and Markets Authority

FCPC: Financial Consumer Protection Centre

FFAR: Foreign Exchange Funding Adequacy Ratio

FGS: Funding for Growth Scheme

FSC: Financial Stability Council

GIRO: Giro Clearing House Ltd.

GSP: Growth Supporting Programme

HCSO: Hungarian Central Statistical Office

ICS: Interbank Clearing System

IFR: Interbank Funding Ratio

IFRS: International Financial Reporting Standards

IMF: International Monetary Fund

IOCCI: Integration Organisation of Cooperative Credit Institutions

IOSCO: International Organization of Securities Commissions

ISDA: International Swaps and Derivatives Association

KELER: KELER Central Clearing House and Depository Ltd.

LCR: Liquidity Coverage Ratio

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

MFAR: Mortgage Funding Adequacy Ratio

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

MLS: Market-Based Lending Scheme

MNB: Magyar Nemzeti Bank

MOF (PM): Ministry of Finance

OECD: Organisation for Economic Co-operation and Development

O-SII: Other Systemically Important Institutions

SyRB: Systemic Risk Buffer

SRM: Single Resolution Mechanism

SSM: Single Supervisory Mechanism

TCI: Total Cost Indicator

TSA: Treasury Single Account

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

Glossary

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

Clearing: Control and transmission of payment transactions, calculation of interbank balances in accordance with specified rules; in the case of securities transactions: matching and confirmation of positions, calculation of accounts receivable/payable and managing the arising financial risk.

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.

CRR (Capital Requirement Regulation): Regulation No. 575/2013/EU of the European Parliament and of the Council on the prudential requirements for credit institutions and investment firms.

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.

Foreign exchange funding adequacy ratio (FFAR): 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.

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.

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 Right).

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

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.

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.

Money market funds: Money market funds are investment funds, the mutual fund shares of which are similar to bank deposits from the aspect of liquidity. Money market funds invest 85 per cent of their assets in money market instruments or transferable debt securities with a remaining maturity of maximum one year or instruments with a return similar to that of the interest rate of money market instruments.

Money market instruments: Low-risk, liquid securities traded in large amounts on markets where they can be exchanged for cash immediately at a low cost.

Omnibus II directive: See Solvency II directive.

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.

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.

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).

ROA: Return on assets.

ROE: Return on equity.

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.

Settlement: Final settlement of interbank liabilities and receivables on an account managed by a common bank, typically the MNB.

Solvency II directive: 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. A new, risk-based regulatory framework for insurers which is based on three pillars; namely, quantitative requirements, qualitative requirements and public disclosure. It is a European standard based on which the supervisory authorities can create standard rules for capital in order to reduce/avoid the risk of insolvency. Applicable from 1 January 2016. The Omnibus II directive (Directive 2012/23/EU of the European Parliament and of the Council) includes the amending provisions of the Solvency II directive – which has been approved but it is yet to become valid and applicable – and the Prospectus directive (Directive 2003/71/EC of the European Parliament and of the Council).

TARGET2-Securities (T2S): The single technical platform of the Eurosystem through which central depositories and national central banks can provide basic, cross-border and neutral securities settlement services in central bank funds across all Europe.

Tomnext transaction: Overnight deposit or FX transaction, which starts on the first working day after the trade date (T+1) and ends on the following working day.

VaR: 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.

Part B)
Audited financial statements of the Magyar Nemzeti Bank

1 Independent auditor’s report

Deloitte.

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

Company Registration Number:
01-09-071057

INDEPENDENT AUDITOR'S REPORT

To the Owner of Magyar Nemzeti Bank

Opinion

We have audited the financial statements of Magyar Nemzeti Bank (the „Bank”) for the year 2018 which comprise the balance sheet as at December 31, 2018 – which shows an equal amount of total assets and total liabilities of million HUF 11.129.442 and profit for the year of million HUF 47.767 –, 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, 2018 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 Bank 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” (the IESBA Code) issued by the International Ethics Standards Board for Accountants, 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 2018. 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 2018 corresponds to the financial statements of the Bank for 2017 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, 7 May, 2019

The original Hungarian version has been signed.

Nagyváradiné Szépfalvi Zsuzsanna
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: 005313

3

2 Balance sheet of the Magyar Nemzeti Bank

HUF millions

Reference number to notes on the Accounts	ASSETS	31 Dec 2017	31 Dec 2018	Change
1	2	3	4	4–3
	I. Receivables denominated in forint	**1,285,030**	**1,426,188**	**141,158**
4.3.	1. Receivables from the central government	39,178	39,178	0
4.7.	2. Receivables from credit institutions	1,242,519	1,383,386	140,867
4.10.	3. Other receivables	3,333	3,624	291
	II. Receivables denominated in foreign currency	**7,879,638**	**9,438,194**	**1,558,556**
4.9.	1. Gold and foreign exchange reserves	7,228,962	8,793,473	1,564,511
4.4.	2. Receivables from the central government	0	0	0
4.8.	3. Receivables from credit institutions	2,490	4,968	2,478
4.10.	4. Other receivables	648,186	639,753	-8,433
	III. Banking assets	**79,533**	**93,646**	**14,113**
4.12.	of which: invested assets	75,361	77,719	2,358
4.14.	**IV. Prepaid expenses/accrued income**	**63,551**	**171,414**	**107,863**
	V. TOTAL ASSETS (I+II+III+IV)	**9,307,752**	**11,129,442**	**1,821,690**

Reference number to notes on the Accounts	LIABILITIES AND EQUITY	31 Dec 2017	31 Dec 2018	Change
1	2	3	4	4–3
	VI. Liabilities denominated in forint	**7,521,201**	**8,669,779**	**1,148,578**
4.5.	1. Central government deposits	380,874	1,136,720	755,846
4.7.	2. Deposits by credit institutions	1,963,446	1,470,306	–493,140
	of which: the main policy instrument*	74,977	0	–74,977
	3. Banknotes and coins in circulation	5,113,983	5,997,810	883,827
4.11.	4. Other deposits and liabilities	62,898	64,943	2,045
	VII. Liabilities denominated in foreign currency	**1,454,373**	**1,810,490**	**356,117**
4.5.	1. Central government deposits	397,402	593,962	196,560
4.8.	2. Deposits by credit institutions	16,599	62,246	45,647
4.11.	3. Other deposits and liabilities	1,040,372	1,154,282	113,910
4.13.	**VIII. Provisions**	**641**	**668**	**27**
	IX. Other banking liabilities	**45,318**	**125,132**	**79,814**
4.14.	**X. Accrued expenses/deferred income**	**43,847**	**88,925**	**45,078**
4.15.	**XI. Equity**	**242,372**	**434,448**	**192,076**
	1. Share capital	10,000	10,000	0
	2. Retained earnings	162,150	200,443	38,293
	3. Valuation reserves	0	0	0
4.16.	4. Revaluation reserves due to exchange rate changes	28,010	169,601	141,591
4.16.	5. Revaluation reserves of foreign currency securities	3,919	6,637	2,718
	6. Profit/Loss for the year	38,293	47,767	9,474
	XII. TOTAL EQUITY AND LIABILITIES (VI+VII+VIII+IX+X+XI)	**9,307,752**	**11,129,442**	**1,821,690**

** The main policy instrument was the 3-month deposit from 23 September 2015 to 31 December 2018; starting from 2019, the role of main policy instrument has been fulfilled by the minimum reserves.*

7 May 2019, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

3 Income statement of the Magyar Nemzeti Bank

HUF millions

Reference number to notes on the Accounts	INCOME	2017	2018	Difference
1	2	3	4	4–3
4.18.	**I. Interest and interest-related income denominated in forint**	**25,568**	**35,382**	**9,814**
	1. Interest on receivables from the central government	59	16	–43
	2. Interest on receivables from credit institutions	1,070	6,137	5,067
	3. Interest on other receivables	29	35	6
	4. Interest-related income	24,410	29,194	4,784
4.18.	**II. Interest and interest-related income denominated in foreign currency**	**132,003**	**180,556**	**48,553**
	1. Interest on foreign exchange reserves	57,291	62,166	4,875
	2. Interest on receivables from the central government	1	0	–1
	3. Interest on receivables from credit institutions	0	0	0
	4. Interest on other receivables	0	0	0
	5. Interest-related income	74,711	118,390	43,679
4.19.	**III. Income arising from exchange rate changes**	**70,306**	**79,150**	**8,844**
4.18.	**IV. Realised gains arising from financial operations**	**6,743**	**2,934**	**–3,809**
4.21.	**V. Other income**	**17,082**	**16,388**	**–694**
	1. Fees and commissions	1,087	1,125	38
4.22.	2. Income other than fees and commissions	4,055	2,927	–1,128
4.23.	3. Income from supervisory activities	11,940	12,336	396
4.13.	**VI. Provisions released**	**265**	**51**	**–214**
4.13.	**VII. Impairment released**	**193**	**343**	**150**
4.24.	**VIII. Operating income**	**20,977**	**506**	**–20,471**
	IX. TOTAL INCOME (I+II+III+IV+V+VI+VII+VIII)	**273,137**	**315,310**	**42,173**

Reference number to notes on the Accounts	EXPENSES	2017	2018	Difference
1	2	3	4	4–3
4.18.	**X. Interest and interest-related expenses denominated in forint**	**13,823**	**11,819**	**–2,004**
	1. Interest on central government deposits	4	129	125
	2. Interest on deposits by credit institutions	11,189	7,001	–4,188
	of which: interest on the main policy instrument	5,024	605	–4,419
	3. Interest on other deposits	36	40	4
	4. Interest-related expenses	2,594	4,649	2,055
4.18.	**XI. Interest and interest-related expenses denominated in foreign currency**	**133,074**	**177,018**	**43,944**
	1. Interest on central government deposits	–2,201	–1,358	843
	2. Interest on deposits of credit institutions	–118	–54	64
	3. Interest on other liabilities	8,149	9,375	1,226
	4. Interest-related expenses	127,244	169,055	41,811
4.19.	**XII. Expenses resulting from exchange rate changes**	**8,913**	**5,195**	**–3,718**
4.20.	**XIII. Cost of issuing banknotes and coins**	**12,544**	**11,633**	**–911**
4.18.	**XIV. Realised losses arising from financial operations**	**5,571**	**10,394**	**4,823**
4.21.	**XV. Other expenses**	**5,366**	**5,390**	**24**
	1. Fees and commissions	689	716	27
4.22.	2. Expenses other than fees and commissions	4,677	4,674	–3
4.13.	**XVI. Provisions charged**	**218**	**78**	**–140**
4.13.	**XVII. Impairment**	**15**	**4,562**	**4,547**
4.24.	**XVIII. Operating costs and expenses**	**55,320**	**41,454**	**–13,866**
	XIX. TOTAL EXPENSES (X+XI+XII+XIII+XIV+XV+XVI+XVII+XVIII)	**234,844**	**267,543**	**32,699**
	XX. PROFIT/LOSS FOR THE YEAR (IX-XIX)	**38,293**	**47,767**	**9,474**

7 May 2019, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

4 Notes to the financial statements

4.1 THE MNB'S ACCOUNTING POLICY

The Magyar Nemzeti Bank (MNB), the central bank of Hungary, is owned by the Hungarian State. Ownership rights are exercised by the minister in charge of public finances (the shareholder).

The accounting policy of the MNB is 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). 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 MNB has been a member of the European System of Central Banks (ESCB).

The following sections present a brief description of the accounting system of the MNB, 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, with special regard to foreign exchange sales and purchases. Spot foreign currency transactions which involve foreign exchange conversions are recorded in the books at the date of the transaction. 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 revaluation of its foreign assets and liabilities and derivative transactions for hedging purposes recorded off-balance sheet;

– 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 policy.

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 deriving 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 grades the receivables and securities in the balance sheet. In addition to the foregoing, it 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 liabilities and expected losses.

The balance sheet date is the 15th working day of January of the year following the reporting year. With regard to this report, the balance sheet date was 22 January 2019.

By law, the MNB is also required to report to Parliament. The MNB submits a single report to both Parliament and the 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. 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 state of affairs during the reporting period, and the MNB's half-year financial statements as defined by the Act on Accounting. The Half-year Report is also published on the internet in Hungarian.

Pursuant to 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 Zsuzsanna Szépfalvi Nagyváradiné (Deloitte Kft.), Chamber membership number: 005313.

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 principles of valuation

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.

Impairment losses may not be recorded in connection with receivables from the central government.

Receivables from credit institutions

Mortgage bonds stated under receivables from credit institutions are recorded in the balance sheet 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.

Impairment losses on mortgage bonds are accounted in proportion to the risk of losses, if the difference (loss) appears to be a permanent, significant amount.

Interest-free refinancing loans within the framework of the Funding for Growth Scheme (FGS) and the base rate fixed security-backed loans provided to credit institutions are recorded in the balance sheet at the disbursed amount.

Other receivables

Receivables from supervisory activities are recorded in the balance sheet with any related impairment. The MNB records supervisory fees imposed in line with the incoming data reported by the institutions, and penalties imposed are recorded in line with the finalised 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'.

'Other receivables' must be measured and subject to impairment if necessary.

Valuation of foreign currency assets and liabilities and the recording of exchange rate gains

In its books, the MNB records all foreign currency assets 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 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 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 on 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 selling 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 in respect of a certain foreign currency adequately liquid prices are not ensured on this day, 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, a provision of 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 forint 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 forint. 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 and creates a liability without maturity date vis-à-vis the IMF on the liability side of the balance sheet. This transaction has an effect on profit and loss accounts (interest must be paid on the SDR amount received), if it is utilised.

Accounting rules relating to derivatives

On the basis of transaction purpose, the MNB distinguishes between two groups of derivative transactions: hedging transactions and derivative transactions 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, derivative transactions with the government or non-resident counterparts to hedge these transactions are also regarded as hedging transactions.

Derivative transactions 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 the item '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 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, unsold precious metals held for non-central bank purposes); as well as

– 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 2018
Concessions, licences and similar rights	17
Trademarks patents and similar assets	10-50
Capitalised value of reorganisation	20
Owned and managed buildings	2-3
Vehicles*	20
Telecommunication devices, office equipment, machines	9-50
Office equipment	14.5-33
Computer hardware	9-33
Emission machinery	5-33
Instruments	9-33
Bank security devices	2-33
Other equipment and devices	3-33

** Residual value 20 per cent of the vehicles.*

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 2018 BALANCE SHEET AND INCOME STATEMENT OF THE MAGYAR NEMZETI BANK

In 2018, the MNB recorded a profit of HUF 47.8 billion. The positive and rising interest and interest-related income was the most significant profit item, followed by income from exchange rate changes. The balance sheet total according to Hungarian Accounting Standards (HAS) was HUF 11,129.4 billion on 31 December 2018, representing an increase of 1,821.7 billion as compared to the end-2017 balance, mainly due to the increase in gold and foreign exchange reserves.

On the assets side, the increase in gold and foreign exchange reserves was a result of the incoming EU transfers and the expansion of fine-tuning swaps. The mortgage bond purchase programme launched in January 2018 also increased foreign

currency reserves, while the maturities of FGS loans decreased the balance sheet total. On the liabilities side, the stock of the forint deposits by credit institutions fell, while the forint deposits of the central government grew. The balance of banknotes and coins in circulation continued to increase in 2018 as well, triggered by the rise in cash held for savings purposes and household consumption. The MNB's equity increased because of the growing revaluation reserves due to exchange rate changes, which was affected by the depreciation of the forint.

The net interest and interest-related result increased by HUF 16.4 billion, yielding a profit of HUF 27.1 billion in 2018. The forint interest result rose by HUF 11.8 billion to a gain of HUF 23.6 billion. Factors contributing to this result included the restructuring of forint deposits in favour of overnight deposits with lower – negative – yields, expiration of the stock of 3-month deposits and higher realised gains on swap and forward transactions with credit institutions. The FX interest result rose by HUF 4.6 billion to a gain of HUF 3.5 billion, mainly owing to higher interest income on the rising foreign currency reserves.

The realised loss on financial operations was HUF 7.5 billion in 2018 compared to a realised gain of HUF 1.2 billion in 2017. This was mainly caused by the increases in FX market yields, especially in relation to the US dollar.

Net income from exchange rate changes – which is driven by the volume of foreign currency sales and by the difference between the official and the actual exchange rate – continued to represent a significant profit item in 2018. Due to sales of foreign currencies, the MNB realised a net gain of HUF 74 billion on exchange rate changes, which was HUF 12.6 billion higher than the gain from 2017.

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

The item for forint receivables from the central government contains government bonds, the amount of which did not change and was HUF 39.2 billion at the end of 2018. The portfolio consists of a government debt bond with a maturity over 5 years.

4.4 FOREIGN CURRENCY RECEIVABLES FROM THE CENTRAL GOVERNMENT

Neither at end-2017 nor at end-2018 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 2017	31 Dec 2018	
	Single Treasury Account (KESZ)	380,383	1,136,269	755,886
	Deposit by Government Debt Management Agency (ÁKK Zrt)	433	393	–40
	Other	58	58	0
VI.1.	**Forint deposits of the central government**	**380,874**	**1,136,720**	**755,846**

The total balance of forint deposits of the central government increased considerably by HUF 755.8 billion by the end of 2018. The change was caused in the stock of the KESZ account, which rose significantly in the second half of 2018 compared to the low starting stock at the end of December 2017. The increase was related partly to the rechannelling of some municipal deposits to the KESZ account and partly to EU-transfers incoming in December 2018.

Foreign currency liabilities of the central government

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	Foreign currency deposits of the central government	308,685	232,539	–76,146
	Currency swaps with the central government	88,717	361,423	272,706
VII.1.	**Foreign currency liabilities of the central government**	**397,402**	**593,962**	**196,560**

The balance of the foreign currency deposits currency swaps of the central government was HUF 594 billion at end-2018, showing an increase of HUF 196.6 billion compared to the end of 2017. The change in foreign currency deposits is triggered by the debt management activities of the ÁKK.

Among the hedging transactions concluded with the central government, only the euro/US dollar currency swaps had an outstanding amount at the times under review. The increase is the result of a transaction effect and an exchange rate effect.

Foreign currency liabilities of the central government in a breakdown by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2017	31 Dec 2018	
	- within 1 year	319,190	232,539	–86,651
	- within 1 to 5 years	26,840	263,075	236,235
	- over 5 years	51,372	98,348	46,976
VII.1.	**Foreign currency liabilities of the central government**	**397,402**	**593,962**	**196,560**

4.6 NET POSITIONS VIS-À-VIS THE CENTRAL GOVERNMENT

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
I.1.—VI.1.	Net forint position	–341,696	–1,097,542	–755,846
II.2.—VII.1.	Net foreign currency position	–397,402	–593,962	–196,560
	Total	**–739,098**	**–1,691,504**	**–952,406**

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 2017	31 Dec 2018	
	Security-backed loans	13,225	73,239	60,014
	Covered mortgage bonds	10,326	402,099	391,773
	FGS refinancing loans	1,216,725	908,150	-308,575
	Other receivables	7,747	6,422	-1,325
	Total receivables from credit institutions in gross value	**1,248,023**	**1,389,910**	**141,887**
	Impairment loss for receivables from credit institutions	-5,504	-6,524	-1,020
I.2.	**Total receivables from credit institutions**	**1,242,519**	**1,383,386**	**140,867**

The amount of receivables from credit institutions was HUF 1,383.4 billion at the end of 2018. Compared to the previous year, this item increased by HUF 140.9 billion, due to the joint effect of several factors.

The stock of covered mortgage bonds increased continuously, due to the mortgage bond purchase programme initiated on 1 January 2018, which led to the end-2018 balance being HUF 391.8 billion higher than the end-2017 balance. The balance of overnight loans amounted to HUF 73.2 billion at year-end, showing an increase of HUF 60 billion. The maturity of refinancing loans of the FGS had an opposite effect, resulting in a decrease of HUF 308.6 billion. Following repayments, the total balance of FGS refinancing loans in Pillar I and Pillar II was HUF 908.1 billion on 31 December 2018, of which the contribution of the first, second and third phase was HUF 117.4 billion, HUF 304.8 billion and HUF 476.5 billion respectively, while FGS+ contributed HUF 9.4 billion. The MNB accepted SME loans financed by credit institutions as collateral, in addition to the normal securities eligible for the central bank. The item 'Other receivables' contains the amount of the overdue receivable of a bank under liquidation.

On 18 September 2018, the Monetary Council decided to launch the 'FGS fix' construction. The programme starting at the beginning of 2019 has the same conditions regarding the most important parameters, including administration, as the former phases of FGS.

Forint receivables from credit institutions by remaining maturity

HUF millions

No.	Remaining maturity	Balance		Change
		31 Dec 2017	31 Dec 2018	
1.	- matured	7,747	6,422	–1,325
2.	- within 1 year	127,616	111,846	–15,770
3.	- within 1 to 5 years	371,173	584,690	213,517
4.	- over 5 years	741,487	686,952	–54,535
5.	**Total receivables from credit institutions in gross value (1+2+3+4)**	**1,248,023**	**1,389,910**	**141,887**

Forint liabilities of credit institutions

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	Current accounts	673,186	461,923	–211,263
	O/N deposits	1,215,283	988,583	–226,700
	Three-month MNB deposits	74,977	0	–74,977
	Other deposits	0	19,800	19,800
VI.2.	**Deposits of credit institutions**	**1,963,446**	**1,470,306**	**–493,140**

The line 'Deposits of credit institutions' contains the liquidity-absorbing instruments, which are pegged to the base rate and mature within one year. The aggregate balance of deposits was HUF 1,470.3 billion at the end of 2018, representing a decrease of 25 per cent compared to 31 December 2017. The balance of overnight central bank deposits was HUF 226.7 billion lower, and the balance of current accounts fell by HUF 211.3 billion at the end of 2018. The stock of 3-month deposits gradually declined and expired, in line with the decision on its termination, by the end of 2018.

4.8 NET POSITIONS VIS-À-VIS CREDIT INSTITUTIONS

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
I.2.—VI.2.	Net forint position	–720,927	–86,920	634,007
II.3.—VII.2.	Net foreign currency position	–14,109	–57,278	–43,169
	Total	**–735,036**	**–144,198**	**590,838**

The decrease in net liabilities to credit institutions improved the net position by HUF 590.8 billion, with the net position showing a net liabilities balance in the amount of HUF 144.2 billion at end-2018. Within this, the net forint position improved by HUF 634 billion to HUF 86.9 billion. This improvement in the position was basically linked to the expanding stock of mortgage bonds and was further strengthened by the decrease in the deposits and current account balances of credit institutions, by the expiration of 3-month deposits and by the rising balance of security-backed loans. The improvement was offset partly by the decline in FGS refinancing loans due to maturities.

In addition to fixed foreign currency deposits, foreign currency liabilities to credit institutions included the outstanding amount of FX swaps at the end of the period under review. The aggregate balance of these items rose by HUF 43.2 billion relative to end-2017 and amounted to HUF 57.3 billion on 31 December 2018. The balance of foreign currency deposited in interest-bearing accounts at the MNB by domestic credit institutions and the change in the balance of foreign currency swaps reduced the net foreign currency position by HUF 37.3 billion and by HUF 5.9 billion, respectively.

Foreign currency receivables from and liabilities to credit institutions in a breakdown by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2017	31 Dec 2018	
	- within 1 year	2,490	4	–2,486
	- within 1 to 5 years	0	119	119
	- over 5 years	0	4,845	4,845
II.3.	**Foreign currency receivables from credit institutions**	**2,490**	**4,968**	**2,478**
	- within 1 year	15,903	62,246	46,343
	- within 1 to 5 years	–3	0	3
	- over 5 years	699	0	–699
VII.2.	**Foreign currency liabilities to credit institutions**	**16,599**	**62,246**	**45,647**
II.3.-VII.2.	**Net foreign currency position**	**–14,109**	**–57,278**	**–43,169**

4.9 GOLD AND FOREIGN EXCHANGE RESERVES OF THE CENTRAL BANK

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	Gold reserve	33,185	363,286	330,101
	Reserve position in the IMF	110,034	116,575	6,541
	Foreign currency deposits	1,966,459	2,082,826	116,367
	Foreign currency securities	5,037,808	6,208,989	1,171,181
	Foreign currency repo transactions	81,476	21,797	–59,679
II.1.	**Gold and foreign exchange reserves**	**7,228,962**	**8,793,473**	**1,564,511**

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, gold and foreign exchange reserves differ in amount according to the statistical and accounting rules.

Foreign exchange reserves not including accrued interest amounted to HUF 8,793.5 billion at 31 December 2018, exceeding the figure for end-2017 by HUF 1,564.5 billion. In the course of 2018, the amount of foreign exchange reserves was increased by EUR transfers from the European Commission, the forint-liquidity providing fine-tuning FX swap tenders with credit institutions and cross-rate changes. The level of reserves was reduced by the overall effect of the debt management and other activities of the Government Debt Management Agency, and by the net balance of foreign currency inflows and payments managed by the Hungarian State Treasury. As a consequence of the aforementioned effects, the stock of foreign exchange reserves denominated in euro increased by EUR 4 billion in 2018.

In October 2018, taking into account the country's national strategy objectives, the MNB increased Hungary's gold reserves tenfold, with the stock of gold rising from 3.1 tons to 31.5 tons, which has already been transported to Hungary. As a result of this, the stock of gold reserves increased by HUF 330.1 billion.

The end-2018 balance of foreign currency securities contained the securities which are managed by the external trustee based on a mandate in a total amount of HUF 739.6 billion (11.9 per cent altogether).

4.10 OTHER FORINT AND FOREIGN CURRENCY RECEIVABLES

Other forint receivables

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	Receivables from supervisory activities	8,817	8,870	53
	Employee loans	3,044	3,418	374
	Total other receivables in HUF in gross value	**11,861**	**12,288**	**427**
	Impairment loss for other receivables	–8,528	–8,664	–136
I.3.	**Other forint receivables**	**3,333**	**3,624**	**291**

The balance of receivables from supervisory activities amounted to HUF 8.9 billion at 31 December 2018, and an impairment loss was recognised for 97.7 percent of this, in line with the internal rules of the MNB. The amount of personal loans and preferential property loans granted by the MNB to its employees rose to HUF 3.4 billion at end-2018.

Other foreign currency receivables

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	Forint payment of IMF quota	603,324	639,191	35,867
	Foreign hedging transactions*	44,862	445	–44,417
	Other	0	117	117
II.4.	**Other foreign currency receivables**	**648,186**	**639,753**	**–8,433**

** 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 5.9-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. The aggregate balance of swap transactions with non-resident counterparties showed a net receivables balance at end-2017, but a net liabilities balance at end-2018.

4.11 OTHER DEPOSITS AND LIABILITIES

Other forint liabilities

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	International financial institutions' forint deposits	55,169	34,352	–20,817
	Other liabilities	7,729	30,591	22,862
VI.4.	**Other forint deposits and liabilities**	**62,898**	**64,943**	**2,045**

The item 'International financial institutions' forint deposits' mainly includes the forint deposits of the European Commission. The item 'Other liabilities' contains the deposits of the National Deposit Insurance Fund, of the Resolution Fund, of the Compensation Fund and of the Investor Protection Fund, among others.

Other foreign currency liabilities

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	IMF deposit	967,744	1,025,275	57,531
	Foreign deposits and loans	70,957	78,399	7,442
	Hedging transactions*	1,306	50,313	49,007
	Other liabilities	365	295	–70
VII.3.	**Other foreign currency liabilities**	**1,040,372**	**1,154,282**	**113,910**

** 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 113.9 billion and amounted to HUF 1,154.3 billion at 31 December 2018. The amount of the IMF deposit changed the most, with an increase of HUF 57.5 billion. The April switch-over to the new official exchange rate announced by the IMF caused a decline of HUF 31.9 billion, while the effect of exchange rate changes increased the stock by HUF 89.4 billion. The total increase of HUF 7.4 billion in the balance of foreign deposits basically resulted from a rise of the volume of hedging transactions marked to market. The aggregate net balance of swap transactions with non-resident counterparties was recorded among the liabilities in the balance sheet at end-2018.

Other foreign currency liabilities by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2017	31 Dec 2018	
	- within 1 year	674,749	759,449	84,700
	- within 1 to 5 years	1,203	2,529	1,326
	- over 5 years	0	6,220	6,220
	- without maturity	364,420	386,084	21,664
VII.3.	**Other foreign currency liabilities**	**1,040,372**	**1,154,282**	**113,910**

The item 'Liabilities without maturity' includes the liabilities amounting to SDR 991.1 million, which derived from the SDR allocation carried out by the IMF in 2009. The increase was caused by exchange rate changes.

Currency structure of other foreign currency liabilities – without foreign hedging transactions

HUF millions

No.	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
1.	- USD	13,479	–88,465	–101,944
2.	- EUR	9,162	5,981	–3,181
3.	- JPY	–125,982	0	125,982
4.	- SDR	361,661	419,193	57,532
5.	- Other	780,746	767,260	–13,486
6.	**Other foreign currency liabilities**	**1,039,066**	**1,103,969**	**64,903**

The item 'Other' amounted to HUF 767.3 billion at the end of 2018 and mainly contains the revaluation-corrected forint coverage of the IMF quota.

4.12 INVESTED ASSETS

The invested assets account for the largest portion of the banking assets in the MNB's balance sheet. Furthermore, in 2018 other banking assets also include the receivable and the deposit escrow amounting to HUF 14.8 billion (EUR 45.3 million) connected to the Buda Palota purchase.

In addition to intangibles, tangibles and capital expenditure (HUF 32.3 billion), invested assets include shares in investments (HUF 9.6 billion in foreign investments and HUF 38.9 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
	Immaterial goods		Tangible assets				Capital expenditure and advances given	
	Intangible assets	Software under development	Buildings and accessories	Equipment	Depository Programme	Assets of banknote and coin		
Gross value								
31 Dec 2017	**15,187**	**545**	**12,965**	**14,830**	**9,968**	**242**	**711**	**54,448**
Commissioning/ acquisition	1,505	282	683	2,854	930	1	1,908	**8,163**
Acceptance of assets free of charge								**0**
Other addition/ reclassificaion	228		1					**229**
Scrapping	-886			-13			-2	**-901**
Selling				-121				**-121**
Transfer free of charge				-570				**-570**
Other disposal/ reclassification	-5			-233				**-238**
31 Dec 2018	**16,029**	**827**	**13,649**	**16,747**	**10,898**	**243**	**2,617**	**61,010**
Details of depreciation								
31 Dec 2017	**11,459**	**0**	**4,857**	**10,691**	**0**	**0**	**0**	**27,007**
Ordinary depreciation	1,563		412	1,296				**3,271**
Other addition due to reclassificaion	90							**90**
Derecognition	-885			-669				**-1,554**
Decrease due to reclassification				-90				**-90**
31 Dec 2018	**12,227**	**0**	**5,269**	**11,228**	**0**	**0**	**0**	**28,724**
Balance								
31 Dec 2017	**3,728**	**545**	**8,108**	**4,139**	**9,968**	**242**	**711**	**27,441**
31 Dec 2018	**3,802**	**827**	**8,380**	**5,519**	**10,898**	**243**	**2,617**	**32,286**
Change	**74**	**282**	**272**	**1,380**	**930**	**1**	**1,906**	**4,845**

The net value of the state-owned, managed buildings (3 buildings and 2 plots of land) was HUF 61 million at 31 December 2018.

Foreign investments and dividends from investments

HUF millions

Description	Ownership share (%)		Book value		Dividends received	
	31 Dec 2017	31 Dec 2018	31 Dec 2017	31 Dec 2018	2017	2018
BIS	1.43	1.43	7,264	7,752	977	798
SDR millions			*10*	*10*		
CHF millions			*13.5*	*13.5*		
European Central Bank	1.38	1.38	1,737	1,801	-	-
EUR thousands			*5,601*	*5,601*		
SWIFT	0.03	0.03	14	15	0	0
EUR thousands			*46.4*	*46.4*		
Total investments			**9,015**	**9,568**	**977**	**798**

Ownership distribution in the ECB at 31 December 2018

National Central Banks (NCBs)	Subscribed capital	Paid-up capital	Capital key (%)
	EUR thousands		
Nationale Bank van België/ Banque Nationale de Belgique	268,222	268,222	2.4778
Deutsche Bundesbank	1,948,209	1,948,209	17.9973
Eesti Pank	20,871	20,871	0.1928
Central Bank of Ireland	125,646	125,646	1.1607
Bank of Greece	220,094	220,094	2.0332
Banco de España	957,028	957,028	8.8409
Banque de France	1,534,900	1,534,900	14.1792
Banca d'Italia	1,332,645	1,332,645	12.3108
Central Bank of Cyprus	16,378	16,378	0.1513
Latvijas Banka	30,537	30,537	0.2821
Lietuvos banka	44,729	44,729	0.4132
Banque centrale du Luxembourg	21,975	21,975	0.2030
Central Bank of Malta	7,015	7,015	0.0648
De Nederlandsche Bank	433,379	433,379	4.0035
Oesterreichische Nationalbank	212,506	212,506	1.9631
Banco de Portugal	188,723	188,723	1.7434
Banka Slovenije	37,400	37,400	0.3455
Národná banka Slovenska	83,623	83,623	0.7725
Suomen Pankki – Finlands Bank	136,005	136,005	1.2564
Subtotal for euro area NCBs	**7,619,885**	**7,619,885**	**70.3915**
Bulgarian National Bank	92,987	3,487	0.8590
Česká národní banka	174,012	6,525	1.6075
Danmarks Nationalbank	161,000	6,038	1.4873
Hrvatska narodna banka	65,199	2,445	0.6023
Magyar Nemzeti Bank	149,363	5,601	1.3798
Narodowy Bank Polski	554,565	20,796	5.1230
Banca Naţională a României	281,710	10,564	2.6024
Sveriges riksbank	246,042	9,227	2.2729
Bank of England	1,480,244	55,509	13.6743
Subtotal for non-euro area NCBs	**3,205,122**	**120,192**	**29.6085**
Total NCBs	**10,825,007**	**7,740,077**	**100.0000**

Hungary joined the European Union on 1 May 2004, as a result which the MNB became a member of the ESCB. The ESCB comprises the European Central Bank (ECB) and the national central banks of the 28 EU Member States. The Eurosystem is composed of the ECB and of the national central banks of Member States which 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 has become 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 additionally change with a new accession to the EU or with capital increase.

Starting from 1 January 2019, the key subscription was adjusted again, due to the five-year review. The MNB's key for subscription decreased to 1.3348, and its share fell to EUR 144.5 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 'Invested 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 5.6 million (HUF 1.8 billion) in the MNB's balance sheet as at 31 December 2018.

Domestic investments and dividends from investments

HUF millions

Description	Ownership share (%)		Book value		Dividends received	
	31 Dec 2017	31 Dec 2018	31 Dec 2017	31 Dec 2018	2017	2018
Pénzjegynyomda Zrt. 1055 Budapest, Markó utca 13–17.	100.0	100.0	11,827	11,827	0	0
Magyar Pénzverő Zrt. 1239 Budapest, Európa u. 1.	100.0	100.0	575	575	0	0
Pénzügyi Stabilitási és Felszámoló Nkft. 1055 Budapest, Bajcsy-Zsilinszky út 78.	100.0	100.0	50	50	-	-
MNB-Jóléti Kft. 1054 Budapest, Szabadság tér 8–9.	100.0	100.0	665	688	0	0
MNB-Biztonsági Zrt. 1123 Budapest, Alkotás utca 50.	100.0	100.0	740	740	863	0
GIRO Elszámolásforgalmi Zrt. 1054 Budapest, Vadász utca 31.	100.0	100.0	9,779	9,779	0	0
Budapesti Értéktőzsde Zrt. 1054 Budapest, Szabadság tér 7.	81.4	81.4	14,619	11,555	0	0
KELER Zrt. 1074 Budapest, Rákóczi út 70–72.	53.3	53.3	643	643	0	457
KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	0.2	0.1	7	7	0	0
Total investments			**38,905**	**35,864**	**863**	**457**

Participations of domestic investments

HUF millions

Description	Participations		
	Name Headquarter	**Ownership share** (%)	**Share capital** (HUF millions)
		31 December 2018	
Pénzjegynyomda Zrt.	**DIPA Diósgyőri Papírgyár Zrt.** 3535 Miskolc, Hegyalja út 203/1.	100.0	4,196
GIRO Elszámolásforgalmi Zrt.	**BISZ Központi Hitelinformációs Zrt.** 1205 Budapest, Mártonffy utca 25–27.	100.0	217
Budapesti Értéktőzsde Zrt.	**Budapest Institute of Banking Zrt.** 1054 Budapest, Szabadság tér 7.	100.0	80
	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.	99.7	1,823

In addition to forint banknotes, **Pénzjegynyomda Zrt.** (Hungarian Banknote Printing Shareholding Company) produces secure documents in paper and plastic card format, tax stamps and securities for domestic and foreign clients. Developments and investments were implemented to ensure the modern, secure production of forint banknotes and documents compatible with international standards. The main strategy of the company is focused on enhanced banknote production in adequate quantity and excellent quality, and increased international penetration in market segments other than banknote production as well as the development of integrated IT systems and services related to the products. As part of the programme for changing and developing Hungary's banknotes (between 2013 and 2019), the priority of the company's operation is the production of the developed banknotes. Beyond that it has stabilised its presence in the production and personalisation of important domestic documents for the contracting period until 2022. At the site established in 2015, in addition to producing cards, printed documents, manufacturing tax stamps/banderoles, as a new activity the personalisation of passports and other domestic documents, as well as the production of electronic identity cards was started at the end of 2017. The subsidiary of the printing company is **Diósgyőri Papírgyár Zrt.** (DIPA, Diósgyőr Papermill), the sole security paper manufacturer in Hungary. The primary function of DIPA is to produce banknote base paper in adequate quantity, quality, and timing. At the centre of the product strategy of the company are quality products applied with high-level security elements. In addition to banknote base paper, DIPA produces a significant share of base papers for documents used in public administration, base papers for tickets, as well as the base papers for the passports of several countries and for documents, for which it offers complex solutions. In its international relations as well, the company strives to strengthen customer satisfaction, based on traditions and innovative solutions, and to stabilise or improve its results, thereby ensuring an efficient investment for the shareholder.

On the basis of the MNB's orders, the primary duty of **Magyar Pénzverő Zrt.** (Hungarian Mint Ltd.) is to produce circulation coins for cash turnover 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 commemorative coins as well and other medals on the basis of its own coin programme and customised orders. Within the range of its commercial activities, the company sells commemorative coins, collector banknotes, medals and gold investment products in Hungary and abroad, both as a wholesaler and retailer. From December 2018 the scope of activities of the company broadened after receiving the mandate of the President's Office for the production of national awards in 2019.

In 2018, the company also carried out a number of investments in its toolplant and minting plant, which resulted in extraordinary performance in all segments. The production of circulation and commemorative coins was carried out according to the orders of the MNB.

Pénzügyi Stabilitási és Felszámoló Nonprofit Kft. (PSFN Kft., Financial Stability and Liquidator Non-profit Ltd.) has exclusive right to perform the liquidation or winding-up proceedings of financial institutions, to phase out venture capital funds, and – if necessary – to perform coordinating and advisory tasks related to the resolution of financial institutions. Furthermore, it performs supervisory commissioner work for financial institutions with suspended authorisation for operations. PSFN Kft. performs tasks related to the administration and therefore to the operative management and if necessary to the organised market derecognition of financial institutions in crisis. Within the framework of its public function, the company designates, if necessary, the person performing the tasks of the supervisory commissioner assuming partial or overall management of financial institutions which need direct professional control and review by the supervisory measures of the MNB. If it is found that – in spite of the supervisory measures of the MNB or the designation of supervisory commissioners – the prudent and legal operation of the financial institution is not ensured, the experts of the company provide for liquidation or for winding-up proceedings of the institution. The purpose of these procedures is to enforce creditors interests and to satisfy their claims after the withdrawal of authorisation for operations of the institution, prior to the end of resolution proceedings. PSFN Kft. performs its functions for the public good, protecting the interests of the users of financial services. The expressed aim of PSFN Kft. is to perform the termination of credit institutions, financial enterprises, insurance companies, capital market institutions, funds and other financial institutions with a uniform approach and methodology, emphasising prudence and transparency; and to complete resolution as soon as possible keeping in mind its complexity and the interests of financial customers and providing creditors with the highest return. Continuous regulatory and infrastructure developments serve to achieve these objectives, provide adequate and efficient information to the public and strengthen confidence in the financial intermediary system.

MNB-Jóléti Humán Szolgáltató és Üzemeltető Kft. (MNB-Welfare Human Services and Operating Ltd.) is responsible for the maintenance and operation of the Tiszaroff Training and Recreation Centre and for the provision of recruitment and other services determined by the MNB at high level on-site (conferences, trainings, courses, external assemblies). In addition, the company operates the buffets at workplaces for employees of the MNB and provides other services (e.g. catering, operation of Teátrum) for the MNB as the owner. The book value of the investment increased to HUF 688 million by the end of 2018 due to the share capital increase of HUF 23 million during the year.

MNB-Biztonsági Zrt. (MNB-Security Services Ltd.) performs active personal guarding and protection activities based on the service contract. 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. MNB-Biztonsági Zrt. carries out tasks of guarding and protecting and securing events for the MNB with personal and property protection guards on ad-hoc basis, beyond its main activity with armed security guards, along with the accompaniment of consignments that require security surveillance. From 2017, the MNB-Biztonsági Zrt. performs evaluative-analytical and advisory activity related to the guarding and protection activity and to the protective services to be performed by the central bank, and furthermore provides security support for the central bank. MNB-Biztonsági Zrt. does not provide services to third parties outside the MNB.

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 the clearing services, implementation of new clearing services, and increasing the competitiveness of clearing fees. At the moment, the company's most important development is the implementation of the instant payment infrastructure, that will make it possible to settle electronic payments up to HUF 10 million within 5 seconds 24 hours a day, every day of the year. Customers will be able to initiate transfers applying secondary account IDs (mobile phone numbers, e-mail addresses, tax ID/tax number) without using the account numbers. Beside this, with the use of the new payment request service, the beneficiary will be able to initiate instant payment transaction at the payer with a standard message. According to the plans, the instant payment system will be launched on 1 July 2019. To support the expansion of the electronic cash flow, the company reworked its clearing fee strategy, which means moving to a new system load based pricing model from the previous transaction based approach. The new package prices covers the usage of the Interbank Clearing System, so the members will not be charged with transaction fees during the clearing from 1 January 2019.

With the strategic ownership of the **Budapesti Értéktőzsde Zrt.** (BÉT, Budapest Stock Exchange), the aim of the MNB is to develop the market and achieve an adequately sized, effectively operating capital market in Hungary, as a developed capital

market and diversified financial intermediary system is a fundamental basis for a competitive economy and sustainable growth. The new strategic policy of the Budapest Stock Exchange until 2020 consists of the following: successful official listings on the stock exchange, renewal of the market structure, strengthening investors and international relations, as well as intensification of government support related to these. The strategy contributes to establishing a healthier structure of the financial system and improving interest rate transmission and assists the further reduction of the shadow economy by ensuring the transparency of the listed companies. In 2018, the Budapest Stock Exchange started the Mentoring Programme to strengthen the national small and medium-size companies' sector, and also launched the Stock Exchange Development Fund to assist potential companies in entering the stock market. BÉT played a role in forming the legislative environment to support the capital market improvement: it liaised several times with the MNB and the Ministry of Finance on the national implementation of the Prospectus Decree and modification of Capital Market Act to make the domestic capital market more competitive. Development of the market structure in 2018 continued with the analysing-quotation programme, the officially launch of the new mortgage bond indices, and the first companies entering the new Xtend platform. Similar to earlier years, in 2018 the Budapest Stock Exchange emphasised maintaining international relationships. The agreement with the Shanghai Stock Exchange allows for the joint development of investment products, research and information exchange, the start of trading with the yuan-based structured security, the first to be issued in the region of the Bank of China. The Budapest Stock Exchange participated the establishment of the joint representation of the region's countries in the EU and also played a role in the work of the Federation of European Securities Exchanges (FESE). In addition, BÉT organised international forums and conferences to stimulate the supply side of new issues. Through its subsidiary company, Budapest Institute of Banking Ltd., it stimulated the demand side with educational initiatives. The company has a minority participation 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 has a strategic share in the KELER Group as well. As the operator of the post-trade infrastructure in the Hungarian securities market, the KELER Group accounts, guarantees and settles the stock exchange transactions traded on the Exchange and transactions involving dematerialised securities issued in Hungary. Based on a business valuation performed by an external consultant, the MNB recognised an impairment loss of HUF 3.1 billion in relation to the investment in BÉT Zrt. in 2018.

KELER Központi Értéktár Zrt. (KELER Zrt., KELER Central Depository Ltd.) is the sole company providing central depository services in the Hungarian capital market and beyond this function it acts as a specialised credit institution. Due to its market position, KELER is the issuer of Hungarian ISIN codes and participates as a provider in all domestic securities issues. At the beginning of 2017, KELER entered the TARGET2-Securities (T2S) securities settlement platform operated by European Central Bank across Europe, which aims to make cross border security trading more efficient. Low T2S rates for international transactions may contribute to higher foreign demand for Hungarian securities and to rendering the foreign securities markets more attractive for domestic customers. In order to enable the participants of the domestic capital market to fully enjoy all the advantages offered by T2S, the company is currently implementing the KELER's Service Development Programme, in which the IT infrastructure of the company will be renewed. In 2017, the re-licensing procedure was started in accordance with the new European regulation on central depositories (CSDR). Following a successful licensing process, KELER will ensure its services essential to the secure functioning of the Hungarian capital market in accordance with the strictest European standards.

As part of the KELER Group, **KELER KSZF Zrt.** attends to the clearing service and the CCP function. As a clearing house, the company accounts the spot and derivative transactions traded on the Budapest Stock Exchange, and as a CCP guarantees the transactions are completed. In addition to the capital market segment, dynamic growth was registered in transactions with electricity and natural gas trading in recent years. In the electricity markets (e.g. the Hungarian power exchange HUPX), KELER KSZF Zrt. provide its services as a member of European Commodity Clearing AG, headquartered in Leipzig. In other markets, the company as a CCP supports smooth transports, for example on the Central-European gas exchange CEEGEX.

Transactions concluded with domestic investments are services or purchases of goods regulated by contracts and are priced on a market basis or with regard to own cost. The charging of fees with domestic investments is based on the valid regulatory fee schedules (MNB decree, public notices). The costs of banknote and coin production are presented in Section 4.20., and expenses related to support are presented in Section 4.22.

Equity of domestic investments

The latest data available upon 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 2018			
Pénzjegynyomda Zrt.	11,827	6,388	1,150	19,365
Magyar Pénzverő Zrt.	575	982	664	2,221
Pénzügyi Stabilitási és Felszámoló Nkft.	50	3	0	53
MNB-Jóléti Kft.	809	-108	0	701
MNB-Biztonsági Zrt.	210	530	0	740
GIRO Elszámolásforgalmi Zrt.	2,496	7,684	1,740	11,920
Budapesti Értéktőzsde Zrt.	541	5,681	297	6,519
KELER Zrt.	4,500	21,104	1,563	27,167
KELER KSZF Zrt.	2,623	5,339	174	8,136

MNB's receivables from and liabilities to affiliated companies

HUF millions

Investment	Receivables	Liabilities
	31 December 2018	
Pénzjegynyomda Zrt.	0	751
Magyar Pénzverő Zrt.	733	42
MNB-Jóléti Kft.	0	117
MNB-Biztonsági Zrt.	0	129
GIRO Elszámolásforgalmi Zrt.	0	4
Budapesti Értéktőzsde Zrt.	0	11
KELER Zrt.	0	8
Budapest Institute of Banking Zrt.	4	0
Total	**737**	**1,062**

The above table presents short-term receivables and liabilities. Receivables from Magyar Pénzverő Zrt. are mostly from financing for materials connected to the production of circulation coins. Liabilities to Pénzjegynyomda Zrt. and Pénzverő Zrt. derive from the invoicing of banknotes produced, circulation and commemorative coins. Liabilities to MNB-Jóléti Kft. are from the provision of services, and liabilities to MNB-Biztonsági Zrt. result from invoices for guarding and protection activities.

4.13 PROVISIONS AND IMPAIRMENT LOSSES

HUF millions

B/S line	Description	31 Dec 2017	Interim changes		31 Dec 2018
		Impairment losses / provisions	Increase (+)	Reversal (-)	Total impairment losses / provisions
I.2.	Forint receivables from credit institutions	5,504	1,362	–342	6,524
I.3.	Other forint receivables	8,528	136	0	8,664
III.	Invested financial assets	249	3,064	0	3,313
III.	Other receivables	4	0	–1	3
VIII.	Off-balance sheet liabilities	641	78	–51	668
	- litigation related liabilities	396	73	–10	459
	- FGS+ refinancing loans	204	0	0	204
	- derivatives	41	5	–41	5
	Total	**14,926**	**4,640**	**–394**	**19,172**

In 2018, provisions and impairment losses increased by HUF 4.2 billion to HUF 19.2 billion in net terms.

In relation to forint receivables from credit institutions, based on the expected recovery, at 31 December 2018 an impairment loss of HUF 6.5 billion was justified.

In relation to forint receivables from supervisory activities, in total an impairment loss of HUF 0.1 billion was recognised during the quarterly impairment testing in 2018.

In relation to invested financial assets, an impairment loss of HUF 3.1 billion was formed, due to an investment in BÉT Zrt.

In connection with litigation-related contingent liabilities, a provision of HUF 0.5 billion was necessary as of 31 December 2018; compared to HUF 0.4 billion at end-2017.

4.14 PREPAID EXPENSES/ACCRUED INCOME AND ACCRUED EXPENSES/ DEFERRED INCOME

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
	Due to banking transactions	61,819	170,234	108,415
	Due to internal operation	1,732	1,180	–552
IV.	**Prepaid expenses/accrued income**	**63,551**	**171,414**	**107,863**
	Due to banking transactions	43,012	88,203	45,191
	Due to internal operation	835	722	–113
X.	**Accrued expenses/deferred income**	**43,847**	**88,925**	**45,078**

Prepaid expenses, accrued income, accrued expenses, and deferred income include interest received/charged and interest related income/charges and expenses incurred in the reporting period, independently of the date of financial settlement.

4.15 CHANGES IN EQUITY

HUF millions

B/S line	Description	31 Dec 2017	31 Dec 2018	Change
XI.1.	Share capital	10,000	10,000	0
XI.2.	Retained earnings	162,150	200,443	38,293
XI.3.	Valuation reserves	0	0	0
XI.4.	Revaluation reserves due to exchange rate changes	28,010	169,601	141,591
XI.5.	Revaluation reserves of foreign currency securities	3,919	6,637	2,718
XI.6.	Profit/loss for the year	38,293	47,767	9,474
XI.	**Equity**	**242,372**	**434,448**	**192,076**

The share capital consists of a single registered share with a nominal value of HUF 10 billion.

For more details on revaluation reserves, see Section 4.16.

4.16 REVALUATION RESERVES

HUF millions

B/S line	Description	31 Dec 2017	31 Dec 2018	Change
XI.4.	Revaluation reserves due to exchange rate changes	28,010	169,601	141,591
XI.5.	Revaluation reserves of foreign currency securities	3,919	6,637	2,718
	Total revaluation reserves	**31,929**	**176,238**	**144,309**

The revaluation reserves due to exchange rate changes are determined by the amount of revaluated foreign exchange holdings and the difference between the official and average cost rate. In 2018, both of these factors increased revaluation reserves due to exchange rate changes, with the balance changing by HUF 141.6 billion to HUF 169.6 billion. The MNB undertook foreign exchange rate exposure mainly in euro: the exchange rate was EUR/HUF 321.51 and the average cost rate was EUR/HUF 309.74 at 31 December 2018.

Revaluation reserves of foreign currency securities are calculated as the difference between the market value and the amortised book value of securities. Market value differences on the foreign currency securities in the MNB's portfolio showed a positive balance of HUF 6.6 billion as at 31 December 2018.

4.17 OFF-BALANCE SHEET LIABILITIES AND OTHER SIGNIFICANT OFF-BALANCE SHEET ITEMS OF THE MNB

Hedging transactions and derivative transactions for purposes other than hedging

HUF millions

No.	Description	31 Dec 2017			31 Dec 2018		
		Receivables	Liabilities	Net market value	Receivables	Liabilities	Net market value
1.	Interest rate swap transactions	3,875,715	3,875,715	55,046	4,404,828	4,404,828	–39,698
	- IRS conditional on lending activity (LIRS)	906,350	906,350	–2,238	906,350	906,350	–1,936
	- IRS facility of monetary policy (MIRS)	0	0	0	1,099,617	1,099,617	–42,574
	- IRS contracted with domestic credit institutions	1,731,290	1,731,290	63,597	1,342,080	1,342,080	26,698
	- IRS contracted with foreign partners	1,238,075	1,238,075	–6,313	1,056,781	1,056,781	–21,886
2.	Futures	0	88,930	314	0	237,692	–420
3.	FX swap and forward transactions	3,583,417	3,534,119	46,852	4,827,139	4,872,986	–48,993
	- Forint liquidity providing FX swaps	1,519,637	1,515,344	1,274	1,993,912	1,996,256	–7,049
4.	Currency swap transactions (including transactions without capital replacement)	1,921,702	1,964,947	–87,405	4,233,952	4,515,315	–290,914
	- Currency swap transactions linked to FGS	140,946	141,642	7,674	161,385	156,421	14,847
5.	**Total hedging transaction (1+2+3+4)**	**9,380,834**	**9,463,711**	**14,807**	**13,465,919**	**14,030,821**	**–380,025**
6.	Options	28,509	0	–40	0	0	0
7.	TBA transactions	13,943	0	15	104,981	45,920	709
8.	Futures	0	0	0	201,796	0	502
9.	**Total derivative transactions for purposes other than hedging (6+7+8)**	**42,452**	**0**	**–25**	**306,777**	**45,920**	**1,211**
10.	**Total (5+9)**	**9,423,286**	**9,463,711**	**14,782**	**13,772,696**	**14,076,741**	**–378,814**

The above table includes all types of off-balance sheet receivables and liabilities arising from derivative transactions; it also includes FX swaps, currency swaps and forward transactions for hedging purposes, which are part of the foreign currency position and are recorded in the balance sheet, except for currency swaps without capital movement. Hedging transactions reduce risks related to the net foreign currency position and risks arising from cross-rate fluctuations and interest rate changes, and support the creation of the benchmark foreign currency structure determined by the Monetary Council.

The aim of interest rate swap transactions for hedging purposes linked to specific bond issuance is to achieve the interest structure deemed desirable by the MNB. Since 2014, the MNB has concluded interest rate swap tenders with domestic credit institutions to reduce their interest rate risk, in 2016 interest rate swaps conditional on lending activity (LIRS) and in 2018 monetary policy interest rate swaps (MIRS) were concluded. Almost 40 percent of the approved transactions mature within 1 year, 34 percent have a maturity of 1 to 5 years, the remaining mature within 9 years.

The aim of futures transactions is to reduce the duration of the reserve portfolio; these are hedging transactions maturing within 1 year.

FX swap and forward transactions are 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, and their maturity is less than 1 year. Fine-tuning FX swap transactions, related to the quantitative limit for the 3-month deposit, are for monetary policy purposes and provide forint liquidity for domestic credit institutions.

Currency swap transactions are used to manage foreign exchange and interest rate risks jointly over the long term. Of the end-2018 balance, 15 per cent of the currency swap transactions consisted of transactions without capital replacement maturing in 2023.

The derivative transactions for purposes other than hedging have a maturity within 1 year.

Liabilities from derivative transactions by remaining maturity

HUF millions

No.	Remaining maturity	Balance		Change
		31 Dec 2017	31 Dec 2018	
	- within 1 year	4,335,034	6,300,213	1,965,179
	- within 1 to 5 years	2,458,141	5,777,915	3,319,774
	- over 5 years	2,670,536	1,952,693	–717,843
1.	**Liabilities from hedging transactions**	**9,463,711**	**14,030,821**	**4,567,110**
	- within 1 year	0	45,920	45,920
	- within 1 to 5 years	0	0	0
	- over 5 years	0	0	0
2.	**Derivative transactions for purposes other than hedging**	**0**	**45,920**	**45,920**
3.	**Total (1+2)**	**9,463,711**	**14,076,741**	**4,613,030**

Other off-balance sheet liabilities

HUF millions

No.	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
1.	FGS residual drawable credit facilities	98,715	33,532	–65,183
2.	FGS+ related contingent liabilities	204	204	0
3.	Litigation-related contingent liabilities	786	825	39
4.	Guarantees	1,592	1,721	129
5.	Other off-balance sheet liabilities	15	15	0
6.	**Total (1+2+3+4+5)**	**101,312**	**36,297**	**–65,015**

In connection with the FGS, the MNB reports the following items as off-balance sheet liabilities: the still available credit facilities originally allocated in the framework of FGS+, but now drawable both in the additional phase of FGS Pillar I at the request of the banks, as well as the credit facilities drawable in the 3rd phase of FGS Pillar I and Pillar II.

In accordance with the contracts concluded in the framework of FGS+, up to a maximum of 50 per cent of the capital loss of credit institutions arising from SME loans are reimbursed by the MNB to the credit institutions subject to a portfolio-level limit. FGS+ related contingent liabilities are used to record the expected reimbursement for which provisions have been formed, in line with the rules of qualification.

The majority of the legal proceedings are proceedings against penalty resolutions connected to the 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 formed.

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 2018, the increase in the balance was caused by exchange rate changes.

Recording off-balance sheet securities transactions

HUF millions

No.	Description	Balance		Change
		31 Dec 2017	31 Dec 2018	
1.	Face value of securities lent	146,283	148,341	2,058
	- automatic securities lending	9,573	8,506	–1,067
	- agency securities lending	136,710	139,835	3,125
2.	Purchase cost of the non-cash hedge arising from security lending transactions	0	0	0
3.	Investment of cash hedge arising from security lending transactions			
	- at purchase cost	138,528	142,029	3,501
	- at market value	138,528	142,029	3,501
4.	Not invested cash hedge arising from security lending transactions	1,293	0	–1,293
5.	Face value of securities bought under repo transactions	77,954	22,227	–55,727

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	2017	2018	Change
(I.1.+II.2.)—(X.1.+XI.1.)	Central government	2,257	1,245	–1,012
(I.2.+II.3.)—(X.2.+XI.2.)	Credit institutions	–10,001	–810	9,191
(I.3.+II.1.+II.4.)—(X.3.+XI.3.)	Other	49,135	52,786	3,651
	Net profit/loss from interest	**41,391**	**53,221**	**11,830**
	Forint securities	114	–2,523	–2,637
	Foreign currency securities	–30,804	–24,418	6,386
	Derivative transactions for hedging and other purposes*	–61	776	837
	Other	34	45	11
(I.4.+II.5.)—(X.4.+XI.4.)	**Net interest-related profit/loss**	**–30,717**	**–26,120**	**4,597**
(I.+II.)—(X.+XI.)	**Net interest and interest-related income**	**10,674**	**27,101**	**16,427**

** For details on derivative transactions for hedging and other purposes, see the last table in this section.*

In 2018, the MNB recorded a net interest and interest-related profit of HUF 27.1 billion, representing an increase of HUF 16.4 billion compared to the figure for end-2017.

Net interest income increased by HUF 11.8 billion in comparison to end-2017, as a combined effect of the following:

Positive factors in net interest income were:

– an increase in interest income on loans to credit institutions and mortgage bonds of HUF 5.1 billion as a result of the mortgage bond purchase programme (at the same time, the amortised net purchase price loss, recognised among net interest-related expenses, amounted to HUF 2.5 billion);

– interest income on foreign exchange reserves were higher by HUF 4.9 billion relative to 2017, which can be explained by the rising level of gold and foreign exchange reserves and the transformation of some elements of the investment strategy;

– a decrease in interest expenses on forint deposits of credit institutions of HUF 4.2 billion, arising from the quantitative restriction and phasing out of the 3-month MNB deposit facility (the main policy instrument);

Negative factors in net interest income were:

– an increase in interest paid on the other deposits denominated in foreign currency of HUF 1.2 billion, mainly due to the rise in interest paid on the IMF SDR allocation;

– interest paid on the forint and foreign currency deposits of the central government rose by HUF 1 billion compared to 2017. As a result of the negative yields in euro, the central bank earned interest income on foreign currency deposits, but with the decrease in deposits, interest income also decreased.

Net interest-related income increased by HUF 4.6 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 sums for interest income/expenses in the net forint and foreign currency interest and interest-related income

HUF millions

P/L line	Description	2017		2018	
		Total	of which: Negative sums for interest	Total	of which: Negative sums for interest
	INCOME				
I.	**Interest and interest-related income denominated in forint**	**25,568**	**–706**	**35,382**	**0**
I. 4.	Interest-related income	24,410	–706	29,194	0
II.	**Interest and interest-related income denominated in foreign currency**	**132,003**	**–5,204**	**180,556**	**–11,960**
II. 1.	Interest on foreign currency reserves	57,291	–2,924	62,166	–4,648
II. 5.	Interest-related income	74,711	–2,280	118,390	–7,312
	EXPENSES				
X.	**Interest and interest-related expenses denominated in forint**	**13,823**	**–360**	**11,819**	**417**
X. 2.	Interest on deposits by credit institutions	11,189	–360	7,001	–1,064
X. 4.	Interest-related expenses	2,594	0	4,649	1,481
XI.	**Interest and interest-related expenses denominated in foreign currency**	**133,074**	**–6,060**	**177,018**	**–5,614**
XI. 1.	Interest on central government deposits	–2,201	–2,249	–1,358	–1,489
XI. 2.	Interest on deposits by credit institutions	–118	–119	–54	–54
XI. 3.	Interest on other liabilities	8,149	–438	9,375	–463
XI. 4.	Interest-related expenses	127,244	–3,254	169,055	–3,608

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 the assets/liabilities (in net terms). For example interest income on the foreign currency deposits of the central government, arising from negative yields, are recorded in line 'XI. 1 Interest on central government deposits'. This method causes the negative balances in the statements.

Details of income from derivative transactions for hedging and for purposes other than hedging represented in interest-related income

HUF millions

No.	Description	2017	2018	Change
1.	Net interest on currency swaps	–20,616	–20,268	348
2.	Interest margin on hedge interest rate swaps	22,371	23,884	1,513
3.	Net interest gains on hedge FX swaps	727	–2,099	–2,826
4.	Net interest gains on hedge forward transactions	144	–228	–372
5.	Net interest gains on hedge futures transactions	–4,309	–1,315	2,994
6.	Net interest-related income on hedge swap transactions	1,461	–76	–1,537
7.	Net interest-related income on hedge option transactions	0	1	1
8.	Net interest and interest-related income on other transactions	161	877	716
9.	**Net income from derivative transactions (1+2+3+4+5+6+7+8)**	**–61**	**776**	**837**

Currency swap transactions include derivative transactions concluded with the Government Debt Management Agency (ÁKK), with foreign partners and with domestic credit institutions. The average amount of transactions concluded with the Government Debt Management Agency increased in 2018, while changes in FX market yields (euro and US dollar yields) had an unfavourable impact on the result. The transactions concluded with foreign partners mainly serve to hedge transactions concluded with the Government Debt Management Agency. The average amount of these transactions rose in 2018, and changes in FX market yields caused an increase in net interest income. The average amount of transactions concluded with domestic credit institutions included the currency swaps related to Pillar II of the FGS in 2018, and the net interest expenses increased. The net interest result of currency swaps was a loss of HUF 20.3 billion, representing an improvement of HUF 0.3 billion compared to 2017.

The increase of HUF 1.5 billion in the interest result on interest rate swaps arose from transactions concluded with domestic credit institutions, mainly from monetary policy interest rate swap (MIRS) transactions.

Hedge FX swaps include short-term transactions concluded with foreign partners, with the Government Debt Management Agency and with domestic credit institutions. The net interest result on these swaps fell by HUF 2.8 billion, which was related to the rise in the amount and the change in the foreign exchange composition of transactions concluded with foreign partners.

Hedge forward transactions include transactions concluded with foreign partners. The net interest result on hedge forward transactions fell by HUF 0.4 billion in 2018, stemming from changes in their foreign exchange composition.

The net interest loss on hedge futures transactions decreased by HUF 3 billion, due to lower net interest expenses on bond futures transactions.

Net interest-related income on hedge swap transactions includes the exchange rate gains or losses of the transactions. The net interest-related result on hedge swaps was mainly caused in 2017 by the exchange rate gains arising from the termination of interest rate swaps conditional on lending activity (LIRS) and in 2018 by the exchange rate loss arising from the termination of interest rate swaps concluded with a foreign partner.

The increase of HUF 0.7 billion in the net interest and interest-related income on other transactions arose from bond futures transactions other than hedging.

Realised gains/losses from financial operations

HUF millions

P/L line	Description	2017	2018	Change
	Realised gains on bonds issued by the Hungarian Government	15	0	–15
	Realised gains on coupon bearing bonds denominated in foreign currency	6,728	2,934	–3,794
IV.	**Realised gains from financial operations**	**6,743**	**2,934**	**–3,809**
	Realised losses on coupon bearing bonds denominated in foreign currency	5,571	10,394	4,823
XIV.	**Realised losses from financial operations**	**5,571**	**10,394**	**4,823**
IV.-XIV.	**Net financial gains/losses**	**1,172**	**–7,460**	**–8,632**

Realised gains and losses from financial operations include gains and losses arising from sales of bonds issued by the Hungarian Government, mortgage bonds and bonds denominated in foreign currency, as well as gains and losses related to CDS transactions. Net realised losses from financial operations amounted to HUF 7.5 billion in 2018. The increase in the US dollar market yields mainly explains the deterioration in the net result compared to the previous year.

4.19 COMPONENTS OF INCOME FROM THE REVALUATION OF FOREIGN EXCHANGE HOLDINGS

HUF millions

Description	2017	2018
Net income from exchange rate changes (realised and conversion spread)*	61,393	73,955
Change in revaluation reserves in the balance sheet** (due to unrealised revaluation net income)	–154,449	141,591
Total effect of exchange rate changes	**–93,056**	**215,546**

** P/L line: III.-XII.*

*** Revaluation reserves due to exchange rate changes (balance sheet line XI.4.).*

In 2018, the total exchange rate change effect was a gain of HUF 215.5 billion, due to weakening in the exchange rate of the forint. The MNB realised a gain of HUF 74 billion on sales related to decreasing the daily net FX position and on FX conversions, while the amount of revaluation reserves increased by the unrealised exchange rate changes gains of HUF 141.6 billion during the year.

4.20 COST OF ISSUING BANKNOTES AND COINS

HUF millions

P/L line	Description	2017	2018	Change
	Cost of banknote production	9,517	6,489	–3,028
	Cost of coin production	2,507	4,507	2,000
	Cost of production of commemorative and collector coins	520	637	117
XIII.	**Cost of issuing banknotes and coins**	**12,544**	**11,633**	**–911**

The total cost of issuing banknotes and coins amounted to HUF 11.6 billion in 2018, down HUF 0.9 billion compared to the figure for 2017. The cost of banknote production decreased by HUF 3 billion compared to the previous year, originating in particular from lower demand for banknotes in the last year of the programme for changing and developing the new banknotes. The cost of coin production increased significantly, rising by HUF 2 billion in 2018 compared to 2017 and amounted to HUF 4.5 billion as a result of stronger demand for coins. As demand for commemorative coins rises from year to year, the cost of producing commemorative and collector coins increased by HUF 0.1 billion.

4.21 OTHER INCOME/EXPENSES

HUF millions

P/L line	Description	2017	2018	Change
V.1.	Income from fees and commissions	1,087	1,125	38
XV.1.	Expenses of fees and commissions	689	716	27
	Net income from fees and commisssions	**398**	**409**	**11**
V.2.	Income from other than fees and commissions	4,055	2,927	–1,128
XV.2.	Expenses of other than fees and commissions	4,677	4,674	–3
	Net income from other than fees and commisssions	**–622**	**–1,747**	**–1,125**
V.3.	**Income from supervisory activities**	**11,940**	**12,336**	**396**
V.-XV.	**Other net results**	**11,716**	**10,998**	**–718**

Net income from fees and commissions mainly relates to the balance of income from and expenses of fees and commissions linked to payment services.

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	2017	2018	Change
	Dividends from investments	1,840	1,255	–585
	Income related to coins and commemorative coins	638	808	170
	Recommitment of financial money transfer	187	778	591
	Income related to invested financial assets	244	0	–244
	Income from assets assigned free of charge	37	37	0
	Other income	1,109	49	–1,060
V.2.	**Income from other than commissions and charges**	**4,055**	**2,927**	**–1,128**
	Expenses related to coins and commemorative coins	577	764	187
	Financial money transfer	3,899	3,768	–131
	Expenses related to public proceedings	141	103	–38
	Expenses from assets assigned free of charge	23	21	–2
	Other expenditures	37	18	–19
XV.2.	**Expenses from other than commissions and charges**	**4,677**	**4,674**	**–3**
V.2.-XV.2.	**Net income/expenses from other than commissions and charges**	**–622**	**–1,747**	**–1,125**

Dividends from investments fell by HUF 0.6 billion compared to 2017. In 2018, KELER paid a dividend of HUF 0.5 billion to the MNB, and BIS paid a dividend of EUR 2.4 million (HUF 0.8 billion) to the MNB (see Section 4.12).

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 the 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 the Pénzverő Zrt. at face value, except when the production cost exceeds the face value (the latter is typical for gold coins). In 2018, the net income arose mainly from the issue of the gold commemorative coin 'Golden Florin of Albert'.

The item 'Financial money transfer' includes donations to professional organisations, foundations, as well as to organisations for charitable and other purposes. In 2018, the MNB gave HUF 3.8 billion as donations and HUF 0.8 billion was remitted to the MNB after the settlement as donations not allocated. The highest amounts were related to PSFN Kft., for its operation in 2018 HUF 1 billion was paid as a donation, while HUF 0.7 billion was paid back as unused operating donation from 2017.

Expenses related to public proceedings arose mainly from remittance of penalties related to inoperative decisions and accounted earlier as income, as well as to the cancellation of penalties.

4.23 INCOME FROM SUPERVISORY ACTIVITIES

HUF millions

P/L line	Description	2017	2018	Change
	Supervisory fee and default interest	9,530	10,152	622
	Received penalties and reimbursement from public proceedings	2,075	1,876	–199
	Administrative servicing fee from public proceedings	325	301	–24
	Late payment surcharge for supervisory claims	4	3	–1
	Other income arising from administrative procedures	6	4	–2
V.3.	**Income from supervisory activities**	**11,940**	**12,336**	**396**

The main item of income from supervisory activities is the supervisory fee received from the supervised institutions obliged to pay this fee. In 2018, the income arising from the assessment of the minimum charges for the entire year and of the quarterly payable variable-rate fees amounted to HUF 10.2 billion, while in 2017 the calculated obligation amounted to HUF 9.5 billion. Penalties imposed by the MNB, which became final and from reimbursements added up to HUF 1.9 billion. Administrative servicing fees and magisterial exam fees amounted to HUF 0.3 billion in 2018.

4.24 OPERATING INCOME AND EXPENSES

HUF millions

P/L line	Description	2017	2018	Change
	Income from assets and inventories	20,104	62	–20,042
	Income from subcontracted services	93	47	–46
	Income from invoiced services	756	360	–396
	Other income	24	37	13
VIII.	**Total operating income**	**20,977**	**506**	**–20,471**
	Expenses of materials	12,795	13,955	1,160
	Cost of materials	408	416	8
	Services contracted	12,348	13,506	1,158
	- Maintenance, operation and rent of properties	2,021	2,493	472
	- Maintenance and rent of equipments	708	673	–35
	- Postal and telecommunication services	617	623	6
	- Consultancy services	1,014	894	–120
	- IT security services	1,667	2,261	594
	- Membership fees	623	700	77
	- Guarding services, transport of banknotes and coins	2,959	2,878	–81
	- Advertisements, market research	1,549	1,668	119
	- Other, non-significant services*	1,190	1,316	126
	Other services	39	33	–6
	Personnel-related costs	22,347	24,119	1,772
	Depreciation	3,299	3,271	–28
	Transfer of costs of other activities	–933	–583	350
	Total operating costs	**37,508**	**40,762**	**3,254**
	Expenses incurred on assets and inventories	16,400	50	–16,350
	Expenses incurred on subcontracted services	89	44	–45
	Expenses incurred on invoiced services	777	317	–460
	Other expenses	546	281	–265
	Total operating expenses	**17,812**	**692**	**–17,120**
XVIII.	**Total operating costs and expenses**	**55,320**	**41,454**	**–13,866**
VIII.–XVIII.	**Net operating expenses**	**–34,343**	**–40,948**	**–6,605**

** 'Other, non-significant services' contains in particular preparation of publications, travel and hotel services, services for education, translation and auditing, as well as distribution of commemorative coins.*

In 2018, net operating expenses amounted to HUF 40.9 billion, representing an increase of HUF 6.6 billion (19.2 per cent) compared to 2017.

Operating expenses were 8.7 per cent (HUF 3.3 billion) higher than in the previous year. The main reason for this cost increase was the higher cost of materials and personnel-related expenses.

The cost of materials in 2018 was up 9.1 per cent (HUF 1.2 billion) compared to 2017.

Within the costs of materials, advertising, market research costs, IT services and consultancy costs, maintenance, operation and rent of properties and costs of other services increased. The costs of consulting and forensic costs decreased.

– The increase in the costs of IT services and consulting was mainly due to maintenance and support contracts concluded in previous years. On the other hand, as a result of the implemented investments the support and operating costs of the new IT systems from 2018 appeared already for the whole year.

– Within the cost of maintaining, operating and leasing real estate, rental costs increased: due to the leasing of certain areas of the Eiffel Palace property sold in 2017 (with the depreciation of the respective property ceased), as well as the cost of renting foreign liaison offices opened in 2018. Other expenses related to events (rent, organisational fees, etc.) also increased, mainly due to the IOSCO[27] Annual Conference held in 2018.

– Among other input services, freight and delivery costs increased the most, mainly due to qualified delivery. Compared to the previous year, the cost of producing publications also increased.

– Auditing costs amounted to HUF 37.4 million in 2018, which – in addition to the bank's annual audit cost – also includes the cost of auditing of some merged Pallas Athene foundations (HUF 13.5 million).

– The cost of communication services within the advertising and market research group rose compared to the previous year's costs, mainly due to the communication activity of the Certified Consumer-Friendly Housing Loans campaign and the banknote replacement programme, as well as the ongoing releases in social media.

– In 2018, the cost of consulting and forensics decreased, mainly due to the expiration of the original contract (expired in early June 2018) for complex research, analysis, consultancy and study work.

Personnel-related costs increased by 7.9 per cent (HUF 1.8 billion) compared to the previous year. One major factor in this regard was the decision by the MNB Board of Directors to increase the annual wage bill from 2017, which also covered extraordinary performance recognition, by 8.25 percent from 1 January 2018, in order to secure and retain highly skilled employees. The average headcount rose by 1.6 percent, due to the filling of vacant positions. Apart from the above, the difference in personnel costs was also caused by the one-time representation costs of the IOSCO conference mentioned above.

The *transfer of costs of other activities* is intended to ensure that the total amount of operating expenses reflects only actual expenses incurred by the MNB. The absolute value of transfers in 2018 was HUF 0.6 billion, amounting to 62.5 percent of the total in 2017. The deviation is mainly due to the sale of the Eiffel Palace property in 2017, as the amount of depreciation expense for the leased areas in 2018 no longer reduced operating costs.

[27] International Organisation of Securities Commissions

4.25 INFORMATION ON WAGES AND NUMBER OF STAFF

HUF millions

Description	2017	2018	Change (%)
Payroll costs incurred on staff	14,482	16,017	11
Other staff costs*	558	548	–2
Payroll	**15,040**	**16,565**	**10**
Other payments to personnel	**3,082**	**3,425**	**11**
Social contribution tax	3,361	3,282	–2
Health contribution	553	504	–9
Contribution to vocational training	229	252	10
Contribution to rehabilitation	76	84	11
Sick-allowance	6	7	17
Taxes on personnel-related payments	**4,225**	**4,129**	**–2**
Payments to personnel	**22,347**	**24,119**	**8**

** Other wage costs include payments on termination and in exchange for vacation time used and amounts paid to non-staff and non-MNB workers.*

Persons

Description	2017	2018	Change (%)
Average number of staff	1,411	1,434	2

Remuneration of executive officers

HUF millions

Bodies	2018
Monetary Council*	423
Supervisory Board	167

** Includes the salaries and other payments to personnel of 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.*

Bodies	Amount of loans	Outstanding at 31 Dec 2018	Maturity	Rate of interest
	HUF millions			
Monetary Council	5	5	01 Dec 2020	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.*

7 May 2019, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

ANNUAL REPORT

2018 Business report and financial statements

of the Magyar Nemzeti Bank

Print: Pauker–Prospektus–SPL consortium

H-8200 Veszprém, Tartu u. 6.

mnb.hu

©MAGYAR NEMZETI BANK

H-1054 BUDAPEST, SZABADSÁG SQUARE 9.