



Annual Report

2016





Annual Report

2016 BUSINESS REPORT
AND FINANCIAL STATEMENTS OF
THE MAGYAR NEMZETI BANK



Kiadja: Magyar Nemzeti Bank

Felelős kiadó: Hergár Eszter

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Part A)
2016 Business report of the Magyar
Nemzeti Bank

1 The Governor's foreword

The domestic real economic environment continued to have a disinflationary impact in 2016, and the annual average rate of inflation was 0.4 per cent. In 2016, the Monetary Council of the MNB deployed additional, targeted monetary policy instruments along with traditional interest rate policy to respond to the challenges posed by the low inflation environment and the country's external vulnerability, with a view to achieving the medium-term inflation target in a sustainable manner and adequately stimulating the real economy.

As the Funding for Growth Scheme (FGS), which was introduced as a temporary instrument, successfully achieved the market building and growth objectives set upon its announcement, the Growth Supporting Programme (GSP) was launched on 1 January 2016 with a view to gradually phasing out the FGS. Part of this involves the third stage of the FGS, comprising two pillars, which allows more restricted and targeted financing than before, while another part consists of the Market-Based Lending Scheme (MLS), a package of instruments containing positive incentives to support banks' lending activity in other ways.

The MNB's objective with the MLS, which forms part of the GSP, was to ensure that – even with the gradual phase-out of the FGS – the credit market functions smoothly and lending increases in a sustainable manner, while being less dependent on the central bank. Within the framework of the MLS, in the first quarter of 2016 the MNB organised a total of five LIRS tenders. At these tenders, banks concluded LIRS transactions with a total value of HUF 780 billion, thereby undertaking to increase their net SME loan portfolio by up to one quarter of their outstanding LIRS portfolio annually, in the next three years. The growth in the portfolio amounted to almost HUF 200 billion annually, representing roughly 5 per cent growth in the SME loan portfolio in 2016.

As regards the FGS, the decision by the Monetary Council in the autumn permitted the credit institutions to regroup their allocated credit lines between the two pillars and prolonged the contracting deadline until end of March 2017. Until the end of 2016, the credit

institutions provided data to the MNB on contracts in the total amount of HUF 473 billion. With this, in all of the phases of the FGS more than 37,000 enterprises had access to financing in the total amount of almost HUF 2,600 billion since 2013. In recent years, the scheme has made a major contribution to economic growth and higher employment.

The change in the MNB's set of monetary policy instruments continued in 2016. As part of this, the limited 2-week deposit instrument was phased out by end-April 2016, and on 7 July 2016 the central bank ended the conditional interest rate swap tenders, introduced as part of the Self-financing Programme. The Monetary Council's decisions on 12 July and 20 September 2016 restricted banks' access to the 3-month central bank deposit instrument. From August 2016, the tender for the 3-month central bank deposit instrument was organised once a month, instead of the earlier weekly tenders, and it was stipulated that the total deposit portfolio of the banks that may be placed through the 2016 Q4 tenders on 3-month deposits must not exceed HUF 900 billion. On 20 September, the MNB also decided to introduce fine-tuning instruments with a view to offsetting the potentially persisting and material liquidity shocks: these instruments included the EUR swap providing forint liquidity on the asset side, and the possibility of placing deposits with the central bank on the liability side.

The new operative monetary policy framework was successful in 2016. The quantitative limitation of the 3-month deposit efficiently supported the targeted, unconventional easing of monetary conditions, as a substantial, lasting fall occurred in yields in the relevant markets. At the same time, the MLS facilitated the sustainable expansion of market-based lending to small and medium-sized enterprises through banks' quantified lending commitments.

In 2016, the vulnerability of the Hungarian financial system continued to decrease. The Hungarian banking system's shock-absorbing capacity is robust both in terms of liquidity and capital stock. Banks' lending activity recovered both in the household and

the corporate segment, while annual SME lending growth reached the level of 5-10 per cent, which is deemed necessary for sustainable growth (growth in the outstanding borrowing of the SME sector, including the self-employed, was close to 12 per cent). However, external risks rose during 2016. In addition to the severe consequences of the crisis, geopolitical developments and challenges posed by the persistently low interest rate environment represent the main risks in the European banking sector. Despite the persistently poor performance of the euro area economy in past years, the Hungarian economy is still on a growth path and systemic risks continued to decrease, as a result of which Hungary was upgraded by the rating agencies.

As a result of the central bank's active participation, the ratio of non-performing loans decreased further. The decline achieved to date is mostly attributable to regulatory measures, in particular the active role played by the central bank. The change in lending practices also helps resolve the issue of non-performing loans, and the central bank's active involvement continues to encourage banks to reduce their non-performing portfolios.

The focus of the MNB's macroprudential activity in 2016 was on fine tuning the previously introduced macroprudential instruments, and monitoring market participants' adjustment and risk developments. In January 2016, the central bank published its strategy entitled "Stability today – Stability tomorrow", which designates the fundamental aspects of the central bank's operation as macroprudential authority, in line with the MNB's Statute. As part of the follow-up of the macroprudential instruments, in October 2016 the MNB issued its *Macroprudential Report* for the first time, which can be regarded as a novel initiative even by international standards. The purpose of the report, which will be published annually in the future, is to present to the public the measures applied by the MNB to prevent and address the identified and communicated systemic risks, as well as the effects of those and the adjustment of market participants. The MNB's new macroprudential instrument, the mortgage funding adequacy ratio (MFAR), will reduce forint maturity mismatch in the banking system from 2017. As a result of the introduction of the new indicator, several new mortgage banks were established in 2016 and new mortgage bond issuances took place. In connection with the fine-tuning of the set of macroprudential instruments, in 2016 – taking into

consideration the increasing mortgage lending and property market activity – minor changes were made to the debt cap rules. The central bank also reviewed the banks' preliminary arrangements for the Systemic Risk Buffer (SRB), which is meant to reduce the risks of the problem project loan portfolios, and performed the annual review of the Other Systemically Important Institutions (O-SII).

The performance of supervisory duties in 2016 was characterised by forward-looking strategic approach and fast response. Applying its revised methodology in practice, the MNB performed the oversight of the financial intermediary system, enforcing the requirement of proactive approach.

The regulatory system, which was revised in respect of several sectors, and the market ambitions generated new challenges for the MNB. Measures fostering stability and sound growth included the integration of cooperative credit institutions and the oversight strategy adjusted to the integration in the area of credit institutions, the supervision of operations in line with Solvency II in the area of insurance, the measures taken to gain investors' confidence and establish a safely functioning institutional system in the capital market, and the closing of the settlement inspections in the area of consumer protection.

The regulatory and supervisory measures implemented in accordance with an "ethical" approach and the consumer protection measures facilitated the maintenance of the relation between the consumers and supervised institutions based on equilibrium and fair business conduct.

In close cooperation with the dominant actors in the domestic market, business model analyses are conducted in an ever broadening range. As a result of the new approach, the MNB can obtain a more comprehensive picture of the sustainability of the supervised institutions' profitability, strategy and business model. Furthermore, the dialogue conducted during the analyses efficiently supports the institutions' strategy development, planning and risk management processes.

One of the greatest achievements of the MNB in 2016 was the successful closure of MKB Bank's resolution procedure. In addition to this, major milestones were reached in the fulfilment of the tasks relating to the resolution function of the MNB: the MNB participated

in the resolution colleges led by the Brussels-based Single Resolution Board, as the resolution authority of the Banking Union, in its capacity as a host authority, as well as in the work of the various resolution colleges and in the process of the resolution planning as a group-level resolution authority in respect of a bank group domiciled in Hungary; in addition, it played an active role in the development of the EU resolution regulatory changes and in the introduction thereof in Hungary. One major achievement during the year was that the MNB liaised with the resolution authorities of 46 non-EU countries with a view to developing professional cooperation. The MNB also assumed a key role in the fulfilment of the financial stability tasks related to collective funds in 2016.

In 2016, the MNB issued 29 resolutions and expert opinions on payments, and within the framework of payment audits it launched 19 new proceedings and closed 5 inspections launched earlier. As a result of the inspections, administrative penalties were imposed in the total amount of HUF 61.1 million.

The MNB once again paid special attention to enhancing the efficiency of the payment systems in 2016. The MNB launched a project for the implementation of the instant payment services in Hungary. It elaborated the final development concept for instant payments after processing the expert opinions provided to it as a result of the comprehensive consultation process conducted during the project. The MNB's Financial Stability Board approved the rules of instant payments on 13 December 2016, which contain the basic requirements prescribed for the rendering of instant payment services in Hungary. In addition, as a result of the development performed at the MNB's initiative, from 1 January 2016 all forint credit transfers requiring interbank clearing, submitted to the credit institutions on paper, are processed in the intraday settlement system of the Interbank Clearing System, instead of the formerly used overnight settlement.

Since the accession of the forint to the CLS international foreign currency settlement system at the end of 2015, the infrastructure worked smoothly and in 2016 the number of direct members and the volume of settled forint turnover increased dynamically in the system. As a result of accession, representatives of the MNB participated in the CLS Oversight Committee's meetings, where they reported, amongst other things, on the experiences

gained since the accession of the forint. In 2016, under the MNB's supervision, domestic payment service providers continued to prepare for compliance with the provisions of the SEPA final date regulation applicable to EUR credit transfers and direct debits. The service providers of non-euro area countries had to complete the changeover by 31 October 2016, which was completed by Hungary smoothly.

In addition to the variety of MNB publications, the MNB's publication entitled *Payment Systems Report 2016*, analysing the recent developments in the central bank money circulation and securities settlement, was published in June 2016 for the fifth time.

The MNB's foreign exchange reserves dropped by EUR 5.94 billion during the year, and thus at the end of December 2016 the foreign exchange reserves amounted to EUR 24.4 billion. During the year, the fall in the level of foreign exchange reserves was mostly attributable to repayment of debt, the conversion of the household foreign currency loans into forint, and the payments related to the foreign currency pillar of phase three of the FGS. These effects were partially offset by the EU transfers received from the European Commission, and the volume of foreign currency received during the forint liquidity providing foreign currency swap tenders announced from October.

On 31 December 2016, the total value of currency in circulation amounted to HUF 4,580 billion, representing a 6 per cent year-on-year increase of HUF 275.7 billion. The extremely intensive growth in forint cash holdings seen since 2012 eased off substantially in 2016.

The two largest banknote denominations still play a dominant role in cash turnover: at the end of last year they jointly accounted for 65 per cent of the volume of banknotes in circulation.

In 2016, the MNB performed cash transactions for its customers, credit institutions and the Hungarian Post in a value of HUF 4,130 billion.

In 2016, 1,549 forint banknote counterfeits were identified and withdrawn from circulation; this represents a further decline even compared to the previous year, and thus it can be stated that the degree of the counterfeiting of forint banknotes is favourable. In 2016, counterfeiting of higher denominations (mainly 10,000-forint and 20,000-forint banknotes)

remained most typical, accounting for 87 per cent of counterfeit forint banknotes.

In the period between 2014 and 2018, in the context of “Progress and tradition”, the MNB is poised to redesign the banknote series presently in circulation. Of the series comprising six denominations, the first banknote which was redesigned was the 10,000-forint bill in 2014, followed by the 20,000-forint banknote in 2015. The next two denominations are the 2,000-forint and 5,000-forint banknotes, which became legal tender from 15 November 2016; they will appear in the circulation gradually, from March 2017, after the proper preparation of the participants of the cash supply chain.

Pursuant to the MNB Act, and in the spirit of the sales policy – aimed at fostering coin collection – valid since 2014, the central bank issued 19 commemorative coins on nine topics in 2016. Three of these were gold coins, seven were silver coins and nine were non-ferrous metal collector coins. The security feature appearing in the mint mark featuring in the coins is a technological innovation introduced in the commemorative coin programme in 2016. In 2016, the MNB also put into circulation the commemorative version of a new 50-forint circulation coin.

In 2016, the MNB made preparations for the acceptance and processing of harmonised data reporting by credit institutions applying the Hungarian and international accounting standards (IFRS), satisfying both supervisory and statistical objectives. The MNB Decree on data reporting, which is effective from 2017 and contains the credit institutions’ data reporting in a new structure, with more details than before, was promulgated in the first half of 2016.

The MNB developed the consolidated risk monitoring system for bank groups employing both the new uniform European-level data supply standard and the data content ordered by the MNB Decree, in the framework of which a quarterly risk evaluation of the activities of all bank groups is prepared starting from 2016. The statistics prepared from the supervisory data reporting, consolidated at the sector level, are also published on the MNB’s website in the form of time series.

In 2016, the MNB also successfully implemented the insurers’ new supervisory data reporting connected to the introduction of the standard Solvency II rules of the European Union.

In 2016, the MNB realised a profit of HUF 54.3 billion. Both net interest income and income from financial transactions developed favourably, which was mostly attributable to the fall in interest expenses resulting from the base rate cutting cycle and the central bank’s self-financing programme.

Actual operating costs amounted to HUF 35,395 million in 2016, which exceeded the expenses incurred in the previous year by 7.3 per cent.

The increase in expenses compared to 2015 was partially due to personnel costs, primarily owing to the rise in the average headcount primarily through the filling of vacancies, and also to the performance new tasks (e.g. resolution and reorganisation activity, and extra duties of the Financial Arbitration Board, as mandatory enforcement forum).

The general operating expenses, mostly within the expenses of upkeep, also rose, which is due to the rise in the costs of armed guarding and protection, as the costs of security guarding outsourced in 2015 were incurred in respect of the full year in 2016.

The financially realised value of investments implemented in 2016 was HUF 4,910 million – including advance payments for investment purposes – the majority of which were capital expenditures, mostly IT, related to the usual course of business.

In 2016, the environmental activity of the MNB was once again determined by the implementation of the medium-term (2014-2016) environmental strategy adopted by the Executive Board. The focus of the strategy was on the environmentally sound development of the MNB’s buildings and further improvement in the environmental performance of the cash supply chain.

In the medium-term strategy, the MNB made the commitment in respect of its buildings that within 3 years it would obtain a one-grade higher rating of the international environmental assessment method and rating system (BREEAM In-Use) for the headquarters building, classified as a national monument. At the end of 2016 it managed to obtain the “Very Good” assessment rating, which is unique by international standards as well.

In relation to improving the environmental performance of the cash supply chain, based on the detailed environmental review of the MNB’s

subsidiaries involved in cash production, in 2016 Pénzjegynyomda Zrt. and Diósgyőri Papírgyár Zrt. started preparing for the implementation of the MNB's environmental management system (KÖVHIR). Preparations are proceeding on schedule, and in 2017 the subsidiaries will obtain the EMAS certificate – the international accreditation recognising environmental-friendly operation.

Compliance with the laws in the area of environmental protection was ensured in 2016, and the MNB renewed its EMAS certificate in 2016.

The review and updating of the MNB's medium-term environmental strategy is due in 2017. The review will cover the MNB's environmental management system, and particularly the assessment of its environmental performance, the identification of the significant environmental factors and, as a result of this, the review of the Environmental Policy, as well as the definition of the objectives to be achieved in 2017-2019.

The MNB regards it as its mission to serve the public good by utilising its sustainable positive financial result, without jeopardising its primary objective and basic tasks, and by supporting, as far as possible, the realisation of professional and social goals that reflect credibility, create value and strengthen social cohesion. The main pillars of the MNB's Corporate

Social Responsibility Strategy – i.e. the improvement of financial literacy, the development of economic education and research infrastructure, the support for national cultural and contribution to charitable activities – reflect these principles. The results of the programme in 2016 contributed to the realisation of the goals set out in the Corporate Social Responsibility Strategy to a substantial degree.

In order to supply the general public with continuous and professional information, in 2016 the MNB issued a total of 413 press releases, held 48 press conferences and published 93 professional articles in the printed press and online, as well on its own website.

Within the framework of statements and press conferences, the MNB presented the most important central bank decisions, the outcomes of the Monetary Council's meetings, the decisions and information regarding monetary policy and the stability of the financial system, the findings of supervisory inspections and the related resolutions, as well as essential statistical data and news on cash circulation and the issuance of commemorative coins. The presentation and introduction of the targeted central bank programmes and measures supporting the economic policy of the government and Hungarian economic growth, along with the demonstration of activities serving whole society goals was once again a key objective in 2016.

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 establishes the MNB’s primary objectives and basic tasks as well as its institutional, operational, personnel 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, and the MNB supports 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 the following:

- it defines and implements monetary policy;
- it has the exclusive right to issue banknotes and coins, including commemorative banknotes and coins, which shall be the legal tender of Hungary;
- it has the exclusive right to hold and manage official foreign exchange and gold reserves, in order to preserve the external stability of the Hungarian economy;
- it has the exclusive right to conduct foreign exchange operations in relation to the management of foreign exchange reserves and the implementation of 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 and 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.

Tasks of the MNB above and beyond its basic tasks 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 forming part of the system of financial intermediation and supervision the prudent exercise of owners' rights;
 - c) discover undesirable business and economic risks to individual financial organisations or individual sectors thereof, reducing or eliminating specific or sectoral risks which have evolved, and taking preventive measures to ensure the prudent operation of individual financial organisations;
 - d) protect the interests of users the services provided by financial organisations in order to

strengthen public confidence in the financial intermediary system;

– it performs, via the Financial Arbitration Board, the out-of-court resolution of disputes related to the establishment and fulfilment of contracts for services, established between the consumer and the entities or persons covered by the acts defined in Article 39 of the MNB Act relating to the establishment and performance of legal relationships for the use of services.

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.

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 pass decisions, by way of a shareholder's resolution, on the establishment and on the 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 are 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, as well as strategic decisions relating to foreign exchange transactions in the context of foreign exchange reserve management and implementation of exchange rate policy including and strategic decisions concerning statistical tasks, in particular, decisions regarding the level of the reserve ratio, interest rate payable on the minimum central bank reserves, decisions related to define the exchange rate regime and determining the central bank base rate;
- in relation to macroprudential tasks, the oversight, the supervision of the financial intermediary system and the MNB's role as a resolution authority, decision 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 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 governor of the MNB in the event of his absence – with the exception of the issuance of decrees. In 2016, the Monetary Council elected Márton Nagy, Deputy Governor, as deputy chairman.

In 2016, 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,

– Andrea Bártfai-Mager, from 21 March 2011 to 6 July 2016,

– Dr János Béla Cinkotai, from 22 March 2011,

– Dr Kolos Kardkovács, from 12 September 2016,

– Dr György Kocziszky, from 5 April 2011,

– Gyula Pleschinger, from 5 March 2013.

The **Financial Stability Council** acts as the decision-making body of the MNB in relation to oversight, macroprudential tasks and resolution authority duties, as well as prudential supervision within the framework defined by the Monetary Council. In relation to these responsibilities, the Financial Stability Council acts on behalf of the MNB in administrative proceedings. 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; and
- makes decisions in administrative proceedings relating to the exercise of supervision over the system of financial intermediation and to the performance of resolution tasks.

Members of the Financial Stability Council:

- the Governor of the MNB as its chairman,
- the Deputy Governor responsible for monetary policy, financial stability and lending incentives, and the Deputy Governor responsible for the financial supervision and consumer protection, and
- as an executive appointed by the Governor of the MNB, the Deputy Governor responsible for statistics, cash logistics and the financial infrastructures,
- as an executive appointed by the Governor of the MNB, the Executive Director Monetary Policy, Financial Stability and Lending Incentive,
- as an executive appointed by the Governor of the MNB, the Executive Director Financial Institutions Supervision, and
- from 28 February 2016, 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 study plans and programmes relating to the operation of the MNB and the performance of its tasks, including the costs of the development and operational plan;
- managing the MNB's internal audit organisation in respect of tasks falling outside the scope of competence of the Supervisory Board, and discussing the observations and plans of the internal audit;
- amending the collective agreement in respect of employment rights and obligations, the exercise and performance of these rights and obligations, and the associated procedures; and
- adopting decisions in respect of the central bank's powers to manage accounts and other financial and auxiliary financial services, as well as certain auxiliary services supplementing investment service activities.

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

Provisions relating to the functions and operational procedures of the Monetary Council, the Financial Stability Council and the Executive Board are set forth in the MNB Act, the MNB's Statutes, Organisational

and Operational Rules as well as the rules of procedure formulated by these bodies.

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.

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 dismissal of the MNB's auditor, the Governor of the MNB consults the President of the State Audit Office.

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 their impact 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.

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

Parliament elected the members of the Supervisory Board on 6 July 2015, as the mandate of the previous Supervisory Board expired.

Members of the Supervisory Board in 2016:

- Dr Ferenc Papcsák, Chairman,
- László Madarász,
- Dr Gábor András Szényei,
- Dr László Nyikos,
- István Molnár, 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 2016, modifications of the MNB's organisational structure were introduced in relation to areas controlled by the Governor, the Deputy Governor Monetary Policy Financial Stability and Lending Incentives, the Deputy Governor Financial Institutions Supervision and Consumer Protection, as well as by the Director General. The primary objective of the modifications was to enhance efficiency.

The work organisation as at 31 December 2016, developed as a result of the organisational changes and destined for the fulfilment of the tasks, is illustrated by the **organisation chart**.

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

Hungary's accession to the European Union also entailed the MNB's membership in the European System of Central Banks (ESCB). The ESCB comprises the European Central Bank (ECB), which was established in June 1998 with its seat 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 contributes to the ECB's advisory functions and to 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.

The number of ESCB members did not change in 2016.

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 percentage 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 was made 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 2015-2016.

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 whose 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 3.13.) 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 2016, the ESCB committees continued to be very useful fora for the exchange of professional experience.

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 Báger
Member of the Monetary Council



Andrea Bártfai-Mager
Member of the Monetary Council



Dr János Béla Cinkotai
Member of the Monetary Council



Dr Kolos Kardkovács
Member of the Monetary Council



Dr György Kocziszy
Member of the Monetary Council



Gyula Pleschinger
Member of the Monetary Council

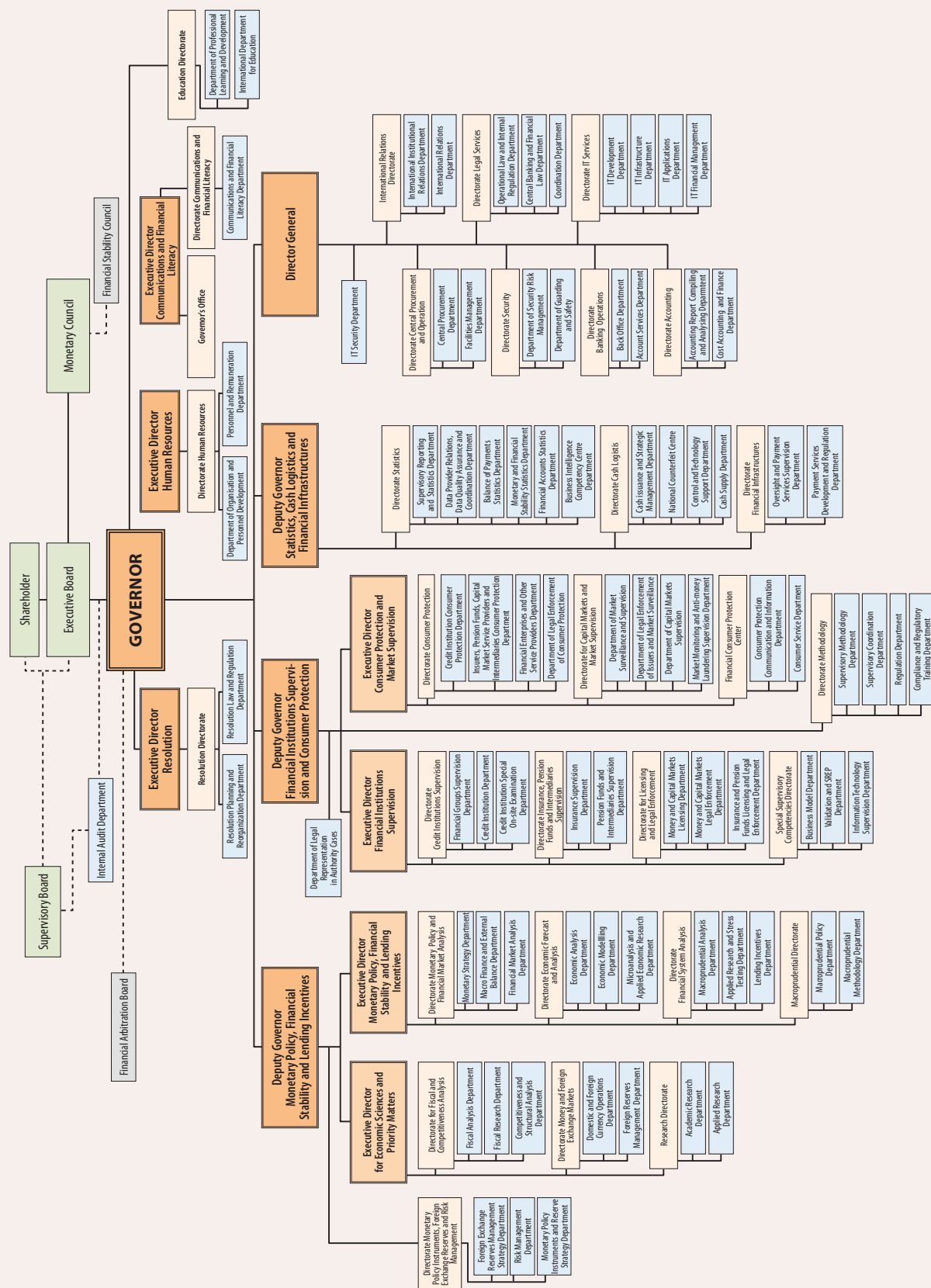
Members of the Supervisory Board of the Magyar Nemzeti Bank



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

Organisation Chart

Organisation Chart of Magyar Nemzeti Bank – 31 December, 2016



3 Review of the MNB's performance in 2016

3.1 MONETARY POLICY

In 2016, the Monetary Council of the MNB deployed additional, targeted monetary policy instruments along with the traditional interest rate policy to respond to the challenges posed by the low inflation environment and the country's external vulnerability, with a view to achieving the medium-term inflation target in a sustainable manner and adequately stimulating the real economy. Over the long term, the central bank can contribute to economic growth and a predictable macroeconomic environment by achieving and maintaining price stability and by ensuring the stability of the financial system.

International financial market developments

Global financial market sentiment was volatile in the first half of the year. At the beginning of the half-year, global investor sentiment deteriorated in connection with concerns about global growth due to the deceleration of the Chinese economy and the future path of oil prices. On the other hand, the macroeconomic releases by the United States in the first half of the period had a favourable impact on global risk appetite, which was also bolstered by the ECB's comprehensive easing programme that was announced in March. At the end of the half-year, international market sentiment was influenced by news related to the referendum on the United Kingdom's EU membership. Global financial market sentiment was also volatile in the third quarter of 2016, which was mostly shaped by the macroeconomic releases of the USA and the euro area, the expectations with regard to the next steps of developed-country central banks and the news about the European banking system. By the end of the year, the focus was on oil market news, the expectations related to the US presidential elections and the monetary policy of the developed countries. The monetary policy decisions by the Fed and the ECB in December reflected different stances. The Fed, in line with expectations, decided to raise the interest

rate, and shifted to a tighter path looking forward as well. By contrast, the ECB decided to prolong its asset purchase programme and thus to continue with further easing.

Domestic economic environment

The domestic real economic environment continued to have a disinflationary impact in 2016, and the annual average rate of inflation was 0.4 per cent. Consumer prices in 2016 showed historically low dynamics, which fell short of the central bank's target. Underlying inflation indicators capturing the medium-term outlook indicated a moderate inflationary environment throughout the year. Following a temporary slowdown early in the year, the pick-up in the Hungarian economy continued during the rest of the year. Hungary's strong external financing capacity and the decline in external debt contributed to the sustained reduction in the vulnerability of the economy. These also made a major contribution to the fact that all of the three leading international credit agencies upgraded the rating of Hungarian government debt to investment grade. According to the perception of the Monetary Council, there is still some degree of unused capacity in the economy, but looking ahead, the disinflationary impact of the domestic real economic environment is gradually dissipating. Inflation will rise over the forecast period and reach the central bank target in the first half of 2018.

Traditional monetary policy measures

Within the framework of traditional monetary policy instruments, in the first half of 2016 the Monetary Council restarted its easing cycle, during which it further reduced the central bank base rate in prudent steps. From March 2016, the Monetary Council reduced the central bank base rate by 45 basis points in three steps, each of which was 15 basis points, bringing the base rate to 0.9 per cent. With this measure, the Monetary Council intended to respond to the underlying processes which were far below the level consistent with the inflation target, to the actual inflation which

was falling significantly short of the target and to the monetary conditions which on the whole may still be deemed accommodating at the global and regional level. Since the end of May 2016 the central bank base rate had been at a historic low level, i.e. at 0.90 per cent. At the end of the year, the Monetary Council was of the opinion that if the assumptions underlying the central bank's projections hold, maintaining the current level of the base rate for an extended period and loosening monetary conditions by changing the monetary policy instruments was consistent with the medium-term achievement of the inflation target and a corresponding degree of support for the economy. The credibility of the persistent maintenance of the central bank base rate by the MNB at the present level is also confirmed by the market expectations, as the yield expectations are at a low level.

Unconventional monetary policy measures

Along with gradual interest rate cuts, the MNB also applied other, targeted monetary policy instruments to address the monetary policy transmission difficulties caused by the crisis, to reduce Hungary's external vulnerability and to ease monetary conditions. The Funding for Growth Scheme, introduced as a temporary instrument, achieved the objectives set out upon announcement of the programme, and thus, pursuant to the decision of the Monetary Council, it was gradually phased out by 31 March 2017. The Self-financing Programme and the corresponding transformation of the set of monetary policy instruments provided substantial support for the decline in yields on the long-term government securities and the decrease in Hungary's external vulnerability. With a view to mitigating extreme

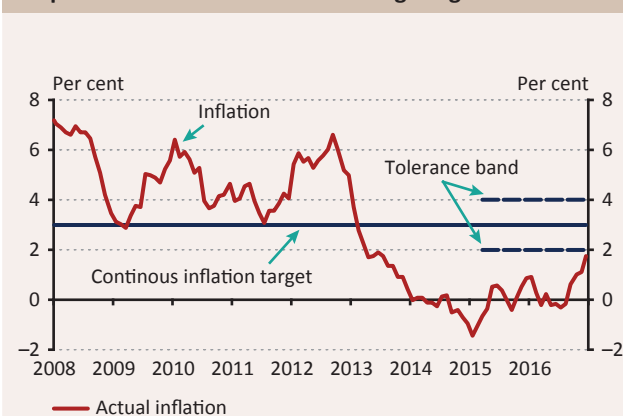
fluctuations in interbank interest rates, the MNB maintains an asymmetric interest rate corridor for the overnight maturity, the asymmetry of which it has changed in several steps. In accordance with the announcement made in July 2016, at its September rate-setting meeting the Monetary Council limited the volume of the 3-month deposit facility outstanding at the end of 2016 to the amount of HUF 900 billion. The Monetary Council considers the limit on the 3-month deposit stock and its potential future change as an integral component of its monetary policy instruments and will decide on the limit quarterly. At its December 2016 meeting, the Monetary Council set a HUF 750 billion upper limit on the stock of 3-month central bank deposits outstanding at the end of the first quarter 2017. The programme operated successfully and achieved the expected results in the money markets, since the liquidity that could not be invested in the deposit facility as a result of the limit, pushed down yields. By the end of the year, the 3-month BUBOR fell to 0.37 per cent, while the 3-month discount Treasury Bill yield was down to 0.06 per cent.

Inflation developments in 2016

The consumer price index continued to remain below 3 per cent, the value set as a price stability target; however, in the past months an upward drift was observed, in line with expectations. Average annual inflation in 2016 was 0.4 per cent, while in December 2016 it was 1.8 per cent.

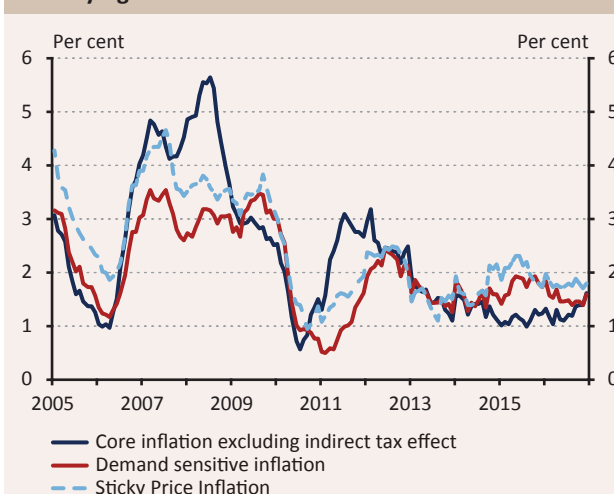
Underlying inflation developments are still restrained, which is mostly attributable to low imported inflation and inflation expectations which stabilised at a moderate level.

Chart 1
Inflation target and inflation developments since the adoption of continuous inflation targeting



Source: HCSO and MNB.

Chart 2
Underlying inflation indicators



Source: MNB

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

	2014	2015	2016	2016			
				Q1	Q2	Q3	Q4
Core inflation	2.2	1.2	1.4	1.4	1.3	1.3	1.6
Unprocessed food	-3.7	4.8	0.4	4.2	-0.4	-0.7	-1.6
Fuel and market energy	-2.1	-11.0	-6.3	-9.5	-10.0	-8.5	2.7
Regulated prices	-6.6	-0.7	0.2	0.2	0.2	0.1	0.3
Inflation	-0.2	-0.1	0.4	0.3	-0.1	0.1	1.3
Inflation with constant tax rate	-0.2	-0.2	0.6	0.5	0.1	0.3	1.3

Note: In the case of price indices with constant tax rate, the HCSO adjusts the consumer price index for the technical effect of changes in indirect taxes. The time series of certain inflation groups may differ, even retroactively, from those published in earlier years due to the reclassification of some partial items at the beginning of 2012.

Source: HCSO

Changes in monetary policy instruments

Funding for Growth Scheme

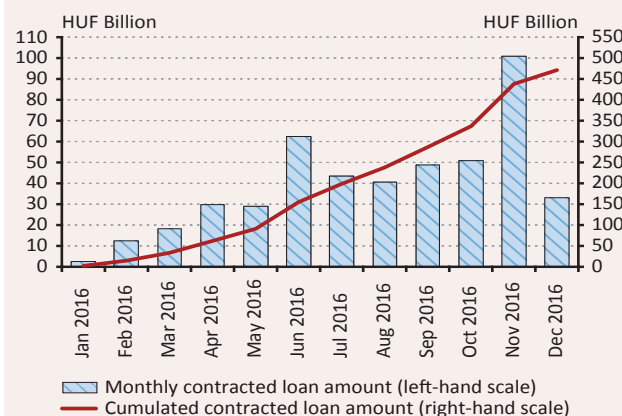
As the Funding for Growth Scheme (FGS), which was introduced as a temporary instrument, successfully achieved the market building and growth objectives set out upon its announcement, in autumn 2015 the Monetary Council decided on its gradual phase-out. The Growth Supporting Programme (GSP) was launched in the spirit of this on 1 January 2016. Part of this involves the third stage of the FGS, comprising two pillars, which facilitates more restricted and targeted financing than before; another part of it consists of the Market-Based Lending Scheme (MLS), which is a package of instruments containing positive incentives, which support banks' lending activity in other ways.

In the third, phase-out stage of the FGS only new investment loan and financial lease transactions may be concluded. Pillar I (forint) was launched with a facility amount of HUF 300 billion, which the MNB raised, in line with market demand, to HUF 400 billion in June 2016. The facility amount of HUF 300 billion under Pillar II (foreign currency) was available in the form of foreign currency financing for small and medium-sized enterprises (SMEs) with natural foreign currency cover. In order to ensure the more efficient absorption of the full facility amount, on 11 October 2016 the Monetary Council provided the credit institutions with HUF 60 billion in the forint pillar from the unutilised facility amount of the foreign currency pillar, and with its decision passed on 22 November, it permitted the use of the unutilised part of the facilities allocated in the foreign currency pillar in either pillar, but the aggregate facility amount of the two pillars remained HUF 700 billion. In addition, on

22 November 2016 the Monetary Council also decided on extending the contracting period of phase three until 31 March 2017.

In 2016, the credit institutions participating in phase three of the programme reported data to the MNB on contracts in the amount of HUF 473 billion, related to roughly 16,600 contracts and more than 11,000 enterprises. The loans effectively outstanding at the end of the year – not including already repaid loans and the undrawn loans (tranches) – amounted to HUF 359 billion (Chart 3). To date, in the three phases of the FGS altogether more than 37,000 enterprises received financing in an amount of roughly HUF 2,600 billion. As a result, the scheme not only reversed the previous downward trend in the outstanding borrowing of SMEs (based on transactions), but also made a major contribution to economic growth and the expansion of employment in recent years.

Chart 3
Utilisation of the third phase of the FGS



Note: Amount of the contracts concluded until the end of 2016 and submitted to the MNB.

Source: MNB.

The MNB's set of monetary policy instruments

On 12 January 2016, the Monetary Council decided on the gradual phase-out of the 2-week deposit facility, serving liquidity management purposes, ending in April 2016. This phase-out was in line with the 2014-2015 transformation of the central bank's set of monetary policy instruments, and the purpose of it was to provide additional support to the Self-financing Programme, ease the monetary conditions and further mitigate external vulnerability. The 2-week deposit facility was available for banks from December 2015 subject to a volume limit of HUF 1,000 billion, and between March and end-April 2016 the auctioned portfolio gradually decreased to zero. Thereafter, i.e. from May 2016, the 3-month deposit facility became the MNB's only longer-term sterilisation instrument.

The central bank's interest rate swap (IRS) instrument, diverting the banks' funds, was key to the success of the Self-financing Programme, the added value of which fell significantly with the phase-out of the 2-week deposit in April 2016. Accordingly, on 10 May 2016 the Monetary Council decided to phase out the IRS from its set of monetary policy instruments, and the MNB held the last tender for this facility on 7 July 2016. The banks' obligation arising from the IRS portfolio is valid until the maturity of the swaps. At the end of the year, the outstanding IRS portfolio amounted to HUF 1,731 billion, of which HUF 652

billion was of 3-year maturity, HUF 904 billion of 5-year maturity and HUF 175 billion of 10-year agreed maturity. In addition, the MNB's total IRS portfolio is supplemented with the 3-year interest rate swaps conditional on lending activity (LIRS) concluded within the framework of the MLS in the amount of HUF 780 billion in the first quarter of 2016, which was still outstanding at the end of 2016.

In 2016, the Monetary Council cut the base rate and reduced the width of the interest rate corridor on several occasions. On 22 March 2016, in addition to reducing the base rate to 1.20 per cent, the interest on the overnight central bank loan changed from base rate +75 basis points to base rate +25 basis points, i.e. to 1.45 per cent (equalling a cut of 50 basis points). Meanwhile, simultaneously with the interest rate cut in March, the O/N deposit rate fell to -0.05 per cent, as a result of which bank liquidity held in the overnight deposit facility declined substantially. From 27 April and 25 May, after additional interest rate cuts, the base rate declined to 1.05 and 0.9 per cent, respectively, and simultaneously the upper bound of the interest rate corridor from 27 April and 25 May was 1.3 per cent and 1.15 per cent, respectively, while the lower bound of the interest rate corridor remained -0.05 per cent. At its meetings held on 25 October 2016 and 22 November 2016, the Monetary Council reduced the upper bound of the interest rate corridor from 1.15 to 1.05 per cent and to 0.90 per cent, respectively. Thus, by the end of 2016 the lower bound of the interest rate corridor became -0.05 per cent and the upper bound thereof 0.90 per cent.

Central bank interest rate swap tenders in 2016

At the 14 self-financing IRS tenders held until the phase-out on 7 July 2016, the MNB placed HUF 263 billion, HUF 184 billion and HUF 50 billion IRS with its counterparties at 3-year, 5-year and 10-year maturities, respectively. Within the framework of MLS, in the first quarter of 2016 the MNB announced five LIRS tenders in total. The tenders were attended by 17 credit institutions in total, and the MNB concluded LIRS transactions in the amount of HUF 780 billion. In accordance with the conditions the programme, the banks undertook to increase their SME loan portfolio by one-quarter of their concluded LIRS transactions, i.e. by almost HUF 200 billion, which may achieve the 5 to 10 per cent annual growth in the outstanding borrowing by SMEs, set by the MNB. With a view to supporting the banks' liquidity management, the MNB also provided the credit institutions participating in the MLS with the opportunity to rely on overnight, preferential central bank deposit, earning interest at the base rate, up to half of their concluded LIRS portfolio.

The Monetary Council's decisions passed on 12 July and 20 September 2016, restricted banks' access to the 3-month central bank deposit instrument. From August 2016, the tender for the 3-month central bank deposit instrument was organised once a month, on the Wednesday that followed the monthly rate-setting meeting, instead of the previous weekly tenders, and it was laid down that the total 3-month deposit portfolio of the banks that may be placed in the last quarter of 2016 must not exceed HUF 900 billion. Limiting the 3-months deposit gives room for monetary easing through the excess liquidity remaining in the banking system. The liquidity squeezed out from the 3-month deposit reduces the yields in the relevant markets, particularly in the interbank market, and may facilitate additional lending, thereby supporting economic growth.

On 20 September 2016, the MNB also decided to develop fine-tuning instruments to offset the

potentially lasting and material liquidity shocks; in the case of positive liquidity shocks it may intervene with 1-week deposits, while in the case of negative shocks with forint providing FX swap, to offset the change in the liquidity path. In the fourth quarter of 2016, the MNB held altogether five 1-month fine-tuning swap tenders: on 17 and 24 October, 14 and 21 November, and on 19 December. The MNB provided HUF 150 billion to the banking system at the tender held on 21 November, while at each of the other ones HUF 200 billion. In addition, on 23 December 2016 the MNB also held a 1-week swap tender, where it allocated HUF 201 billion to the participating banks. No fine-tuning deposit tender was held in 2016.

In order to ensure quantity adjustment to the limiting of the 3-month deposit and harmonisation with the practice of the European Central Bank, at its meeting held on 25 October 2016, the Monetary Council reduced the reserve requirement from 2 per cent to 1 per cent with effect from 1 December 2016. On 27 October 2016, the MNB suspended the 3-month central bank loan tender facility with effect from 7 November 2016.

Forint liquidity management of the banking system

Items affecting the liabilities side forint liquidity of the central bank's balance sheet (3-month deposit, 2-week deposit, balance on payment accounts, overnight and preferential deposits) declined by a total of HUF 2,400 billion during the year. While at 31 December 2015 the balance was HUF 4,628 billion, the aggregate level at the end of the following year amounted to HUF 2,228 billion. The forint liquidity of the banking system was reduced by HUF 1,475 billion by the change in the Single Treasury Account (STA) allocable to the banking system, including the refinancing of the foreign currency bonds by forint bonds issued by the Government Debt Management Agency. The growth in the cash in circulation and the MNB instruments also reduced liquidity (by HUF 276 billion and HUF 745 billion, respectively). Of the latter, it is justified to highlight the central bank swaps related to the conversion of the households' foreign currency loan into forints, of which assets in the total amount of EUR 4.76 billion expired (EUR 914 million of conditional assets and EUR 3.852 billion of unconditional assets), reducing the liquidity of the credit institutions due to the forint leg payable. Meanwhile, liquidity was expanded in the last quarter by the fine-tuning swap tenders, within the framework of which the MNB

provided the banking system, at several tenders, with liquidity of variable amounts, in the amount of HUF 150-201 billion. From December 2016 the reserve adequacy requirement changed, and the required reserve ratio was reduced from 2 per cent to 1 per cent.

The overnight (O/N) deposit portfolio fluctuated in the range of HUF 50-100 billion, apart from the values recorded in the first half of January and between mid-November and the year-end. After the amendment of the interest rate corridor in March, new deposits practically ceased due to the negative deposit rate, and then during June it returned to the levels recorded in the first quarter. The average deposit balance during the year was HUF 55 billion, but its temporal distribution was uneven, with major increase in the last quarter. The surge in O/N deposits at year-end was attributable to the limitation of the 3-month deposits, as the banks placed their surplus liquidity in other MNB instruments, amongst others, in the O/N deposits available to banks without limitation. Until the beginning of June, and during September-October the monthly average of preferential deposits was around HUF 30-80 billion, while in the summer months it reached a HUF 100-160 billion volume on average. By the last two months of the year, with the restriction of the 3-month deposit facility, the preferential deposit facility appreciated strongly, in parallel with which banks' average holding rose to HUF 250-310 billion.

At the fifteen tenders of the 2-week deposit facility, after the restriction thereof, from early 2016 until its phase-out at the end of April, overbidding was registered on six occasions, three of which occurred in the first half of January. The average accepted interest rates at the tenders were close to the base rate all the time. This implies that the gradual decrease in 2-week deposits did not pose liquidity problems for banks. The more active use of the central bank loan tenders and the preferential deposit facility available from February also contributed to this.

At the last 3-month deposit tender on 27 July 2016, before making the 3-month deposit tenders less frequent, banks' demand amounted to HUF 222 billion, in parallel with which a portfolio of HUF 506 billion in total expired until the tender held in August. This shows that the banks typically did not roll forward the maturities of the interim tenders, i.e. they did not borrow larger volumes of funds to bridge the interim periods. Thus the banking system initially placed the

3-month deposits expiring before the August tender on giro and preferential deposit accounts, and later the O/N deposits also increased. At the August and September 3-month deposit tenders, still available without volume limits, the banks typically also renewed part of the 3-month portfolios due to expire from borrowed funds. Thus, the 3-month deposit portfolio temporarily increased: rising from HUF 1,276 billion on 23 August to HUF 1,837 billion and from HUF 1,629 billion on 21 September to HUF 1,976 billion. The increase in August represented new deposits placed by the banks in the amount of HUF 637 billion and HUF 437 billion in September. By the end of the fourth quarter of 2016, the Monetary Council set the value of the 3-month deposit portfolio to HUF 900 billion. At the tender held on 26 October, the MNB accepted new 3-month deposits in the amount of HUF 100 billion under an aggregate bid of HUF 314 billion and expiring deposits of HUF 222 billion. The banks' total demand for 3-month deposits in November and December was HUF 696 billion and HUF 521 billion, respectively, compared to the allocated amount of HUF 400-400 billion.

As regards to overnight loans, 345 loan transactions were registered in 2016, with average holdings of HUF 20 billion. The largest utilisation took place in the last third of September 2016 (90 transactions between 21 and 30 September, with average transaction size of HUF 39 billion).

In 2016, 11 banks took 1-week collateralised loans from the MNB, with an average transaction size of HUF 90 billion. Utilisation of the 1-week collateralised loans was the highest at about the end of March and end of September 2016. The average outstanding borrowing between 16 March and 12 April was HUF 435 billion with 15 loan applications from 8 credit institutions, while between 21 September and 4 October the MNB registered an average stock of HUF 530 billion, comprising 10 loan applications from 6 banks.

The portfolio of 3-month collateralised loans was relatively stable. From January until early November, the MNB financed an average portfolio of HUF 51 billion, with the largest drawdown being HUF 110 billion. After 8 November 2016 no new drawdowns occurred, and from 7 December 2016 the MNB suspended further disbursement of the 3-month loans.

In the last quarter, the MNB held forint liquidity providing euro swap tenders on six occasions. Of these, at five one-month tenders it provided liquidity

to the counterparties in varying amounts, around HUF 150-201 billion (EUR 485-652 million), of which the balance outstanding at year-end was HUF 199 billion (EUR 639 million). The MNB also held a 1-week tender bridging the year-end, where the allocated amount was HUF 201 billion (EUR 648 million).

The HUFONIA, reflecting O/N interest rates, fluctuated around the base rate from mid-March to early June, whereas in early January, in February and in June it was close to the lower bound of the interest rate corridor. In the summer months, it fluctuated around 40-50 basis points, while on the day of the August 3-month tender it rose to 79 basis points, leaving the low range of 10-25 basis points that prevailed from the beginning of the month. After this, until the 3-month tender held on 21 September 2016, the HUFONIA was around 68-93 basis points. On 21 September, which was the last tender without volume limit, it rose to 1.34 per cent, exceeding the upper bound of the interest rate corridor (1.15 per cent). From the next day its value declined and on the last two days of the quarter it fell below the base rate. Thereafter, the HUFONIA remained close to the base rate in October. As a result of the strongly expanding interbank excess liquidity, by the end of November the level of interest rates fell close to 10 basis points and fluctuated around this value in December as well.

The 3-month benchmark rate, bearing special significance for interest rate transmission, moved closely together with the base rate in the first three quarters. The 3-month government securities market benchmark rate started to fall after the announcement that the frequency of the 3-month deposit tender would be reduced, then accelerated from the first limited 3-month deposit tender, i.e. from end of October, as a result of which the 3-month discounted Treasury bill yield dropped to 6 basis points by the end of December. Until the base rate cut of 25 May, the BUBOR moved strongly together with the base rate, but after this, until early August it was above the base rate by no more than 12 basis points and thereafter below it by no more than 6 basis points. After the volume limitation on the 3-month deposit, the BUBOR also started to fall strongly, dropping to 41 basis points by early December and to 34 basis points by the end of the year. In the first nine months of 2016, the spot yield derived from the FRAs was close to the base rate or below it most of the time, while from mid-October it broke away, together with the discount Treasury bill yield and the BUBOR, from the base rate and by mid-December it fell close to 30 basis points.

In the course of the year, interest rates on variable interest loans and deposits with short-term maturities declined both in the corporate and the household segments (between December 2015 and November 2016). In the corporate sector, the interest rate on sight deposits fell by 10 basis points, while those on term deposits with a maturity of less than one year dropped by 53 basis points. In the case of the household deposits, the fall with respect to the same items was 4 and 51 basis points, respectively. As regards corporate loans, overdraft facilities registered a fall of 61 basis points, while interest rates on short-term fixed rate loans and variable rate loans dropped by 161 basis points. In the sector these values showed a decline of 170 and 327 basis points, respectively.

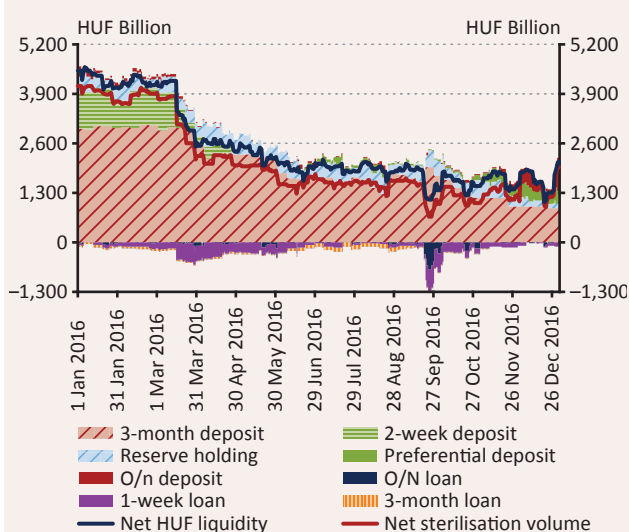
Instruments providing foreign exchange liquidity

On 2 March and 31 March 2016, EUR 200 million and EUR 714 million, respectively, of the settlement and forint conversion conditional euro swaps was closed, as a result of which this portfolio expired. Of the unconditional swap instruments, expired transactions amounted to EUR 2,082 billion on 16 March 2016, EUR 784 million on 15 June, EUR 373 million on 21 September and EUR 613 million on 21 December. Thus in 2016, with the expiry of EUR 3,852 million, the stock of unconditional swaps dropped to EUR 1,082 million. At the beginning of the year the outstanding CHF swaps concluded in relation to the forint conversion of the consumer foreign currency loans amounted to CHF 12.8 million, which expired in full on 13 April 2016.

During 2016, there was no drawing against the MNB's overnight and 3-month EUR swap facility. Thus, after the tender held on 7 November 2016, the MNB suspended the 3-month EUR swap facility. The volume of the central bank FX swaps related to the Pillar III of phase one of the FGS fell to zero from EUR 473 million recorded at the beginning of the year: on 31 March it dropped to EUR 200 million, on 6 April to EUR 150 million, while the remaining part was repaid on 29 April.

HUF/EUR foreign currency swap spreads developed similarly as in the previous period; some extreme values, both positive and negative, were observed. The annual average of the spreads was around 0 in all terms, taking a positive value of 5-7 basis points at the overnight and tom next periods, and slightly negative values of (-9)-(-20) basis points at the longer periods.

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



Note: Net of the loan and swap transactions granted under the Funding for Growth Scheme.
Source: MNB.

Compared to the last quarter of 2015 the overnight spread was more volatile: in the first five months of the half-year, the mid-quotes typically varied between -50 and +125 basis points, while from mid-May the positive swings decreased and, with some exceptions, fell below 50 basis points. At the tom next transactions the typical spread is lower (within 50 basis points), with larger swings: the spread at the end-March 2016 unconditional swap maturity was -439 basis points. Apart from this, not more than one or two swings per months could be observed in the entire period. Apart from the largest swings at the start/end of the year, the maximum swings in the overnight and tom next spreads varied on the negative side around -200 to -300 basis points and on the positive side around 100 to 200 basis points. The remaining quotes from the end of the year and the 1-week spreads, apart from the local minimum of -184 basis points around 21 September, did not exceed 63 basis points in absolute value. During the three working days around the end of 2016 the overnight spreads fell from +229 basis points to -1,178 basis points, while the similar tom next values dropped from +436 basis points to +72 basis points. At the end the second and third quarters only a minor swap market tension could be observed, in both cases with overnight spreads around -150 basis points. This implies that the dependence of the Hungarian banking system on foreign currency liquidity may have decreased.

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; furthermore, the MNB supports the economic policy of the government using the instruments at its disposal. As a member of the European System of Financial Supervision, the MNB performs the tasks imposed on it arising out of the scope 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 acts as a resolution authority.

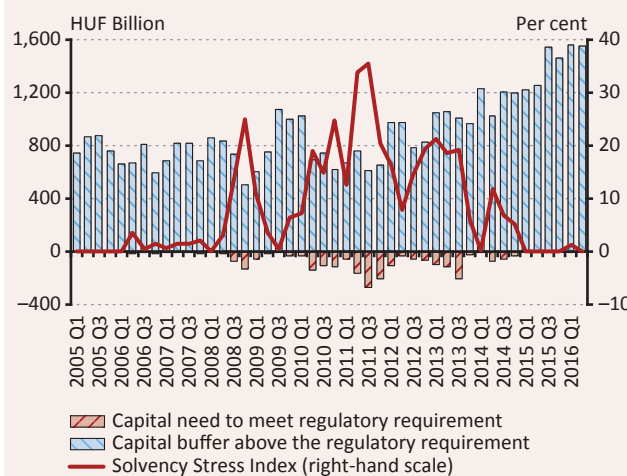
Key developments in the financial system

The Hungarian banking system's shock-absorbing capacity is robust both in terms of liquidity and capital stock (Chart 5). In 2016, banks' lending activity intensified, as annual SME credit growth reached the level of 5-10 per cent, which is deemed necessary for sustainable growth. The previously very strong procyclical operation of the Hungarian financial system eased substantially, which was greatly supported by the MNB's credit incentive schemes (FGS, MLS) and the self-financing programme. However, external risks rose. In addition to the severe consequences of the crisis, geopolitical developments and challenges posed by the persistently low interest rate environment represent the main risks in the European banking sector.

The *Financial Stability Reports* provide a regular and comprehensive assessment of risks to financial stability, presenting the main risks including the management of those risks. Possible market turbulences evolving on the weak fundamentals of the European banking system may affect the Hungarian banking sector as well through various channels of contagion. Despite the lasting poor performance of the euro area economy seen in recent years, the Hungarian economy is still on a growth path and the systemic risks continued to decrease, as a result of which Hungary was upgraded by the rating agencies.

As regards trends in domestic lending, in 2016 there was a turnaround in corporate lending growth and particularly in SME lending growth, with the lending

Chart 5
Developments in the Solvency Stress Index

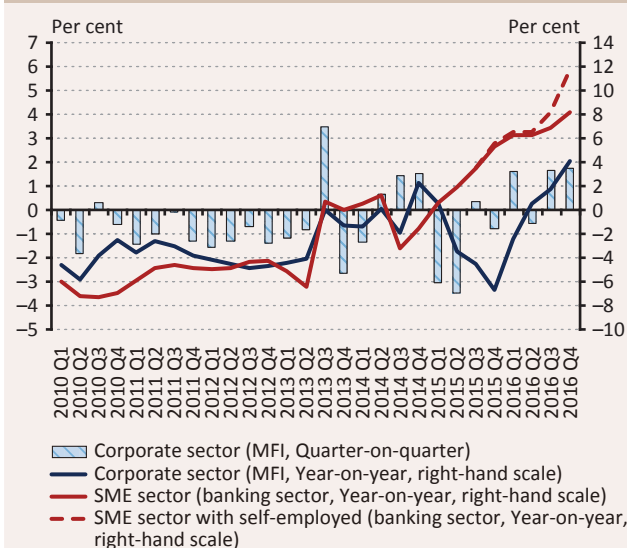


Note: In the case of stress index, the lower the value of the index, the lower the ratio of banks below the regulatory minimum in the event of a stress scenario.

Source: MNB.

incentives programmes of the central bank (FGS, MLS) playing an important role in this regard. As a result, SME lending entered the expansion band of 5 to 10 per cent, which is necessary for sustainable growth (Chart 6). The growth rate of lending to SMEs including the self-employed was close to 12 per cent. In 2016, the credit institutions participating in the third phase of the Funding for Growth Scheme lent HUF 473 billion

Chart 6
Annual growth rate of the outstanding borrowings of the corporate and SME sector



Note: Based on transactions; the SME sector is estimated on the basis of banking sector data before 2015 Q4.

Source: MNB

to the SME sector, in roughly 16,600 transactions to more than 11,000 enterprises. Since the launch of the scheme in June 2013, more than 37,000 enterprises had access to financing in an amount of roughly HUF 2,600 billion, of which the outstanding borrowing at the end of 2016 was HUF 1,415 billion. As a result of the scheme, the declining trend in the outstanding borrowing of SMEs observed for several years before 2013 not only halted, but turned to growth on transaction basis from 2015.

Of the contracts concluded in the amount of about HUF 473 billion until 30 December 2016 in the third phase of the FGS, 76.5 per cent were new investment loans with an average maturity of around 9 years, while 23.5 per cent of them were new lease transactions with an average maturity of 4 to 5 years. The average size of the loan and lease transactions concluded in the amount of HUF 320 billion in Pillar I was HUF 21.3 million (median transaction size: HUF 6.4 million), while the average size of the transactions concluded in the amount of HUF 152 billion in Pillar II was HUF 96.3 million (median transaction size: HUF 20.7 million). As regards the distribution by sectors, in Pillar I agriculture, trade & repair and manufacturing industries had outstanding share, with more than 60 per cent of the loans flowing to these three sectors, while Pillar II is dominated by real estate activities, manufacturing and transport & storage, with their aggregate ratio being around 64 per cent.

The segmented recovery of the property market continued in 2016. Housing market represents a key area at the level of the individual economic agents (households, financial institutions), as well as at the level of national economy. Housing market developments are closely related not only to the financial stability dilemmas, but also fundamentally determine the short-term and long-term prospects of economic activity. Housing market developments and in particular the volatility of housing prices influence the sector's savings and consumption decisions through the households' wealth, while they influence the portfolio, profitability and lending activity of financial institutions through the mortgage loan collateral. In order to monitor the property price developments and the impacts of those on financial stability, the MNB developed its own housing price index, which is able to capture the changes in domestic housing prices more accurately, particularly the heterogeneity in prices and their development compared to the fundamentally justified level. In

view of the key role of the property market, in May 2016 the MNB published the first issue of the *Housing Market Report*, to be followed by semi-annual new publications. The reports published so far highlight the fact that even though there was substantial appreciation in housing prices in Budapest, housing prices still cannot be deemed exaggerated. On the other hand, price increase is not so typical in less frequented areas or smaller settlements.

In parallel with the housing market developments, a turnaround took place in household lending as well. For the first time since 2008, disbursements exceeded repayments from June 2016, which is primarily attributable to the almost 50 per cent increase in housing loans. So far, the central bank's debt cap rules have kept new lending at a sound level, but a shift to fixed rate loans would be desirable, particularly at longer maturities, in the case of customers with higher payment-to-income (PTI) ratios. However, this requires stronger price competition between the banks, as the spread on domestic fixed-rate loans is extremely high by international standards.

For many years, the high ratio and volume of non-performing household mortgage loans have been a major problem of the financial intermediary system, which needs to be resolved. In addition to financial stability risks, the political and social aspects of the problem justified the government measures taken in the past six to seven years to foster the equitable settlement of the situation. 2016 represented a turnaround in several respects, as the foreclosure and eviction moratorium ended on 1 March; thus, it once again became possible for lenders to enforce collateral. It was foreseeable at the start of the year that the number of properties offered to the National Asset Management Agency (NAMA) would reach the permitted limit and that the property market boom and the low yield environment together make the sales of the receivables attractive for the lenders.

Recognising the new situation, in March 2016 the MNB published a recommendation with regard to the lasting recovery of the solvency of household mortgage loan debtors with payments in arrears. The MNB's objective with the recommendation was to encourage the consensual settlement of debt servicing, in line with the new market and regulatory environment, simultaneously minimising the stability and societal risks. Within the framework of the recommendation, until the end of November 2016, lenders attempted to

liaise with the debtor of almost 68,000 transactions, with success in a large part of the cases. In almost one quarter of the respective transactions the debtor was demonstrably uncooperative, and hence in the case of these clients the lender may apply other solutions as well, not stipulated in the recommendation. By the end of November almost 3,500 compromises were concluded in total: in the vast majority – almost three quarters – of the accepted solutions the property remained in the possession of the debtor, while in about one fifth of the cases it was included in the programme of NAMA and in 8 per cent of the cases the property was sold jointly. Based on the procedural deadline of the MNB recommendation, the number of compromises may increase in the first half of 2017.

Compared to previous years, the banking sector realised an outstanding profit in 2016. Partly due to one-off effects, such as the release of impairments, the return on equity rose to above 10 per cent. At the same time, in the persistently low interest rate environment, banks' structural profitability will be under pressure in the medium term due to the narrowing interest margins. Despite the streamlining efforts of past years, there was no substantial improvement in the sector's cost effectiveness and management of the non-performing portfolio continues to tie down significant capacities.

Improved cost efficiency is key to managing the challenges posed by the persistently low interest environment and technological progress. This could be fostered by the consolidation of the banking sector, the exploitation of the opportunities inherent in digitalisation and the reduction of the non-performing loan portfolio. The improvement in cost efficiency could be boosted by competition within the banking sector, particularly the price competition in lending to households, which would force banks to take the necessary measures.

The MNB conducted a *Market Intelligence Survey* in 2016 as well, in the context of which MNB staff members visited 10 credit institutions to discuss with representatives of the institutions the strategy of the specific institution and the condition of the Hungarian banking sector, expected trends in lending, and the factors determining the future of the sector. The results of the survey were presented in the May issue of the *Financial Stability Report*.

Macroprudential regulatory activity of the MNB

In 2016, the MNB's macroprudential activity focused on monitoring the adjustment of market participants and the trends in lending, and on fine tuning the previously elaborated set of macroprudential instruments. In line with its macroprudential mandate, in 2016 the central bank published its macroprudential strategy, enhanced its system for identifying and monitoring systemic risks and developed its macroprudential instruments necessary for efficient risk management. During the year, the central bank monitored market developments closely and consulted with market participants in the interests of assessing the impact of the regulations introduced and duly calibrating such.

The principles pertaining to the use of the macroprudential instruments are summarised and presented to the public in the MNB's strategy entitled "Stability today – Stability tomorrow", elaborated in accordance with the recommendations of the European Systemic Risk Board (ESRB)¹ and published in January 2016. In line with the MNB's Statute, the strategic material designates the basic principles of the central bank's operation as a macroprudential authority: the targets of macroprudential risk assessment, intervention and follow-up, the method of applying macroprudential instruments and the main principles fostering transparent operations.

Having consulted with market participants, the MNB revised the debt cap rules in force since 1 January 2015, based on the experiences of the past period. As a result, it made a number of amendments which serve to reduce borrowers' administrative burdens and ease borrowing, while at the same time continuing to ensure responsible lending. Amongst other things, the amendments may help to mitigate the interest rate risks borne by consumers, by the preferential management of instalments on mortgage loans with longer interest fixation periods. In parallel with the amendments, the answers given to the questions aimed at interpreting the regulations and fostering standard market practices were published on the MNB's website in the form of "Frequently Asked Questions – FAQ".

As a result of the review of the mortgage funding adequacy ratio (MFAR) regulation, which will be

¹ ESRB/2013/1: http://www.esrb.europa.eu/pub/pdf/recommendations/2013/ESRB_2013_1.en.pdf.

introduced in 2017, the new guidelines for the requirement prescribing stable forint financing were also designated. As a result of the regulation, two new mortgage banks were established by the end of 2016, and the first new mortgage bond issues also occurred. Due to the expected change in the regulation pertaining to mortgages and the legislative environment for mortgage financing, the MNB's Financial Stability Council modified the date of introducing the MFAR regulation from 1 October 2016 to 1 April 2017. As a result of the upturn in housing loans and after establishing the mortgage bank and refinancing infrastructure, it became necessary to tighten the MFAR regulation. Defining the direction of tightening was preceded by a detailed survey by the MNB, which assessed the preparation of the mortgage banks. Pursuant to the decision of the FSB, the minimum expected level of the MFAR and the expected maturity of the funding will increase from 1 October 2018. With a view to encouraging real, external financing, the mortgage bonds purchased by banks will be partially "netted" against the eligible funds as determined by the decree. Finally, the mortgage bonds subscribed by building societies can be taken into account as real, stable financing from 1 October 2018. As a result of the amendments, the systemic maturity mismatch will decrease further and – due to the expected mortgage bond issuances – the mortgage bond market may continue to deepen. In relation to the changing regulation, the MNB consulted with a wide range of stakeholders, including market participants and the European Central Bank.

The MNB's experts surveyed the concerned institutions' portfolio cleaning practices related to problem project loans and reviewed the status of preparations for introducing the Systemic Risk Buffer (SRB). Based on the experiences, with a view to ensuring the standard interpretation of the regulation and developing a uniform market practice, the MNB also published a summary on its website (Frequently Asked Questions – FAQ). On 20 September 2016, the Financial Stability Council decided to postpone the introduction of the systemic risk buffer by six months. Accordingly, the capital buffer must be accumulated from 1 July 2017, based on the portfolio outstanding at the end of the first quarter of 2017. Since the announcement of the capital buffer, the banks have performed substantial cleaning in their balance sheet: the problem portfolio fell from roughly HUF 820 billion in 2014 Q3 to HUF 247 billion by the end of 2016 Q3. In the adjustment period, which was extended by the

MNB's decision, the banks can reduce their problem exposures and hence may be exempted from the accumulation of the systemic risk buffer.

Based on the methodology approved by the Financial Stability Council, in 2016 the MNB performed the annual review of other systemically important institutions (O-SII). Considering the consolidated balance sheet data of 31 December 2015, eight domestic banks were identified as systemically important. Based on their position in the financial system, these institutions are considered to be of outstanding importance; hence in order to increase their shock-absorbing capacity, the MNB prescribed for them to accumulate additional capital buffer from 1 January 2017. The identified institutions must satisfy the capital requirements of 0.5 to 2 per cent, as a proportion of the exposure, in four years at a gradually increasing level. The adjustment period lasting until 2020 supports the continued upturn in lending, while simultaneously strengthening financial stability, and is also in line with international regulatory practice.

In accordance with its statutory obligation, the MNB quarterly revises the countercyclical capital buffer rate (CCB), which may be applied for the mitigation of the risks of excessive lending. At present, no excessive lending can be observed in the banking system, and hence the Financial Stability Council left the CCB rate, which is applicable to domestic exposures, at 0 per cent throughout the year in order to encourage lending. The methodology of determining the CCB rate was also enhanced, supplementing the methodology for determining the build-up of the CCB with the conditions applicable to the release of the capital requirement.

As part of the follow-up of the macroprudential instruments, in October 2016 the MNB issued its *Macroprudential Report* for the first time, which may be regarded as a novel initiative even by international standards. The purpose of the report, which will be published annually in the future, is to present to the public the measures applied by the MNB to prevent and address the systemic risks which it identifies and communicates, as well as the effects of such risks and the adjustment of market participants.

The central bank's experts continued to monitor international regulatory developments affecting the financial intermediary system in 2016, and participated in the macroprudential policy working groups of various European institutions.

3.3 SUPERVISION AND CONSUMER PROTECTION

Based on the data from 31 December 2016, the MNB is responsible for the prudential supervision of 1,608 institutions; the distribution of the institutions by type is shown in Chart 7. The (≈ 7.8 per cent) decrease in the number of supervised institutions compared to the previous year is attributable to the concentration processes taking place in the market, of which the integration of cooperative credit institutions should be highlighted both in terms of its topicality and weight. In 2016, the MNB launched 126 prudential and 36 market surveillance inspections, and completed 129 prudential and 50 market surveillance inspections. In the review period, the MNB issued a total of 1,736 prudential legal enforcement and licensing resolutions, while in the market surveillance and issuer oversight areas 86 legal enforcement resolution were passed in total. The measures taken included the imposition of prudential institutional fines amounting to HUF 1,168 million, prudential personal fines amounting to HUF 221 million and market surveillance and supervisory fines of HUF 3,889 million.

The MNB continued the practical application of the enhanced methods also in the area of IT supervision; in the spirit of which it completed the survey of data flows, the audit of the adequacy of the confidentiality controls and the assessment of the fraud risks at several institutions. In order to ensure higher certainty – instead of the traditional sampling-based audit – the

supervisory authority introduced an audit methodology based data analysis covering the entire dataset and independent recalculation. In relation to the quick spread of cloud services, regarded as one the most significant information technology innovations in the last twenty years, the MNB elaborated its recommendation regarding the use of social and public cloud services.

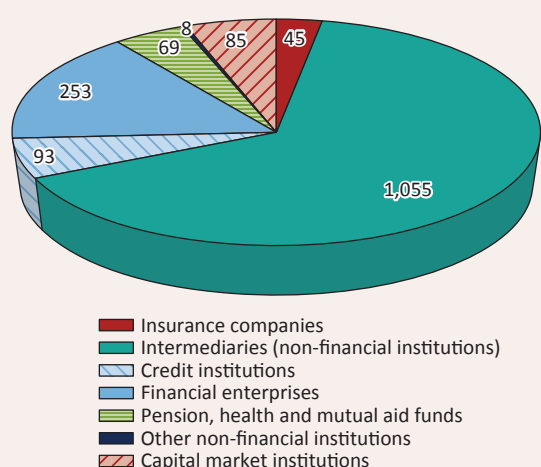
Supervision of credit institutions

The MNB's functional area responsible for the supervision of credit institutions initiated 42 inspections in total in 2016, and closed 28 comprehensive, 11 targeted, 1 thematic and 8 follow-up inspections. As regards the institutions' capital adequacy, 11 ICAAP inspections (aimed at the internal capital adequacy assessment process) were completed. As a result of the procedures closed in respect of the credit institutions, in 2016 prudential institutional penalties in the total amount of HUF 709 million were imposed, underlining that the MNB takes firm measures against infringing forms of conduct and institutions failing to comply with the provisions of its earlier resolutions.

In accordance with international trends and the recommendation of the European Banking Authority (EBA), the business model-based approach is gaining increasing importance in domestic supervisory activities as well. The central bank pays special attention to making the supervised institutions aware of the business model analyses performed on the basis of the continuously developing framework and of the identified risks and this dialogue efficiently supports the banks' strategy development, planning and risk management processes.

The supervisory review and internal evaluation process of the large banks' capital adequacy assessment process (ICAAP-SREP) and the validation of the internal models necessary for calculating the capital requirement, bear the utmost importance for the stability of the financial intermediary system. During the year, the MNB conducted the review in respect of all complex banks and at the same time launched validation processes, at the banks' request, in the case of several risk models. With a view to supplementing the MLS, which supports economic growth, and making it more efficient, the central bank – in its capacity as supervisory authority – provided the credit institutions with an allowance in the capital requirement in proportion to the growth commitments they made.

Chart 7
Number of supervised entities by type on 31 December 2016



Source: MNB.

In April 2016, a prudential thematic inspection assessing the efficiency of the large banks' household mortgage loan collection process was launched, which covered both the operative structure of the collection area and the adequacy of risk management methods related to the categorisation of overdue transactions. The procedure analysing the efficiency of the NPL reduction strategy may also serve as an additional incentive to foster portfolio cleaning, and it helped the banks, having reviewed their own processes, pay more attention to expanding the restructuring facilities. The MNB actively applied its operative procedures with a short lead-in time and typically launched these without advance notice to the credit institutions as well, in the course of which it formulated findings in respect of the data supply and the calculation of the MFAR.

During the reporting period, the MNB actively participated in the risk assessment of international banking groups both as home and host authority. As part of the college work, within the framework of joint decisions, the central bank promoted the formulation of requirements applying to institutions also active in the Hungarian market, ensuring that the operation of domestic actors was risk conscious and efficient in microprudential terms as well. As a result of the intensive cooperation, the recovery plans were accepted, based on which – in a crisis situation – an institution would be able to continue its operation and restore the normal course of business without public assistance as well.

The largest change in the regulatory environment of the financial sector was due to the modification of the Act on the integration of cooperative credit institutions and the MNB Act² in 2016, as a result of

which it became necessary to revise the oversight strategy and the instruments related to the Integration. The amendments extended the MNB's oversight competence to the Integration Organisation as well, and established the opportunity for risk-based oversight. The purpose of the increasingly centralised Integration is to ensure that with centralised institutions (Integration of Cooperative Credit Institutions – ICCI and Takarékbank) it operates in a framework similar to that of large banks and the member cooperative credit institutions practically function as branches. When reaching the level of operation of large banks, the MNB wishes to apply the oversight principles and instruments applied to large banks; however, the basic requirement of this is to have a homogenous group operating on the basis of uniform regulations, efficiently managed and controlled by the central institution. In order to ensure stability, the MNB does not yet supervise the Integration using the large bank approach in full, and thus a transitional period was introduced, in the course of which for the institutions with highest weight and/or risk, it applies custom treatment, and for cooperative credit institutions it applies joint or intensive joint treatment, depending on their risk profile.

With the completion of the processes commenced in past years, the focus of financial institution licensing activity was on the acquisition of controlling interests, the mergers of cooperative credit institutions, the transfer of payment service general agreement portfolios, as well as the transfer of loan, credit, lease and receivable portfolios. In 2016, two specialised credit institutions – ERSTE Mortgage Bank Ltd. and K&H Mortgage Bank Ltd. – obtained activity licences and entered the market. Additionally, the MNB also

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

Type of entity	Type of inspection	Closed in 2016		Started in 2016	In progress on 31 Dec 2016
		Started in 2015	Started in 2016		
Credit institutions (and branches)	Comprehensive	11	14	20	6
	Targeted	7	4	13	9
	Thematic	1	0	1	1
	Follow-up	3	5	6	1
	Validation and SREP	4	7	11	4
Financial enterprises	Targeted	4	2	3	1
Payment service providers	Comprehensive	2	1	2	1

² Act CXXCV of 2013 and Act CXXXIX of 2013.

authorised the establishment of another specialised credit institution, MKB Mortgage Bank Ltd. AXA Bank Europe SA Hungarian Branch Office terminated its operation in Hungary at the end of the year, while the Banif Plus Bank Ltd. merged with the credit institution Cofidis SA as a result of a cross-border merger. The portfolio of AXA was taken over by OTP Bank Plc, while the portfolio Banif Plus was transferred to the Hungarian Branch Office of Cofidis. Of the acquisition of interests in credit institutions, the market sale of MKB Bank Ltd. should be highlighted.

Supervision of insurance companies, funds and intermediaries

In the insurance sector, 9 new inspections started and 11 ongoing inspections were concluded in 2016. The prudential fines imposed in respect of the insurance market amounted to a total of HUF 247 million.

One of the most important events in the insurance sector was the changeover to Solvency II, which was successfully completed in 2016. In the past, the MNB had supported this process by issuing recommendations and conducting impact analyses, along with active communication and test data reporting. The preparation can be deemed successful by European standards, as the central bank forwarded the data of the domestic insurers to the European authority in a much higher quality than average. In addition, the smooth changeover is also reflected by the stable capital adequacy at the sector level (over 200 per cent), and moreover, it reached the EU average compared to the former situation. The central bank's recommendation, in which it requires holding capital buffer to eliminate volatility impacts, made a major contribution to the stability of the capital position.

In the low market yield environment, it is a key requirement for the insurers that they offer a variety of marketable and cost efficient products which comply with the decreased yields, but nevertheless provide positive return for the customers. The MNB elaborated the ethical life insurance concept along the "fair" approach in its strategy, the primary objective of which is to increase public trust and willingness of self-provision. In order to attain the targets set, the central bank, in cooperation with the legislator and the market, initiated the amendment of the law, issued two MNB decrees and a recommendation consisting

of 120 points, which determine the expectations toward the insurers. As a result of the measures, a new generation of life insurance products with savings may appear from 2017.

In 2016, the MNB conducted pilot business model-based inspections at four insurers. Although the central bank identified minor shortcomings in these proceedings, on the whole it can be said that the inspected insurers 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.

In the course the comprehensive inspections, the MNB inspected the proper application of the new Insurance Act³ issued in relation to Solvency II, introduced on 1 January 2016 and of the EU rules. In the spirit of this, along the Prudent Person Principle related to insurers' investment activity within the Solvency II rules, it inspected the adequacy of the investment strategy and regulation with special care and it assessed the investment activity, also focusing on the profitability and liquidity aspects. The supervisory authority treated as a priority the inspection of the composition and quality of the assets constituting the regulatory capital and the cover for the insurance technical reserves, as well as the maturity match of the reserves and underlying liabilities, and the adequacy of the procedures that are to ensure this. The inspections revealed shortcomings in the area of investment policies, the evaluation of corporate decisions, and continuous monitoring of the portfolio.

In the reporting period, the underlying factors of the sector-specific findings included infringements related to the contractual terms of the sold products and customer information documents, as well as to the customer information and complaint management. In addition, irregularities related to outsourcing contracts, product designs, provisioning and accounting policies, portfolio management and registration systems, were also identified.

The forward-looking approach of the supervisory authority is evidenced by the fact that it implemented a number of early interventions in the insurance sector, which helped prevent jeopardising customer

³ Act LXXXVIII of 2014.

funds as a result of the inadequate operation of the institution or the erroneous business model. In the case of the Romanian insurer Astra, the MNB played a special – a kind of intermediary – role between the Hungarian and Romanian guarantee funds, to ensure that the aggrieved customers of the branch office have proper access to the damages. At the same time, it provided continuous information to the public on the progress of the Romanian procedure and the related deadlines.

In the funds sector, 16 new inspections started and 17 ongoing inspections were concluded, in the context of which a total of HUF 11.4 million was imposed in fines, and the activity licences of two voluntary funds were withdrawn.

In several cases, the inspections identified shortcomings in the internal control systems and processes, irregularities related to the organisation and documentation of delegate election meeting, the absence of regulation updates and the violation of accounting rules. During the comprehensive inspections, the focus areas continued to be the proper execution of payments related to services provided to members and to the termination of membership, and the correct crediting of membership fees to individual accounts in accordance with the appropriate distribution ratio. The supervisory authority concentrated on the inspection of indirect costs related to investments, as a result of which a number of asset managers reimbursed the funds for unjustified excess costs, and thus those were credited to members' individual accounts.

In December 2016, the MNB issued a revised recommendation on the selectable portfolio system, which may be operated by the voluntary pension funds and puts more emphasis than before on encouraging

the funds that they should adjust the portfolios to the members' life cycles and risk-taking capacity, and clarifies the regulation of the investment policy of those. At the end of the year, the central bank also published the notice presenting the premium charged by the voluntary pension funds between 2000 and 2015, which compares the membership fee deduction for operational and liquidity purposes, and the level of asset management costs to the members' assets. According to the notice, the value of the sector-level indicators is still below 1 per cent, i.e. the degree of the deductions charged to the members can be deemed low.

Within the framework of the cooperation agreement concluded with the National Association of Voluntary Funds, the MNB conducted several negotiations on the market and regulatory processes, as well as on the proposals aimed at fostering the development of the voluntary funds system and strengthening the self-provision approach.

The fact that – due to the amendment of the Act on voluntary funds and of the related government decrees – all voluntary pension funds operating selectable portfolio systems modified their regulations related to the operation of the selectable portfolio system increased the number of cases managed in the area of fund licensing.

In the **intermediary area**, the supervisory authority enhanced its audit methodology, extending the focus thereof to the inspection of the content of mediated contracts in terms of the insurance trade and the existence of proper professional care in particular as regards the new contracts recommended for corresponding needs. All inspections conducted in respect of the intermediaries identified shortcomings in respect of the registration in the supervisory authority's register.

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

Type of entity	Type of inspection	Closed in 2016		Started in 2016	In progress on 31 Dec 2016
		Started in 2015	Started in 2016		
Insurance companies	Comprehensive	5	2	7	5
	Targeted	3	1	2	1
Pension, health and mutual aid funds	Comprehensive	9	6	14	8
	Targeted	2	0	2	2
Intermediaries	Targeted	4	0	3	3
	Follow-up	0	1	1	0

During the licensing procedures, new tasks were generated by the management of the “fit & proper” requirements towards the newly employed insurance intermediary activity controllers, as prescribed by the provisions of the new Insurance Act.

Supervision of capital market institutions

In 2016, the MNB launched 39 new inspections and closed 31 inspections at capital market institutions, in the context of which it imposed institutional and personal fines in the amount of HUF 377.5 million. During the year, several enterprises terminated their investment services activities and according to the developments being seen, market consolidation is expected to continue in 2017 as well.

A basic element of the inspection of investment firms was the audit of the transactions and positions in institutions' record-keeping systems based on the data of the databases obtained during the on-site inspections. The tools of continuous oversight were expanded with the database logics enquiries based on the regular data reporting by the supervised institutions. Since February 2016, customers of investment service providers may enquire on the month-end balances of the securities account held with the service provider on the MNB's website.

The central bank treats the protection of customer receivables and compliance with the related statutory provisions as key priorities. As widely as possible, the MNB applies operative-type inspection methods at capital market actors, where during the

on-site inspections conducted without prior notice it acquires the data directly from the inspected institution, thereby preventing the potential *mala fide* amendment of such data. During the reporting year, such inspections were carried out on 10 occasions, in the course of which – apart from identifying potential sectoral infringement and the related proportional measures – no systemic fraud or conduct jeopardising customers' assets was revealed.

In the course of inspecting investment fund managers, in addition to the control of data supplies, the supervisory authority focused on the inspection of the institutions' business processes, particularly on risk management, liquidity management, investment decisions, order management and their capital position. The targeted audited closed in 2016 resulted in the withdrawal of the activity licence on one occasion and the suspension thereof in one case.

In relation to the MiFID II regulation (the directive specifying the requirements related to investment firms and regulated markets) to be applied from January 2018 due to the amendment of the EU Directive 2004/39/EC on markets in financial instruments, the supervisory authority conducted consultations with the market institutions.

After 1 July 2016, the registered status of intermediaries registered without a principal ceased by operation of law, as a result of which the MNB cancelled the data of almost two thousand intermediaries from its records.

Table 4
Number of inspections conducted at capital market institutions

Type of entity	Type of inspection	Closed in 2016		Started in 2016	In progress on 31 Dec 2016
		Started in 2015	Started in 2016		
Investment fund managers (exc. venture capital fund managers)	Comprehensive	1	5	15	10
	Targeted	1	0	1	1
Venture capital fund managers	Comprehensive	2	0	3	3
Central counterparty	Comprehensive	0	1	1	0
Central depository	Comprehensive	0	0	1	1
Investment firms	Comprehensive	3	3	10	7
	Follow-up	0	2	3	1
	Thematic	0	1	1	0
	Targeted	10	2	4	2

Market surveillance and oversight of issuers

In 2016, the MNB completed 50 market surveillance inspections, as a result of which it imposed market surveillance penalty amounting to almost HUF 3.9 billion.

The MNB pays special attention to the liquidation of unauthorised activities distorting the market and to the immediate suppression of the initiatives without economic foundation, promising unreasonably high yields and aimed at damaging investors. In the spirit of fighting the spread of unauthorised actors in the low interest and yield environment, in 2016 the supervisory authority considerably increased the number of the temporary measures taken in the early phase of its market surveillance procedures, the criminal charges filed during the procedures and press releases informing the public about unauthorised service providers.

In 2016, the series of market surveillance procedures related to the unlicensed purchase of receivables in Hungary was closed. As a result of the public authority's actions, the central bank also initiated criminal proceedings, in addition to the market surveillance penalties of several hundred million forints which were imposed in certain cases of special importance.

In 2016, the MNB placed the control of the stock exchange issuers' notification obligation on new foundations, in the spirit of which it encourages the issuers of publicly traded securities to fulfil the notification obligation voluntarily. The supervisory authority issued resolutions – in addition to imposing supervisory penalty in the amount of some HUF 50 million – in about 40 cases against the issuers that breached the notification obligation, and in 13 cases the trading of the respective securities at the stock exchange was also suspended.

As part of the new stock exchange strategy, new issuers appeared on the Budapest Stock Exchange after two years.

Consumer protection

The MNB's consumer protection activity in 2016 was strongly determined by the fulfilment and closure of the extraordinary tasks related to the settlement. During the review of the settlement more than

18,000 documents were generated and as part of the inspection the central bank received electronic data reporting in more than 16,000 cases. As part of the settlement thematic audit, in relation to infringements which were identified the MNB imposed consumer protection fines in the total amount of HUF 155 million, penalties of HUF 6.1 million for failure to comply with the prescribed extraordinary reporting and procedural penalties of HUF 2.3 million for hindering the inspection. On the whole, the series of inspections carried out at 322 financial institutions did not reveal systemic errors; most of the affected parties remedied the shortcomings already during the inspection and the fulfilment of the additional obligations prescribed by the MNB is also on schedule.

With a view to assessing and managing the consumer protection risks, in 2016 the MNB launched thematic inspections related to fair lending and to companies pursuing pawnbroking activity, impacting 18 supervised institutions in total.

The investigation of suspected infringements was performed within the framework of targeted inspections aimed at complaint management, the calculation and communication of annual percentage rate of charge, and at the identification of unfair commercial practices to the detriment of consumers.

In order to survey the sales techniques, conducts, provision of information and the real market circumstances, the MNB concluded trial transactions in 26 cases in 2016.

The consumers' petitions initiating consumer protection inspections also bore important information for the central bank, which were investigated – upon the existence of the statutory conditions of launching the procedure – in 222 cases.

Due to the infringements identified during the inspections, the MNB imposed consumer protection fines in the total amount of HUF 258.4 million in 2016. The MNB monitored the actual conduct and communication of the supervised institutions in the form of continuous consumer protection supervision, and in the course of this it issued a total of 42 consumer protection warnings, due to the detection of undesirable practices.

The supervisory authority considers it particularly important to ensure that the general terms and conditions should comply with requirements of good

Table 5**The MNB's consumer protection administrative activity, and data related to the settlement thematic audit***(HUF Millions)*

Type of entity	Procedural penalties	Consumer protection fines regarding extraordinary data supply	Consumer protection fines regarding infringements revealed in the course of thematic inspection
Credit institutions	0.25	0	126.0
Cooperative credit institutions	0.85	1.1	12.9
Financial enterprises equivalent to credit institutions	1.2	5	14.3
Debt management institutions	0	0	1.9
Total:	2.3	6.1	155

faith and fairness, as prescribed by civil law, and thus in 2016 it reviewed in detail the relevant regulations of nine financial institutions that concluded new consumer car loans or lease contracts in autumn 2015. The respective institutions modified their contractual conditions by eliminating the concerns formulated by the supervisory authority, and thus the MNB did not bring *actio popularis* claims against them. At the request of the MNB, the institutions updated their entire outstanding contract portfolio with the changes, and thus conditions that were unjustified or represented an unfair disadvantage for the consumers, or that were unclear, were removed from 150,000 contracts.

In relation to the national home creation communities established based on the provisions of Act XV of 2016, the MNB fulfilled its obligations related to the regulation, and also prepared and published the informative guidelines both for the consumers and the future organisers.

Financial Consumer Protection Centre

Customers can reach the customer service operating in the MNB's Financial Consumer Protection Centre through four channels, i.e. in person, over the phone, by e-mail and by petitions submitted on paper. In 2016, the customer service received 37,543 enquiries and 3,698 petitions. Half of the customer petitions and enquiries related to the financial market and almost one quarter related to the insurance sector. Within the financial market, a large part (36 per cent) of the enquiries and complaints related to lending, while almost one third of the insurance cases concerned compulsory motor third-party liability insurance. The causes of problems primarily included settlements related to contracts, insufficient information, various administrative errors, the amount of commissions,

costs and fees, the degree of indemnification and lengthy claim settlements. In 2016, the enquiries and petitions received in connection with the claims related to the termination of the services of ASTRA Insurer accounted for almost 4 per cent of all enquiries received by the customer service.

During the central bank's consumer protection activity, financial consumer protection communication is becoming increasingly important. The purpose of this is to reduce the damages arising from consumers' erroneous decisions, increase consumers' financial awareness and enhance domestic financial literacy. As part of this, in December 2016 the consumer protection webpage (micro site) available through the MNB's website was revamped, rendering it even more user-friendly with its new structure. On the consumer protection micro site, which attracts roughly ten thousand visitors per month, visitors can search for thematic content in almost 350 articles, covering almost the whole range of financial services.

Within the framework of the Financial Navigator information paper series, which is already regarded as a classic publication, 4 new Financial Navigator papers and 2 new Financial Navigator EXTRA notification were published. The printed booklets were published in more than 4.8 million copies to foster financially-aware decision-making by the general public.

The MNB also assists the provision of comprehensive information to consumers with short videos, dealing with the most important financial topics. These are also available online; in this spirit, by the end of the year 19 short films had been published. The central bank also tries to access the widest possible range of consumers via social media, and thus it shared almost 400 contents enhancing financial awareness on its Facebook site. As one element of the Financial

Navigator information system, the MNB's product selection applications help collect the information necessary for consumers' decisions more easily. Of these, the enhancement of the bank account, deposit and loan/lease selector, and the household budget and loan calculator commenced during the year, while the national branch and ATM search application helps orientation from June as a new service.

In 2016, the Financial Advisory Network – operating with the support of the MNB – was renewed: it provides financial information and advice at 9 county seats in almost 4,600 matters. As a new service, twice a month, the offices also offer external advisory services in smaller settlements around the county seats, and thus the service is available at 18 sites monthly. NGOs participating in the financial consumer protection Civil Network organised 91 events, particularly for the population living in the countryside, to provide assistance in consumers' legal enforcement efforts and to provide information. The Financial Consumer Protection Centre organised 2 forums and 2 online examinations for the NGOs during the year.

The MNB places strong emphasis on representing the interests of social groups with special needs, and thus with a view to providing equal opportunities to customers with impaired hearing, a video interpreter service was introduced at the personal customer service from 1 December 2016. From the same day, the customer service receives telephone enquires at toll-free telephone numbers.

3.4 RESOLUTION

In 2016, one of the greatest achievement of the MNB was the successful completion of resolution procedure for MKB Bank.

The resolution of MKB Bank was one of the first resolution procedures in the European Union conducted on the basis of the new European resolution framework introduced in 2014. During the 18-month procedure, which commenced in December 2014, MKB Bank disposed of its toxic asset portfolio by applying the sale of business and the asset separation resolution tools, which together with the reorganisation measures taken in parallel, contributed to the recovery of the institution's long-term viability. The bank, which was thus set on a sustainable path, was sold by the MNB, acting in its scope as resolution authority, in an open, transparent and non-

discriminatory sales process to market participants in the first half of 2016. Meanwhile, the funds qualifying as State aid were used to the smallest possible degree and were refunded by the market sale. The creditors of the bank suffered no loss in relation to the resolution proceeding, and the funds and assets of the bank's clients and business partners continuously enjoyed maximum protection. In view of the fact that the MNB fulfilled the measures specified in the resolution action plan, as a result of which the resolution objectives were met in full, the resolution procedure was closed on 30 June 2016. One of the most important fundamental principles of the resolution framework is that no owner or creditor should incur greater losses as a result of the resolution procedure than would have been incurred if the institution had been wound up under normal insolvency proceedings (No Creditors Worse Off principle); if this is not the case, the owners and the creditors are entitled to compensation from the Resolution Fund. In making that assessment, after completion of the resolution proceeding, in summer 2016 the MNB appointed an independent valuer, complying with the relevant professional and conflict of interest criteria, to prepare the valuation of the difference between the relevant assumed liquidation procedure and the completed resolution procedure. In view of the complexity of the task, the valuation extended on into 2017.

The MNB exercises the ownership rights over the Hungarian Resolution Asset Management Vehicle (Magyar Szanálási Vagyonkezelő Zrt. – MSZVK Zrt.). The subsidiaries of MSZVK manage the mostly toxic asset portfolio, separated from MKB Bank during the resolution and their duty is to sell those at the highest possible price.

In 2016, the MNB participated in the work of the resolution colleges set up for given groups of institutions – led by the Single Resolution Board, as the resolution authority of the Banking Union – as the host resolution authority of the Hungarian subsidiary banks of several parent banks with registered office in the European Union. In respect of the banking group, belonging to its competence as group-level resolution authority, the most important objective in 2016 was to identify the critical functions of the group and to elaborate the resolution strategy, which ensures the maintenance of these functions, and to have them accepted by the resolution college. The joint decision, representing the acceptance of the resolution plan, may be passed in the first quarter of 2017.

In addition to the work performed in the resolution colleges, cooperating closely with EU resolution authorities, the MNB also participates in the enhancement of the regulatory environment related to resolution, primarily in the various working groups of the European Banking Authority (EBA). The EBA guidelines issued during the year were duly adopted in the MNB's internal regulations. The Resolution Handbook was also revised in line with regulatory changes, which was justified by the incorporation of the useful experiences gained during the resolution of MKB Bank in the internal regulations, and also by the need to ensure harmony with the directly applicable EU regulations, which entered into force in 2016. In addition, together with respective peer authorities, the MNB participates in the development of the resolution framework applicable to central counterparties and insurers, which is expected to be codified in the near future.

With a view to developing cooperation with the resolution authorities of countries outside the European Union, in 2016 the MNB liaised with the resolution authorities of 46 non-EU countries in seven phases, with the purpose of deepening professional cooperation and later concluding cooperation agreements with the authorities of particular importance in terms of cross-border cooperation.

The collective funds (National Deposit Insurance Fund, Resolution Fund, Investor Protection Fund, Settlement Fund) are important parts of the financial stability safety net. In 2016, the MNB granted 3-month liquidity loans subject to full compliance with the prohibitions of monetary financing, to the Settlement Fund and to the Investor Protection Fund in order to ensure the orderly compensation of the affected investors, which were repaid in full by the due date. It is a recurring task for the MNB every year to determine the rate of the risk-based premium payment to the fund for the member institutions of the Resolution Fund, at the market level and for individual institutions.

The experts of the MNB made presentations on resolution both at domestic and foreign conferences and also published a number of academic and professional papers.

3.5 PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

Security of domestic payments

Findings of payment inspections

In 2016, the MNB verified compliance with the provisions of Act LXXXV of 2009 on the Pursuit of the Business of Payment Services (hereinafter: Payment Services Act), MNB Decree No. 18/2009 (VIII. 6.) on executing payments (hereinafter: MNB Decree), and the Regulation of the European Parliament and the Council on interchange fees for card-based payment transactions (hereinafter: MIF regulation), published as a new law to be controlled) at 15 credit institutions (2 banks, and 13 cooperative credit institutions). On the basis of the Act on Certain Payment Service Providers (hereinafter: Payment Service Providers Act), it also inspected the 4 voucher issuers operating – in practice as well – in Hungary. In addition to scheduled inspections, at the beginning of 2016 the MNB concluded 5 inspections carried over from 2015. In addition to prescribing corrective measures, the MNB imposed fines amounting to a total of HUF 51.5 million in the case of 3 inspections. In three cases, the measures prescribed based on the inspections carried out in 2015 were implemented inadequately; the MNB therefore prescribed additional measures and repeatedly imposed fines amounting to HUF 6.4 million in these cases. During the 19 inspections conducted in 2016, the infringement of statutory provisions was identified in 94 cases. 16 of these inspections were concluded by the application of measures (the MNB instructed the institutions to meet their obligations by the deadline), of which a penalty in the total amount of HUF 3.2 was imposed on 1 credit institution due to the severity of the infringements. Thus, the fines imposed in 2016 amounted to a total of HUF 61.1 million, including fines brought forward from the previous year and follow-up audits. In addition, 2 administrative procedures were still in progress on 31 December 2016.

The inspections revealed that credit institutions failed to comply with certain rules related to the provision of advance and subsequent information, the formal and

substantive requirements of the master agreement, the amendment and termination of the master agreement, the opening of the payment account, the correction of payment transactions, liability and the bearing of damages and queuing.⁴ Moreover, the MNB also identified shortcomings in respect of certain rules pertaining to the receipt of payment orders, the rejection of payment orders issued by the other payment service providers or by the client, the queuing or partial execution of payment orders, the administrative payment order and court payment order, the execution of payment transactions between payment service providers to the credit of the payment account, the value date, making the amount of the payment transaction available to the beneficiary and the execution of direct debits.⁵ The most frequent infringements involved violations of the requirements of the Payment Services Act in respect of the supply of advance and subsequent information, and of the MNB Decree in respect of making the amount of the payment transaction available to the beneficiary.

During the inspection of institutions engaged in the issuance of negotiable vouchers, the infringement of the rules pertaining to the management of the consideration for the negotiable vouchers, complaint management and the registration of the contact person in charge of consumer protection matters⁶ and a statutory shortcoming related to data reporting regulation⁷ were identified.

By reinforcing the compliance of credit institutions and other payment service providers with regulations, payment inspections contribute to the reliable and compliant operation of the financial intermediary system, the predictability of payment processes for customers, and hence, the efficient delivery of services to customers.

Statements on payments

In 2016, the central bank issued 29 resolutions and professional opinions on payments based on administrative and customer enquiries. In two cases, the MNB provided an opinion focusing on payment issues in relation to European Union legislation, and in

27 cases it issued statements or professional opinions based on household, institutional, administrative or other requests.

Payment and settlement systems

Introduction of the instant payment service in Hungary

In the first half of 2016, the MNB launched a project to implement the introduction of the instant payment services in Hungary, as a first step of which it started comprehensive consultations with the affected market participants. The stakeholders of the project could express their professional opinion on the concept put up for professional debate at industry forums, bilateral discussions and in the form of written proposals. As the first step of the consultation process, the MNB organised professional forums in May 2016 for the banking sector, the technical service sector, the public actors, and for organisations representing the interests of enterprises and consumers. The forums were followed by bilateral meetings in June with a narrower circle of market participants, while the option to submit written comments was open to all organisations in the sector. After the processing of the professional opinions received, the MNB elaborated the final development concept.

The Financial Stability Council of the MNB approved the rules applicable to instant payments on 13 December 2016. The rules contain fundamental requirements, the fulfilment of which is the precondition for rendering instant payment services in Hungary, and they define the transactions that must be executed in all cases in accordance with the rules of instant execution after the launch of the system. The development of the instant payment system permits the application of modern IT and communication solutions in payments, thereby supporting innovation and fostering competition between actors in the payments market. In the new system, it will be possible to initiate payments up to the amount HUF 10 million, 24 hours on each day of the year, even by merely specifying the mobile number of the beneficiary, and the funds will reach the

⁴ Sections 3 (2), 4 (1) and (2), 8 (1) and (2), 10 (1), 13, 14 (1), 15 (1), 17.(4) and (6), 18 (1) and (3), 2 (1) and (2), 26(1) and (2), 43-46, 49, 50 (3), 61 (1) and (2) of the Payment Services Act.

⁵ Sections 5 (1), (2), (5) and (6), 7 (3), (4) and (7), 8 (2), 9 (3), 17, 20, 21, 21/B, 31(3a), 37/A (8) of the MNB Decree.

⁶ Sections 52(4) a), (5) and (6) a), 70 (9), 70 (15) of the Payment Service Provider Act.

⁷ MNB Decree 48/2014 (XI. 27) on the Data supply obligations to be fulfilled for enabling the Magyar Nemzeti Bank to perform its basic duties, rules related to the data reporting entitled "Report on the issued negotiable vouchers" (MNB identification code: P54) (filling instructions in Section II of Annex 2).

addressee in a matter of seconds. Building on the new system, it will be possible to create supplementary services, such as e.g. mobile payment solutions. As a result of this, new types of service providers may also enter the payments market and compete with traditional participants, providing customers with a much wider range of convenient, fast and cheap electronic payment services than at present. The MNB will publish the details related to the operation and development of the infrastructure early 2017. Thereafter, a national infrastructure modernisation project will commence with the lead of the central bank to ensure that both the central infrastructure and the systems of the payment service providers become capable of processing the transactions in accordance with the rules from the second half of 2019.

The MNB regards the introduction of the instant payment service as a development project that serves the long-term competitiveness of the payment industry. The success of this project will provide customers with services of higher quality than at present. The project, which commenced in the first half of 2016, will generate changes across the sector in the coming years, which will increase the efficiency of the sector.

Intensive preparation for the changes accompanying the SEPA regulation's entry into force

In 2016, domestic payment service providers continued to be prepared for compliance with the requirements defined in the EU regulation⁸ (final date regulation) applicable to EUR credit transfers and direct debits. In the European Union, the SEPA credit transfer (SCT) and the SEPA direct debit (SDD) was introduced in 2008 and 2009, respectively. Pursuant to the regulation, the changeover to the single payment scheme had to be completed by August 2014 in the euro area countries, while the deadline for countries outside the euro area was October 2016.

In order to monitor the preparation process, the MNB and the Hungarian Banking Association conducted a questionnaire-based survey on the changeover to the single payment scheme among the payment service providers in the first half of 2016. As a result of the survey, it was established that the majority

of the service providers transacting high payment turnover had already started preparations for the single payment scheme earlier, while the rest of the payment service providers started this in the first or second quarter of 2016. A rule of the regulation representing one of the greatest challenges is that the payment service provider must ensure in the case of the customers, not qualifying as consumers or micro enterprises (companies, public authorities), initiating or receiving EUR credit transfer (direct debit) orders in batches that after the deadline they use only the messages specified in SEPA format. In the case of Hungary, the changeover was duly implemented by the deadline of 31 October 2016.

Elaboration of the security requirements related to electronic payments

The experts of the MNB's functional area performing the oversight of the payment systems participated in the twentieth plenary meeting of the SecuRe Pay forum, dealing with the security of retail payments, jointly controlled by the European Central Bank and the European Banking Authority (EBA), the topic of which – pursuant to the payment services directive revised in 2015 (PSD2) – was the agreement on a draft standard⁹ ensuring the development of strong client authentication and communication related to electronic payments. The MNB's colleagues engaged in oversight – in cooperation with the Banking Association – made a professional presentation on the draft published by EBA on 12 August 2016 to the representatives of the commercial banks, where they described the requirements of the regulation in relation to the authorisation provided by the relevant PSD2.

Experiences in 2016 with regard to the forint's accession to the CLS system

Since 16 November 2015, the Hungarian forint is also a settlement currency in the international foreign currency settlement infrastructure operated by CLS. Through the accession, the MNB acquired membership in the CLS International Oversight Committee, as a result of which the central bank's duties performed within the framework of international cooperative oversight expanded. As part of this, at the meetings of the committee held in 2016 the MNB's representatives

⁸ Regulation 260/2012/EU establishing technical and business requirements for credit transfers and direct debits in euro and amending Regulation 924/2009/EC.

⁹ Regulatory Technical Standard on Strong Customer Authentication and Common and Secure Communication.

reported, among others, on the experiences of the forint's accession to date.

In 2016, the system operated smoothly. Since the start of the service the forint turnover settled in CLS has been continuously increasing; in 2016 the volume of the related netted RTGS turnover multiplied compared to the initial value. The growth was also attributable to the fact that in the period after accession there was a major increase in the number of direct CLS members settling their foreign exchange transaction against forint in this system, and several Hungarian credit institutions also became indirect members in the system. In accordance with the central bank's objectives, an increasing volume of domestic banks' foreign currency turnover is transferred to CLS, which greatly increases the stability of the domestic financial system by eliminating the settlement risk. Based on the experiences gained so far it may be stated that the infrastructure cooperation developed between the respective parties fully complies with the security and operation requirements, and it is ready for the integration of additional institutions. Accordingly, the central bank maintains its expectation that as many as possible domestic market participants should develop direct or indirect connection to the system, and it supports the initiatives related to this in all cases.

New transactions in the intraday clearing system of the Interbank Clearing System

Following the introduction of intraday clearing in 2012, paper-based credit transfer transactions, collection-type operations and the credit transfers of the Hungarian State Treasury remained in the overnight settlement cycle. As a result of the development performed last year, from 1 January 2016 all forint credit transfers requiring interbank clearing, which are submitted to the credit institutions on paper, are processed in the intraday settlement system of the Interbank Clearing System. As a result of this, apart from Treasury credit transfers, only collection-type transactions are settled in the overnight system. However, in order to support the efficiency of public payments, the MNB initiated that the Treasury's individual and direct credits should be also settled in the fast and modern intraday clearing system, similarly to the credit transfers executed in the credit institution sector. The diversion of the Treasury's direct credits to the intraday clearing requires substantial preparation, as due to the mass payments, transactions with an

extremely high number of items must be settled within a short time on the given days. The MNB, GIRO and the credit institutions have already prepared for the changeover; the go-live planned for the first half of 2017 depends on the preparedness of the Treasury.

Annual review of the EMIR licence of KELER CCP completed

KELER CCP, as an institution performing central counterparty activity within the European Union, had to go through a re-licensing process in 2014 to ensure compliance with EMIR,¹⁰ which was performed by a licensing college comprised of international members. Based on the EMIR requirements, KELER CCP must continuously comply with the requirements, and this compliance is reviewed by the licensing college at least once a year in person; additionally, it must regularly notify the college on all major operational changes that affect the licensed activity. The 2016 review was performed in September, as a result of which the college established that the operation of KELER CCP continues to comply with the EMIR requirements. In addition to the MNB and the European Securities Market Authority (ESMA), the authorities of those countries also participate in the college of KELER CCP, which have delegates at KELER CCP, thus the Irish, Belgian and British financial supervisory authorities were also represented in the college.

Other information

Survey of the frauds related to direct debit and credit transfers

At the initiative of the European Central Bank, in September 2016 a consultation was launched with the MNB's cooperation to survey the features and underlying motives of the fraud cases related to direct debits and credit transfers. The information was collected in anonymous form on questionnaires, which were processed by ECB.

Range of data published in the payment table set expanded further

Taking account of users' requirements, from early 2016 the payment table set was expanded to include data presenting payment card turnover. As part of this, the value of payment card turnover is published in a breakdown by card types. In addition, data on

¹⁰ European Union regulation on the OTC derivative transactions, central counterparties and trading data warehouses.

debit and credit card turnover are also available retrospectively to the first half of 2010.

Publications related to payments and payment systems

In June 2016, the MNB's publication related to payment systems, entitled *Payment Systems Report 2016* was published for the fifth time. In this regular publication, the MNB prepared a comprehensive expert analysis on the trends observed in 2015 in the domestic payments and the operation of the supervised payment and securities settlement systems, and a forward-looking analysis of current events in 2016. The report is available at: <https://www.mnb.hu/en/publications/reports/payment-systems-report/payment-systems-report-2016>.

In the June issue of the Financial and Economic Review, a paper by Tamás Ilyés and Lóránt Varga entitled *Macroeconomic effects of the increase of electronic retail payments – A general equilibrium approach using Hungarian data* was published. In the paper they focus on the potential effects on the performance of the Hungarian economy if components of various sizes of the retail and other household cash payments were substituted with payment by debit card. The paper is available at <http://english.hitelintezetiszemle.hu/>.

On 29 August, the MNB published the volume summarising the experiences gained during the two years since the introduction of the Self-financing Programme. The analysis describes in detail the ways in which participants of the payment system adjusted to the specific measures of the Self-Financing Programme and illustrates the impact of the series of measures on selected liquidity indicators.

In the MNB Occasional Papers series, the paper of Gergely Balla and Tamás Ilyés entitled *Liquidity needs and liquidity costs of an instant payment systems* was published on 30 November 2016, which provides a background analysis for the introduction of instant payment services in Hungary. In the paper, the authors presented and quantified three cost elements that may occur in the Hungarian instant payment system in relation to liquidity management. In the analysis of the cost types, it was revealed that the liquidity needs of the instant payment system and the cost of providing this liquidity is manageable at the level of the entire payment system, i.e. it does not represent an obstacle that would substantially hinder the introduction of the instant payment services. The authors also presented

the analysis at the international conference entitled *Economics of Payments VIII*, organised by Deutsche Bundesbank on 9 November 2016. The analysis is available at <https://www.mnb.hu/en/publications/studies-publications-statistics/occasional-papers>.

3.6 FOREIGN EXCHANGE RESERVES MANAGEMENT

Purposes of holding reserves

Similarly to other central banks, one of the key tasks of the MNB – as specified in the Act on MNB – is to manage the foreign exchange reserves of the country. 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 system,
- to satisfy the state's transaction-related foreign currency requirement.

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, initiates measures – within the permitted limits – to reach the adequate level. In 2016, the foreign exchange reserves exceeded the secure level, expected by the investors and other market participants, throughout the year.

In terms of transaction goals, servicing the management of government debt continued to be the most important objective last year, which was greatly influenced by the MNB's Self-financing Programme. The debt management agency supported the policy of rolling over the expiring foreign currency liability essentially using the forint by higher share of forint denominated issuance, which was mostly facilitated by the banks' excess demand and the government securities purchases of households. 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, the

continuous provision of budgetary institutions with foreign currency should be mentioned here. The transfers received from the European Union also flow through the MNB; these have been and will be substantial sources of foreign exchange reserves. The aforementioned transaction goals were once again satisfied smoothly in 2016.

The MNB still does not hold foreign exchange reserves purely for asset accumulation purposes. On the other hand, in the course of managing the required volume of foreign reserves it makes efforts 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 foreign exchange reserves declined by EUR 5.94 billion in 2016, amounting to EUR 24.4 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 the net foreign currency interest expenditures, as well as the foreign currency expenses of the Hungarian State Treasury, reduced the foreign exchange reserves by roughly EUR 6.6 billion in total. The change was primarily the combined result of bond maturities in the nominal values of GBP 500 million, CHF 200 million and EUR 1 billion, the repayment of the last instalment of the foreign currency loan taken from the European Commission, cash movements related to the retail foreign currency bond (PÉMÁK) and other items. The cash movements related to the conversion of the households' foreign currency loans into HUF,

to the foreign currency pillar of the third phase of the FGS, and to the foreign exchange swaps expiring under Pillar 3 of the first phase of the FGS, reduced the reserves by almost EUR 4.5 billion. The inflow of EU transfers, in the amount of roughly EUR 3.4 billion in 2016, were the primary items that pointed toward the increase in foreign exchange reserves against the reserve-reducing items; however, this has offset the fall in the reserve holdings only partially. In April, Hungary – as the first among the countries in the region – issued a foreign currency bond denominated in renminbi in the Chinese offshore market with a value of CNY 1 billion. The maturity of 1-week liquidity providing swap transaction at the end of 2015 had a reserve-increasing effect of approximately EUR 0.5 billion, while foreign currency swap tenders providing forint liquidity, announced in September and called for as of mid-October, had a reserve-increasing effect amounting to some EUR 1.3 billion. The profit realised on the reserves in the reporting period amounted to EUR 28 million.

Financial performance and risks of foreign exchange reserves

In fulfilling its core tasks as stipulated in the 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 reserves management, the threefold objective of liquidity, security and yield must be satisfied, meaning that the MNB tries to achieve the highest yield level while continuously keeping the risks at the pre-defined low level.

Similarly to other central bank duties, the Monetary Council is also the supreme decision-making body in respect of foreign exchange reserves 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 numerical 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

Chart 8
Developments in the size of foreign exchange reserves



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 two main pillars of the reserve management are the benchmark system and the limit system. Independent performance measurement is an important element of the risk-taking policy. With a view to ensuring the measurement of the success of portfolio management, the performance of each reserve portfolio is compared with the performance of a reference (benchmark) portfolio. Benchmark portfolios show what yield would have been produced by a passively managed portfolio that represents a wide market segment if investment parameters had been the same. The performance of foreign exchange reserves 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 the business area.

The most important risk categories related to foreign exchange reserves management include market risk, liquidity risk, credit risk, settlement risk and counterparty risk. The MNB controls the possible degree of financial risks related to foreign exchange reserves management using limits. In accordance with the conservative reserve portfolio management characteristic 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 reserves management, the MNB applies a variety of risk-minimising techniques to ensure that the assumed risks comply with 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 margins also help limit risks. In the case of foreign exchange market transactions, the MNB settles its transactions, in accordance with the international best practices, 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 2016, the MNB managed euro, US dollar, Japanese yen, British pound and Chinese renminbi portfolios. The MNB assumes exchange rate exposure only in euro: it hedges the other currency/euro cross rate risks by derivative instruments. The holding of other exchange rate-hedged foreign currency instruments is justified by the higher diversification and, in the case of the US dollar, the available higher liquidity. Altogether, the MNB actively manages seven portfolios, in euro, US dollar, British pound and renminbi. Based on the MNB's former decision, it allocates a small part of the foreign exchange reserve portfolios to Chinese government securities investments, the first step of which was carried out indirectly, in cooperation with BIS (Bank for International Settlements, Basel). By mid-2016, the building of the internally managed, Chinese renminbi exposure was also completed. 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 a part of the MNB's investment strategy. In 2016, a second MBS portfolio was also built, relying on external asset management. The strategic average duration (target duration) of the reserve portfolios was around 1 year. The MNB's gold reserves amount to 98,857 ounces, worth EUR 108 million at the end of the reporting period.

The EUR 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. Its benchmark includes 100 per cent euro area government securities of AAA-AA rating. In addition to the foregoing, highly-rated corporate and bank issues, and covered securities may be purchased for the EUR investment portfolio; this portfolio typically includes government securities only for the purpose of adjusting the maturity structure.

The benchmark of both the euro and the US dollar investment portfolio contains government securities, corporate and bank bonds, as well as money and capital market instruments of high credit rating with a maximum residual maturity of 7 years. The structure

of the benchmark portfolios, the credit rating and residual maturity of the assets reflect a conservative willingness to take risks, typically characterising central banks.

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 and other bonds of mostly high credit rating, managed in its portfolios, the MNB also benefited from this process through the revaluation of the positions as a result of the decreasing yield environment. In view of the substantially negative yield environment that sank close to zero in the euro area, the possibility of further price increase is limited, which explains the more modest performance compared to previous years.

Similarly to the previous year, the ECB's and Fed's opposite monetary policy measures continued to be determinant factors. In the USA, an interest rate increasing cycle commenced after the end of quantitative easing and the asset purchase programme. It was anticipated that the Fed would continue its tightening cycle started in December 2015, however, as a result of the referendum held in Great-Britain on leaving the European Union (Brexit), the deceleration in global growth, and other domestic macroeconomic data, the tightening did not continue until December 2016, when Fed raised the interest by 25 basis points. By contrast, in Europe easing the monetary stance remained in focus in 2016. During the year, the ECB modified its securities purchase programme announced earlier on several occasions. In addition to the extension of the programme, it also decided to reduce all three elements of the interest rate corridor. At the end of the year, the Governing Council of the ECB announced the extension of the asset purchase programme until the end of 2017. In the period under review, Brexit was one of the most important economic events, which also contributed to the global postponement of the interest rate increase expectations and the high level of demands for safe instruments. As regards the performance of reserves, the reporting period was determined by continuously declining EUR yields, which were in the negative range in a major part of the yield curve. USD yields also

fell in the first half of 2016, followed by a rise in the second half-year, and thus by the end of the year they exceeded the level recorded a year ago by 10-25 basis points in total.

Despite the low yield environment, in 2016 the MNB achieved close to zero, but positive performance on the foreign exchange reserves both in absolute terms and compared to the respective benchmarks. The liquidity allocated for the attainment of the monetary policy objectives was continuously available during the year and no credit risk event occurred that would have had an adverse effect on the MNB's reputation. The annualised yield realised on the gold and foreign exchange reserves – weighted by the market value and adjusted for the financing cost – was 0.01 per cent, outperforming the benchmark by 9 basis points.

In respect of the future performance of foreign exchange reserves, it still represents a risk that the performance of the reserve portfolios may become negative if the yields of the highly-rated assets move from an extremely low level as result of a yield increase, which deteriorates reserve performance as a result of the revaluation loss arising from depreciation of the existing bonds over the short run. On the other hand, due to the short duration of the reserves, the medium-term impact of this is already positive.

In view of the substantially changed financial market environment and the negative expected return realisable on the foreign exchange reserves, the MNB responded by the diversification of its exposures, and in order to maintain the capital – in line with the conservative central bank mandate – by the amendment of the portfolio structure and the parallel strengthening of risk controls. At the end of December 2016, the degree of the MNB's interest rate risk, according to the VaR terminology with a 95 per cent confidence level and 1-month horizon, was EUR 20 million, with an Expected Shortfall (ES) of EUR 25 million. This means that under the portfolio composition and market circumstances at the end of December, the chance of the MNB's suffering a loss higher than EUR 20 million compared to the expected return within one month is 5 per cent, while the expected value of the losses exceeding the VaR value is EUR 25 million. The ES value of EUR 25 million corresponds to 1 thousandth of the reserve portfolio value.

3.7 CASH LOGISTICS ACTIVITY

Currency in circulation

On 31 December 2016, the total value of currency in circulation amounted to HUF 4,580 billion, representing a 6 per cent year-on-year increase of HUF 275.7 billion.

Cash holdings increased strongly in 2016 as well, but the extremely intensive, double-digit expansion seen since 2012 decelerated. As a result of the growth, the GDP-proportionate value of cash holdings at the end of 2016 reached 13 per cent, representing a minor increase compared to the value of 12.6 per cent registered at the end of 2015.

The decline in the growth of cash holdings is presumably attributable to the fact that last year – compared to the period of 2012-2015 – there was no

such major change in the interest rate environment that would have materially reduced the opportunity cost of holding currency, thereby representing a strong incentive for the use of cash for savings purposes. In 2015, a number of one-off effects increased cash holdings (settlement of foreign currency loan, NDIF payments), which was less typical in 2016. Inflation, which once again started to rise recently, also pointed to the deceleration of the growth in cash holdings. By contrast, household consumption growth supported the continuation of the major increase in cash holdings. On the whole, the deceleration of the growth in cash holdings was in line with the expectations.

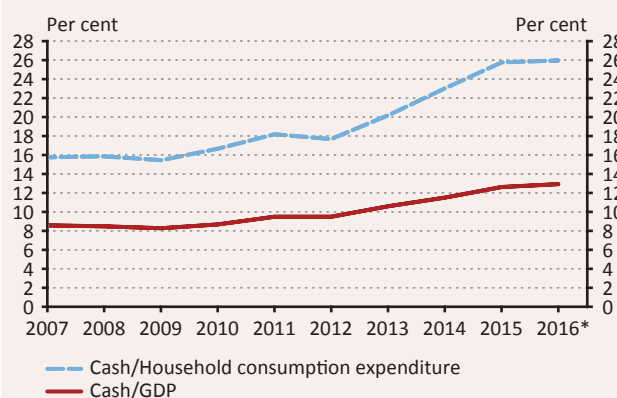
The change in the volume of banknotes in circulation varies by denomination. In the case of the 20,000-forint, 10,000-forint, 5,000-forint, 1,000-forint and 500-forint denominations, the stock rose by 5, 9, 5, 8 and 5 per cent, respectively, while in the case of the 2,000 forint denomination the stock decreased by 2 per cent last year.

The two largest banknote denominations still play a dominant role in the cash turnover: at the end of last year they jointly accounted for 65 per cent of the volume of banknotes in circulation. This is due to the fact that in addition to their payment role in the cash turnover, they also fulfil a capital formation function.

Compared to the end of previous year, the volume of the forint coins in circulation increased by 7 per cent on average.

The MNB's expenditures related to cash production amounted to a gross sum of HUF 13.7 billion in 2016. The increase compared to previous years is primarily attributable to the higher manufacturing needs related to the new, enhanced banknotes.

Chart 9
Cash/GDP and cash/consumption expenditure of households



* The 2016 GDP figure and the consumption expenditure of households are MNB estimates.

Chart 10
Distribution of banknotes in circulation by quantity at end-2016

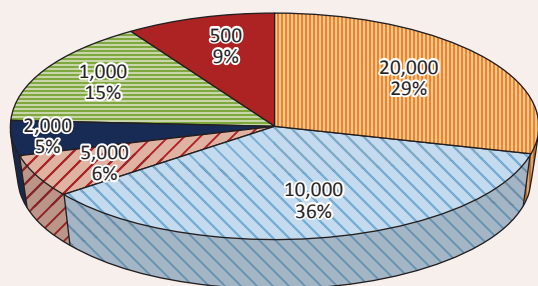


Chart 11
Banknote and circulation coin manufacturing (gross expenditure)

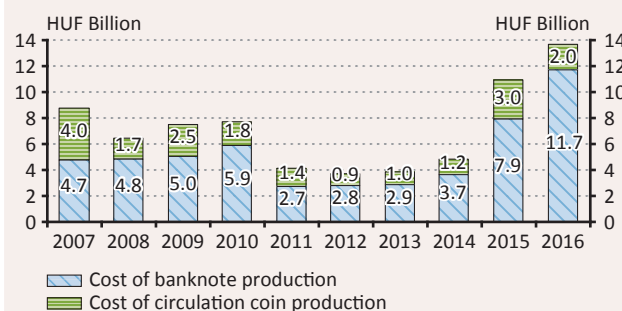


Table 6**Banknotes and coins¹¹ in circulation***(data from 31 December 2016 and 31 December 2015)*

	2016				2015			
Banknotes	Volume	Value	Ratio (%)		Volume	Value	Ratio (%)	
	Million pieces	Billion HUF	Volume	Value	Million pieces	Billion HUF	Volume	Value
20,000 forint	130.7	2,613.8	28.9	58.0	124.5	2,491.0	29.3	58.8
10,000 forint	162.3	1,622.8	35.9	36.0	148.6	1,486.2	35.0	35.1
5,000 forint	27.5	137.8	6.1	3.1	26.2	130.8	6.2	3.1
2,000 forint	23.4	46.8	5.1	1.0	23.8	47.6	5.6	1.1
1,000 forint	67.9	67.9	15.0	1.5	63.2	63.2	14.8	1.5
500 forint	40.5	20.3	9.0	0.4	38.7	19.3	9.1	0.4
Total	452.3	4,509.4	100.0	100.0	425.0	4,238.1	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	130.1	26.0	8.0	41.5	121.4	24.3	8.0	41.3
100 forint	170.9	17.1	10.5	27.3	161.9	16.2	10.6	27.6
50 forint	153.0	7.6	9.4	12.2	142.6	7.1	9.3	12.1
20 forint	289.6	5.8	17.9	9.3	272.4	5.4	17.9	9.2
10 forint	336.6	3.4	20.7	5.4	317.5	3.2	20.8	5.4
5 forint	544.4	2.7	33.5	4.3	509.6	2.6	33.4	4.4
Total	1,624.6	62.6	100.0	100.0	1,525.4	58.8	100.0	100.0

Distribution of cash

In 2016, the MNB managed cash turnover for its clients, i.e. credit institutions and the Hungarian Post, in a total amount of HUF 4,130 billion; within that it distributed 319 million banknotes to its clients, while 291 million banknotes were delivered to the central bank.

In the past year, the MNB scrapped 164 million end-of-life banknotes, and replaced them by new, high quality means of payment.

Prevention and reduction of counterfeiting

In accordance with the previous years, the counterfeiting of forint banknotes was extremely low again in 2016; the total number of forint banknote counterfeits eliminated from cash circulation was 1,549.

The number of counterfeit banknotes for each one million genuine banknotes in circulation was 3.4 in last year, which is extremely favourable even by international standards.

The free educational activity performed by the MNB in respect of banknotes also 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 2016 the MNB's experts trained more than 2,000 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.

In 2016, counterfeiting of higher denominations (mainly the 10,000-forint and 20,000-forint banknotes) remained most typical, accounting for 87 per cent of counterfeit forint banknotes.

Table 7**Denomination breakdown of discovered forint banknote counterfeits in 2016**

Denominations	500	1,000	2,000	5,000	10,000	20,000
Breakdown (%)	2.5	0.6	2.6	7.7	33.8	52.8

The counterfeiting methods, which are still characterised by the use of office reproduction

¹¹ The table does not include holdings of commemorative coins and commemorative banknotes issued by the central bank, which although – as legal tender – form part of the means of payment in circulation, in accordance with their role, do not participate actively in the execution of cash turnover.

Chart 12
Annual trends in the number of counterfeit forint banknotes identified in turnover

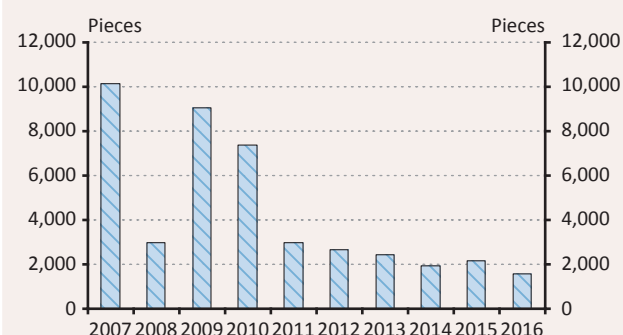
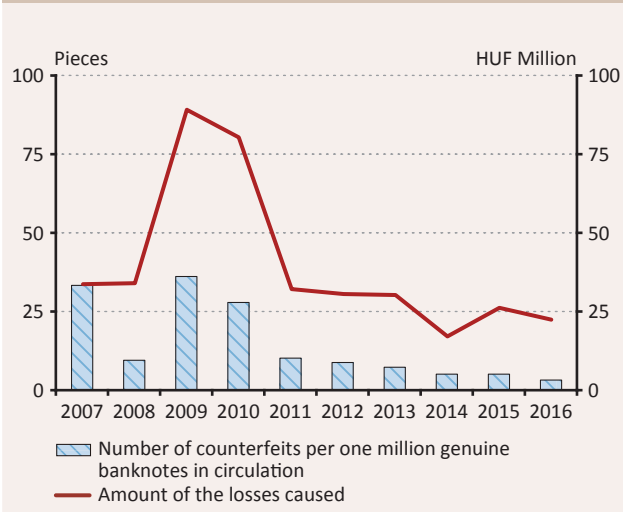


Chart 13
Trends in the counterfeits for each one million genuine banknotes and the value of the resulting damage



equipment (colour copy machines, printers), also did not change considerably.

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, i.e. with the use of UV-A and UV-C light.

The occurrence of counterfeit foreign currency is still negligible. The central bank's experts examined 1,576 various foreign currency counterfeits in 2016. Of these, the number of counterfeit euro banknotes was 1,233.

Cash distribution administrative inspections

In 2016, the MNB inspected compliance with the provisions of the MNB Act on cash issuance, of the Banknote Decree¹² and of the MNB Decrees¹³ on the central bank data supply at 12 credit institutions, three cash processing providers and one 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 for the smooth cash circulation and the provision of fair services by the credit institution to the households. The MNB launched 16 administrative inspection procedures in 2016, one of which was closed in January 2017. Of these, in six cases in a letter of warning the MNB called upon the inspected institutions to eliminate the shortcomings identified, while it found no infringement in 10 procedures. In addition, within the framework of the continuous verification of the data included in reporting, a warning was issued in two cases due to missing the deadline. Of the inspections launched in 2015, two administrative procedures were closed early 2016, without identifying any infringement. During the administrative inspections, the MNB identified the violation of certain rules¹⁴ applicable to the recycling of banknotes, the operation of banknote handling machines, the action plan for the management of extraordinary situations occurring in the distribution of cash, the management of incomplete or damaged banknotes, the content of the institutions' internal regulations, the management of suspected counterfeit banknotes and to the fulfilment of the central bank reporting obligations.

Hungarian banknotes being redesigned

In the period of 2014–2018, the MNB is renewing the banknote series currently in circulation and issuing redesigned, enhanced and modern 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 six denominations, the first banknote redesigned by the MNB was the

¹² MNB Decree 11/2011 (IX.6.) on the processing and distribution of banknotes and on technical tasks relating to the protection of banknotes against counterfeiting.

¹³ MNB Decrees 50/2015 (XII.9) and 48/2014 (XI.27.) on the data reporting obligations to the central bank's information system primarily to enable the Magyar Nemzeti Bank to carry out its basic duties.

¹⁴ Article 23 (8) of the MNB Act, Sections 4(2), 5 (1)-(3), 14, 19 and 23 of the Banknote Decree, Subsection 2.1.1 of Annex 2 and Annex 4, Annex II of the MNB Decrees on central bank data reporting.

10,000-forint bill in 2014, followed by the 20,000-forint banknote in 2015. The next two denominations were the 2,000-forint and 5,000-forint banknotes, which became legal tender from 15 November 2016; they appeared in the circulation gradually, from 1 March 2017, after the proper preparation of the participants of the cash supply chain.

On 1 December 2016, the central bank prolonged the exchange of the 20,000-forint banknotes issued before 2015 by one year, thus they can be used in cash circulation until 31 December 2017. After the day of the withdrawal the cash-desks of the credit institution and the Hungarian Post will exchange the withdrawn forint banknotes to legal tender for further three years and the MNB for 20 years, free of charge.

Issue of commemorative coins and the commemorative version of circulation coins

Pursuant to the MNB Act, the MNB has exclusive right to issue banknotes and coins, also including commemorative banknotes and commemorative coins, which are also legal tender in Hungary. The MNB – in line with the practice of foreign central banks – issues commemorative 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 commemorative coins are not meant for circulation.

Since 2014, the MNB has also issued all commemorative coins made of precious metal in a cheaper, non-ferrous metal version, with a view to enforcing the coins' value-conveying, attention-raising and educational roles in a wider circle. The MNB's decision with regard to the distribution of silver commemorative coins (for 3 month after issue) and non-ferrous metal commemorative coins at face value also serves the purpose of expanding the range of conveying value.

Based on the statutory powers and in the spirit of the sales policy in place since 2014, in 2016 the central bank issued 19 commemorative coins in nine topics. Three of these were gold coins, seven were silver coins and nine (of two independent designs of coin) were non-ferrous metal collector coins.

The technological innovation introduced in the 2016 commemorative coin programme is the security feature appearing in the mint mark: 'B' and 'P' letters

in microlettering on the mint mark are indiscernible, they are visible only if magnified minimum ten times and serve as protection against the counterfeiting of the commemorative coins. The new security features appeared on all commemorative coins issued in 2016, except for the mini gold coins with diameter of 11 mm.

The MNB's 2016 commemorative coin issuing programme commenced on 25 April 2016 with the silver coin in a denomination of HUF 10,000, entitled Fundamental Law of Hungary, and the non-ferrous metal version thereof in a denomination of HUF 2,000. The commemorative coins recalled the 5th anniversary of the enactment of the Fundamental Law and the significance thereof. The 5-year old Fundamental Law is the foundation of the legal system of Hungary and the first written constitution in the country's history which was adopted by a democratically elected legislature.

On 27 April 2016, the MNB issued a mini gold collector coin with a face value of HUF 5,000, a silver coin with a face value of HUF 10,000 and the non-ferrous metal coin version of the latter one, with a face value of HUF 2,000 in honour of the Games of the XXXI Olympiad. The MNB issues collector coins to commemorate the world's most-viewed sports event since 1984; however, it is the first time that a non-ferrous coins is also issued with the Olympics as its theme.

On 9 July 2016, the central bank issued a silver collector coin with a face value of HUF 10,000 and a non-ferrous metal coin with a face value of HUF 2,000 to commemorate the 1700th anniversary of the birth of Saint Martin, who was born in Savaria (present-day Szombathely) and is venerated as one of the most popular saints of Europe. Exceptionally, the silver and non-ferrous metal coins were issued with different coin design.

On 14 July 2016, the MNB issued a gold collector coin 'Gold florin of Sigismund' with a face value of HUF 50,000 in normal and piedfort size, which is four times the weight of the standard coin. The non-ferrous metal version of the commemorative coin, with a face value of HUF 2,000 was also issued. All three coins are part of the "Mediaeval Hungarian gold florins" collector series, launched in 2012.

On 1 August 2016, i.e. on the 70th anniversary of the introduction of the forint, the MNB wished to remind the population about the notable anniversary by issuing silver collector coins with a face value of HUF

10,000, non-ferrous metal coins with a face value of HUF 2,000 and the commemorative version of the HUF 50 circulation coin. The commemorative version of the circulation coin was released to circulation in 2 million copies.

The MNB issued special, vertical rectangular silver and brass commemorative coins with face value of HUF 10,000 and HUF 2,000, respectively, on 9 August 2016, to mark the 150th anniversary of the Budapest Zoo and Botanical Garden.

One of the most special issues in 2016 was the silver collector coin with a face value of HUF 20,000 and its nonferrous metal version with a face value of HUF 2,000 to celebrate the 225th anniversary of the birth of István Széchenyi. The face value and size of the silver commemorative coin issued on 21 September 2016 is exceptional, thereby acknowledging the characterisation of Széchenyi by Kossuth: the biggest silver commemorative coin (with a diameter of 52.5 mm) for "the greatest among Hungarians". The reeded edge of the commemorative coins is uniquely divided; the grouping of the reeds refers to the year István Széchenyi was born.

The 2016 commemorative coin programme was closed by the issue of a non-ferrous metal commemorative coin for the 60th anniversary of the 1956 Hungarian Revolution and Fight for Independence on 3 November 2016. The commemorative coin with face value of HUF 2,000 was issued as part of the series launched in 2014, presenting the Hungarian national memorial sites.

3.8 STATISTICAL SERVICES

For the purpose of fulfilling its duties as specified in the MNB Act, the MNB collects statistical information for the analysis of financial developments, preparation of monetary policy decisions, oversight of the operation payment and settlement systems to ensure the smooth execution of payments, supporting the stability of the financial system, as well as for the fulfilment of the micro and macroprudential supervisory activity, and publishes the statistics compiled from those.

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 publications.

In 2016, the MNB issued 6 decrees related to data reporting in 2017; these were primarily decrees containing data reporting ordered for the fulfilment of the MNB's basic tasks,¹⁵ supplemented by four decrees ordering the data reporting necessary primarily for the fulfilment of the supervisory tasks.¹⁶ In addition, the MNB also issued, in a separate form related to one year – to ensure promulgation as soon as possible – the MNB Decree prescribing data reporting with regard to certain financial instruments, general financial information and capital adequacy of the credit institutions.¹⁷ In respect of the fulfilment of the reporting requirements in 2016 several mid-year changes were implemented. In relation to the conversion of certain foreign currency-denominated receivables originating from consumer loan contracts, the MNB also issued an MNB Decree¹⁸ prescribing a one-off data reporting in 2016. In 2016, the effective MNB Decrees related to the data supplies of 2016 were modified on seven occasions due to changes in the domestic legislative environment, with a view to effecting publication changes, and to ensure the receipt of data necessary for the research, analysis and decision support activity required for the fulfilment of the MNB's fundamental duties.¹⁹

Results of the data collection integration projects

Of the two harmonisation projects – *Integration of data collection for statistical and supervisory purposes* and *Integration of the statistical and supervisory IT systems* – launched after the integration of the HFSA and the MNB, the data collection integration project was successfully completed in 2016. The main goal of the data collection integration project was to rationalise and consolidate statistical and supervisory data collections after the integration, to eliminate overlaps, and to develop a new, integrated, international quality data collection system that is also suitable for satisfying all supervisory and central bank

¹⁵ MNB Decree 50/2016 (XII.12).

¹⁶ MNB Decrees 48/2016.(XII. 12), 49/2016 (XII. 12), 51/2016 (XII. 12) and 52/2016 (XII. 12).

¹⁷ MNB Decree 20/2016 (VI. 6).

¹⁸ MNB Decree 1/2016 (I.13).

¹⁹ The changes affected the MNB Decrees ordered for the fulfilment of the MNB's fundamental and supervisory tasks, as well as MNB Decree 20/2016 (VI. 6.) [MNB Decrees 3/2016 (II. 8.), 5/2016 (III. 1.), 17/2016. (V. 11.), 21/2016 (VI. 29.), 33/2016 (VIII. 8.), 38/2016 (IX. 29.), 46/2016 (XI. 25.)].

statistical requirements. Changing the data collection model will take place over a period of several years, and in parallel, the project entitled “*Integration of statistical and supervisory IT systems*” addresses the required information technology support system.

As the closure of the successful work performed by the project entitled *Integration of data collection for statistical and supervisory purposes*, the MNB data reporting decree, containing the credit institutions’ more detailed data supplies in the new structure, valid from 2017, was promulgated in the first half of 2016 [20/2016 (VI. 6.)]. From 2017, credit institutions may change over from the application of the Hungarian accounting system to international accounting rules, i.e. IFRS. Within the framework of the project, the MNB elaborated a new, detailed data collection from the credit institutions, which replaces several former data collections and ensures uniform data supply by the credit institutions applying Hungarian accounting standards and IFRS. The decree published in early June 2016 applies to certain financial instruments and general financial information of credit institutions, and thus it contains the statistical balance sheet and profit and loss account, the detailed data related to deposits and financial derivatives, as well as individual FINREP package, i.e. the data reporting of credit institutions changing over to IFRS from 1 January 2017, based on the international accounting standards. The individual FINREP package was elaborated on the basis of and in line with the consolidated FINREP package, standardised at EU level.

There has been an increasing demand for individual-level credit data, both at international and national level, in the area of statistical data collection, central bank analyses and fulfilment of supervisory duties. The MNB places increasing emphasis on verifying the quality of the loan register data, available from two sources – the CCIS data taken over from BISZ Zrt. and the data from the data collection ordered directly for the credit institutions, expanded in 2016 and supplementing the loan register – and performing the necessary corrections. A high quality loan register better fulfils its function related to responsible lending, provides comprehensive analytical opportunities for the monitoring of lending processes, and over the longer run it also allows the potential replacement of aggregate statistics by individual data.

Publication changes in the MNB statistics

As a supplement to the monthly securities statistics data dissemination, from 2016 the MNB publishes

press releases on the changes in the securities holdings issued by residents and the breakdown of the holders. The publication of the press release was justified by the fact that the role of securities, particularly of debt securities and within that of government securities, substantially increased in the investments of the economic sectors; in addition, there was an increasing demand from market participants to present the ownership breakdown of securities. The purpose of the securities press release is to provide the users with more comprehensive information on the major events that occurred in the given period and on the ownership structure of the securities in circulation. Another important function of it is to provide those interested with easy-to-understand summary information on the data appearing in the monthly securities statistical publication.

In line with international statistical recommendations, the MNB publishes the country breakdown of stock, flow and income data of direct investments in a breakdown by immediate investor and investment. However, among domestic and international users there is also mounting demand for a breakdown of the inward foreign direct investment position by the ultimate investor. Starting from September 2016, the MNB compiles and publishes the position of foreign direct investments in Hungary broken down by the country of the ultimate investor. These supplementary annual statistics are also published simultaneously with the September data release, but with a time lag of 21 months, and can be deemed final, in line with the normal revision practice, in the 33th month after the reference period. The first year of which this breakdown is available is 2014. The new country breakdown of inward FDI positions is made available by the MNB on its website broken down by instruments, separately for equity and debt, for data excluding special purpose entities (SPEs).

Supervisory statistics

In 2016, the supervisory data collection introduced in 2014 for credit institutions with uniform content and format across the European Union (hereinafter: EU reporting standard) was supplemented with additional new elements, primarily in the area of liquidity monitoring. The standardised receipt and processing of these reports, ensuring data quality, and tracking the frequent amendments and taxonomy version changes take place in a regulated manner in accordance with detailed procedures. The MNB also submits the supervisory reports of the largest

Hungarian banking groups to the European Banking Authority and started to make preparation for the planned submission of the supervisory reports of all credit institutions operating in Hungary over the medium run. The MNB developed the consolidated risk monitoring system for banking groups using both the new uniform data standard and the additional data content regulated by the MNB Decree, within the framework of which a quarterly risk assessment of the activities of all banking groups is prepared. The statistics based on supervisory reporting, aggregated at sector level, are published on the MNB's website in the form of time series and the publications are expanded depending on the users' needs. Among the supervisory data published on credit institutions, new time series on corporate lending activity was introduced in the second half of 2016, which places special emphasis on analysing the components of changes in the outstanding loans towards micro, small and medium-sized enterprises.

The insurers' supervisory data reporting has fully changed with the introduction of the uniform Solvency II (S II) European Union rules in 2016. The data, prepared in line with the new technical standard applicable to the reporting of insurers based on the single EU authorisation ((2450/2015 EU (2015. XII. 31) are already submitted in XBRL format. Simultaneously with this, the data content specified in the MNB decree on supervisory reporting applicable to the insurers falling within S II has been substantially reduced, containing only supplementary information in order to prevent overlaps. The new data reporting requirements were successfully implemented. The MNB met the requirements prescribed by EIOPA in full and by the deadline, i.e. it uploaded the opening reports of the insurers falling within S II, as well as their 2016 Q1-Q3 reports, in full and by the deadline to EIOPA's data receiving system. Simultaneously with this, the insurers' institutional monitoring risk assessment system also had to be renewed. Implementation was carried out in two phases: The assessment of seven risk elements carried out in phase one from 2016 Q1 will be expanded to include the assessment of further two risk elements from 2017 Q1. The introduction of the new data reporting was accompanied by the major transformation of the formerly published statistical series, as S II introduced fundamental methodological changes. Thus, most of the formerly published time series could no longer be continued.

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 European Central Bank, 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 is continuously present at 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 matters.

CESS 2016 (Conference of European Statistics Stakeholders) was organised jointly by Eurostat, the ECB, the European Statistical Advisory Committee, the Federation of European National Statistical Societies, the Hungarian Central Statistical Office and the Hungarian Statistical Association, in Budapest on 20-21 October 2016. The purpose of the conference was to bring together European methodological experts, and producers and users of statistics, to discuss the users' needs, share the best practices related to the compilation and publication of statistics, and present new, innovative forms of communicating statistics (applications, videos). In the presentation held at the event, the MNB presented the Hungarian practices related to the compilation and publication of FDI statistics filtering out the data of special purpose entities (SPEs), the capital in transit and transactions of asset portfolio realignment.

Data quality, administrative inspection

The MNB audited the 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 prescribing 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

inspection in 2016 as well. In 2016, the MNB launched no administrative inspection procedures; the administrative inspection procedure launched in 2015 in respect of one credit institution ended with a warning and by prescribing measures.

In 2016, due to the infringements identified on the basis of the continuous inspection of the fulfilment of data supplies, measures were taken in 430 cases: in 79 cases binding resolutions or notices were issued, while in the rest of the cases warnings were given, mostly due to the omission or late performance of the reporting obligations (erroneous reporting justified measures in 2 cases). Based on the audit evidence, the MNB obliged the reporting agents to eliminate the identified errors, submit the omitted reports retrospectively and fulfil the statutory requirements in the future. The measures affected certain statistical data supplies with regard to the balance of payments, monetary, securities and payments statistics, and the financial intermediary system, as well as supervisory reports.

In 2016, penalties were imposed on 21 occasions – on 18 reporting agents – due to the failure to comply with the reporting requirements or for late fulfilment.

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

In the implementation of the Pallas Athena Public Thinking Programme, which forms a key element of the Social Responsibility Strategy, announced in line with the mission, vision and fundamental values laid down in its Statute, the MNB considers the enhancement of financial literacy, financial awareness, and underlying economic and social knowledge, as well as the related institutional system and infrastructure to be its mission and strategic task. In the MNB's view, the central bank can support the realisation of economic policy objectives within the framework of the Programme by renewing and enhancing education – primarily tertiary education – and the system of economist and financial training and by supporting scientific activity and financial literacy. The MNB implements its education programmes with this goal in mind.

Under the auspices of the education programmes, the MNB Excellence Scholarship programme was announced for the first time in 2016. Within its framework more than 400 students of 25 higher

education institutions received awards and benefited from scholarship grants.

In the area of institutional partnerships supporting the social responsibility strategy, the strategic cooperation between the Corvinus University of Budapest and the MNB commenced by signing the cooperation agreement two years ago. The purpose of the cooperation is to contribute to the realisation of the Pallas Athena Public Thinking Programme's goals by organising joint professional education projects and providing the infrastructure conditions supporting these initiatives. In 2016, the MNB Department was set up at the Corvinus School of Economics and the areas of geo-economy, geopolitics and economic geography were also strengthened by the support of the MNB. The MNB Department offers nearly ten courses on a variety of subjects: in addition to the subjects "Analysis of time series", "Analysis of financial markets", "Modelling in the central bank's practice", "Role of the banking system in the economy", "Ethical economy", "Modern trends in economy" and "Theory and practice of monetary policy", the courses "International economic and financial institutions" and "Economic governance" were also introduced. As a result of the cooperation, the central bank analyst specialisation was launched at the economic analyst masters course, and after a break of several years the regional and environmental economy programme was re-launched, with a new education profile and lecturers.

With the cooperation of the Pallas Athena Foundations the doctoral (Phd) programme entitled "Geopolitics, geo-economics and political geography from a Central European perspective" was launched at the University of Pécs in the autumn of 2015, starting the academic year of 2016/2017 with two classes. The students participating in the programme can learn from prominent domestic and foreign experts, and may attend, through application, international scientific conferences and foreign summer universities. The Phd supporting scholarship programme, announced by the Pallas Athena Domus Scientiae Foundation, was expanded with a new class in September 2016. The young researchers have the opportunity – in addition to following macroeconomics, financial and banking courses – to master the latest methodological skills as well. The academic progress of the third year, which has already entered the active research phase, is guaranteed by strict professional requirements, mentor support and a schedule.

The cooperation agreement between the MNB and the Budapest Business School was also signed in autumn 2016. As part of this cooperation, the MNB supports the education of young experts speaking East Asian languages who are familiar with the culture and economies of the East Asian countries and regions, as well as the development of the educational, research, cultural and economic relations between Hungary and the countries of East Asia.

The MNB extended the range of institutional cooperation supporting the reform of economic higher education also to the region of North Hungary, by concluding a cooperation agreement with the University of Miskolc. As part of this, the MNB undertook to provide the outstanding students of the Faculty of Economy with internship and scholarship opportunities, and to facilitate the implementation of joint professional events. The MNB also supports the introduction of a novel form of education – i.e. dual education – in cooperation with the Pallas Athena University, where at the Mechanical Engineering and the Business Management bachelor courses more than 30 dual students can gain professional experience currently.

The Tiszaroff Scholarship Tender is aimed at the convergence of disadvantaged regions. Thanks to this programme, more than 50 students from the micro-region were able to benefit from scholarship in 2016 again. The cooperation projects under preparation include the partnership to be formed with the Eötvös Loránd University and the Károli Gáspár Calvinist University, as well as the support of the Non-profit Foundation for Students' Scientific Association (TDK). During the year, the MNB also developed partnership relations with a number of prominent foreign universities, institutions and researchers in the area of international educational relations in order to keep track of the most important trends in international higher education.

Within the framework of a series of festive events, the temporary exhibition entitled "70 years of the forint" was opened on 1 August 2016 on the occasion of the issuance of Hungary's national legal tender, which was extended into a travelling exhibition, reaching six regions nationwide, from October 2016. The MNB is carrying out the travelling exhibition in cooperation with local higher education and public education partner institutions – taking into account the given region's specific characteristics relating to the history

of money and numismatics – focusing on the provision of comprehensive information to the public.

In creating its Depository Programme in January 2014, the MNB joined the group of major central banks that contribute to the protection of cultural heritage through artwork purchases and collections. The primary objective of the Depository Programme is to regain the possession for Hungary of as high a portion of art treasures that earlier passed into foreign ownership as possible, and at the same time to keep the treasures that can be found in domestic estates in Hungary by purchasing them.

As a result of the programme, invaluable artworks have been obtained by the central bank and can be viewed in public collections, such as the painting by Tiziano Vecellio – Virgin Mary with Child and St. Paul, by Lajos Gulácsy – The mulatto man and the statue-white woman, by János Vaszary – Christianity, by Dezső Orbán – Nude (large format), Gábor Bachman's architecture and design collection, the painting by Mihály Munkácsy – Christ in front of Pilate, the Silver thalers minted in the 16th-17th century in Transylvania – coin collection, the presentation of the Transylvanian region of the Open Air Museum of Szentendre, the painting collection of István Kövesi, the early works of László Moholy-Nagy and the documents related to his oeuvre, the Artpool document collection built by Júlia Klaniczay and György Galántai, the painting by Abraham van Beijeren entitled Still Life with Fruit, Sea Food, and Precious Tableware, the granite conference table of Marcell Breuer, the internationally acknowledged architect of Hungarian origin, the silver covered tray produced in 1791 in the workshop of Johann Georg Hann, Vienna-based goldsmith for Count Sámuel Teleki (1739-1822), certain works of art from the estate of Rudolf Bedő, the Ferenc Kiss collection, which includes the portrait of Sándor Petőfi painted by Miklós Barabás and the daguerreotype made in Boston portraying Lajos Kossuth.

A detailed description of the works of art and the collections purchased within the framework of the MNB's Depository programme is available on the central bank's website.

In addition, to the best of its capacity, the MNB participates in value creation, the preservation of national values, intellectual and cultural heritage (e.g. Museum of Fine Arts, Palace of Arts), and supports the training of professionals and scientific activities

(e.g. Hungarian Economic Association, National Association of Doctoral Candidates) directly or through its foundations under strategic agreements or via ad hoc grants. Through charitable donations, it has contributed to improving the quality of life and equal opportunities of disadvantaged groups and to alleviating the difficulties arising from extraordinary life situations (e.g. Magic Lamp Wish Fulfilling Foundation, Hungarian Red Cross). Within the framework of its corporate social responsibility programme and aligned with its designated strategic objectives, the central bank is open to expanding the group of its cooperating partners.

3.10 FACTORS SHAPING THE COMMUNICATION OF THE MNB

In order to supply the general public with continuous and comprehensive information, in 2016 the MNB issued a total of 413 press releases, held 48 press conference and published 93 professional articles in the printed press and online, as well on its own website.

The purpose of the central bank's statements and press conferences included, among others, presentation of the decisions and facts related to monetary policy and financial stability, the MNB's most important decisions, publication of the results of the Monetary Council's meeting, presentation of the results of the supervisory inspections and information on the related resolutions, as well as publication of important statistical data and information on cash turnover, the banknote exchange programme and the issuance of commemorative coins.

The presentation and introduction of the targeted central bank programmes and measures supporting the economic policy of the government and Hungarian economic growth, along with the demonstration and description of important professional decisions was a key objective again in 2016. The central bank continuously reported on the MNB's initiatives, including the Funding for Growth Scheme and the latest results thereof, the current events of the self-financing programme and the MNB's fine-tuning swap tenders. The professional papers published on the MNB's website and other competent online portals made a major contribution to familiarising and explaining the background of professional decisions and processes.

The MNB provided information on the steps of the banknote replacement programme, which continued

in 2016 – among others on the new issuances and the withdrawal dates – not only through the press, but also directly in retail trade, with posters and flyers, which presented the appearance and security features of the new banknotes, and informed consumers on the dates until which the specific banknotes can be used in daily shopping. All parts of the educational series launched with a view to increasing financial awareness and consumers' knowledge were made public on the central bank's website, video sharing channel and social media sites.

The MNB paid special attention to provide regular and detailed information on its value creating initiative, supplementing the traditional central bank activities, be it the increasing number of educational programmes implemented through university cooperation or the activity performed with a view to augmenting the domestic art treasures within the framework of the Depository programme. A short film was also produced on all elements of the Depository programme, from which anybody can obtain information on the importance of the art treasures and the sites where they are exhibited through the MNB's social media and video sharing site.

3.11 THE MNB'S INCOME IN 2016

In 2016, the Magyar Nemzeti Bank recorded a profit of HUF 54.3 billion. In 2016, the following main developments had an effect on the balance sheet and profit:

- the level and composition of foreign exchange reserves defined by monetary policy, and foreign currency purchases and sales affecting the level of reserves: operations performed by the Government Debt Management Agency in relation to debt management, net foreign exchange inflows from EU transfers, the foreign exchange conversions performed by the Hungarian State Treasury for purposes not related to debt financing;
- developments in instruments absorbing forint liquidity, which are correlated with changes in foreign exchange reserves and the MNB's net foreign currency receivables;
- changes in forint interest rates and international foreign exchange interest rates; and
- changes in the forint exchange rate.

Table 8
Abbreviated income statement and individual balance sheet items of the MNB
(HUF Billions)

No.	Description (P/L line)	2015	2016	Change
1	Net interest and interest-related income (I+II)-(X+XI)	-42.7	-15.6	27.1
2	– net forint interest and interest-related income (I-X)	-93.0	-28.4	64.6
3	– net foreign exchange interest and interest-related income (II-XI)	50.3	12.8	-37.5
4	Realised gains/losses arising from financial operations (IV-XIV)	14.9	16.8	1.9
5	Income arising from exchange rate changes (III-XII)	177.7	95.1	-82.6
6	Other constituents of net income* (V+VI+VII+VIII)-(XIII+XV+XVI+XVII+XVIII)	-55.3	-42.0	13.3
7	Profit/loss for the year (1+4+5+6)	94.5	54.3	-40.2
	Revaluation reserves in the balance sheet			
8	– due to unrealised foreign exchange gain/loss	312.6	182.5	-130.1
9	– due to changes in the market value of the foreign currency securities**	28.5	17.4	-11.1

* 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.

Net interest and interest-related losses amounted to HUF 15.6 billion, which represents an improvement of HUF 27.1 billion compared to the previous year. The MNB's interest loss stems from the fact that FX reserves, which account for more than two thirds of its balance sheet, are mainly financed from forint funds, and foreign exchange yields are below the average forint interest rate. In 2016, the improvement in net interest income was primarily attributable to the fact that – owing to the self-financing programme and the conversion of the households' foreign currency loans into forint – foreign exchange reserves decreased substantially, and there was a decline in the balance of liquidity absorbing instruments. The difference between the yield levels was also smaller, which had a positive impact on net interest income.

Net forint interest and interest-related losses amounted to HUF 28.4 billion, i.e. HUF 64.6 billion less than in 2015. As a result of the contraction of the central bank balance sheet, the average portfolio of forint liabilities with interest rate tied to the base rate (regulatory reserve, liquidity absorbing instruments) was halved year on year. The average central bank base rate weighted by calendar days fell by 60 basis points in 2016. Both processes contributed to the substantial improvement in net interest income.

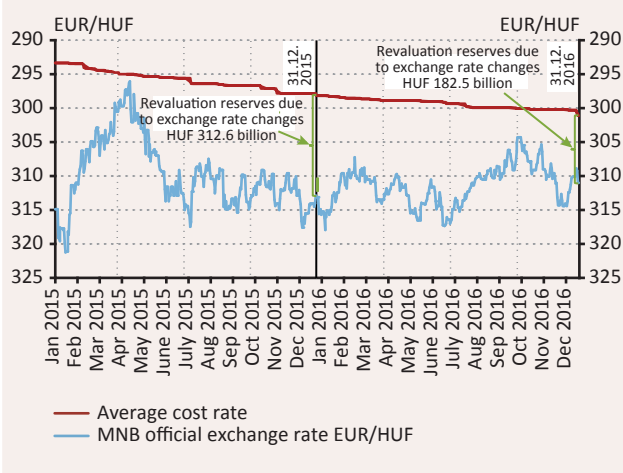
Foreign currency net interest and interest-related income showed a profit of HUF 12.8 billion, which fell substantially short of the result from last year,

mainly due to the decline in interest income on foreign exchange reserves. The reserves decreased by almost EUR 6 billion during the year and the fall in the euro yield levels also continued. Due to these factors, interest income on foreign exchange reserves was realised at a lower level than last year.

Realised gains arising from financial operations rose by HUF 1.9 billion in 2016. This profit/loss category primarily contains gains and losses realised from changes in the market prices of securities included in the FX reserves. The increase in profit was mainly attributable to the higher securities sales, connected to the decrease in foreign exchange reserves, and this was strengthened by the continuing decline in euro yields. The MNB's profit arising from financial operations amounted to HUF 16.8 billion in 2016.

The two main factors determining the income arising from exchange rate changes are the difference between the official and the cost rates as well as the volume of foreign exchange sales. In 2016, the forint exchange rate was less volatile compared to previous years: the difference between the official and the cost rate became smaller. The volume of foreign currency sales also dropped and they typically took place in relation to the debt management operations of the Government Debt Management Agency. Exchange gains earned during the year amounted to HUF 95.1 billion, and continued to be a key component of the central bank's profit.

Chart 14
Changes in the forint exchange rate
(inverse scale)



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 deriving from these items amounted to HUF 42 billion in 2016, representing a year-on-year decrease of HUF 13.3 billion.

The MNB's equity amounted to HUF 372 billion at the end of the year. Its size was fundamentally determined by the level of revaluation reserves, in particular, the reserves due to forint exchange rate changes.

Revaluation reserves due to the forint exchange rate changes declined by HUF 130.1 billion compared to end-2015, since at the end of 2016 the difference between the official and the average cost rates was smaller than a year earlier. Revaluation reserves due to exchange rate changes stood at HUF 182.5 billion on 31 December 2016.

On 31 December 2016, the MNB's balance sheet showed unrealised gains of HUF 17.4 billion on foreign

currency-denominated securities marked to market, falling short of the previous year's level, due to the decline in FX reserves.

3.12 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 2016 amounted to HUF 35,395 million, which is 13.2 per cent below the approved budget and 7.3 per cent above the expenditures incurred in 2015.

The shortfall compared to the 2016 budget in the case of personnel costs is due to the fact that during the year the headcount was lower than planned, and part of the family-friendly workplace programme's 2016 phase will be implemented differently, in line with the Executive Board's decision. The fulfilment of the 2016 general operating costs below the budget was mostly attributable to the fact that the new contract for the communication service was not concluded in 2016, contrary to the plans, due to the longer-than-anticipated public procurement procedure.

The increase in the expenses compared to the previous year occurred in the personnel costs, mostly due to the rise in the average headcount by 52 (4.1 per cent) primarily through the filling of vacancies, and also for the performance of new tasks (e.g. resolution and reorganisation activity, and extra duties of the Financial Arbitration Board, as mandatory enforcement forum).

General operating costs also increased, mostly due to the rise in the costs of armed security guarding, within the operating expenditures. This is attributable to the

Table 9
Operating costs of the MNB in 2016

Description	Actual data for 2015	Budget for 2016	Actual data for 2016	Index (2016 actual / 2016 budgeted)	Index (2016 actual / 2015 actual)
	HUF millions			Per cent	
1. Staff expenditures	19,712	23,334	21,146	90.6	107.3
2. General operating costs	13,261	17,459	14,249	81.6	107.5
Total	32,973	40,793	35,395	86.8	107.3

fact that with the outsourcing of the security guarding activity, security requirements increased, the impact of which was incurred in the operating costs from March 2015, while in 2016 it was already incurred for the entire reporting period. In addition, the flat fee of the security guarding services for 2016 rose from 1 January.

Personnel costs

In 2016, personnel costs (HUF 21,146 million) exceeded the previous year's costs by 7.3 per cent (by HUF 1,434 million).

Compared to 2015, the closing headcount was up by 117 employees (9.2 per cent), while the change in the average headcount was over 4 per cent, i.e. it rose from 1,274 in 2015 to 1,326 in 2016.

The impact on costs of the aforementioned factors and of the wage adjustment performed within the framework of the wage bill management appeared in 2016. In addition to the foregoing, the difference in personnel costs is also attributable to the fact that the cost of meal allowances was incurred in respect of the whole year in 2016. Moreover, the health programme (general medical screening) was introduced mid-year in 2015, while in 2016 the service was available throughout the year.

General operating costs

In 2016, general operating costs (HUF 14,249 million) were 7.5 per cent higher than in 2015 (up HUF 988 million); the changes in the components are attributable to the following reasons.

IT costs increased by HUF 132 million (7.0 per cent) in year-on-year terms. This was mostly attributable to the rise in IT security services and data transmission fees, related to the high-level protection of confidential data and new data relations. The excess costs were mitigated by the optimisation of the use of consulting services.

Compared to 2015, *operating costs* also rose (by HUF 1,177 million, 20.4 per cent), which is mostly due to the increase in security guarding expenses. The cost of the outsourced activity in 2015 was incurred for 10 months, while in 2016 for 12 months, and the flat rate of the service also rose in 2016. The excess costs of security guarding were mitigated by a technical

decrease in property maintenance costs: from 1 January 2016 the upkeep expenses of the Training and Leisure Centre are recognised among personnel costs, which represents a saving in operating expenses, but in fact is not a saving in terms of the total costs of the MNB. Consulting fees related to upkeep, as well as the vehicle, stationery, telephone costs and postage also decreased, albeit to a smaller degree.

The annual amount of the *depreciation charge* of tangible and intangible assets (HUF 2,951 million) in 2016 exceeded that of the previous year by 10.6 per cent, primarily as a result of the investments realised in 2015.

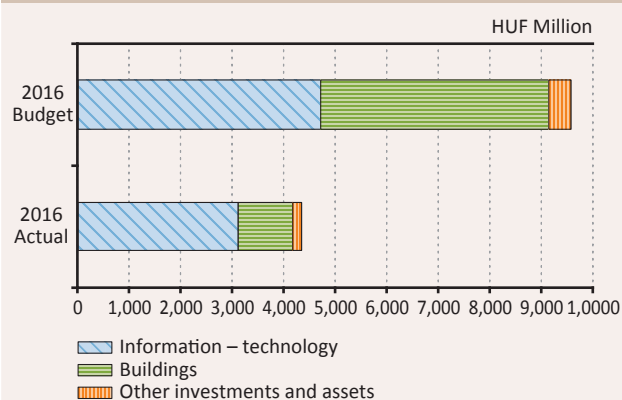
Other expenses in 2016 fell by 15.7 per cent (HUF 605 million) compared to the expenses incurred in 2015, which is the combined result of several factors working in opposite directions. Legal consultancy costs decreased substantially, as most of the costs related to the set-up of the central bank's asset management agency were incurred in 2015; in addition, the legal resolutions, related to the activity of the Financial Arbitration Board, prescribed by the MNB Act were obtained to a much lower degree than in 2015 (compared to the number of cases in 2015, substantially fewer legal disputes arose in 2016). Communication costs also decreased in 2016, due to the delay in the new public procurement procedure announced for the use of communication services. On the other hand, expert fees substantially increased, because the costs of the complex central bank research and analysis, research-supported consultancy and study compilation tasks in 2015 were incurred only from the second half of the year, while in 2016 throughout the year, together with the costs of ad hoc works. The amount of the membership fees related to the supervisory activity, prescribed by EU regulations, also increased.

Capital expenditure

In order to achieve the MNB's objectives and maintain the volume and quality of tangible assets, development projects and asset procurements became necessary. In relation to the normal course of business, the approved capital expenditure budget for 2016 amounted to HUF 8,829 million. An appropriation was also approved for the implementation of the Corporate Social Responsibility Programme, for purchasing the properties serving as venues for internal training, and for the renovation,

rebuilding or reconstruction of existing property and for property to be purchased in the future. (The 2016 budget contained only the property renovations and modernisation related to the usual course of business against this real property appropriation.) In relation to the Corporate Social Responsibility Programme, the MNB supports the purchase of art treasures as part of the Depository Programme, for the implementation of which the approved capital expenditure plan includes a separate appropriation. In 2016, HUF 4,910 million was paid in relation to capital expenditure, of which HUF 559 million is related to the Depository programme.

Chart 15
Trends in the MNB's capital expenditure in 2016*



* Excluding the appropriation for property purchases and renovations and the Depository Programme.

Purchases made for IT operating purposes comprise a large portion of the information technology investment. Investments included the purchase of Microsoft licences, the developer and test servers, as well as the licences necessary for the implementation of the STAFIR programme aimed at the integration of the statistical and supervisory systems, and the development of the system also continued. The version change of the KONDOR system was also completed. The major purchases of IT equipment also include the expansion of the capacity of the central data storage system and the renewal of the network devices.

One of the most important investments in the area of IT security was the procurement of intrusion detection and prevention systems and the purchase of the privileged user management system, which ensures the management and protection of the accounts of users with privileged access.

The procurement procedure related to the replacement of the security technology system of

the building at Szabadság square and of the Logistics Centre, as part of the enhancement of the security technology environment, was closed with no result. The investments provide assistance for the work of the armed security guards by the complex replacement of the bank security electronic and mechanical systems, and they are also aimed at preventing extraordinary situations. The procurement procedure related to the investments will be launched in 2017 again based on new concept.

The most important property-related investments included the development of the social area on the 7th floor of Eiffel Palace, the strengthening of the front gates of the building at Szabadság square and the replacement of the electric noise traps in the computer room.

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. Accordingly, it provides its employees who are committed to the central bank's goals over the long run and are ready to enhance their professional skills on an ongoing basis with stable employment, moral and professional appreciation, competitive income, advancement, training and education opportunities.

The MNB has developed a work culture where in a value-driven atmosphere employees are able to perform their tasks efficiently, focusing on performance. 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. All these help the employees realise their individual interests in harmony with the interests of the institution.

The MNB's human resource strategy is able to secure the required number of highly educated and motivated employees and employ the professional skills and abilities of the available resources efficiently. Its goal is not only to integrate excellent employees, but also retain them; thus, it also helps support the individual ambitions in line with objectives of the organisation. The MNB still considers it important to employ highly qualified, knowledgeable, dedicated and loyal employees, relying on whom it is capable of taking part in the changes along the renewing domestic economic and social interests and values.

Following its proven practice, the MNB elaborated a new three-year training concept in 2016 as well, as part of which it prepared a Training Catalogue and Training Plan with a view to providing a pool of highly qualified employees representing professional excellence. Employees typically attended professional, personal skills development programmes and language trainings, which – tailored to individual needs – served the participants' development in the most effective and efficient manner possible in terms of efficiency and approach as well as the development cooperation skills.

Within the framework of the internship system, the MNB also contributed to ensuring that university students can acquire as much professional skills as possible. 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. The new system allows the selection and employment of students whose performance is outstanding.

In 2016, the human resource area continued the development of HR systems, which also ensure the employment framework, support the integration of new entrants, the relations between the employee and the organisation during the existence of the legal relationship, and support the process of leaving the organisation. The human resource functional area communicates the human policy goals and principles to the employees, and facilitates information flow between the employer and the staff.

The head of the functional area plays a dominant role in the elaboration of the headcount and wages necessary for fulfilling the tasks. The MNB's wage and income policy reflects its special position and supervisory function. The wages reflect the due recognition of the special knowledge that the staff of the functional areas in charge of monetary control, financial supervision or cash supply have.

The MNB operated a wage bill management system in 2016 as well, which is suitable for the fast and flexible management of the changes and requirements arising in the various functional areas by the (temporary) regrouping of employees. In addition, the wage bill management also supports leaders in the most complete performance of the tasks of the areas managed by them in a way that the heads of the various areas can directly evaluate excellent

work and the relevant achievements, which may be reflected in the remuneration of the employees as well. Accordingly, the system that was introduced became suitable for the long-term retention of high-quality, highly qualified personnel and also for the strengthening of responsible financial management by granting much wider possibilities for the heads of wage management areas to give proposals.

The long-term goal of the wage bill management is that the fulfilment of the strategic objectives and tasks of individual areas can be reflected in wage setting as well; it should help determine competitive salaries, motivate a more thorough assessment of employees and acknowledge expertise and skills in the salary, as well as encourage the heads of functional areas to manage human resources in a way that is even more reasonable and economical than the current one, providing at the same time greater opportunities to ensure competitive income for knowledgeable, experienced employees. Within the framework of the incentive system, in 2016 it was also possible to recognise individual efforts and responsible professional work, within the limits permitted by the rules of wage bill management.

With its multi-component fringe benefit system, the MNB provided a wide range of benefits to its employees in 2016 as well, and also preserved its family welfare scheme. Within the framework of this, it provided special support for families with children 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 check-up programme is available for each employee once a year.

It is of key importance in the MNB's organisational culture that employees can fulfil their family roles as well and can perform their workplace tasks with a 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, the MNB won the title of 'Family-friendly Workplace' presented by the Ministry of Human Capacities in 2016 as well. With this title, the Ministry appreciated the efforts, programmes, initiatives and system-level solutions undertaken by the central bank voluntarily and irrespective of competition, in order to support employees with family and children.

Changes in staff number

Changes in the staff number of the MNB in 2016 were determined by the labour-intensiveness of the tasks to be completed and by measures related to the transformation of the organisation.

As a result of the natural migration and quality-driven replacements, the employment of 171 employees was terminated during the year.

In order to secure an adequate workforce for the operating structure aligned with the challenges and the MNB's expanded tasks, 276 new entrants were recruited to fill vacant or new positions in 2016. During the year, the number of employees joining the so-called 'inactive payroll' – who are not included in the statistical headcount – fell short of the number of those returning from the 'inactive payroll' by 12. The relevant effect also increased the closing headcount.

At end-2016, the total staff number was 1,384 employees; the number of employees was 117 persons higher than at end-2015.

In 2016, the average staff number of the MNB was 1,326 employees, exceeding that of the previous year by 52.

In dual education, the MNB supported and accepted 17 students as trainees.

As regards the average age of employees, it can be stated that the staff became even younger: in 2016 the average age of employees 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. The MNB is still subject to public procurement jurisdiction based on Commission Decision 2008/963 amending the Annexes to Directives 2004/17/EC and 2004/18/EC of the European Parliament and of the Council on public procurement procedures, as regards their lists of contracting entities and contracting authorities.

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 prevailing Act on Public Procurement.

As regards procurements in 2016, there were three types of procurement procedures at the MNB:

- other procurement below a net amount of HUF 2 million;
- other procurement reaching a net amount of HUF 2 million, but not reaching the public procurement value limit (in 2016 this included procurements between the net amount of HUF 2 and 8 million based on value); and
- public procurement.

Procurement procedures below net HUF 2 million are conducted by the cost-bearing organisational units within their own sphere of responsibility, while procurements and public procurements reaching the value of net HUF 2 million are arranged by the Central Procurement Department of the Central Procurement and Operation Directorate with support from the organisational units concerned.

In 2016, 207 procurement requests were received and procedures launched, of which 62 procedures were carried over to 2017.

Number of procedures in 2016 (closed with the conclusion of a contract): 149 (of these 62 were brought forward from 2015)

- public procurement: 60;
- other procurement in excess of net HUF 2 million: 89.

The total value of completed procedures with a value in excess of a net amount of HUF 2 million represented a total expenditure of HUF 4,571 million for the central bank.

Environmentally-conscious operation

In 2016 again, the environmental activity of the MNB was determined by the environmental strategy applicable to the period 2014-2016. Along with the environmentally-conscious development of buildings, the measures implemented were aimed at further enhancing the environmental performance of the cash supply chain.

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 is one grade higher than the current rating. It implemented the changes and developments necessary for the upgrading. The external audit of the comprehensive building rating (MNB Head Office, Logistics Centre) was performed in November 2016, and the MNB obtained the 'Very Good' rating. Based on the assessment of the buildings' certification result by external auditor, it should be emphasised that no listed building has ever obtained such high-level certification, which in the case of the MNB Head Office is an outstanding result by international standards as well. From the data of the BREEAM In-Use building certification performed in various countries of the world it can be established that more than 50 per cent of the buildings do not reach the "Very Good" rating. Based on this, the MNB Head Office and the Logistics Centre buildings belong to the top 50 per cent globally as well. According to the external expert assessment, the Logistics Centre performs in line with its age, while the Head Office's performance is outstanding by international standards as well, since in that category the most typical rating of the buildings of similar age is "Pass" and "Good".

In 2017, the MNB's environmental strategy will be reviewed, which will also include the analysis of the further steps related to the development of the buildings. Based on the score achieved in the case of the Logistics Centre, it is not unfeasible to set the goal of achieving the "Excellent" rating. In the case of the Head Office, the retention and confirmation of the "Very Good" rating may be set as a target.

The 2014-2016 environmental strategy period was closed at the end of 2016. In relation to the improvement of the cash supply chain's environmental performance, based on the detailed environmental review of the MNB's subsidiaries involved in cash production, in 2016 Péntjegynyomda Zrt. and Díósgyőri Papírgyár Zrt. started the preparation for the implementation of the MNB's environmental management system (KÖVHIR). In 2017, the subsidiaries will obtain the EMAS certificate – the international accreditation recognising environmental-friendly operation. In relation to the further enhancement of the cash supply chain's environmental performance, in the medium-term strategic period of 2017-2019 the focus will be on the survey of the cash logistics providers' environmental performance.

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. The total energy consumption of the properties included in the environmental management system (Head Office, Logistics Centre, business site at Krisztina krt.) declined in the last three years, falling short of the 2013 base by 2.6 per cent. (According to the environmental target, the goal was to reduce total energy consumption by 10 per cent by 2016 compared to the 2013 base.) Although the target was not achieved in nominal terms, the improvement in the efficiency of total energy consumption is well reflected by the fact that the MNB's per capita (specific) energy consumption fell by 18.5 per cent in the last three years.

In the case of the targets set for the reduction of energy consumption, it is difficult to formulate a responsible undertaking due to the extreme weather conditions accompanying global warming; nevertheless, continuous efforts should be made to improve specific energy consumption.

The operation of the MNB's environmental management system (KÖVHIR) allows for the continuous monitoring of the environmental factors that result in significant environmental impacts, and also allows intervention if necessary for the improvement of environmental performance year by year. The MNB intends to maintain and enhance this system in the 2017-2019 strategic period as well. In relation to this, it is advisable to examine the possibility of integrating the environmental management systems to be implemented by the subsidiaries involved in banknote production in the MNB's system.

In 2016, the system of selective waste collection was standardised in the MNB's properties, as a result of which the possibility of recycling metal, plastic and glass waste, in addition to paper, is guaranteed in all Budapest-based MNB properties. Important progress was achieved in the development of waste management in connection with the utilisation of 'banknote briquettes'. From 1 January 2016, instead of the previous utilisation for charity purposes, so-called 'green electricity' is generated from the 'banknote briquettes' in domestic power plants, which is a more advantageous solution in terms of the protection of the environment. The new system lived up to the expectations; based on the experiences, the service provider is flexible in accepting and processing the waste consignments that occasionally exceed the usual volume, and the recycled product enters into business circulation.

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 that in mind, the identification, assessment and continuous internal 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 systems in line with such.

In order to be able to adequately discharge its fundamental tasks in critical situations as well, the MNB operates efficient business continuity management. Within that, it continuously updates its business continuity and disaster recovery plans, the reliability of which is tested every year. The 1-week real time integrated test performed in respect of the operation of the payment system and foreign reserve management bears utmost importance.

3.13 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 2016, fifteen ESCB committees and two other committees assisting the work of the ESCB were in operation. In connection with the launch of the so-called Single Supervisory Mechanism (SSM) in November 2014, in addition to the two existing configurations (euro area composition and ESCB composition) some 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 co-ordination 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 co-operation 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 operation. 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 co-operation 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 Payment and Settlement Systems Committee (PSSC) continues its operation under the name of MIPC since 1 April 2016. This Committee assists the ESCB in the smooth operation of payment systems and in connection with the cross-border use of collaterals. 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. In accordance with its new name, in the future the committee will pay more attention to the strengthening of 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 consists of 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 on issues concerning the budget of the ECB; its members are the central banks of the euro area Member States.

Human Resources Conference (HRC): The objective of this committee, established in 2005, 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.

3.14 THE MNB'S RESEARCH ACTIVITIES IN 2016

Academic research is typically carried out by the Research Directorate, while applied research is conducted both by the Research Directorate and the analysts of other economic directorates. Academic research is ultimately published in international and domestic scientific journals. Applied research is mostly presented in the dedicated publications of the MNB: the *MNB Working Papers* (issued in English only), the *MNB Occasional Papers* series and the *Financial and Economic Review*. In addition to the publications, participation in international conferences and in the research networks and working groups coordinated by the ECB all form part of the MNB's research activity.

Publications

In 2016, five papers of the MNB's researchers were published in highly ranked international journals. One of the journals that published a study that was prepared in the MNB was the *International Journal of Central Banking*, which is the top international journal in central banking. The other four MNB papers were published by the *European Economic Review*, the *Economics of Transition*, the *Journal of Corporate Finance*, and the *Industrial and Labour Relations Review*. In addition, two papers written by MNB authors were published in *Közgazdasági Szemle (Economic Review)*, and the *Statisztikai Szemle (Statistical Review)* also published a central bank study. Applied research findings were presented in the MNB's publications. Four papers were published in the *MNB Working Papers* series and three in the *MNB Occasional Papers* series, while the MNB's employees contributed to the 2016 issues of the *Hitelintézet Szemle (Financial and Economic Review)* with fourteen studies, eleven book reviews and four conference reports.

Conferences and lectures

The MNB organised the Budapest Economic Seminar Series (BESS) in 2016 again, with internationally acknowledged economists presenting their studies to those interested. In 2016, presentations were made in the MNB by researchers from the UK, Austrian, Portuguese and Slovakian central banks and colleagues from the following top universities:

HEC Montreal, CERGE (Prague), Colegio Carlo Alberto (Torino), Tilburg University, University of Bonn, and Sapiientia University.

The MNB's researchers held presentations at a number of international conferences as well as at several central banks and universities. Of the main conferences, ones that deserve mention include the conference organised jointly by the European Economic Association (EEA) and the Econometric Society (ES) in August in Mannheim, the conference of the Royal Economic Society (RES) in May in Bristol, the North American Summer Meeting of the Econometric Society in Philadelphia, each of which included a presentation by a researcher from the MNB. In addition, the MNB's studies were presented at the June annual conference of Computing in Economics and Finance (CEF) in Bordeaux and at the prestigious conference series entitled Money in Macro and Finance in Bath. Regarding presentations in Hungary, two MNB studies were presented in the seminar series of the Research Centre for Economic and Regional Studies of the Hungarian Academy of Sciences as well, and many lecturers also represented the MNB at the December conference of the Hungarian Society of Economics.

Several MNB staff members participated in the research networks and working groups coordinated by the ECB. The analysts and researchers participated in the regular meetings of the Working Group on Econometric Modelling (WGEM), the Wage Dynamics Network (WDN) and the Household Finance and Consumption Network (HFCN); at one of the WGEM meetings in Frankfurt meetings of the WGEM one of the presentations was delivered by an MNB staff member.

3.15 PUBLICATIONS AND CONFERENCES ORGANISED BY THE MNB IN 2016

Publications

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.

Financial Stability Report

Published biannually, this Report outlines the position of the Bank regarding the changes observed 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 Hungary's longer-term growth path (occasionally encompassing an entire business cycle) and its determinants, using standard and alternative indicators. The Report provides an annual overview of the most important trends shaping economic growth over the short, medium and longer term.

Macroprudential Report

The purpose of the Macroprudential Report, published annually, 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.

Trends in Lending

The objective of the publication entitled 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 the developments in credit aggregates, the demand for loans perceived by banks and credit conditions.

Housing Market Report

The MNB's new "Housing Market Report", which was first published in the spring of 2016, presents 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. The Housing Market Report presents a topic which has special relevance for the central bank as well. The housing market represents a key area at the level of the individual economic operators (households, financial institutions), as well as at the level of national economy. Housing market developments are not only closely related to the financial stability issues, but also fundamentally determine the short-term and long-term prospects of economic activity. Housing market developments and in particular the volatility of housing prices influence the sector's savings and consumption decisions through households' wealth, while influencing the portfolio, profitability and lending activity of financial institutions via mortgage loan collateral. Overall, we can state that the housing market is integrally linked to all areas of the national economy.

Financial Consumer Protection Report

The MNB has published, online and in printed form, its Financial Consumer Protection Report once a year since 2016. The purpose of the publication is to inform the institutions of the financial system and the public about current financial consumer protection issues, thereby also enhancing the risk awareness of stakeholders, while at the same time maintaining and strengthening confidence in the financial system. The objective of the MNB is to ensure that the administrative activity performed to identify and mitigate risks, the central bank's informative and educational activity and its work aimed at the improvement of financial literacy in Hungary all contribute to ensuring that the necessary information is readily available for stakeholders to make financial decisions, and to strengthening the stability of the financial system as a whole. After summarising the priorities, the report presents the MNB's financial consumer protection, administrative and customer service activity, the priority cases that affected a wide range of consumers in the period under review, as well as the risks identified by the MNB, which may bear special importance in terms of consumer protection. Previously, the publication was issued under the title of Financial Consumer Protection and Market Supervision Report.

Risk Outlook for Non-Bank Financial Sectors

Starting from 2015, the report Risk Outlook for Non-Bank Financial Sectors has been published by the MNB

once a year. This report presents the risks of insurers, funds, financial enterprises and intermediaries, co-operative credit institutions and the capital market. The Risk Outlook for Non-Bank Financial Sectors mainly focuses on a deeper analysis of the sectors that are not presented or only touched upon briefly in the Financial Stability Report, and thus it does not contain findings related to the banking sector outlined in detail therein. The main objective of this publication is to increase the risk awareness of those active in the supervised markets and to strengthen the confidence in the sectors. The report provides an overview of the key observations from official investigations and continuous supervision broken down by areas, highlighting the main prudential risks identified in the period under review.

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, the 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 CXCV of 2011 on the Economic Stability of Hungary, the Governor of the MNB is a member of the Fiscal Council (FC), and thus the professional expertise and accumulated information available in the MNB can indirectly support the work of the FC. The MNB prepares background analyses for the duties of the FC stipulated in the 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 publication entitled Public Finance Report (formerly entitled: *General government analysis*).

Annual Report

Published once annually, this report 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 related 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 account of the basic activities of the operating units of the Bank 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

Act CXXXIX of 2013 on the Magyar Nemzeti Bank (MNB Act) prescribes that the members of the Supervisory Board have a reporting obligation to the National Assembly that elects them and to the Minister who appoints them. In respect of the reporting obligation, the rules of procedures of the MNB's Supervisory Board, adopted in 2015, state the following: "The chairman and members of the Supervisory Board prepare – in line with the obligation set forth by the MNB Act – a joint report on their activity annually, and send it to the National Assembly and the

Minister. Beyond this, the chairman and members of the Supervisory Board also have ad hoc reporting obligation to the National Assembly and the Minister electing and appointing them, respectively.” The focus of the Supervisory Board’s duties specified in the MNB Act is on the control of 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 main form of the control activity is the meetings of the Supervisory Board. The topics at these meetings are determined by the annual rolling work-plan based on the audit universe. The Supervisory Board’s report is a presentation of the Supervisory Board’s activity.

Central Bank Almanac

In a comprehensible format, the Central Bank Almanac provides a retrospective summary of the most important events of economic life and the main steps of monetary policy in the year under review. The volume, which gives a comprehensive presentation and evaluation of decisions and results already published earlier, allows a review and reassessment of the events of the past months for the public that is interested in the subject. The Central Bank Almanac is also designed to summarise all the professional MNB articles published during the year the messages of which – although they may not be eternal – aid in the understanding of the main economic developments and central bank decisions over the longer term. This publication is released once a year, in Hungarian.

Analyses, studies, statistics

MNB Occasional Papers

This series presents economic analyses related to the MNB’s monetary policy decision-making process. It aims at increasing the transparency of monetary policy. Accordingly, in addition to studies also describing technical details of forecasting, the publication covers economic issues surrounding the preparatory work for decision-making as well. The Occasional Paper (OP) series of the MNB primarily presents practical (applied) research related to the central bank’s professional areas, summarises theories and international findings in relation to specific topics, and provides analyses facilitating the understanding of central bank decision-making.

MNB Working Papers

The MNB Working Papers series presents the results of theoretical research conducted at the MNB. The studies published in this series primarily address the audience of academic, central bank and 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 been available only in English.

Financial and Economic Review

With a history of over a decade, the Financial and Economic Review is a recently rejuvenated social and scientific journal offering an increasing range of content and a gradually developing set of topics, with contemporary typography. It is published in separate volumes in Hungarian and in English. Since the end of 2014, the journal has been edited and published by the MNB. The writings published in the journal include revised studies, 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/>).

Educational Booklets

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

Other publications

70 years of the forint: Road from hyperinflation to price stability

The everyday role and importance of inflation also justify the birth of this publication. The anniversary of the introduction of forint on 1 August 1946 offered a proper opportunity to draw the conclusions in respect of inflation in Hungary.

The first two years of the Self-financing Programme

The MNB announced the Self-financing Programme in spring 2014. The programme, which entailed the

transformation of the entire set of monetary policy instruments, as an unconventional tool, contributed – in addition to the reduction of gross external debt and foreign currency debt – to monetary easing, and also played a substantial role in the upgrade of the Hungarian debt rating to the investment grade in May 2016. The MNB's experts analyse the experiences of the first two years of the Self-financing Programme in a volume of studies comprising of four analyses.

Funding for Growth Scheme – Experience with the Magyar Nemzeti Bank's instrument to incentivise bank lending

The objective of the publication is to present the results achieved by the Funding for Growth Scheme launched in 2013 until the end of 2015.

By publishing the volume of five studies the MNB wishes to help the Hungarian and the international public to gain a deeper insight into the effects of the programme so far.

2016 Macprudential strategy of the MNB

The macroprudential strategy of the MNB presents the operation of the macroprudential function in detail. The identification and monitoring of systemic risks, the application of the macroprudential toolkit, the evaluation and follow-up of the interventions' effects, and coordination with Hungarian and international stakeholders constitute the main components of the macroprudential function. The clear statutory mandate and institutional independence of the MNB can only properly serve macroprudential strategic objectives if macroprudential policy is as transparent and credible as possible. In the future, the MNB will give an account of the adjustment to macroprudential interventions and the impact and follow-up of the interventions in its annual Macroprudential Reports.

Half-Term Report 2013-2016

The Half-Term Report summarises and evaluates the work performed in the period since March 2013 and provides an overview of the most important changes in monetary policy and its related instruments, the new tasks and initiatives. It also presents the changes in the last three years in the central bank's approach, the expansion of the former duties and the differences in the central bank's work compared to the pre-2013 period.

The Self-financing Programme of the Magyar Nemzeti Bank

Prior to the global financial crisis that erupted in 2008, the Hungarian economy had accumulated high external debt, and thus its external exposure increased. In recent years, however, the external balance position of the country has improved considerably, and external vulnerability has declined, allowing a targeted use of foreign exchange reserves. The central bank's self-financing programme announced in April 2014 aims at reducing the risks stemming from the high external and FX government debt. This publication presents how Hungary was able to renew its maturing external FX debt from forints and how it was facilitated by the MNB's programme over the past more than one year, i.e. the transformation of the main policy instrument and the introduction of the central bank interest rate swap tenders.

The Renewed Magyar Nemzeti Bank 2013–2015

The global economic crisis of 2008–2009 opened a new era in monetary policy. Partly out of necessity, and partly because they recognised the shortcomings of their earlier perceptions concerning their own roles, the central banks of the world started to play a more and more active role in the stabilisation and in the recovery from the serious economic damages caused by the crisis. In terms of domestic monetary policy, this turnaround only started in the summer of 2012 and unfolded after March 2013. Following its appointment, the new central bank management attempted to take careful but determined steps to work off the backlog accumulated before against the best international practice, and thus renewed domestic monetary policy in a number of areas. This publication provides a brief summary of these eventful two years, taking stock of the most important domestic monetary policy steps.

The MNB's publications are available on its website (<http://www.mnb.hu/en/publications>).

Series of books published by the MNB

On 5 March 2015, the central bank launched a new series of books on the subjects of economic and monetary policy. The first volume of the series was written by Dr György Matolcsy. The book entitled *Balance and Growth* provides a detailed presentation of all the new economic policy concepts, innovations and instruments that resulted in the success of the

Hungarian economy between 2010 and 2014, which was significant from the aspect of economic history as well, achieving fiscal and financial stabilisation, and thus creating the fundamental conditions for sustainable growth.

Competitiveness and Growth is the second volume of the series of MNB books on economics and monetary policy. It was published in 2016 and edited by Dániel Palotai and Barnabás Virág, Executive Directors of the central bank. The MNB decided to launch this series of trade books in compliance with its mandate, as its statutory tasks include the development of financial literacy and economic thinking in Hungary and – without jeopardising the Bank's primary objective – the support of the economic policy of the government.

Complying with its statutory tasks, with the volume *Competitiveness and Growth*, the Bank intends to contribute to the collective thinking about sustainable growth and competitiveness. The book provides an overview of domestic and international experiences as well as a comprehensive picture of the most important determinants of economic convergence. In addition, it identifies areas where progress is most necessary, and gives proposals for reforms that may contribute to the increasing of competitiveness.

Events organised by the MNB

As for events, the MNB pursues a strategy of openness with its associate and partner institutions, which strengthens professional partnership. The events organised by the MNB include international conferences, internal events and so-called cultural events as well.

International conferences

The majority of the international, professional conferences that last for several days usually involve 50–60 people, although the number of participants in some events may reach 150–200 people. The majority of the international conferences are held in the building of the MNB.

The most important international conference events organised in 2016 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 Lamfalussy Lectures 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.

The conference, organised for the third time in February 2016, was entitled "*Professor Lamfalussy Commemorative Conference – His contribution to economic policy and the birth of the euro*" and paid tribute to the oeuvre of Alexandre Lamfalussy, who passed away in 2015. The presentations of the conference were delivered by renowned lecturers, including Luiz Awazu Pereira da Silva, Deputy General Manager of the BIS (representing the Bank for International Settlements, the 2016 recipient of the Lámfalussy Award), Benoît Coeuré, Executive Board Member of the European Central Bank and Ewald Nowotny, Governor of the Oesterreichische Nationalbank (both of whom have already been honoured with the Lámfalussy Award), the Governor of the National Bank of Belgium, the President of the Euro50 Group and the Managing Director of the European Stability Mechanism (ESM). The presentations were followed by a panel discussion on the circumstances of the establishment of the monetary union, with the participation of renowned economists.

The conference was held at an external location in Budapest and was attended by more than 400 guests.

2016 summer committee session and seminar of the International Association of Insurance Supervisors

In the summer of 2016, the International Association of Insurance Supervisors (IAS) held its summer committee session and related seminar in Budapest; both events were organised and hosted by the MNB.

The IAIS is an organisation covering over 200 institutions from almost 140 countries, with the Hungarian authority in charge of supervision as a founding member. The summer session included meetings of the most important IAIS committees, with

the participation of middle and top level managers of the insurance supervisory authorities of the IAIS member countries.

The 5-day conference was organised at an external location, with around 400 attendees.

2016 external meeting of the ESCB Legal Committee

In September 2016, the Legal Committee (LEGCO) of the European System of Central Banks (ESCB) held its annual external meeting in Budapest at the invitation of the MNB. The LEGCO is a committee of legal professionals of the EU Member States' national central banks and of the ECB. Current legal issues and topics related to the ESCB were discussed at the two-day meeting.

OMFIF Economists Meeting

In September 2016, for the second time the MNB hosted the so called Economists Meeting, which is one of the prestigious events of the Official Monetary and Financial Institutions Forum (OMFIF). The discussion focused on "*The role of monetary policy in promoting growth in the CESEE region and wider Europe*". At the half-day roundtable, senior officials from the Polish, Czech and Romanian central banks, and from domestic and international financial institutions reviewed the post-crisis role of the Hungarian, regional and European monetary policy and the European and global future of monetary policy.

Adam Smith seminar

In November 2016, the Autumn meeting of the Adam Smith Seminar was organised in Budapest, at which policy-makers active in the field of international economics and finances reviewed and discussed the current developments and outlook of the global economy at an informal gathering. This was the second time that the MNB hosted the event, which looks back on a history of almost twenty-five years. During the seminar, presentations were delivered by top level managers of foreign peer institutions – including the US Fed, the Czech, Icelandic, Japanese, Polish and Turkish central banks – and international financial institutions and universities. The two-day programme also included several round-table discussions with the active involvement of the participants.

MNB-EBRD conference on the out-of-court settlement of corporate non-performing loans

The MNB and the European Bank for Reconstruction and Development (EBRD) have been closely cooperating since 2014 with the aim of promoting the efficient management of non-performing loans, which in the medium term also contributes to improving Hungary's competitiveness and may prevent the build-up of non-performing portfolios in the future. The cooperation is led by the European Bank Coordination Vienna Initiative, which calls for determined, timely and targeted action in this area.

At the conference organised on 3 October 2016, the almost 100 participants reviewed the guidelines related to the best practices of the out-of-court debt rescheduling and the settlement of corporate non-performing loans through compromise, which were prepared jointly by the MNB and the EBRD. The Hungarian Banking Association and the representatives of the banking system were also involved in the discussions. The purpose of the guidelines is to encourage banks to follow a more cooperative and coordinated approach in those cases when several financial lenders are involved.

Other international events

BESS at MNB lectures

9 March 2016, Martin Brown (University of St. Gallen) – Deposit Withdrawals from Distressed Commercial Banks

7 April 2016, Stephen Millard (Bank of England) – A Dynamic Model of Financial Balances for the United Kingdom

27 April 2016, Zsolt Sándor (Sapientia University) – Random Coefficient Demand Estimation by Optimal Instrument-Based Continuously Updated GMM (Generalised Method of Moments)

4 May 2016, Burak Uras (Tilburg University) – Efficient Asset Opacity with Banks and Markets

18 May 2016, Alessandro Barattieri (Collegio Carlo Alberto) – Banks Interconnectivity and Leverage

26 May 2016, Thomas Hintermaier (University of Bonn) – Household Debt and Crises of Confidence

– Structural vector autoregression.

1 June 2016, Helmut Stix (Oesterreichische Nationalbank) – Banking Crises, Bail-ins, and Depositor Confidence: Lessons from Cyprus

– Factor and FAVAR models.

– Structural time series analysis with Bayesian estimation.

14 September 2016, Pavel Gertler (National Bank of Slovenia), **Boris Hofmann** (BIS) – Monetary Facts Revisited

– Panel models, Panel VAR models and partial pooled models.

28 September 2016, Matteo Cacciatore (HEC Montreal) – Hours and Employment Over the Business Cycle

Summer courses 2016

Barbara Rossi (Universitat Pompeu Fabra) – **Exchange rate dynamics and predictability**, 27 June – 1 July 2016

16 November 2016, Sudipto Karmakar (Banco De Portugal) – Real Effects of Financial Distress: the Role of Heterogeneity

– Dynamics of exchange rates.

– Time series models of exchange rates.

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

– Forecasts and their evaluation.

Spring courses 2016

– Connection of non-normal distribution, time-varying forecasts.

Enrique Sentana (CEMFI) – **The econometrics of financial markets**, 21-25 March 2016

– Boundaries of mean-variance estimate. GMM estimates and conclusions.

Jesper Lindé (Stockholm School of Economics and Sveriges Riksbank) – **Monetary and fiscal interactions in modern central banking analysis**, 4-8 July 2016

– Impact of the boundaries of the mean variance estimation on the arbitrage portfolios and gross yield.

– Practical guide for Bayesian DSGE estimates.

– Time series models for the analysis of volatility.

– Impacts of the fiscal policy in non-crisis periods and close-to-zero interest environment.

– Methods beyond the mean-variance analysis.

– Impacts of fiscal policy in a monetary union.

Fabio Canova (BI Norwegian Business School) – **Empirical methods for the study of the monetary transmission mechanism**, 29 March – 1 April 2016

– International spillover of fiscal policy impacts in a monetary union.

– Impacts of deteriorated credibility on budgetary consolidation.

4 Additional information on the supervisory activity of the MNB in 2016

4.1 INSTITUTION OVERSIGHT

As at 31 December 2016, the MNB performed oversight of 1,608 institutions according to the breakdown in Table 10.

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 requirement 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 11.

Table 10	
Number of institutions supervised in 2016	
Capital markets	85
Investment fund manager	65
Commodities exchange service provider	1
Investment firm	15
Trust	1
Clearing house	1
Central counterparty	1
Stock exchange	1
Funds	69
Private pension fund	4
Voluntary funds	64
Voluntary health fund	16
Voluntary pension fund	41
Voluntary mutual fund	7
Occupational pension fund	1
Financial market	958
Non-financial institution	612
Electronic money issuer	1
Independent intermediary	605
Payment service provider	6
Financial institutions	346
Credit institution	93
Bank	29
Specialised credit institution	11
Cooperative credit institution	53
Financial enterprises	253
Financial enterprise equivalent to credit institutions	2
Other financial enterprises	251
Insurance	496
Insurance institutions	45
Insurance association	18
Insurance company	27
Insurance intermediaries	450
Independent insurance intermediary	395
Tied insurance intermediary	55
Advocacy	1
Total	1,608

Table 11

Inspection statistics

Number of prudential on-site inspections	2015		2016		2017 planned	
	Comprehensive	Other*	Comprehensive	Other*	Comprehensive	Other*
Large banks and bank groups	4	20	3	14	3	27
Small and medium-sized banks	5	3	2	5	5	2
Integration (acceded credit institutions)	8	8	10	7	0	16
Specialised credit institutions	1	3	5	4	0	5
Branch of banks	0	0	0	1	0	0
Non-banking group financial enterprises	0	7	0	3	0	1
Payment service providers	2	1	2	0	2	0
Insurance companies	7	3	6	2	9	0
Insurance associations	1	2	1	0	8	0
Intermediaries	0	6	0	4	0	3
Funds	16	3	13	2	13	2
Capital market institutions	9	22	30	9	24	0
Occupational pension funds	0	0	1	0	0	0
Total	53	78	73	51	64	56

* Including the ICAAP inspections and validations.

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 the Tables 12-15, broken down by sector.

Table 12**Measures taken in the financial market sector***(Pieces)*

Prudential measures	
Resolutions closing supervisory proceedings	258
of which: resolutions imposing fines	139
Other prudential measures, resolutions	335
Rulings	66
Total amount of fines (million HUF)	753.4
Authorisation resolutions/rulings	
Authorisation of the foundation of credit institutions	2
Refusal of the foundation of credit institutions	0
Authorisation of the operation of credit institutions	2
Refusal of the operation of credit institutions	0
Withdrawal of authorisation for the foundation of credit institutions	0
Authorisation of the operation of payment service provider	1
Authorisation of the electronic money issuing activity of electronic money issuers	0
Authorisation of the foundation and the operation of financial enterprises	4
Refusal of the foundation and the operation of financial enterprises	2
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	7
Authorisation of the election of senior executives	314
of which: credit institutions' senior executives	181
Refusal of the election of senior executives	3
Approval of the amendment of agency contract	146
Authorisation of multiple special services intermediary	1
Authorisation of multiple agents	20
Authorisation of brokers	1
Authorisation of the employment of intermediaries	65
Resolution withdrawing the activity license of intermediaries	18
Authorisation of the amendment of the bylaws	19
Authorisation of other regulations	11
Authorisation of the acquisition of qualifying holdings	53
Refusal of the acquisition of qualifying holdings	3
Authorisation of merger and division	14
Authorisation of transformation	0
Authorisation of the acquisition of qualifying holdings in a nonresident enterprise	2
Authorisation of the transfer of client accounts	17
Resolutions issued under CRR	34
of which:	
– Resolution concerning the calculation of capital adequacy of operational risk	2
– Resolution concerning the calculation of capital adequacy of credit risk	3
– Resolution concerning Tier1, additional Tier1 and Tier2 capital instruments	10
– Resolution concerning supervision on a consolidated basis	13
Other resolutions	107
Rulings	79
Total number of resolutions and rulings	1,588

Table 13	
Measures taken in the capital market sector	
<i>(Pieces)</i>	
Prudential measures	
Resolutions closing supervisory proceedings	45
of which: resolutions imposing fines	44
Other prudential measures, resolutions	66
Rulings	68
Total amount of fines (million HUF)	377.5
Authorisation resolutions/rulings	
Authorisation for operations	4
Withdrawal of authorisation for operations	5
Authorisation of regulations	56
Authorisation of senior executives	112
Authorisation of the acquisition of qualifying holdings	4
Rulings	148
Other resolutions	186
Total number of resolutions and rulings	694

Table 14	
Measures taken in the insurance sector	
<i>(Pieces)</i>	
Prudential measures	
Resolutions closing supervisory proceedings	112
of which: resolutions imposing fines	102
Other prudential measures, resolutions	50
Rulings	44
Total amount of fines (million HUF)	246.8
Authorisation resolutions/rulings	
Authorisation of executive officers	75
Authorisation of professional executives	55
Withdrawal of authorisation for operations at request	14
Other resolutions	73
Authorisation of activities closely related to insurance activities	5
Authorisation of the activities of insurance intermediaries	17
Conditional decision	19
Rulings	35
Total number of resolutions and rulings	499

Table 15**Measures taken in the funds sector***(Pieces)*

Prudential measures	
Resolutions closing supervisory proceedings	22
of which: resolutions imposing fines	18
Other prudential measures, resolutions	52
Rulings	16
Total amount of fines (million HUF)	11.4
Authorisation resolutions/rulings	
Authorisation of executive officers	0
Authorisation of professional executives	5
Withdrawal of authorisation for operations at request	5
Other resolutions	22
Conditional decision	3
Rulings	5
Total number of resolutions and rulings	130

4.4 MARKET SURVEILLANCE

The summary data on measures required within the framework of the MNB's market surveillance activity in 2016 are presented in the Tables 16-17.

Table 16**Market surveillance and supervision related measures***(Pieces)*

Market surveillance and supervisory measures	
Resolutions related to market surveillance	44
of which: resolutions imposing fines	34
Rulings related to market surveillance	310
Resolutions related to issuers supervision	42
Rulings related to issuers supervision	3
Other resolutions and rulings	20
Fines – market surveillance (million HUF)	3,837.4
– related to unauthorised and unreported activities	3,672.3
– related to insider dealing and unlawful market manipulation	125.1
– related to compliance with company takeover rules	40
Fines – supervisory (million HUF)	52
– related to issuers supervision	42
Total amount of fines (million HUF)	3,889.4
Total number of resolutions and rulings	419

Table 17

Licensing related to securities issuance

(Pieces)

Licensing related to securities issuance

Number of issues	10
– stock	2
– bonds and mortgage bonds program	8
Number of stock exchange listings	4
– stock	3
– bonds and mortgage bonds	1
Number of resolutions related to issuers	851
Number of rulings	21
Number of applications to be put in order	222
Total number of resolutions and rulings	1,094

4.5 CONSUMER PROTECTION

Tables 18-19 contain a summary related to the MNB's administrative activity performed in 2016 in the area of financial consumer protection.

Table 18

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

Type of entities	Targeted inspections ex officio	Targeted consumer protection inspections ex officio	Inspected entities	Inspections along with prudential inspections	Consumer protection inspections by request
Credit institutions sector, Bank	19	1	14	1	114
Credit institutions sector, Cooperative credit institution	9	0	0	1	0
Financial enterprise equivalent to credit institutions	2	0	0	1	4
Independent money market broker	4	0	0	0	1
Pawnbroker enterprises	3	1	4	1	0
Debt collection and management enterprises	1	0	0	0	3
Insurance sector	1	0	0	10	89
Capital market sector	2	0	0	6	5
Funds sector	0	0	0	1	6
Total:	41	2	18	21	222

Table 19**The MNB's consumer protection administrative activity, result of the procedures**

Sector/measures	Financial market	Insurance	Capital market	Funds	Total
Rulings	2,520	473	19	12	3,024
of which: substantive	333	118	5	1	457
non substantive	2,187	355	14	11	2,567
Resolutions	496	84	6	2	588
of which: without breach of law	107	39	3	0	149
with breach of law	223	45	3	2	273
Total amount of consumer protection fines (million HUF)	158.6	89.5	9.9	0.4	258.4

Tables 20–22 show the main data related to the activity of the Financial Consumer Protection Centre.

Table 20**Distribution of customer inquiries and requests received by receipt channel**

Channel of receipt	No.	Per cent
Mail	3,698	9.0
E-mail	7,393	17.9
Personal	4,264	10.3
Phone	25,886	62.8
Total	41,241	100.0

Table 21**Customer inquiries and requests broken down by sectors**

Sector	No.	Per cent
Financial markets	20,162	48.9
Capital markets	2,893	7.0
Insurance	9,432	22.9
Pension, health and mutual aid funds	305	0.7
Other	8,449	20.5
Total	41,241	100.0

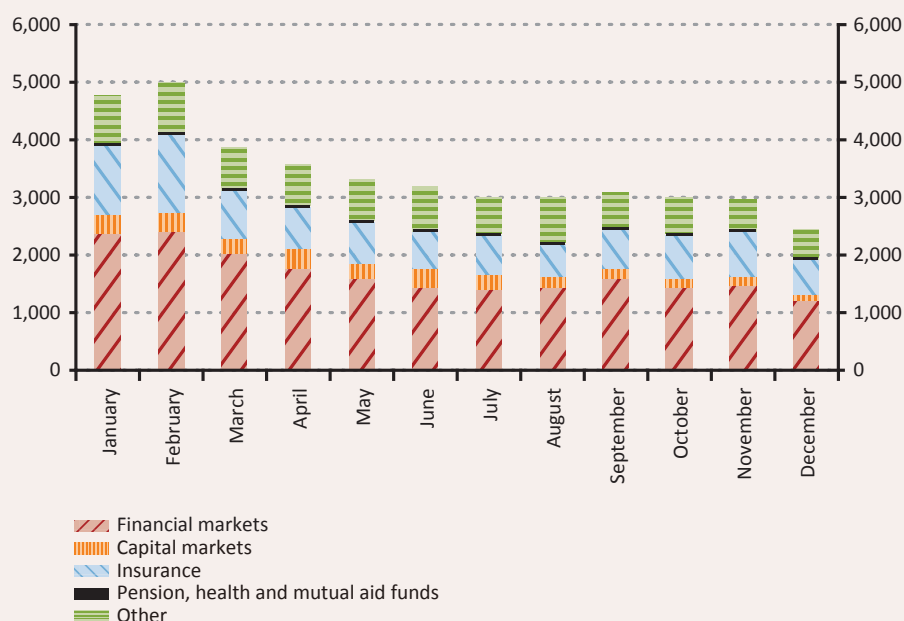
Table 22**Number of customer inquiries and requests broken down by sector and quarter**

Sector	Q1	Q2	Q3	Q4	2016 Total
Financial markets	6,839	4,814	4,403	4,106	20,162
Capital markets	933	889	627	444	2,893
Insurance	3,331	2,047	1,951	2,103	9,432
Pension, health and mutual aid funds	99	93	47	66	305
Other	2,435	2,246	2,056	1,712	8,449
Total	13,637	10,089	9,084	8,431	41,241

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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 23

Cases commenced in 2016, broken down by type and sector

Type	No.	Per cent	Sector	No.	Per cent
Judicial review of administrative decisions (litigious)	43	68.3	Financial markets	29	46.0
Non-litigious	12	19.0	Capital markets	23	36.5
Non-litigious (rulings imposing fines)	2	3.2	Insurance	8	12.7
Financial Arbitration Board	6	9.5	Pension, health and mutual aid funds	3	4.8
Total	63	100.0	Total	63	100.0

5 Explanation of abbreviations and terms specific to central banking

ABBREVIATIONS

BIS: Bank for International Settlements

BISZ Zrt.: BISZ Central Credit Information Plc.

BREEAM: Building Research Establishment Environmental Assessment Methodology

BRRD: Bank Recovery and Resolution Directive

BSE: Budapest Stock Exchange

CCB: Countercyclical Capital Buffer

CCIS: Central Credit Information System

CEBS: Committee of European Banking Supervisors

EBA: European Banking Authority

ECB: European Central Bank

EIOPA: European Insurance and Occupational Pensions Authority

EMU: Economic and Monetary Union

ESCB: European System of Central Banks

ESRB: European Systemic Risk Board

FCPC: Financial Consumer Protection Centre

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

IMF: International Monetary Fund

ISDA: International Swaps and Derivatives Association

KELER: KELER Central Clearing House and Depository Ltd.

LCR: Liquidity Coverage Ratio

MLS: Market-Based Lending Scheme

MNB: Magyar Nemzeti Bank

MNE: Ministry for National Economy

OECD: Organisation for Economic Co-operation and Development

PIP ('FCP'): Financial Compass Programme

POP ('FTP'): Financial Training Programme

SRB: Systemic Risk Buffer

SRM: Single Resolution Mechanism

SSM: Single Supervisory Mechanism

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.

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 a 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 possessor of the option exercises this right, it will become an obligation for the seller (writer) of the option.

Payment System Forum: An independent, self-organising, open professional organisation with consultative character committed to the matters of the domestic payment system and operating on the MNB's initiative, with the support of the Hungarian Banking Association and the involvement of market participants that play a decisive role in payment transactions as well as the Hungarian State Treasury, GIRO Zrt. and KELER Zrt. The supreme body of the Forum is the Payment System Council, which consists

of the representatives of the members and operates under the co-chairmanship of the MNB and the Hungarian Banking Association.

Payment System Council: The decision-making body of the Payment System Forum.

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 they have a negative balance, the central government is liable to reimburse the negative portion, and credit the amount to the respective revaluation reserve account by 31 March of the year following the current year. 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 (except for repurchased foreign exchange bonds) 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.

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



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This is a translation of the Hungarian Report

Independent Auditors Report

To the Shareholder of Magyar Nemzeti Bank

Opinion

We have audited the accompanying 2016 annual financial statements of Magyar Nemzeti Bank ("the Company"), which comprise the balance sheet as at 31 December 2016 - showing a balance sheet total of HUF 10,054,901 million and a profit for the year of HUF 54,281 million -, the related profit and loss account for the financial year then ended and notes to the annual financial statements, including a summary of significant accounting policies.

In our opinion the annual financial statements give a true and fair view of the equity and financial position of Magyar Nemzeti Bank as at 31 December 2016 and of the results of its operations for the financial year then ended in accordance with the Act C of 2000 on Accounting ("Hungarian Accounting Law").

Basis for opinion

We conducted our audit in accordance with Hungarian National Auditing Standards and with applicable laws and regulations in Hungary. Our responsibilities under those standards are further described in the "Auditor's responsibilities for the audit of the annual financial statements" section of our report.

We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the annual financial statements in Hungary, and we have fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Other information consists of the 2016 business report of Magyar Nemzeti Bank. Management is responsible for the preparation of the business report in accordance with the Hungarian Accounting Law and other relevant legal requirements, if any. Our opinion on the annual financial statements does not cover the business report.

In connection with our audit of the annual financial statements, our responsibility is to read the business report and, in doing so, consider whether the business report is materially inconsistent with the annual financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.



Concerning the business report it is our responsibility also, in accordance with the Hungarian Accounting Law, to consider whether the business report has been prepared in accordance with the Hungarian Accounting Law and other relevant legal requirements, if any.

In our opinion, the business report of Magyar Nemzeti Bank for 2016 corresponds the 2016 annual financial statements of Magyar Nemzeti Bank and has been prepared in accordance with the Hungarian Accounting Law.

Since no other legal regulations prescribe for the Company further requirements with regard to its business report, our opinion on the business report does not include opinion in this regard as required by Subsection (5) h) of Section 156 of the Hungarian Accounting Law.

Further to the above, based on the knowledge we have obtained about the Company and its environment in the course of the audit we are required to report whether we have identified any material misstatement in the business report, and if so, the nature of the misstatement in question. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the annual financial statements

Management is responsible for the preparation and fair presentation of the annual financial statements in accordance with the Hungarian Accounting Law, and for such internal control as management determines is necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's responsibilities for the audit of the annual financial statements

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue 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 Hungarian National Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and 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 annual financial statements.



As part of an audit in accordance with Hungarian National Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- ▶ Identify and assess the risks of material misstatement of the annual 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 Company'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 use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual financial statements or, if such disclosures are inadequate, to modify our 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 Company to cease to continue as a going concern.
- ▶ Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual 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 internal control that we identify during our audit.

Budapest, 24 April 2017

(The original Hungarian language version has been signed.)

Szabó Gergely
Ernst & Young Kft.
1132 Budapest, Váci út 20.
Registration No.: 001165

Szabó Gergely
Registered auditor
Chamber membership No.: 005676

2 Balance sheet of the Magyar Nemzeti Bank

HUF millions

Reference number to notes on the Accounts	ASSETS	31 Dec 2015*	31 Dec 2016	Change
1	2	3	4	4-3
	I. Receivables denominated in forint	1,446,828	1,590,537	143,709
4.3.	1. Receivables from the central government	39,178	39,178	0
4.7.	2. Receivables from credit institutions	1,405,552	1,548,530	142,978
4.10.	3. Other receivables	2,098	2,829	731
	II. Receivables denominated in foreign currency	9,843,344	8,286,460	-1,556,884
4.9.	1. Gold and foreign exchange reserves	9,436,975	7,557,282	-1,879,693
4.4.	2. Receivables from the central government	0	0	0
4.8.	3. Receivables from credit institutions	6,962	62	-6,900
4.10.	4. Other receivables	399,407	729,116	329,709
	III. Banking assets	109,638	108,684	-954
4.12.	of which: invested assets	107,137	108,271	1,134
4.14.	IV. Prepaid expenses/accrued income	95,697	69,220	-26,477
	V. Total assets (I+II+III+IV)	11,495,507	10,054,901	-1,440,606

Reference number to notes on the Accounts	LIABILITIES AND EQUITY	31 Dec 2015*	31 Dec 2016	Change
1	2	3	4	4-3
	VI. Liabilities denominated in forint	9,527,734	7,833,804	-1,693,930
4.5.	1. Central government deposits	403,624	785,648	382,024
4.7.	2. Deposits by credit institutions	4,772,252	2,408,122	-2,364,130
	of which: the main policy instrument	2,986,826	899,987	-2,086,839
	3. Banknotes and coins in circulation	4,304,879	4,580,614	275,735
4.11.	4. Other deposits and liabilities	46,979	59,420	12,441
	VII. Liabilities denominated in foreign currency	1,407,934	1,798,115	390,181
4.5.	1. Central government deposits	416,115	544,616	128,501
4.8.	2. Deposits by credit institutions	58,378	75,866	17,488
4.11.	3. Other deposits and liabilities	933,441	1,177,633	244,192
4.13.	VIII. Provisions	1,978	689	-1,289
	IX. Other banking liabilities**	17,839	17,847	8
4.14.	X. Accrued expenses/deferred income	31,044	32,483	1,439
4.15.	XI. Equity	508,978	371,963	-137,015
	1. Share capital	10,000	10,000	0
	2. Retained earnings	63,417	107,869	44,452
	3. Valuation reserves	0	0	0
4.16.	4. Revaluation reserves due to exchange rate changes	312,599	182,459	-130,140
4.16.	5. Revaluation reserves of foreign currency securities	28,510	17,354	-11,156
	6. Profit/Loss for the year**	94,452	54,281	-40,171
	XII. Total equity and liabilities (VI+VII+VIII+IX+X+XI)	11,495,507	10,054,901	-1,440,606

* Presented in the 2016 balance-sheet structure.

** In the new balance-sheet structure for 31 December, 2015 dividend payable was replaced from line IX. Other banking liabilities to line XI. 6. Profit for the year.

24 April 2017, 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	2015	2016	Difference
1	2	3	4	4-3
4.18.	I. Interest and interest-related income denominated in forint	10,817	17,406	6,589
	1. Interest on receivables from the central government	2,706	329	-2,377
	2. Interest on receivables from credit institutions	3,128	3,981	853
	3. Interest on other receivables	771	124	-647
	4. Interest-related income	4,212	12,972	8,760
4.18.	II. Interest and interest-related income denominated in foreign currency	215,866	154,036	-61,830
	1. Interest on foreign exchange reserves	123,495	78,010	-45,485
	2. Interest on receivables from the central government	3,235	0	-3,235
	3. Interest on receivables from credit institutions	0	0	0
	4. Interest on other receivables	54	0	-54
	5. Interest-related income	89,082	76,026	-13,056
4.19.	III. Income arising from exchange rate changes	184,568	117,716	-66,852
4.18.	IV. Realised gains arising from financial operations	18,190	23,700	5,510
4.21.	V. Other income	14,524	17,250	2,726
	1. Fees and commissions	1,033	941	-92
4.22.	2. Income other than fees and commissions	1,380	1,634	254
4.23.	3. Income from supervisory activities	12,111	14,675	2,564
4.13.	VI. Provisions released	2,933	1,569	-1,364
4.13.	VII. Impairment released	1,399	520	-879
4.24.	VIII. Operating income	1,466	1,337	-129
	IX. Total income (I+II+III+IV+V+VI+VII+VIII)	449,763	333,534	-116,229
Reference number to notes on the Accounts	EXPENSES	2015	2016	Difference
1	2	3	4	4-3
4.18.	X. Interest and interest-related expenses denominated in forint	103,825	45,866	-57,959
	1. Interest on central government deposits	11,229	5,680	-5,549
	2. Interest on deposits by credit institutions	92,498	32,853	-59,645
	of which: interest on the main policy instrument*	74,063	23,535	-50,528
	3. Interest on other deposits	98	89	-9
	4. Interest-related expenses	0	7,244	7,244
4.18.	XI. Interest and interest-related expenses denominated in foreign currency	165,561	141,203	-24,358
	1. Interest on central government deposits	-1,737	-1,845	-108
	2. Interest on deposits of credit institutions	-29	-173	-144
	3. Interest on other liabilities	1,685	3,233	1,548
	4. Interest-related expenses	165,642	139,988	-25,654
4.19.	XII. Expenses resulting from exchange rate changes	6,891	22,627	15,736
4.20.	XIII. Cost of issuing banknotes and coins	11,286	14,163	2,877
4.18.	XIV. Realised losses arising from financial operations	3,328	6,854	3,526
4.21.	XV. Other expenses	21,268	5,263	-16,005
	1. Fees and commissions	851	693	-158
4.22.	2. Expenses other than fees and commissions	20,417	4,570	-15,847
4.13.	XVI. Provisions charged	644	280	-364
4.13.	XVII. Impairment	7,556	5,966	-1,590
4.24.	XVIII. Operating costs and expenses	34,952	37,031	2,079
	XIX. Total expenses (X+XI+XII+XIII+XIV+XV+XVI+XVII+XVIII)	355,311	279,253	-76,058
	XX. Profit/loss for the year (IX-XIX)	94,452	54,281	-40,171

Until 22 September 2015, the 2-week deposit was the main policy instrument; from 23 September 2015 the 3-month MNB deposit became the main policy instrument.

24 April 2017, 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 Magyar Nemzeti Bank 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 Magyar Nemzeti Bank 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, whenever 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 in terms of 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 transactions. 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' premiums and discounts; 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 is required to close accounts relating to its assets and liabilities and to net income on a quarterly basis, and to prepare trial balances following the procedure specified in its accounting policy.

For internal use, the MNB compiles a balance sheet and income statement every month, which are supported by the following:

- 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. On a quarterly basis, the MNB also grades the claims and securities in the balance sheet; in addition to the foregoing, it measures the 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 20 January 2017.

By law, the MNB is also required to report to Parliament. The MNB submits a single report to both Parliament and the Ministry for National Economy, which – as it is in charge of public finances – 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 in the reporting year, and the MNB's annual financial statements defined by the Act on Accounting, as adopted by the Board of Directors and approved by audit certificate. The Supervisory Board submits an opinion on the Annual Report and makes 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>.

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 in the reporting period, and the MNB's half-year financial statements defined by the Act on Accounting. The Half-year Report is also published on the internet.

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 Gergely Szabó (Ernst & Young Könyvvizsgáló Kft.), Chamber membership number: 005676.

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 must be accounted in proportion to the risk of losses.

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 must be recorded in the balance sheet at the disbursed amount.

Other receivables

Receivables from supervisory activities are recorded in the balance sheet with their impairment. The MNB books the supervisory fee prescriptions in line with the incoming data reported by the institutions and the penalty prescriptions are recorded in line with the finalised resolutions. The supervisory fees, levied and the penalties used for support purposes defined by the MNB Act, as well as the fees received from public proceedings must be recorded as 'Income from supervisory activities'.

The balance of 'Other receivables' also contains the employee loans and the loans provided to other legal entities at the amount of the disbursements. The related interest income is stated under 'Interest on other receivables'.

'Other receivables' must be qualified and impaired 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 rate and the official 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 that particular 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, 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 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 portfolio management facilitating tool) 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 and maturing are stated under 'Realised gains/losses arising from financial operations'.

The Magyar Nemzeti Bank measures its securities on the basis of market prices prevailing on the last working day of each month. However if adequately liquid prices are not ensured on this day, 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 on the grounds of a mandate are also stated at market price, applying the prices received from the custodian.

Security repurchase transactions 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 recorded 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, subscribed in SDR, is presented under 'Other foreign currency receivables' in the balance sheet. The related IMF forint deposit is presented 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 a HUF account only formally, it is presented 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 an unmatured liability vis-à-vis the IMF on the liability side of the balance sheet. This transaction has an effect on profit or loss (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 deal 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 must be stated under off-balance sheet assets and liabilities. The aggregate revaluation difference of foreign currency assets and liabilities arising from hedging transactions must be stated in the balance sheet (depending on their balance, 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 must be 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 in the case of 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 set aside 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 are 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 therefore are deducted from banknotes and coins on the liabilities side of the balance sheet.

Depreciation rates applied by the Magyar Nemzeti Bank:

Description	Per cent
	31 Dec 2016
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 treasure).

4.2 EFFECTS OF MACROECONOMIC TRENDS ON THE 2016 BALANCE SHEET AND INCOME STATEMENT OF THE MAGYAR NEMZETI BANK

In 2016, the MNB recorded a profit of HUF 54.3 billion. Both the contraction of central bank's balance sheet and the continued reduction of the base rate contributed to the profit. Income arising from exchange rate changes was the most significant item of the profit in 2016. The MNB quoted exchange rate against the euro fluctuated in a narrower band in the course of 2016, relative to 2015. The MNB official exchange rate was EUR/HUF 311.02 at end-2016, representing appreciation of 0.7 per cent relative to the end of 2015. The official exchange rate was weaker than the average cost rate for the entire year; the difference between the two rates dropped from the end-2015 EUR/HUF 14.95 to EUR/HUF 9.86 as at 31 December 2016. Due to the decreasing volume of foreign currency sales, the MNB realised less exchange rate gains (amounting to HUF 95.1 billion) in the course of 2016.

The balance of revaluation reserves due to exchange rate changes, as an unrealised foreign exchange result, decreased by HUF 130.1 billion from 31 December 2015 and amounted to HUF 182.5 billion at end-2016. The total exchange rate change effect was a loss of HUF 35.1 billion.

The balance sheet total according to Hungarian Accounting Standards (HAS) was HUF 10,054.9 billion on 31 December 2016, representing a 13 per cent year-on-year decrease compared to HUF 11,495.5 billion at end-2015. The Self-financing Programme and the conversion of households' FX loans into forints altogether induced a strong contraction in the central bank's balance sheet. On the assets side, the decrease in foreign exchange reserves was mitigated by the increase in the IMF quota and the rise in refinancing loans provided under the FGS. On the liabilities side, the deposits of credit institutions declined significantly, while the central government deposits and the banknotes and coins increased, along with IMF forint deposit, owing to the quota increase.

The sum of the net interest result and realised gains arising from financial operations changed to positive after the losses of earlier years and showed a profit amounting to HUF 1.2 billion. In 2016, the bank recorded a net interest and interest related loss of HUF 15.6 billion, representing an improvement of HUF 27.1 billion compared to the figure for end-2015, mainly due to the contraction in the central bank's balance sheet. Owing to the decrease in foreign exchange reserves, the amount of forint liabilities financing the reserves also declined and a further reduction of the margin between foreign exchange yields and forint interest rates also improved the interest result. The HUF 64.6 billion increase in the forint interest loss was caused by a significant decrease of the volume and by the interest effect. In 2016, the calendar day weighted average central bank base rate was 60 basis points lower. The significant decrease in FX interest gains amounted to HUF 37.5 billion, due to the decline of stock of foreign exchange reserves and to lower interest income because of the lower foreign exchange yields.

The total realised gains from financial operations amounted to HUF 16.8 billion in 2016. Both the large volume of foreign currency securities sales and shrinking FX interest rates caused an increase of HUF 2 billion.

For more details on impacts on net income, see Section 3.11 of the Business Report.

4.3 FORINT RECEIVABLES FROM THE CENTRAL GOVERNMENT

The line for forint receivables from the central government contains government bonds, the amount of which did not change and amounted to HUF 39.2 billion at the end of 2016. 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-2015 nor at end-2016 was any amount listed in the line for foreign currency receivables from the central government. The net balance of currency swaps with the central government showed a 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 2015	31 Dec 2016	
	Single Treasury Account (KESZ)	403,218	785,157	381,939
	Deposit by Government Debt Management Agency (ÁKK Zrt)	347	433	86
	Other	59	58	-1
VI.1.	Forint deposits of the central government	403,624	785,648	382,024

The total balance of forint deposits of the central government amounted to HUF 785.6 billion at the end of December 2016 and was HUF 382 billion higher than at the end of 2015. The change was caused in the stock of KESZ, which remained at a steadily high level in 2016. Due to the larger volume of government bond maturities and government bond repurchases, the balance of KESZ was unusually lower.

Foreign currency liabilities of the central government

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Foreign currency deposits of the central government	255,939	354,385	98,446
	Swap and forward transactions with the central government	0	0	0
	Currency swaps with the central government	160,176	190,231	30,055
VII.1.	Foreign currency liabilities of the central government	416,115	544,616	128,501

The balance of the foreign currency deposits of the central government was HUF 354.4 billion on 31 December 2016, reflecting an increase of HUF 98.4 billion. However, the average amount of liabilities for 2015 was far lower and was approximately 40 per cent below the average of the previous year. The balance-reducing effect of the December 2015 developments (PEMÁK-maturity and foreign currency government bonds repurchases) carried over to 2016. The ÁKK continuously refilled the foreign exchange holdings which was used to decrease the government debt. Owing to a May and an October PEMÁK-maturity and the July maturity of the euro-bond issued in the past by the ÁKK, the balance of deposits dropped in the second half of the year.

Among the hedging transactions concluded with the central government, only the currency swaps had outstanding amount at the times under review. The cross-rate changes caused the increase of HUF 30.1 billion.

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

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2015	31 Dec 2016	
	– within 1 year	255,939	354,385	98,446
	– within 1 to 5 years	38,672	44,840	6,168
	– over 5 years	121,504	145,391	23,887
VII.1.	Foreign currency liabilities of the central government	416,115	544,616	128,501

4.6 NET POSITIONS VIS-À-VIS THE CENTRAL GOVERNMENT

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
I.1.—VI.1.	Net forint position	–364,446	–746,470	–382,024
II.2.—VII.1.	Net foreign currency position	–416,115	–544,616	–128,501
	Total	–780,561	–1,291,086	–510,525

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 2015	31 Dec 2016	
	Security-backed loans	103,061	120,000	16,939
	Covered mortgage bonds	10,701	10,823	122
	FGS refinancing loans	1,286,742	1,415,028	128,286
	Other receivables	5,048	2,679	–2,369
I.2.	Total receivables from credit institutions	1,405,552	1,548,530	142,978

The amount of receivables from credit institutions was HUF 1,548.5 billion on December 2016. The total increase of HUF 143 billion in the balance relative to end-2015 appeared due to the joint effect of a number of factors.

Initiated on 1 June 2013 as a temporary instrument, the Funding Growth Scheme (FGS) successfully fulfilled the growth and market development objectives established upon the announcement of the programme, and therefore the FGS was phased out gradually from the beginning of 2016. Simultaneously with this, the Growth Supporting Programme (GSP), was announced in November 2015, launched with the aim of ensuring that banks return to market-based lending. Within the framework of the programme, the MNB grants interest-free refinancing loans to credit institutions. The amount of refinancing loans granted under Pillar I and Pillar II of FGS, after deducting repayments, totalled HUF 1,415 billion on 31 December 2016. Within the overall volume, the amount from the first phase was HUF 286.3 billion, from the second phase was HUF 753.3 billion, from the third phase was HUF 359 billion and from FGS+ was HUF 16.2 billion (repayment of the loans has started). The MNB accepts SME loans financed by credit institutions as collateral, in addition to the normal securities eligible for the central bank. Accepting the value of collateral blocked in favour of the MNB must be covered by the MNB's credit receivables vis-à-vis the credit institution in question. The total nominal value of these credits amounted to HUF 834.4 billion on 31 December 2016.

The balance of security-backed loans rose by HUF 16.9 billion and amounted to HUF 120 billion at 31 December 2016. It only includes the stock of 1-week loan tender granted to credit institutions, as there was no stock of overnight loans at end-2016.

The end-2016 balance of other receivables from credit institutions decreased by HUF 2.4 billion compared to previous year, as the gross value of non-performing claims from banks under liquidation, due to recoveries, diminished by HUF 2.9 billion to HUF 8.2 billion from end-2015 to end-2016. HUF 0.5 billion from the related impairment loss was wrote back as an impairment loss of HUF 5.5 billion was created on these receivables on 31 December 2016.

Forint receivables from credit institutions by remaining maturity

HUF millions

No.	Remaining maturity	Balance		Change
		31 Dec 2015	31 Dec 2016	
1.	– matured	5,048	2,679	–2,369
2.	– within 1 year	177,991	186,791	8,800
3.	– within 1 to 5 years	671,253	610,148	–61,105
4.	– over 5 years	551,260	748,912	197,652
5.	Total receivables from credit institutions (1+2+3+4)	1,405,552	1,548,530	142,978

Forint liabilities of credit institutions

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Current accounts	563,071	631,835	68,764
	Two-week MNB deposits	958,100	0	–958,100
	Three-month MNB deposits	2,986,826	899,987	–2,086,839
	Other deposits	264,255	876,300	612,045
VI.2.	Deposits of credit institutions	4,772,252	2,408,122	–2,364,130

The line ‘Deposits of credit institutions’ contains the liquidity-absorbing instruments and minimum reserves of domestic credit institutions, both of which are pegged to the base rate; the aggregate balance of such was HUF 2,408.1 billion on 31 December 2016. The maturity dates of all deposits were within one year. The total decrease of HUF 2,364.1 billion in the balance of deposits can mainly be explained by the decline in 3-month fixed-rate deposits. These fixed-rate instruments are sold at tenders by the MNB; the interest rate on deposits is the central bank base rate, and it became the MNB’s main policy instrument from 23 September 2015. The 2-week deposit was phased out in April 2016. The balance of overnight central bank deposits was HUF 612 billion higher at end-2016 relative to 31 December 2015, but the average amount, calculated for 2016, was lower by more than 40 per cent.

4.8 NET POSITIONS VIS-À-VIS CREDIT INSTITUTIONS

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
I.2.—VI.2.	Net forint position	–3,366,700	–859,592	2,507,108
II.3.—VII.2.	Net foreign currency position	–51,416	–75,804	–24,388
	Total	–3,418,116	–935,396	2,482,720

Net liabilities to credit institutions decreased by HUF 2,482.7 billion to HUF 935.4 billion by 31 December 2016. Nearly the same amount of improvement was observed in the line 'Net forint position', which showed a net forint liabilities balance of HUF 859.6 billion at end-2016. The decline in 3-month deposits contributed significantly to the improvement in the net position, as well as the phase-out of 2-week deposits and the increase in FGS refinancing loans to credit institutions and in security-backed loans. By contrast, the net forint liabilities position vis-à-vis credit institutions rose, owing to the increase in overnight deposits and current accounts and the decrease in non-performing claims from credit institutions under liquidation corrected by impairment loss.

Net foreign currency liabilities to credit institutions declined by HUF 24.4 billion, showing a balance of HUF 75.8 billion at 31 December 2016. The net balance of the foreign currency position to credit institutions included the fix foreign currency deposits on the one hand, and the outstanding amount of foreign exchange swaps at the end of the period under review on the other hand. The amount of foreign currency deposited in interest-bearing accounts at the MNB by domestic credit institutions rose by HUF 36.8 billion from end-2015 to 31 December 2016. There was no demand for swaps providing EUR liquidity to the banking sector. The outstanding amount of EUR/HUF swap transaction concluded from March 2016 was HUF 273 billion at end-2016 in connection with forint refinancing loans of Pillar II of the FGS' third, phase-out stage. The MNB's FX swaps instruments related to Pillar III of the FGS (which was phased out in 2014) matured during the second quarter of 2016. Foreign exchange swaps concluded in line with the phasing-out of household's foreign currency loans terminated in April 2016, but the amount of currency interest rate swaps was EUR 1.1 billion at 31 December 2016. In connection with the quantitative restriction on 3-month deposits, in October 2016, the MNB decided to create the forint liquidity providing fine-tuning FX swaps, which amounted to EUR 1.3 billion at end-2016.

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

HUF millions

No.	Remaining maturity	Balance		Change
		31 Dec 2015	31 Dec 2016	
1.	– within 1 year	6,962	62	–6,900
2.	– within 1 to 5 years	0	0	0
3.	– over 5 years	0	0	0
4.	Total foreign currency receivables from credit institutions (1+2+3)	6,962	62	–6,900
5.	– within 1 year	52,445	75,507	23,062
6.	– within 1 to 5 years	5,933	–9	–5,942
7.	– over 5 years	0	368	368
8.	Total foreign currency liabilities to credit institutions (5+6+7)	58,378	75,866	17,488
9.	Net foreign currency position (4-8)	–51,416	–75,804	–24,388

4.9 GOLD AND FOREIGN EXCHANGE RESERVES OF THE CENTRAL BANK

Forint balances

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Gold reserve	30,117	0	–30,117
	Reserve position in the IMF	29,353	117,772	88,419
	Foreign currency deposits	1,020,443	1,648,649	628,206
	Foreign currency securities	8,305,698	5,787,115	–2,518,583
	Foreign currency repo transactions	51,364	3,746	–47,618
II.1.	Gold and foreign exchange reserves	9,436,975	7,557,282	–1,879,693

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 7,557.3 billion at 31 December 2016, down HUF 1,879.7 billion compared to the previous year-end.

The reason for the change in gold reserve is that it was invested by the MNB in gold-currency swaps, instead of receivables in connection with gold, but the swaps had higher yields with the same risk. The foreign exchange derived from the swaps raised the amount of the line 'Foreign currency deposits' in foreign exchange reserves. The derivative-type gold receivables appeared under item II.4. Other foreign currency receivables. This transaction does not cause a change in the level of gold reserve, but modified the type of receivables.

The IMF free quota rose by HUF 88.4 billion mainly due to the IMF quota increase carried out in February. The Hungary's IMF quota rose by SDR 901.6 million (HUF 354.4 billion) to SDR 1,940 billion. According to IMF rules, 25 per cent of quota increase (amounting to SDR 225.4 million) – which is stated under foreign exchange reserves – had to be satisfied in SDR, and 75 per cent (amounting to SDR 676.2 million) in own currency, which mean forint (the latter is shown under 'Other foreign currency receivables'; see Section 4.10).

The end-2016 balance of foreign currency securities contained those securities which are managed by the external trustee on the ground of the mandate in a total amount of HUF 209.2 billion (3.6 per cent altogether).

Euro balances

EUR millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Gold reserve	96	0	-96
	Reserve position in the IMF	94	379	285
	Foreign currency deposits	3,259	5,301	2,042
	Foreign currency securities	26,526	18,607	-7,919
	Foreign currency repo transactions	164	12	-152
II.1.	Gold and foreign exchange reserves	30,139	24,299	-5,840

The official exchange rate of the forint was EUR/HUF 313.12 on 31 December 2015 and EUR/HUF 311.02 on 31 December 2016.

In the course of 2016, the most significant item increasing foreign exchange reserves was the incoming EUR transfers from the European Commission; furthermore, the maturity of monetary policy swaps with credit institutions and changes in cross rates also increased the balance. The level of reserves was reduced by the maturity and termination of one part of foreign exchange swaps and currency interest rate swaps related to phasing-out of household's foreign currency loans; the sum of the debt management and other activities of the Government Debt Management Agency; by the net balance of foreign currency influx and payment managed by the Hungarian State Treasury. As a consequence of the aforementioned effects, the stock of foreign exchange reserves denominated in euro decreased by EUR 5.8 billion by 31 December 2016.

4.10 OTHER FORINT AND FOREIGN CURRENCY RECEIVABLES

Other forint receivables

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Receivables from supervisory activities	5,345	8,996	3,651
	Employee loans	2,061	2,552	491
	Total other receivables in HUF in gross value	7,406	11,548	4,142
	Impairment loss for other receivables	-5,308	-8,719	-3,411
I.3.	Other forint receivables	2,098	2,829	731

The balance of receivables from supervisory activities corrected by overpayments amounted to HUF 9 billion at 31 December 2016, and an impairment loss was recognised for 96.9 per cent of this, in line with the internal rules of the MNB. The total amount of the personal loans and preferential property loans granted by the MNB to its employees was HUF 2.6 billion at end-2016.

Other foreign currency receivables

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Forint payment of IMF quota	383,432	645,754	262,322
	Receivables from investment units	15,796	0	-15,796
	Foreign hedging transactions*	96	81,951	81,855
	Other	83	1,411	1,328
II.4.	Other foreign currency receivables	399,407	729,116	329,709

* 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 by HUF 262.3 billion during the year (for more details on the IMF quota increase, see Section 4.9).

The decline of HUF 15.8 billion observed in the line 'Receivables from investment units' was due to the fact that the Chinese renminbi-denominated investment units to be recorded at market value were shown among non-foreign exchange reserves before 1 February 2016, but they now form a part of foreign exchange reserves (the transaction took place within the framework of Central Bank Renminbi Programme announced by the MNB, in the first phase of which investment units were purchased indirectly from the BIS).

The item 'Foreign hedging transactions' includes the net debit balance of swap and forward transactions with non-resident counterparties concluded by the MNB, including the gold-currency swap mentioned in Section 4.9.

4.11 OTHER DEPOSITS AND LIABILITIES

Other forint liabilities

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	International financial institutions' forint deposits	38,818	50,029	11,211
	Other liabilities	8,161	9,391	1,230
VI.4.	Other forint deposits and liabilities	46,979	59,420	12,441

The item 'International financial institution's deposits' mainly includes the forint deposits of the European Commission.

Other foreign currency liabilities

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	IMF deposit	777,395	1,035,803	258,408
	Foreign deposits and loans	129,834	141,112	11,278
	Hedging transactions*	25,144	4	-25,140
	Other liabilities	1,068	714	-354
VII.3.	Other foreign currency liabilities	933,441	1,177,633	244,192

* 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 244.2 billion to HUF 1,177.6 billion as at 31 December 2016. The IMF deposit's balance changed due to the February quota increase amounting to HUF 257.1 billion, along with an April switch-over to the new official exchange rate ordered by the IMF amounting to HUF 13.4 billion, in addition to exchange rate changes.

The total increase of HUF 11.3 billion in the balance of foreign deposits resulted from a rise in the volume of hedging transactions marked to market, and it was reflected in the change in the amount of the mark-to-market deposit, which is for the market price differences of transactions.

The item 'Hedging transactions' contains the net credit balance of forward transactions with non-resident counterparties concluded by the MNB. At end-2016, the net debit balance of HUF 82 billion of swap transactions appeared under item II.4. Other foreign currency receivables.

Other foreign currency liabilities by remaining maturity

HUF millions

B/S line	Remaining maturity	Balance		Change
		31 Dec 2015	31 Dec 2016	
	– within 1 year	539,056	787,152	248,096
	– within 1 to 5 years	0	0	0
	– over 5 years	0	0	0
	– without maturity	394,385	390,481	-3,904
VII.3.	Other foreign currency liabilities	933,441	1,177,633	244,192

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

Currency structure of other foreign currency liabilities

HUF millions

No.	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
1.	– USD	13,853	19,740	5,887
2.	– EUR	147,729	103,687	–44,042
3.	– JPY	0	–14,619	–14,619
4.	– SDR	437,140	429,720	–7,420
5.	– Other	309,575	639,101	329,526
6.	Other foreign currency liabilities	908,297	1,177,629	269,332

The item 'Other' amounted to HUF 639.1 billion at the end of 2016 and mainly contains the revaluation-corrected forint coverage of the IMF quota.

4.12 INVESTED ASSETS

In addition to intangibles, tangibles and capital expenditure (HUF 41.8 billion), invested assets include shares in investments (HUF 9.6 billion in foreign investments and HUF 56.9 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 2015	12,005	101	28,100	15,507	8,867	239	322	65,141
Commissioning/ Acquisition	1,478	427	481	1,968	555	4	25	4,938
Other addition/ Reclassificaion					8			8
Scrapping	–585			–3			–15	–603
Selling				–2				–2
Transfer free of charge				–310				–310
Other disposal/ Reclassification	–83		–505	–2		–2	–7	–599
31 Dec 2016	12,815	528	28,076	17,158	9,430	241	325	68,573
Details of depreciation								
31 Dec 2015	10,224	0	4,726	9,910	0	0	0	24,860
Ordinary depreciation	818		867	1,270				2,955
Derecognition	–658		–27	–314				–999
31 Dec 2016	10,384	0	5,566	10,866	0	0	0	26,816
Balance								
31 Dec 2015	1,781	101	23,374	5,597	8,867	239	322	40,281
31 Dec 2016	2,431	528	22,510	6,292	9,430	241	325	41,757
Change	650	427	–864	695	563	2	3	1,476

In May 2016, during the transfer of the Tiszaroff Training and Recreation Center as contribution to MNB-Jóléti Kft, the Tiszaroff property's net book value amounted of HUF 486 million was removed from buildings and capital expenditure. The value of the investment in MNB-Jóléti Kft increased according to the HUF 510 million contribution value of the property, and the price difference amounted to HUF 24 million was recognised as income from other than commissions.

The net value of the state-owned, managed buildings (3 buildings and 2 plots of land) was HUF 64 million at 31 December 2016.

Foreign investments and dividends from investments

HUF millions

Description	Ownership share (%)		Book value		Dividends received*	
	31 Dec 2015	31 Dec 2016	31 Dec 2015	31 Dec 2016	2015	2016
BIS	1.43	1.43	7,888	7,850	761	734
SDR millions			10	10		
CHF millions			13.5	13.5		
European Central Bank	1.38	1.38	1,754	1,742	—	—
EUR thousands			5,601	5,601		
SWIFT	0.03	0.03	15	14	0	0
EUR thousands			46.4	46.4		
Total investments			9,657	9,606	761	734

* Dividends financially settled in the given year.

Ownership distribution in the ECB at 31 December 2016

The Republic of Hungary joined the European Union on 1 May 2004. Consequently, 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.

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 1.7 billion) in the MNB's balance sheet as at 31 December 2016.

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 bankas	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 Națională 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

Domestic investments and dividends from investments

HUF millions

Description	Ownership share (%)		Book value		Dividends received*	
	31 Dec 2015	31 Dec 2016	31 Dec 2015	31 Dec 2016	2015	2016
Pénzjegynyomda Zrt. 1055 Budapest, Markó utca 13–17.	100.0	100.0	10,627	10,627	0	0
Magyar Pénzverő Zrt. 1239 Budapest, Európa u. 1.	100.0	100.0	575	575	0	80
Pénzügyi Stabilitási és Felszámoló Nkft. 1055 Budapest, Bajcsy-Zsilinszky út 78.	100.0	100.0	50	50	–	–
MARK Magyar Reorganizációs és Követeléskezelő Zrt. 1055 Budapest, Bajcsy-Zsilinszky út 78.	100.0	100.0	21,700	19,298	0	0
MNB-Jóléti Kft. 1054 Budapest, Szabadság tér 8–9.	100.0	100.0	75	569	–	–
MNB-Biztonsági Zrt. 1054 Budapest, Szabadság tér 8–9.	100.0	100.0	200	740	0	0
GIRO Elszámolásforgalmi Zrt. 1054 Budapest, Vadász utca 31.	100.0	100.0	9,779	9,779	0	0
KELER Zrt. 1074 Budapest, Rákóczi út 70–72.	53.3	53.3	643	643	0	0
KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	0.2	0.2	7	7	0	0
Budapesti Értéktőzsde Zrt. 1054 Budapest, Szabadság tér 7.	75.7	81.4	13,543	14,619	36	0
Befektetések összesen			57,199	56,907	36	80

* Dividends financially settled in the given year.

Participations of domestic investments

Description	Participations		
	Name Headquarter	Ownership share (%)	Share capital (HUF millions)
		31 Dec 2016	
Pénzjegynyomda Zrt.	DIPA Diósgyőri Papírgyár Zrt. 3535 Miskolc, Hegyalja út 203/1.	100.0	4,196
MARK Zrt.	MARK Ingatlan Zrt. 1055 Budapest, Bajcsy-Zsilinszky út 78.	100.0	20
MNB-Biztonsági Zrt.	QUALITAS-Védelmi Tanácsadó Kft. 1123 Budapest, Alkotás utca 50. C. ép. V. em.	100.0	140
GIRO Elszámolásforgalmi Zrt.	BISZ Központi Hitelinformációs Zrt. 1205 Budapest, Mártonffy utca 25–27.	100.0	217
KELER Zrt.	KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	99.7	1,823
Budapesti Értéktőzsde Zrt.	KELER Zrt. 1074 Budapest, Rákóczi út 70–72.	46.7	4 500
	KELER KSZF Zrt. 1074 Budapest, Rákóczi út 70–72.	0.1	1 823

In addition to banknotes, **Pénzjegynyomda Zrt.** produces documents, 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 satisfying customer needs. The main strategy of the company is focused on banknote production in adequate quantity and excellent quality, and increased penetration in market segments other than banknote production based on competitive advantages. This set of goals can ensure the long-term growth path for Pénzjegynyomda Zrt. and maintain and enhance shareholder value. As part of the programme for changing and developing Hungary's banknotes (between 2013 and 2018), the company applies all of its resources for the production of the developed banknotes. Beyond that it has stabilized its presence in the production and personalisation of important domestic documents for the contracting period until 2022. In 2015, a new site was set up in accordance with the mounting demand, featuring new technology as well as the implementation of equipment investments meeting modern requirements. In the first half of 2016, the company mainly produced cards, printed documents, manufactured tax stamps/banderoles on site, and in 2017 it will established a centre primarily providing the personalisation of passports and other domestic documents. The value of the investments changed to HUF 11,827 million in January 2017, resulting from the increase in the share capital of HUF 1.2 billion, which was necessary for the equipment investments. The primary function of **Diósgyőri Papírgyár Zrt.** (DIPA), with the priority of serving its shareholder, 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. Beside 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 ensures complex solutions. The company stands, also in international relations, for strengthening the appreciation of its customers based on tradition and innovative solutions and stabilising or improving the results achieved, thereby ensuring an efficient investment for the shareholder.

Pursuant to the MNB's order, the primary duty of **Magyar Pénzverő Zrt.** is to produce circulation coins for cash turnover and commemorative coins issued by the MNB. Utilisation of the company's free capacity allows for the production of non-legal tender commemorative coins 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 as a wholesaler and retailer as well.

Pénzügyi Stabilitási és Felszámoló Nonprofit Kft. (PSFN Kft., Financial Stability and Liquidator Non-profit Ltd.) 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 frame of its public function, PFSN Kft. designates the supervisory commissioners assuming partial or overall management of the financial institutions, which need direct professional control and review by the supervisory measures of the MNB. If it is stated 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 PSFN Kft. shall provide for liquidation or for winding-up proceedings of the financial institutions. The purpose of these procedures is to realise creditors interests, to satisfy their claims prior to the institution's termination. PSFN Kft. performs its functions for public use, 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 in a unified approach and methodology; and to close the terminations as soon as possible keeping in mind their complexity and the interests of the financial customers.

The objective of **Magyar Reorganizációs és Követeléskezelő (MARK) Zrt.** (MARK Hungarian Restructuring and Debt Management Private Company Limited by Shares, MARK Ltd.) is to effectively clean up a significant portion of the non-performing commercial real estate loan portfolios of the banking sector from the balance sheet of the banking system. In 2016, MARK continued in the framework of the agency contract to handle and sell the receivables and properties registered in the books of Magyar Szanálási Vagyongkezelő (MSZVK) group members. Following the review of the previous strategic directions, the company primarily provides institutional or professional investors with debt and real estate portfolio management services. The aim of the MNB is to have a successful precedent at the European level set by the operation of MARK, as a result of which the reliance on the central bank will cease and its operation will be placed on a market basis over the short term. The book value of the investment was modified by HUF 2,402 million to HUF 19,298 million in 2016 due to the impairment based on the year-end valuation.

MNB-Jóléti Humán Szolgáltató és Üzemeltető Kft. is responsible for the maintenance and operation of the Tiszaroff Training and Recreation Center 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 from HUF 75 million to HUF 569 million in 2016 due to the share capital increase (real property and cash contribution) during the year and the impairment loss based on the loss stated in the financial statement for 2015 and the expected loss for 2016.

MNB-Biztonsági Zrt. performs active personal guarding and protection activity in accordance with the contents of 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. The personal and property protection activity of the company was integrated in 2016 with the convoy of consignments that require security surveillance. MNB-Biztonsági Zrt. does not provide services to third parties outside the MNB. A further rise, to an extent ordered by the police, in the number of highly trained guards with special expertise is essential for successfully discharging the increased guarding and protection tasks (e.g. guards authorised to handle new equipment required for passenger and luggage inspection). The book value of the investment increased to HUF 740 million in 2016 due to the payment in the share capital of HUF 10 million and in the capital reserve of HUF 530 million.

By becoming the sole owner of **GIRO Zrt.**, the MNB has the opportunity to directly implement its ideas for developing electronic money circulation. The company 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 existing clearing services, implementation of new clearing services, and increasing the competitiveness of clearing fees. In line with this, after decreasing the clearing transactions fees by 20 per cent in 2015, the company carried out a further reduction in the fees

in January 2016, as a result of which the interbank transfer fee fell by 27 per cent in total, compared to the prices before the acquisition by central bank. From 1 January 2016 all forint credit transfers requiring interbank clearing, submitted to the credit institutions on paper, are processed in the intraday settlement system of the Interbank Clearing System, representing a new step toward the trend to move all transactions from the overnight settlement into the quicker intraday settlement system based on modern standards. Relating to the implementation of the payment account directive, a service facilitating switching the banks was introduced for the customers of the payment service providers. The preparation for implementation of the instant payment infrastructure was started in order to accelerate further the payment transactions and to broaden the use of electronic payment methods. Using the new payment system payments will be able to be effected in a few seconds 24 hours a day, on every day of the year.

MNB increased its ownership in **Budapesti Értéktőzsde Zrt. (BÉT)** to a 81.35 per cent stake by end-2016 by partially taking over the stake of small investors. The aim of the MNB is to develop and build market and to achieve an adequately sized, effectively operating capital market in Hungary, since the base of the competitive economy and of the sustainable growth is a developed capital market and diversified financial intermediary system. The development of the domestic capital market is all the more relevant, because funds arising from the European Union are already expected to decline considerably before 2020 and with the phasing-out of the FGS the MNB will also reduce its support for corporate lending. The expansion of the stock exchange will be based on the close cooperation of the state, the market and the BÉT with the development of regulation framework and market structure stimulating the operation of the capital market. The new strategic policy of the BÉT until 2020 consists of the following: successful official listings on the stock exchange, government support, renewal of the market structure, strengthening investors and international relations, as well as boosting bond and derivative markets. The strategy focuses on widening the investor base and making more attractive the conditions of supply and demand and liquidity in the domestic stock exchange, contributing to establishing a healthier structure of the financial system and improving interest rate transmission. This strategy can assist the further reduction of the shadow economy by ensuring the transparency of the listed companies. In 2016, as part of the new strategy BÉT carried out several measures: organising international forums and conferences in order to stimulate the supply-side of the issues, encouraging demand side with education, the Stock Exchange Advisory Body was established, and preparations were made for developing the SME market. As an important development, the government launched the Stock Exchange Development Fund, which also may contribute to supplying SMEs with capital. Since the company has a minority participation in the KELER Group consisting of **KELER Zrt.** and **KELER KSZF Zrt.**, the MNB also holds a strategic share in the KELER Group as the majority owner of the BÉT. 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 BÉT and transactions involving dematerialised securities issued in Hungary.

Equity of domestic investments

Upon compilation of the Annual Report, the latest available data are shown in the following table.

HUF millions

Investment	Share capital	Reserves	Profit/loss for the year	Equity
	31 Dec 2016			
Pénzjegynyomda Zrt.	10,627	4,113	1,634	16,374
Magyar Pénzverő Zrt.	575	691	148	1,414
Pénzügyi Stabilitási és Felszámoló Nkft.	50	3	0	53
MARK Zrt.	700	20,102	-21	20,781
MNB-Jóléti Kft.	763	-113	-74	576
MNB-Biztonsági Zrt.	210	718	675	1,603
GIRO Elszámolásforgalmi Zrt.	2,496	6,402	459	9,357
KELER Zrt.	4,500	23,040	1,272	28,812
KELER KSZF Zrt.	1,823	3,857	133	5,813
Budapesti Értéktőzsde Zrt.	541	5,432	73	6,046

The MNB's receivables from and liabilities to affiliated companies

HUF millions

Investment	Receivables	Liabilities
	31 Dec 2016	
Pénzjegynyomda Zrt.	0	1,042
Magyar Pénzverő Zrt.	5	1
MNB-Jóléti Kft.	84	138
MNB-Biztonsági Zrt.	1	0
GIRO Elszámolásforgalmi Zrt.	1	1
KELER Zrt.	0	1
Total	91	1,183

The above table presents short-term receivables and liabilities. Liabilities to Pénzjegynyomda Zrt. derive from invoicing of produced banknotes. Receivables from and liabilities to MNB-Jóléti Kft. are advanced payments provided in connection with operating of the company and from cost accounting.

4.13 IMPAIRMENT LOSSES AND PROVISIONS

HUF millions

B/S line	Description	31 Dec 2015	Interim changes in 2016		31 Dec 2016
		Impairment losses / provisions	Increase (+)	Reversal (-)	Total impairment losses / provisions
1	2	3	4	5	3+4+5
I.2.	Forint receivables from credit institutions	5,985	4	-500	5,489
I.3.	Other forint receivables	5,308	3,411	0	8,719
II.4.	Other foreign currency receivables	18	0	-18	0
III.	Invested assets	120	2,531	0	2,651
III.	Other assets	9	20	-2	27
VIII.	Liabilities	1,978	280	-1,569	689
	– litigation related liabilities	1,096	131	-687	540
	– FGS+ refinancing loans	0	149	0	149
	– derivatives	744	0	-744	0
	– bond lending	138	0	-138	0
	Total	13,418	6,246	-2,089	17,575

Impairment losses and provisions increased by HUF 4,157 million to HUF 17,575 million in 2016.

Based on the expected recovery, an impairment loss of HUF 5,489 million was created for forint receivables from credit institutions; compared to end-2015, in total there was a formation of an impairment loss in the amount of HUF 4 million and a write-back of an impairment loss in the amount of HUF 500 million.

In relation to forint receivables from supervisory activities, a HUF 3,411 million impairment loss appeared in total during the quarterly impairment testing in 2016.

The impairment balance of other foreign currency receivables was utilised in connection with depreciation of underlying receivables at the end of the year.

In relation to invested assets, a HUF 2,531 million impairment loss was recognised according to the accounting policy. In connection with the investment in MNB-Jóléti Kft., during the semi-annual impairment testing the impairment loss amounted to HUF 48 million based on the 2015 loss, and during the year-end testing an impairment loss of HUF 81 million was justified due to the preliminary loss expected in 2016. In relation to the investment in MARK Zrt., an impairment loss of HUF 2,402 million was created in view of the planned changes in 2017 (share capital decrease and its operation need to place on a market basis). As a result of impairment testing, on 31 December 2016, the value of the investment reflects the secure returns, consistent with the principle of prudence.

In the case of other banking assets, due to uncertainties of recoveries of receivables an impairment loss of HUF 20 million was created, while HUF 2 million was written back owing to recoveries in 2016.

In connection with litigation-related contingent liabilities, a provision of HUF 540 million was necessary as of 31 December 2016; compared to end-2015; in total there was a formation of a provision of HUF 131 million and a reversal in the amount of HUF 687 million.

In the framework of FGS+, up to a maximum of 50 per cent of credit institutions' capital loss arising from SME loans are reimbursed by the MNB, within the loss compensation limit. In 2016, provision of HUF 149 million was created for the compensation of expected loans in relation to FGS+.

The whole amount of the provision for derivative transactions for purposes other than hedging – due to the maturity – was reversed in 2016.

According to the international securities lending contracts, the MNB is charged with the entire amount of potential losses arising from hedge investments made by agents. Based on the principle of prudence, a provision must be created to cover this loss as a future liability. Because of the recall of the two underlying securities in 2016, the entire provision created for securities lending was released.

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

HUF millions

B/S line	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
	Due to banking transactions	95,500	68,837	-26,663
	Due to internal operation	197	383	186
IV.	Prepaid expenses/accrued income	95,697	69,220	-26,477
	Due to banking transactions	30,806	31,814	1,008
	Due to internal operation	238	669	431
X.	Accrued expenses/deferred income	31,044	32,483	1,439

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 2015	Interim change	31 Dec 2016
XI.1.	Share capital	10,000	0	10,000
XI.2.	Retained earnings	63,417	44,452	107,869
XI.3.	Valuation reserves	0	0	0
XI.4.	Revaluation reserves due to exchange rate changes	312,599	-130,140	182,459
XI.5.	Revaluation reserves of foreign currency securities	28,510	-11,156	17,354
XI.6.	Profit/Loss for the year	94,452	-40,171	54,281
XI.	Equity	508,978	-137,015	371,963

* Presented in the 2016 balance-sheet structure.

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 2015	31 Dec 2016	Változás
XI.4.	Revaluation reserves due to exchange rate changes	312,599	182,459	-130,140
XI.5.	Revaluation reserves of foreign currency securities	28,510	17,354	-11,156
	Total revaluation reserves	341,109	199,813	-141,296

The official forint exchange rate versus the euro fluctuated in a range of EUR/HUF 304.28 to 317.97 in 2016. It reached its lowest value in early October and its highest value in mid-January. Compared to 31 December 2015, the exchange rate strengthened by 0.7 per cent. The exchange rate was EUR/HUF 311.02 as at 31 December 2016. The average cost rate weakened by HUF 2.99 to EUR/HUF 301.16. As a result, the difference between the official and average cost rate was lower compared to end-2015 (a decrease from EUR/HUF 14.95 to EUR/HUF 9.86). Consequently, the revaluation reserves due to exchange rate changes, calculated as the difference of foreign exchange items converted into forints using the official and average cost rate, decreased by HUF 130.1 billion to HUF 182.5 billion.

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 balance of HUF 17.4 billion as at 31 December 2016.

Annual changes in the forint exchange rate

EUR/HUF

Date	MNB official exchange rate	Average cost rate
31 Dec 2015	313.12	298.17
31 Dec 2016	311.02	301.16
Annual appreciation		
In 2015	0.6%	
In 2016	0.7%	

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

Liabilities arising from hedging transactions and derivative transactions for purposes other than hedging with related receivables

HUF millions

No.	Description	31 Dec 2015			31 Dec 2016		
		Receivables	Liabilities	Net market value	Receivables	Liabilities	Net market value
1.	Interest rate swap transactions	2,634,171	2,634,171	17,976	3,870,739	3,870,739	36,358
	– IRS conditional on lending activity (LIRS)	0	0	0	779,560	779,560	–8,994
	– IRS contracted with domestic credit institutions	1,296,440	1,296,440	10,636	1,731,290	1,731,290	50,438
	– IRS contracted with foreign partners	1,337,731	1,337,731	7,340	1,359,889	1,359,889	–5,086
2.	Bond future transactions	0	33,695	–19	0	260,719	–2,738
3.	FX swap and forward transactions	3,478,755	3,501,907	–22,971	2,874,990	2,793,117	82,832
	– Forint liquidity providing FX swaps	0	0	0	400,487	400,283	126
4.	Currency swap transactions (including transactions without capital replacement)	3,291,513	3,351,549	–187,442	2,052,883	2,105,756	–172,066
	– Currency swap transactions linked to FGS	148,106	142,494	5,734	84,783	85,143	10,094
5.	Total hedging transaction (1+2+3+4)	9,404,439	9,521,322	–192,456	8,798,612	9,030,331	–55,614
6.	CDS transactions	187,872	187,872	–716	0	0	0
7.	FX swap and forward transactions	25,163	25,162	–18	0	0	0
8.	Total derivative transactions for purposes other than hedging (6+7)	213,035	213,034	–734	0	0	0
9.	Total (5+8)	9,617,474	9,734,356	–193,190	8,798,612	9,030,331	–55,614

The table above includes all types of off-balance sheet 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 arising from cross-rate fluctuations and interest rate changes. These transactions 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 desired by the MNB. Furthermore, since 2014, the MNB concluded interest rate swap tenders with domestic credit institutions in order to reduce their interest rate risk, additionally in 2016 interest rate swaps conditional on lending activity (LIRS) were concluded. Most of the approved transactions have a maturity of 1 to 5 years, and less than 7 per cent have 10-year maturity.

The aim of bond 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. In the fourth quarter of 2016, a new forint liquidity-providing FX swap was launched for monetary policy purposes related to the quantitative limit for the 3-month deposit.

Currency swap transactions are for managing foreign exchange and interest rate risks jointly over the long run. Their amount decreased in 2016, as some of the transactions related to phasing out households' foreign currency loans matured. Of the end-2016 balance, 32 per cent of the currency swap transactions consisted of transactions without capital replacement concluded in February and November 2013 with a maturity of 10 years.

Liabilities from derivative transactions by remaining maturity

HUF millions

No.	Remaining maturity	Balance		Change
		31 Dec 2015	31 Dec 2016	
	– within 1 year	4,884,234	3,390,360	–1,493,874
	– within 1 to 5 years	1,988,576	2,829,416	840,840
	– over 5 years	2,648,512	2,810,555	162,043
1.	Hedging transactions	9,521,322	9,030,331	–490,991
	– within 1 year	213,034	0	–213,034
	– within 1 to 5 years	0	0	0
	– over 5 years	0	0	0
2.	Derivative transactions for purposes other than hedging	213,034	0	–213,034
3.	Total (1+2)	9,734,356	9,030,331	–704,025

Other off-balance sheet liabilities

HUF millions

No.	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
1.	FGS residual drawable credit facilities	185,609	121,583	–64,026
2.	FGS+ related contingent liabilities	0	149	149
3.	Litigation-related contingent liabilities	1,564	716	–848
4.	Guarantees	1,763	1,804	41
5.	Other off-balance sheet liabilities	15	15	0
6.	Total (1+2+3+4+5)	188,951	124,267	–64,684

In connection with the Funding for Growth Scheme, the MNB reports the following items as off-balance sheet liabilities: the still available credit facilities allocated originally in the framework of FGS+, but now drawable both in the additional phase of FGS Pillar I and in the Pillar of FGS+ at the request of the banks; furthermore, the credit facilities drawable in the 3rd phase of FGS Pillar I and Pillar II originating from 2016.

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 within a limit. FGS+ related contingent liabilities are to record the expected reimbursement for which provisions have been formed in line with the rules of qualification.

The majority of the proceedings are connected to the supervisory activities and contain proceedings against penalty resolutions as well as indemnity cases. The related contingent liabilities are to record the 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 2015, the increase in the balance was caused by exchange rate changes.

Recording off-balance sheet security transactions

HUF millions

No.	Description	Balance		Change
		31 Dec 2015	31 Dec 2016	
1.	Face value of securities lent	555,761	364,807	-190,954
	– automatic securities lending	48,037	24,457	-23,580
	– agency securities lending	507,724	340,350	-167,374
2.	Purchase cost of the non-cash hedge arising from security lending transactions	96,973	89,298	-7,675
3.	Investment of cash hedge arising from security lending transactions			
	– at purchase cost	432,792	236,400	-196,392
	– at market value	432,654	236,400	-196,254
4.	Not invested cash hedge arising from security lending transactions	0	27,199	27,199
5.	Face value of securities bought under repo transactions	51,006	3,670	-47,336
6.	Face value of securities sold under reverse repo and blocked to ECB repo transactions	0	0	0

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	2015	2016	Change
1	2	3	4	4-3
(I.1.+II.2.)—(X.1.+XI.1.)	Central government	-3,551	-3,506	45
(I.2.+II.3.)—(X.2.+XI.2.)	Credit institutions	-89,341	-28,699	60,642
(I.3.+II.1.+II.4.)—(X.3.+XI.3.)	Other	122,537	74,812	-47,725
	Net profit/loss from interest	29,645	42,607	12,962
	Forint securities	485	122	-363
	Foreign currency securities	-91,024	-52,584	38,440
	Derivative transactions for hedging and other purposes*	18,218	-5,786	-24,004
	Other	-27	14	41
(I.4.+II.5.)—(X.4.+XI.4.)	Net interest-related profit/loss	-72,348	-58,234	14,114
(I.+II.)—(X.+XI.)	Net interest and interest-related income	-42,703	-15,627	27,076

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

In 2016, the MNB recorded a net interest and interest-related loss of HUF 15.6 billion, representing an improvement of HUF 27.1 billion compared to the figure for end-2015, when a loss of HUF 42.7 billion was reported.

Net interest income improved by HUF 13 billion in comparison to end-2015, due to the drop in liquidity-absorbing instruments (main policy instruments and O/N deposits) as a result of the shrinkage of the central bank balance sheet and the decrease in the average base rate.

Positive factors in net interest income were:

- interest expenses on the main policy instruments (on three-month MNB deposits) were HUF 50.5 billion lower;
- interest paid on the forint deposits of the central government decreased by HUF 5.5 billion compared to 2015, due to the falling forint interest rates;
- an increase in interest income on loans to credit institutions and mortgage bonds of HUF 0.9 billion stemmed from the rise in security-backed loans.

Negative factors in net interest income were:

- a decline of HUF 45.5 billion in interest income on foreign exchange reserves relative to 2015;
- a decrease of HUF 5.6 billion in interest income on receivables from the central government arising from the lower amount of government bonds.

Net interest-related income increased by HUF 14.1 billion; it includes mainly the net gain or loss on derivative transactions which are not related to exchange rate changes and the amortisation of the purchase price difference (premium) of securities.

Negative sums for interest income/expenses in the net forint and foreign currency interest and interest-related income for 2016

<i>HUF millions</i>			
P/L line	Description	Total	of which: Negative sums for interest
II.	INCOME		
	Interest and interest-related income denominated in foreign currency	154,036	–2,942
II. 1.	Interest on foreign exchange	78,010	–2,908
II. 5.	Interest-related income	76,026	–35
X.	EXPENSES		
	Interest and interest-related expenses denominated in forint	45,866	–17
X. 1.	Interest on central government deposits	5,680	0
X. 2.	Interest on deposits by credit institutions	32,853	–17
X. 3.	Interest on other deposits	89	0
X. 4.	Interest-related expenses	7,244	0
XI.	Interest and interest-related expenses denominated in foreign currency	141,203	–4,258
XI. 1.	Interest on central government deposits	–1,845	–1,848
XI. 2.	Interest on deposits by credit institutions	–173	–178
XI. 3.	Interest on other liabilities	3,233	–410
XI. 4.	Interest-related expenses	139,988	–1,822

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

HUF millions

No.	Description	2015	2016	Change
1.	Net interest on currency swaps	-2,288	-14,414	-12,126
2.	Interest margin on hedge interest rate swaps	15,798	11,047	-4,751
3.	Net interest gains on hedge FX swaps	5,902	-2,203	-8,105
4.	Net interest gains on hedge forward transactions	652	-1,015	-1,667
5.	Net interest gains on hedge futures transactions	-1,624	-2,956	-1,332
6.	Net interest-related income on hedge swap transactions	-148	3,270	3,418
7.	Net interest-related income on hedge option transactions	137	95	-42
8.	Net interest and interest-related income on other transactions	-211	390	601
9.	Net income from derivative transactions (1+2+3+4+5+6+7+8)	18,218	-5,786	-24,004

Currency swap transactions include derivative transactions concluded with foreign partners, with the Government Debt Management Agency (ÁKK), and with domestic credit institutions. The average amount of transactions concluded with the Government Debt Management Agency increased in 2016, but changes in FX market yields (euro and US dollar yields) had an unfavourable impact on the result. The transactions concluded with foreign partners serve mainly to hedge transactions concluded with the Government Debt Management Agency. The average amount of transactions did not change in 2016, but changes in FX market yields caused a slightly increase in the interest income. The average amount of transactions concluded with domestic credit institutions dropped considerably compared to 2015, resulting from the maturity of a part of the transactions related to the phasing-out of households' foreign currency loans. The net interest result of the currency swaps was a loss of HUF 14.4 billion, and there was a deterioration of HUF 12.1 billion compared to 2015.

The HUF 4.8 billion decrease in the interest result on interest rate swaps was caused by those conditional on lending activity (LIRS). Under the facility, the MNB offers the banks a fixed rate construction below the market rate, which is expected to promote lending by managing banks' interest rate risks arising from lending, through the partial assumption of such risks by the MNB.

Hedge FX swaps include short-term transactions concluded with foreign partners, with the Government Debt Management Agency, and with domestic credit institutions. Net interest gains on these swaps decreased by HUF 8.1 billion caused mainly by maturity in 2016 of transactions related to the phasing-out of households' foreign currency loans. Interest expenses on transactions concluded with foreign partners increased as a result of the change in their foreign exchange composition.

The amount of hedge forward transactions concluded with foreign partners increased, but transactions concluded with the Government Debt Management Agency were terminated, and there were no such transactions in 2016. The foreign exchange composition of the transactions differed significantly in 2016 from 2015 because the transactions were concluded with different partners. Net interest gains on hedge forward transactions decreased by HUF 1.7 billion, resulting from the less favourable difference in interest.

Net interest loss on hedge futures transactions increased by HUF 1.3 billion, due to the greater amount and the higher interest expense on bond futures transactions.

Net interest-related income on hedge swap transactions includes the exchange rate gains or losses of the transactions. The HUF 3.4 billion increase in the net interest-related result on hedge swaps was caused mainly by the exchange rate gains arose from the termination of interest rate swaps concluded with credit institutions.

Realised gains/losses from financial operations

HUF millions

P/L line	Description	2015	2016	Change
	Realised gains on bonds issued by the Hungarian Government	2,694	132	-2,562
	Realised gains on covered mortgage bonds	417	0	-417
	Realised gains on coupon bearing bonds denominated in foreign currency	15,079	23,568	8,489
	Realised gains related to CDS transactions	0	0	0
IV.	Realised gains from financial operations	18,190	23,700	5,510
	Realised losses on bonds issues by the Hungarian Government	0	0	0
	Realised losses on covered mortgage bonds	0	0	0
	Realised losses on coupon bearing bonds denominated in foreign currency	2,388	6,123	3,735
	Realised losses related to CDS transactions	940	731	-209
XIV.	Realised losses from financial operations	3,328	6,854	3,526
IV.-XIV.	Net financial gains/losses	14,862	16,846	1,984

Realised gains and loss from financial operations include gains and losses arising from sales of securities, from sales of investments arising from security lending transactions and gains and losses related to CDS transactions.

Net realised gains from financial operations amounted to HUF 16.8 billion in 2016, improving by HUF 2 billion compared to 2015. These were mainly exchange rate gains arising from the sales of coupon-bearing foreign exchange bonds.

4.19 COMPONENTS OF INCOME FROM THE REVALUATION OF FOREIGN EXCHANGE HOLDINGS

HUF millions

Description	2015	2016
Net income from exchange rate changes (realised and conversion spread)*	177,677	95,089
Change in revaluation reserves in the balance sheet** (due to unrealised revaluation net income)	-205,385	-130,140
Total effect of exchange rate changes	-27,708	-35,051
* P/L line: III.-XII.		
** Revaluation reserves due to exchange rate changes (balance sheet line XI.4.).		

In 2016, the total exchange rate change effect was a loss of HUF 35.1 billion, due to the changes in the exchange rate of the forint. In the sales related to decreasing the daily net FX position, the MNB realised a gain of HUF 95.1 billion, while the amount of the revaluation reserve was decreased by the unrealised exchange rate changes losses of HUF 130.1 billion during the year.

For more details on revaluation reserves, see Section 4.16.

4.20 COST OF ISSUING BANKNOTES AND COINS

HUF millions

P/L line	Description	2015	2016	Change
	Cost of banknote production	7,925	11,712	3,787
	Cost of coin production	3,025	1,988	-1,037
	Cost of production of commemorative and collector coins	336	463	127
XIII.	Cost of issuing banknotes and coins	11,286	14,163	2,877

The total cost of issuing banknotes and coins amounted to HUF 14.2 billion in 2016, representing an increase of HUF 2.9 billion compared to the figure for 2015. The growth originated in particular in the higher manufacturing needs resulting from the programme for changing and developing the new banknotes, which caused an increase of HUF 3.8 billion in the cost of banknote production. In 2016, no increased demand for coins was seen as was the case in 2015, and therefore the cost of coin production decreased by more than HUF 1 billion compared to the previous year. The cost of production of commemorative and collector coins substantially exceeded the figure for 2015, as demand for commemorative coins increased significantly. The commemorative coin for the 5th anniversary of the Fundamental Law of Hungary was an unplanned issue, which also raised the costs.

4.21 OTHER INCOME/EXPENSES

HUF millions

P/L line	Description	2015	2016	Change
V.1.	Income from fees and commissions	1,033	941	-92
XV.1.	Expenses of fees and commissions	851	693	-158
	Net income from fees and commissions	182	248	66
V.2.	Income from other than fees and commissions	1,380	1,634	254
XV.2.	Expenses of other than fees and commissions	20,417	4,570	-15,847
	Net income from other than fees and commissions	-19,037	-2,936	16,101
V.3.	Income from supervisory activities	12,111	14,675	2,564
V.-XV.	Other net results	-6,744	11,987	18,731

Income from fees and commissions mainly relates to payment services. In 2016, the income from fees and commissions decreased mainly because from 1 January 2016 the fee per item for submitted orders sank. The decline in expenses for fees and commissions was caused by the lower costs related to the management of foreign securities accounts.

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	2015	2016	Change
	Income related to coins and commemorative coins	471	609	138
	Dividends from investments	797	814	17
	Income related to invested financial assets	0	24	24
	Income from assets assigned free of charge	1	0	-1
	Recommitment of financial money transfer	13	93	80
	Other income	98	94	-4
V.2.	Income from other than commissions and charges	1,380	1,634	254
	Financial money transfer	15,288	3,697	-11,591
	Expenses related to coins and commemorative coins	458	569	111
	Expenses related to public proceedings	98	217	119
	Expenses from assets assigned free of charge	4,545	18	-4,527
XV.2.	Expenses from other than commissions and charges	20,417	4,570	-15,847
V.2.-XV.2.	Net income/expenses from other than commissions and charges	-19,037	-2,936	16,101

Income other than fees and commissions includes the following in 2016:

- 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.
- Dividends from investments increased by HUF 17 million compared to 2015. In 2016, Magyar Pénzverő Zrt. paid a dividend of HUF 80 million to the MNB, and BIS paid EUR 2.3 million (HUF 734 million) to the MNB.
- The item 'Income related to invested financial assets' includes the price difference between the book value and the transactional value of the real property at Tiszaroff transferred as contribution to the MNB-Jóléti Kft. (see Section 4.12).
- In 2016, the item 'Financial money transfer' includes the HUF 600 million allocation of founders' financial assets related to the Pallas Athena Public Thinking Programme and money transfers for financial and professional purposes, mainly to foundations, professional organisations and to schools, as well as donations for charitable purposes. After the settlement donations not allocated are remitted to the MNB.
- Expenses related to public proceedings arising mainly from remittance of penalties related to inoperative decisions and accounted earlier as income, moreover cancellation of penalties.

4.23 INCOME FROM SUPERVISORY ACTIVITIES

HUF millions

P/L line	Description	2015	2016	Change
	Supervisory fee and default interest	8,940	9,119	179
	Received penalties and reimbursement from public proceedings	2,913	5,255	2,342
	Administrative servicing fee from public proceedings	180	281	101
	Late payment surcharge for supervisory claims	23	10	-13
	Other income arising from administrative procedures	55	10	-45
V.3.	Income from supervisory activities	12,111	14,675	2,564

The main item of income from supervisory activities is the supervisory fee received from the supervised institutions obliged to pay this fee. In 2016, 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 9.1 billion, while in 2015 the declared obligation amounted to HUF 9 billion. Penalties imposed by the MNB, which became final and from reimbursements added up to HUF 5.3 billion. In connection with penalties, an impairment of HUF 3.4 billion was also created in the period under review for the recoveries, as well as for litigation items based on the probability of losing a lawsuit (see Section 4.13). Administrative servicing fees and magisterial exam fees amounted to HUF 0.3 billion in 2016.

4.24 OPERATING INCOME AND EXPENSES

HUF millions

P/L line	Description	2015	2016	Change
	Income from assets and inventories	62	20	-42
	Income from subcontracted services	454	224	-230
	Income from invoiced services	931	1,052	121
	Other income	19	41	22
VIII.	Total operating income	1,466	1,337	-129
	Expenses of materials	11,677	12,372	695
	Cost of materials	464	432	-32
	Services contracted	11,182	11,899	717
	– Maintenance, operation and rent of properties	1,944	1,806	-138
	– Maintenance and rent of equipments	649	675	26
	– Postal and telecommunication services	618	684	66
	– Consultancy services	1,657	1,138	-519
	– IT security services	1,338	1,375	37
	– Membership fees	487	606	119
	– Guarding services, transport of banknotes and coins	2,726	4,132	1,406
	– Advertisements, market research	757	505	-252
	– Other, non significant services*	1,006	978	-28
	Other services	31	41	10
	Personnel-related costs	19,712	21,146	1,434
	Depreciation	2,671	2,954	283
	Transfer of costs of other activities	-1,086	-1,077	9
	Total operating costs	32,974	35,395	2,421
	Expenses incurred on assets and inventories	60	30	-30
	Expenses incurred on subcontracted services	452	223	-229
	Expenses incurred on invoiced services	1,036	1,013	-23
	Other expenses	430	370	-60
	Total operating expenses	1,978	1,636	-342
XVIII.	Total operating costs and expenses	34,952	37,031	2,079
VIII.–XVIII.	Net operating expenses	-33,486	-35,694	-2,208

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

Net operating expenses amounted to HUF 35.7 billion in 2016, representing an increase of HUF 2.2 billion (6.6 per cent) compared to 2015.

Operating expenses in 2016 were 7.3 per cent (HUF 2.4 billion) higher than previous year. The main reason for this cost increase was higher amount of cost of materials and personnel-related expenses.

The cost of materials in the reporting year was 6 per cent (nearly HUF 0.7 billion) higher than previous year.

The increase in costs related to armed guarding and protection were mainly observed among the material nature-related expenses. This is mostly the result of the impact of outsourcing of guarding activities and the enforcement of higher safety requirements, which arose only from March 2015, while in 2016 has already applied for the entire reporting period. In addition, from 1 January 2016 the costs of guarding increased.

Within the costs of materials, consultancy costs and legal expenses declined. The main reason was that the costs associated with the Bank's asset management mainly arose in 2015, and significantly fewer cases required legal resolutions by Financial Arbitration Board pursuant to the National Bank Act in 2016 compared to the number of cases in 2015.

In 2016 advertising and market research costs also fell, mainly due to delays in public procurement procedures related to communication tasks.

Personnel-related costs increased by 7.3 per cent (HUF 1.4 billion) compared to the previous year. The average headcount rose 4.1 per cent, due to unfilled positions and supply of new tasks (e.g. resolution and reorganisation activities, and the Financial Arbitration Board's activities). The cost of the health programme (general medical screening) in 2016 accounted for a smaller part of this growth, due to the longer duration and greater number of employees who had recourse to this examination.

Depreciation increased by 10.6 per cent (by HUF 0.3 billion) in 2016 versus the previous year, mainly due to the investments realised in 2015.

The *transfer of costs* is intended to ensure that the total amount of operating expenses reflects only the actual expenses incurred by the MNB. The absolute value of transfers in 2016 was HUF 1.1 billion, which is 99.2 per cent of the total in 2015. On the one hand the transferred depreciation of leased areas of the Eiffel Palace office building purchased during the year appears in this item, and on the other hand it also includes the rent paid by Magyar Pénzverő Zrt. to the MNB for the partial use of the Logistic Center area. The self-developed software costs also appear in this item, as these costs by software activation will be part of assets.

The revenue of invoiced mediated services comes primarily from property rental income. Rents and re-invoiced operating costs are reported as revenue, operational and amortization costs – related to rental activity – transferred from operating activities are reported as expenditures.

4.25 INFORMATION ON WAGES AND NUMBER OF STAFF

HUF millions

Description	2015	2016	Change (%)
Payroll costs incurred on staff	12,484	13,144	5
Other staff costs*	470	530	13
Payroll	12,954	13,674	6
Other payments to personnel	2,362	2,853	21
Social contribution tax	3,544	3,749	6
Health contribution	588	595	1
Contribution to vocational training	197	208	6
Contribution to rehabilitation	61	61	0
Sick-allowance	6	6	0
Taxes on personnel related payments	4,396	4,619	5
Payments to personnel	19,712	21,146	7

* 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	2015	2016	Change (%)
Average number of staff	1,274	1,326	4

Remuneration and loans of executive officers

HUF millions

Bodies	Compensation
Monetary Council*	315
Supervisory Board	156

* Includes the salaries and employer's voluntary pension fund contributions of 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 2016	Final maturity	Rate of interest
	HUF millions			
Monetary Council	48	19	01 Dec 2018	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.*

24 April 2017, Budapest

Dr György Matolcsy
Governor of the Magyar Nemzeti Bank

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