MAGYAR NEMZETI BANK

REPORT

2013
—
2019

*With responsibility to the nation –
the measures taken by
the Magyar Nemzeti Bank to foster
the economic and social development
of our country*

Magyar Nemzeti Bank
Report

"The greatness and happiness of a nation
lies always in the nation itself."

Stádium, 68

by Count István Széchenyi

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Contents

1 Foreword

The global financial crisis of 2008–2009 and the events of the decade that followed represent an important end of an era not only for economic historians. The complex challenges posed by the global economic crisis and the responses to it fundamentally define our everyday lives, even today, and bear profound geopolitical, socio-political and political consequences. Once again, it has been proven that in difficult situations, sustainable development can only be achieved through an economic policy based on creative ideas, courageous decisions and constructive cooperation. Novel problems demanded an approach with a new economic philosophy breaking with older ones, as well as a change of role perception in the various branches of economic policy. The biggest changes have certainly taken place in the activities of the central banks managing monetary policy.

By 2009, the Hungarian economy had reached a low point, but as a result of the budget launched by the Government that came into office in 2010, and the monetary policy turnaround since 2013, we can now see the healthiest economic boom in our modern history. Broad-based, rapid economic growth is taking place through full employment and by maintaining a stable external and internal balance. As with most central banks in the world, the last six years have been a period of renewal for the Magyar Nemzeti Bank, with innovative solutions and exciting decisions. Upon reaching the end of the six-year presidential term that started in 2013, the Bank bears the important responsibility to the nation to render an account of its decisions made in recent years, as well as the results of those decisions.

The central bank management that took office in 2013 started its work with new responsibilities and new powers. By pursuing a real inflation-targeting strategy, the Magyar Nemzeti Bank has ensured the stability of the financial system and effectively supported the Government's economic policy. The renewed central bank, which had previously been chiefly a conventional, often passive participant, has become an innovative and proactive actor and has achieved results of economic history in many areas by implementing both conventional and unconventional measures.

For two years - uniquely in the history of nearly two decades of the Hungarian inflation targeting system - inflation has been almost continuously within the central bank's tolerance band, while the Magyar Nemzeti Bank has supported and continues to support the development of the Hungarian economy with a historically low interest rate environment. The central bank policy has renewed the entire financial system with a series of targeted measures. Credit incentive schemes (such as the Funding for Growth Scheme and the Market-based Lending Scheme) have helped to restore corporate credit markets, while macroprudential (such as the introduction of debt cap rules, qualified consumer-friendly mortgage loans) and monetary policy measures (such as the Mortgage Bond Purchase Programme) have provided a healthy structure for retail credit growth. The Self-financing Programme has reduced the country's external vulnerability and, as one of the most important decisions of the period, together with the Government and the Hungarian Banking Association we managed to solve the burning problem of household foreign currency loans. The Magyar Nemzeti Bank has ensured the stability of our financial system with a strong and effective supervisory policy. Hungary's gold reserves finally returned home and their size has increased tenfold, while the central bank has been actively involved in reforming domestic economic education and improving financial awareness. The monetary policy turnaround allowed the Magyar Nemzeti Bank to operate profitably in every year of the cycle, thus not a forint of taxpayers' money had to be spent on shoring up central bank losses. Moreover, the MNB also contributed to the reduction of public debt by dividend payment, and by the end of 2018 it had built up a high level of profit reserves, which will provide security for the coming years. In recent years, the central bank has been actively supporting the Government's economic policy with elaborate proposals for competitiveness.

Even this brief and by no means complete list shows that these have been productive years. As a bank of the Hungarian nation, our measures have always served its development. The success of domestic economic policy is now widely recognized. Thanks to our results, we have managed to establish a central bank, which has consolidated its activities both domestically and internationally. Its targeted, unconventional central bank policy has made the Magyar Nemzeti Bank the most innovative central bank in the emerging region.

Dr. Ferenc Gerhardt
Deputy Governor

Márton Nagy
Deputy Governor

Dr. László Windisch
Deputy Governor

Dr. György Matolcsy
Governor

2 The MNB as the bank of the Hungarian nation – in a strategic alliance for the nation

2.A NEW MNB LAW

In the spring of 2013, there was a radical turnaround in the monetary policy of the Magyar Nemzeti Bank. As a result of the cycle of interest rate cuts started in August 2012 and evolving in 2013, the base rate dropped to a historical low in May 2016. Meanwhile, from the spring of 2013, in addition to traditional instruments, central bank management eased monetary conditions with targeted, unconventional tools. The new Central Bank Act, which entered into force in October 2013, strengthened the central bank's mandate system and gave it broader powers to support the stability of the financial system. The new Central Bank Act defined the mandate system and basic tasks of the Magyar Nemzeti Bank as follows:

The primary objective of the MNB shall be to achieve and maintain price stability. (Act CXXXIX of 2013, Section 3. [1])

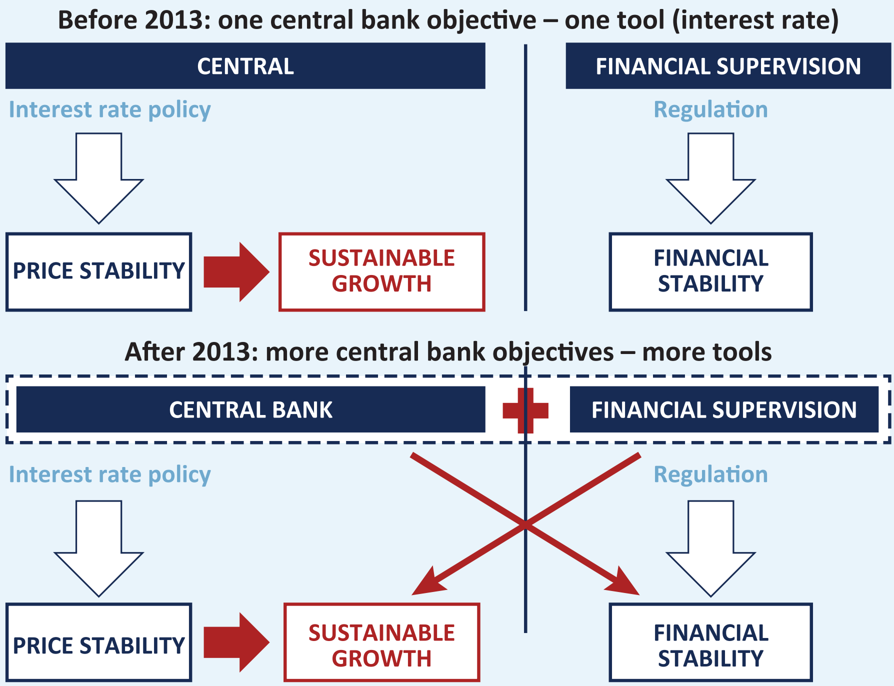
Without prejudice to its primary objective, the MNB shall uphold to maintain the stability of the financial intermediary system, to increase its resilience and to ensure its sustainable contribution to economic growth, and shall support the economic policy of the Government using the means at its disposal. (Act CXXXIX of 2013, Section 3. [2])

The new Central Bank Act details the role of the central bank, defines the parameters for its operation and establishes a legal framework for the efficient and effective operation of the Magyar Nemzeti Bank.

With the entry into force of the Act, the Hungarian Central Bank expanded both its licenses and its organization, since October 2013 the Magyar Nemzeti Bank has been responsible for the supervision of the banking system as well as other financial institutions, which was previously the responsibility of the Hungarian Financial Supervisory Authority (PSZÁF). In addition to the supervisory powers, the authority functions related to financial resolution have endowed the central bank with a wide range of competence. However, the integration of supervisory powers required a rethink of the previous regulatory framework. Accordingly, the central bank coordinated its macro- and microprudential supervisory framework, as well as its applied set of instruments. In addition, it sought to consolidate the financial consumer protection and to represent and defend consumer interests more effectively. By international comparison and from an organizational perspective, the Magyar Nemzeti Bank has become a remarkable institution in its role as the authority exercising supervisory powers over the financial system.

The period prior to the global economic crisis of 2008 was characterized by a stable macroeconomic environment, seemingly sustainable growth and relatively low inflation in the global economy. However, this apparent stability masked the gradually emerging imbalances in the real economy and money market, which later resulted in the collapse of the financial system. The crisis demonstrated that macroeconomic stability does not in itself guarantee the stability of the financial system, so in recent years the role of financial stability has appreciated in international central bank practices, and real economy factors have also become more prominent in decision-making *(Chart 2.1).*

Chart 2.1
Competence of the Magyar Nemzeti Bank before and after 2013



Source: MNB.

Despite its broadening powers, the primary objective has not changed, the central bank continues to strive to create and maintain financial stability without endangering its price stability mandate, and supports the Government's economic policy with the means at its disposal. The emergence of new roles has led to the development of a clearer, more flexible inflation targeting system that emphasizes the primacy of the price stability mandate. The new Central Bank Act effectively laid the foundations for the successful monetary policy turnaround of recent years, for the stability of the financial system and for putting the growth of the Hungarian economy on a sustainable path.

2.B NEW MANDATE SYSTEM

In many respects, the crisis found the Hungarian economy in an unfavourable situation. In addition to the country's significant external vulnerability and the high ratio of foreign currency loans, the weak banking system also contributed to the fact that the crisis caused a severe downturn in the Hungarian economy. In order to successfully manage the crisis, the Magyar Nemzeti Bank made its inflation targeting strategy more flexible and strengthened its mandate system with the new Central Bank Act. In addition to the traditional monetary policy instruments, the central bank also sought to meet its mandates by introducing new, proactive, innovative and targeted instruments. The development of targeted tools supported the avoidance of conflicts between the objectives of the central bank, because due to their targeted nature, it became possible to implement the financial stability and real economic factors without jeopardizing the primary mandate, which was also supported by strategic cooperation with the Government, the financial institutions and other economic actors.

The integration of supervisory powers over the financial system effectively created the conditions for ensuring financial stability within the central bank's mandate system (Matolcsy, 2015, p. 445). The coordination of macro- and microprudential regulations as well as the creation of the resolution function in its unique way made it possible for the central bank to assess and effectively manage the risks to the financial system.

While out of the government's economic policy programmes it was the Széll Kálmán Plans, the labour market reforms, as well as the commitment to disciplined fiscal policy and the elimination of excessive deficit procedure that promoted stabilization, the central bank committed itself to sustained loose monetary conditions and to the historically low interest rates. By launching its targeted Funding for Growth Scheme Programme that supports targeted growth, it contributed to the turnaround in lending, helping the Hungarian economy recover from the crisis. By increasing the proportion of domestic ownership of Hungarian government securities, the MNB's Self-financing Programme helped to strengthen the domestic financing of government debt, which contributed to the reduction of the country's external vulnerability through the realization of a sustainable debt path. The external vulnerability of the economy was further reduced by the forint conversion of residential foreign currency debts. As a result, several international credit rating agencies decided to upgrade the economy.

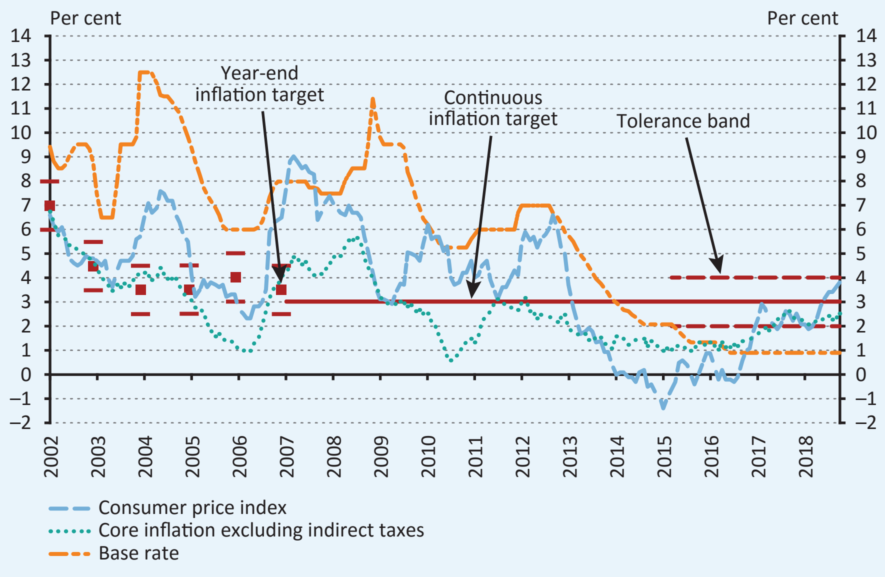
The proactive, innovative monetary policy of the Magyar Nemzeti Bank made it possible to stabilize the real economy and the financial system, without jeopardizing the objective of price stability, as a result of which the country's external vulnerability was significantly reduced and the programmes significantly contributed to Hungary's recovery from the crisis.

2.C NEW, EXPANDED INFLATION TARGET SYSTEM

The crisis provided the central banks with many lessons. By examining the shocks that hit the economy, central banks concluded that they were larger and more persistent than before. In such an environment, the pursuit of achieving the inflation target may entail a greater risk to the real economy, as the inflation index may become more volatile in a significant manner. In parallel with this, during the crisis the historically low level of interest rates reduced to close to zero also meant that central banks hit the lower bound of the application of their policy rate. After reaching the effective lower bound, the best way for them to strive to sustainably fulfil their primary, price stability mandate was to introduce unconventional tools. As a result, many central banks instigated measures to make the applied inflation targeting system more flexible. In decision-making, in addition to the priority of the price stability mandate, this primarily meant the appearance of the real economy and financial stability factors. In respect to how the aim was achieved, in several cases flexibility appeared in the creation and a more active use of the tolerance band around the inflation target, while in terms of time some central banks extended the time horizon for target achievement (Felcser et al., 2015).

In March 2015, in line with the monetary turnaround in the spring of 2013, and in harmony with the new central bank law and the strengthened central bank mandate system, the Magyar Nemzeti Bank designated an ex ante ± 1 percentage point tolerance band around the 3% inflation target. With the introduction of the tolerance band, the central bank remains committed to its 3% inflation target, while at the same time indicating that due to the simultaneous application of various decision-making criteria as well as the longer-lasting shocks to the economy it is able to tolerate to some extent the fluctuation of inflation around the target. In the Hungarian central bank's practice, some temporary tolerance of the deviation from the inflation target had to a certain degree appeared earlier as well, however, this was part of the ex post evaluation of inflationary processes in terms of target achievement (ex post tolerance band) (Felcser–Horváth, 2017). At the same time, with the introduction of the ex ante tolerance band the central bank is effectively declaring in advance that, besides the priority of achieving the inflation target in a sustainable manner, it will tolerate inflation fluctuations around the target in a symmetric band of 1 percentage point. The use of a more flexible inflation targeting system, including a tolerance band around the inflation target, has proved successful: since January 2017, the inflation rate has been mainly within the band *(Chart 2.2).* Thus, in recent years, the Magyar Nemzeti Bank has successfully stabilized inflation around the 3% inflation target in the context of the monetary policy turnaround.

Chart 2.2
Inflation rate and base rate performance as well as development of domestic inflation targeting system



Source: MNB.

2.D MNB SUPERVISION INTEGRATION

According to Act CXXXIX of 2013 on the Magyar Nemzeti Bank, from 1 October 2013, the **MNB is also responsible for the supervision of financial institutions and financial consumer protection.** Thus, central bank and supervisory activities are concentrated in a single institution, enabling the Hungarian financial sector to be supervised through the coordinated, interrelated application of macro- and microprudential instruments. As a result of integration, an internationally and EU recognized organization has been established that **aims to ensure the stability of the financial system as a whole, and the safe operation of individual sectors and financial institutions.** The new institutional and operational framework is capable of detecting, eliminating, and if necessary, addressing macro- and microprudential risks effectively and quickly, while ensuring the fair, prudent behaviour of domestic and foreign actors of the financial sector as well as strong consumer protection. Financial stability also provides the right environment for maintaining the growth of the real economy.

In the time since the integration, the MNB has significantly renewed both its supervisory tools and organization, thus providing the framework for a completely new supervisory approach and methodology, adapting to changes and innovations in the financial sector and its environment. The MNB acts as a supervisory body that closely and proactively monitors the supervised sectors, adjusts to changes, takes the interests of consumers into account, and **imposes strict sanctions to eliminate and avoid risks and infringements, while intervening immediately if necessary.** At the same time, in addition to its strong supervisory presence, the MNB strives for continuous communication as well as for open and constructive cooperation with the supervised institutions and actors.

Largely due to this decisive presence in terms of supervision, consumer protection and involvement, over the last six years, the actors of the Hungarian financial intermediary system have become significantly stronger, their shock resistance has increased considerably and the operation of the whole transmission system has become much healthier.

3 An innovative central bank: achieving and maintaining price stability

3.A INNOVATIVE MONETARY POLICY TO ACHIEVE AND MAINTAIN PRICE STABILITY

Monetary policy turnaround and the lowest interest rates ever in our history

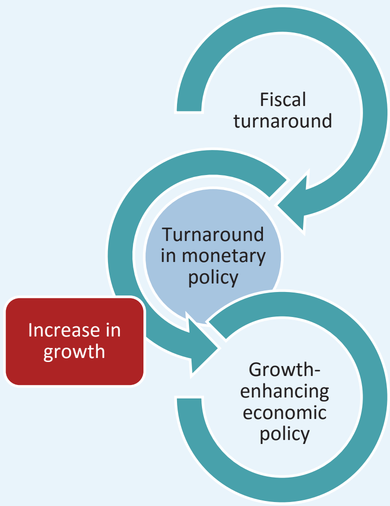
Traditional monetary policy measures after the crisis

Developed economies responded to the unfavourable macroeconomic processes of the global economic crisis, starting in 2008, with fiscal and monetary easing. In response to the economic recession, the major global central banks first reduced the policy rate and, after reaching the level considered at the time as the nominal lower bound, introduced unconventional monetary policy instruments (Felcser et al., 2015).

At the same time, the recession found Hungary in a special situation as the economy was hit by multiple crises: the structural growth and macrofinancing problems had led to political instability. For these reasons, the solutions successfully implemented by other central banks were not viable in Hungary, which called for the introduction of new, innovative and targeted instruments. While the base rate remained the primary instrument, a number of new instruments were also added to the central bank's toolkit in support of a more flexible system of central bank objectives.

In 2011–2012, recovery from the crisis broke down in many regions of the global economy, hence the central banks further eased monetary conditions. **Responding to new challenges, the Hungarian central bank's interest rate policy changed at the end of summer 2012** *(Chart 3.1).* Following the practice of international central banks, the Magyar Nemzeti Bank, with the support of the external members of the Monetary Council, launched a significant interest rate reduction cycle, and from 2013 onwards, complemented with new, innovative, targeted instruments, sought to fulfil its primary mandate of achieving and maintaining price stability. **Through the proactive use of its conventional and unconventional instruments, the Magyar Nemzeti Bank has successfully stabilized inflation near the 3% target:** since January 2017, inflation has been largely within the tolerance band around the 3 per cent target.

Chart 3.1
Harmony between branches of economic policy promoted the recovery from the crisis



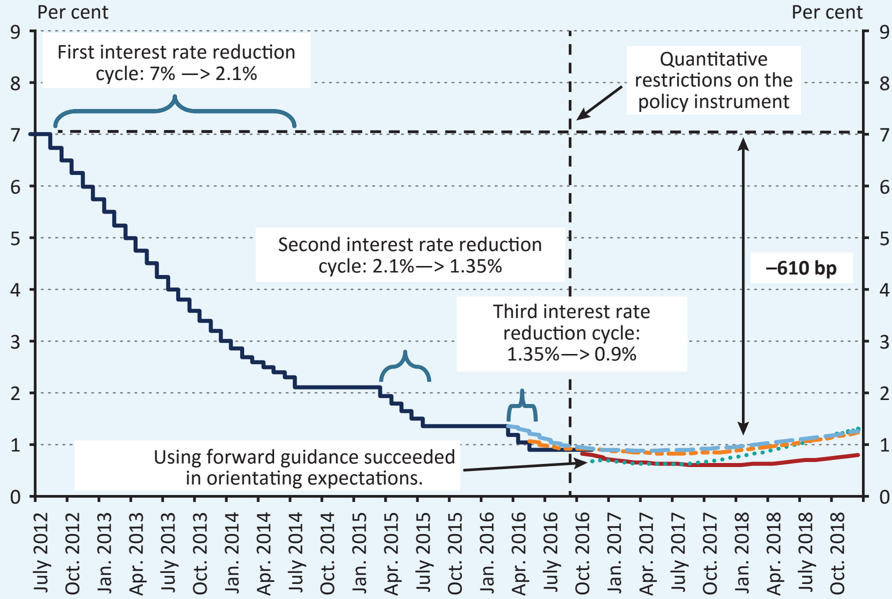
Source: MNB.

Similarly, to the regional central banks, the Magyar Nemzeti Bank started an interest rate reduction cycle in the summer of 2012. The easing cycle was initially enabled by Hungary's improving risk perception and the consistently loose monetary policy stance adopted by major global central banks, while the actions taken in the field of domestic fiscal policy further increased the monetary policy's room for manoeuvre. At the beginning of the cycle, inflation was substantially higher than the central bank's target, which was mostly attributable to temporary one-off effects, and once those effects had petered out, a process of strong disinflation commenced from late 2012. In the first phase of the interest rate reduction cycle the Monetary Council of the MNB cut the central bank base rate, by 25 basis point phases, from the initial 7 per cent to 4 per cent between August 2012 and July 2013.

The continuation of the interest rate reduction cycle was necessitated by the persistent disinflationary environment and inflation expectations falling below the inflation target, which was supported by the continued improvement in risk perception, the disciplined fiscal policy as well as the loose monetary policy of globally important central banks. Accordingly, by July 2014, the Monetary Council reduced the central bank base rate by another 190 basis points to 2.1 per cent. At the same time, the uncertainty in the international environment justified a more cautious monetary policy, so instead of the previous 25 basis point stages, the reduction of the base rate continued in smaller steps. In its forward guidance issued after the completion of the first phase of the easing cycle, the Monetary Council indicated that the macroeconomic outlook pointed towards persistently loose monetary conditions.

In March 2015, rising downward inflationary risks justified the resumption of the interest rate reduction cycle. Between March and July 2015, the Monetary Council of the MNB reduced the base rate by another 75 basis points to 1.35 per cent, then closed the second phase of the easing cycle and indicated that the macroeconomic and inflationary outlook pointed towards persistently loose monetary conditions. As a result of the new cost shocks, communication became more valued in relation to the expected path of the base rate. With an emphasis on conditionality and the achievement of the inflation target, use of forward guidance succeeded in orientating market and analysts' expectations for future monetary policy *(Chart 3.2),* thereby alleviating the uncertainty around central bank decisions, and, moreover, it improved the efficiency of monetary policy.

Chart 3.2
Forward guidance for interest rate cycles has effectively orientated interest rate expectations

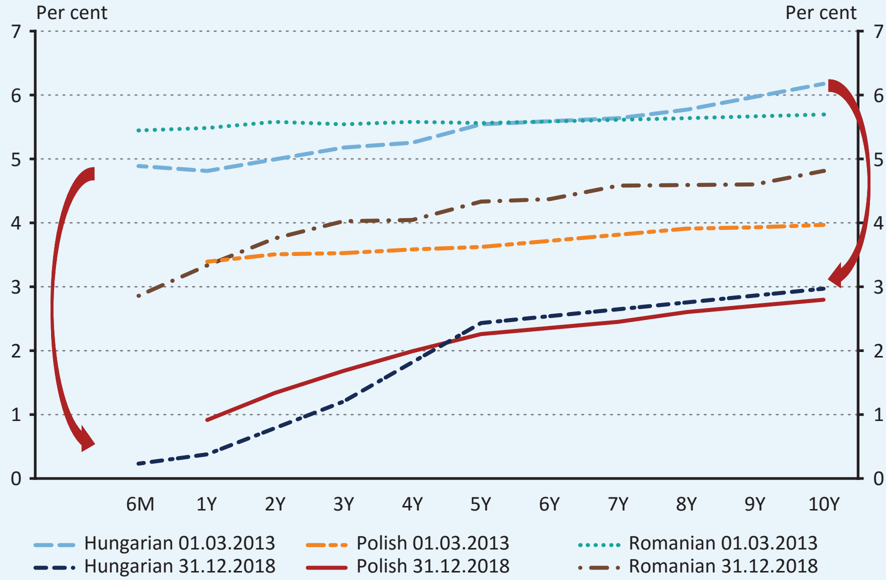


Source: MNB, Bloomberg.

The sustainable achievement of the inflation target, in spring 2016, required further reduction of the policy interest rate. Responding to the low cost-side inflationary pressure and the historically low inflation expectations, between March and May 2016, the Monetary Council reduced the base rate by another 45 basis points to a historic low of 0.9 per cent in three phases. At this stage of the cycle, the overall easing of monetary conditions was necessary to achieve the inflation target in a sustainable manner; therefore, in addition to the lowering of the base rate, the interest rate corridor became asymmetric in several stages.

Overall, **as a result of the interest rate reduction cycle launched in the summer of 2012, the policy rate fell from the initial 7 per cent to the lowest in the central bank's history: 0.9 per cent.** In its decisions, the Monetary Council did not seek to reach the lowest interest rate level attainable in the short term, but instead targeted a sufficiently low interest rate level that would ensure the sustainable fulfilment of its primary mandate and the stability of the base rate in respect to the effectiveness of monetary easing (Virág, 2016). **In order for the interest rate cuts to take place over the longest period of the yield curve, the Monetary Council improved the efficiency of monetary transmission with forward guidance and a reform of the monetary policy toolkit.** As a result, the domestic yield curve shifted down throughout the entire period *(Chart 3.3).*

Chart 3.3
Regional and domestic yield curve



Source: Bloomberg.

The interest rate reduction cycle launched by the Magyar Nemzeti Bank in August 2012 had a major impact on both the interest rates of various bank products and the yields on government securities, while it also resulted in significant savings on interest for the consolidated general government. At the same time, it is important to emphasize that besides the central bank's actions other events may also have an impact on the development of various yields; however, over a longer term a relatively close correlation can be observed between the movements of the policy rate and market rates, which implies that monetary policy could have played a significant role in the decline of various yields to a historic low (Felcser et al., 2015). Due to the gradual interest rate moves, the cuts could be implemented without any risk to financial stability.

Use of targeted, unconventional monetary policy instruments

Since in the first phase of the crisis, our country faced a number of country-specific challenges, the central bank – in addition to its conventional instruments – used unconventional, targeted instruments in creating the monetary conditions necessary for the achievement of its objectives, and improved monetary transmission, while the programmes contributed significantly to the reduction of the external vulnerability of the Hungarian economy.

In spring 2013, the Magyar Nemzeti Bank launched its first targeted programme, which focused on the promotion of credit for small and medium-sized enterprises, thereby supporting economic growth. The launch of the Growth Loan Programme laid the foundations for the turnaround in lending in the Hungarian economy, contributing substantially to the stabilization of the economy. Through the encouraged expansion of domestic ownership of Hungarian government securities, the MNB's Self-financing Programme supported the reduction of the country's external vulnerability. The forint conversion of household foreign currency loans also significantly reduced the vulnerability of the economy.

In respect to unconventional instruments affecting short-term yields, the monetary policy toolkit was reformed under the Self-financing Programme announced in 2014 (for details, see Chapter 3D). In the first phase of the programme, the two-week central bank bond was replaced by the two-week deposit facility in August 2014. The next adjustment to the liquidity characteristics of the main policy instrument was made in the second phase of the programme, launched in June 2015, when the maturity of the deposit was increased from 2 weeks to 3 months.

After the end of the interest rate cut-off cycle, in July 2016, the Monetary Council announced the next phases to reform the toolkit: the decreased frequency of tenders for the 3-month policy instrument, and then the limitation on the quantities accepted in tenders. Following the Council's earlier recommendation, the modification of the monetary policy toolkit announced in July supported a further reduction of vulnerability and the stimulation of lending through targeted, unconventional instruments.

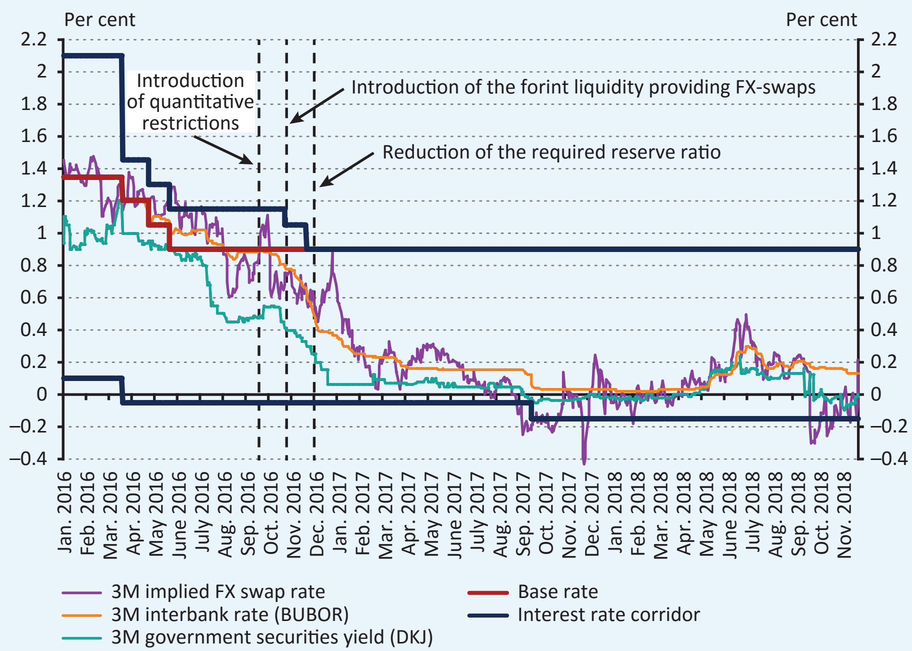
From the autumn of 2016, the Magyar Nemzeti Bank limited access to three-month deposits. In its forward guidance, the Monetary Council stressed that with this measure, the central bank would achieve the easing of monetary conditions and the corresponding stimulation of economic growth through a decline in money market yields. As a result of the quantitative restriction, the three-month deposit portfolio, which was as high as HUF 1600 billion in autumn 2016, fell to HUF 75 billion by the end of 2017, while the liquidity crowded-out from the deposit facility amounted to HUF 400–600 billion. At this point, decision-makers indicated that the three-month deposit limit had fulfilled its role and the stock's limit at the end of 2017 did not decrease further, while the importance of the stock and maturity structure of the forint liquidity swap instruments was appreciating, which would be adjusted to the liquidity to be crowded-out. The Monetary Council decided on a quarterly basis on the liquidity to be crowded-out, the rate of which was set to at least HUF 400–600 billion. In addition, it stated that the amount of actual displacement should be such as to ensure the sustained maintenance of the established loose monetary conditions.

In order to address the uncertainty of liquidity processes, the introduction of the MNB's fine-tuning forint liquidity providing and absorbing FX swap assets took place in the autumn of 2016, at the same time as the quantitative restriction. These fine-tuning tools enable the MNB to manage consistent and meaningful movements in the liquidity path in order to ensure the effectiveness of the cap. If necessary, the central bank transfers liquidity to the banking system with one-week, one-month or three-month forint swap instruments, and ties up excessively high liquidity in one-week central bank deposits (Kolozsi–Hoffmann, 2016). In March 2017, the Monetary Council indicated that in addition to the maturities used it would extend the range of HUF-denominated swap instruments with maturities of 6 and 12 months, thereby supporting the sustained maintenance of monetary conditions at the time.

In connection with the quantitative limitation of the three-month deposit facility, the asymmetry of the interest rate corridor was also further strengthened by the Monetary Council, within which, by November 2016, the one-day and one-week loan interest rates also dropped to the level of the base rate. In addition, reducing the required reserve ratio from 2 per cent to 1 per cent by the expansion of banking system liquidity also supported the system of quantitative restriction.

Following the introduction of the quantitative restriction framework in the summer of 2016, all relevant yields dropped to the bottom of the interest rate corridor *(Chart 3.4).* From autumn 2017 to spring 2018 the 3-month Discount Treasury Bill (DKJ), as well as the short-term implied swap yields were in the negative range. In spring and summer, 2018 – primarily as a result of the international money market developments and particularly of the monetary policy measures taken by the Federal Reserve – Hungarian yields also started to rise; however, in autumn 2018 they were once again close to the bottom of the interest rate corridor, sometimes in the negative range.

Chart 3.4
Short-term money market yields within the interest rate corridor



Source: Bloomberg.

In September 2017, the Monetary Council indicated that in general, the former loose monetary conditions required for a sustainable achievement of the inflation target had moved in a stricter direction, besides the fact that the repeated deferment of the inflation target also required monetary easing. In order to ensure adequate monetary conditions, decision-makers reduced the overnight deposit interest rate by 10 basis points to –0.15 per cent, and indicated that in the coming period the stock of swap instruments would be increased. In the following month, the Monetary Council confirmed that it was ready to further ease monetary conditions and, in accordance with this, **it examined unconventional instruments to be applied.**

To ensure that loose monetary conditions would prevail not only on the short but also on the longer end of the yield curve, **in November 2017, the Monetary Council decided that in January 2018 it would introduce two new unconventional instruments, the monetary policy interest rate swap (IRS) facility and the Mortgage Bond Purchase Programme.** Accordingly, the Monetary Council introduced an unconditional interest rate swap facility with 5- and 10-year maturities, and set its annual allocation at HUF 1,100 billion for 2018. Under the Mortgage Bond Purchase Programme, the central bank purchased mortgage bonds with a maturity of 3 years or more on the primary and secondary markets. The programmes promoted the further proliferation of long-term fixed-interest housing loans and reduced bank interest rate risks. As a result of mortgage bond purchases, mortgage bond issuance increased and the mortgage bond premium declined relative to government securities. In September 2018, as part of the fine-tuning of the unconventional toolkit for long-term yields, the Monetary Council decided to phase out the programmes by the end of 2018.

Summary

Since 2013, central bank management has developed its monetary policy with a new, innovative approach. To achieve its statutory objectives, the central bank reacted proactively to the existing economic challenges with targeted, unconventional instruments alongside the interest rate reduction cycle. The Magyar Nemzeti Bank has been pursuing a predictable economic environment, and in particular the creation of price stability, with a transparent monetary policy that puts the emphasis on stability. By proactively using conventional and unconventional tools, it has influenced both the short and the long end of the yield curve, and has also successfully stabilized inflation near the 3 per cent target. At the same time, the use of a more flexible inflation targeting strategy has also contributed to this, within which, since 2015, the central bank has maintained an ex ante ± 1% tolerance band around its inflation target. Since January 2017, inflation has mostly been in this band. In recent years, the Magyar Nemzeti Bank's monetary policy has been effective and efficient in supporting the growth turnaround of the Hungarian economy and the resumption of convergence.

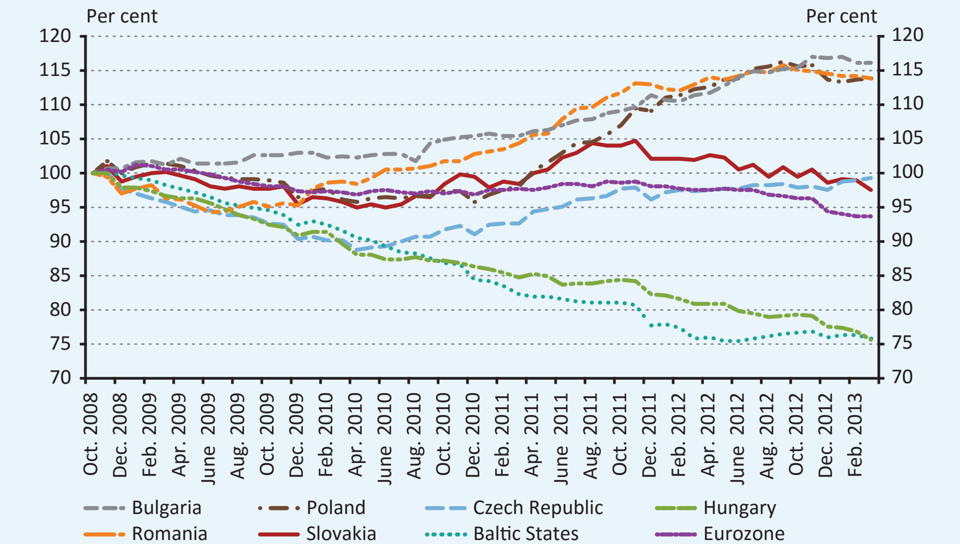
3.B THE ICE IS BROKEN: ESTABLISHING AND CONSOLIDATING THE LENDING TURNAROUND

A new, targeted tool contributing to the turnaround in lending

Following the onset of the crisis, Hungary faced a downturn in private sector lending that was outstanding even by international comparison. The downturn occurred in lending both to households and corporations; yet, the disruptions in the system of financial intermediation were primarily reflected in corporate lending. As a result of the 5 per cent annual decline in the outstanding corporate loans, lasting for almost 5 years, the portfolio had shrunk to 75 per cent of the pre-crisis level by the beginning of 2013. While the contraction of the loan portfolio typically ended in the fifth year following the crisis in other countries hit by a severe financial crisis, the domestic corporate outstanding loan portfolio was still declining in 2013 *(Chart 3.5).* Hungarian-owned SMEs in need of bank financing were hit particularly hard by the scarce credit supply, banks' restrained willingness to lend as well as by rising risk premiums. High financing costs and worsening profitability forced SMEs to adjust their balance sheet, reduce their production, and postpone their investments. This further undermined the credit supply of the banks through the deteriorating creditworthiness, increasing the risk of getting into a negative spiral, which in turn posed the threat of the lending market freezing.

In June 2013, the central bank launched the Funding for Growth Scheme (FGS) as a new, targeted element in its monetary policy toolkit designed to mitigate the protracted market disturbances in SME lending, and thus provide a stimulus to the economy, consolidate financial stability and reduce Hungary's external vulnerability. Although the central bank started to reduce the base rate in the summer of 2012, a meaningful improvement in corporate lending conditions was only detected in a limited segment of the corporate sector. Even creditworthy businesses faced high interest rates, which resulted in a deterioration of the monetary transmission mechanism. Since there is no developed capital market in Hungary, the MNB facilitated the SMEs' access to financing through the banking sector, by providing targeted liquidity, instead of launching an asset purchases programme.

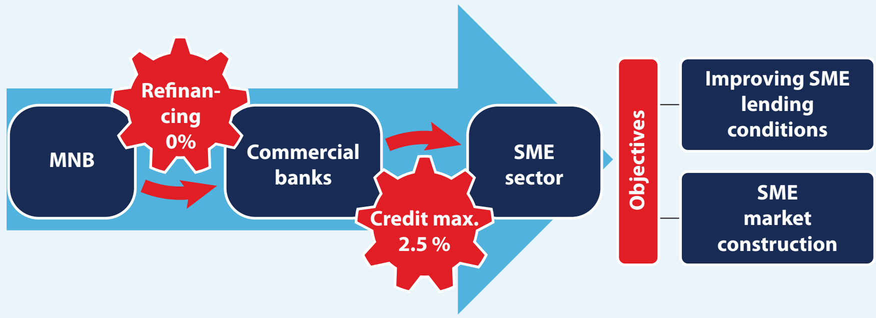
Chart 3.5
Changes in corporate outstanding loans by international comparison
(October 2008 = 100%)



Source: ECB, MNB.

Under the FGS, the central bank provided refinanced forint loans to credit institutions at a 0 per cent interest rate, which they could lend to SMEs with a margin up to 2.5 per cent, with a repayment period of up to ten years, for the credit purposes defined in the programme *(Chart 3.6).* The availability of long-term credit available at a fixed and favourable interest rate without any exchange rate risk, provides predictability for the SMEs, ensuring smoother operations and enabling enterprises to expand their businesses and implement postponed and new investments.

Chart 3.6
Financing under the Funding for Growth Scheme



Source: MNB.

The FGS was launched in June 2013, and its first phase, spanning a mere three months, accomplished the short-term objectives set at the time of its launch: the easing of credit market barriers and increased interbank competition. Already at the time of its announcement, the scheme exerted a significant impact on the activity of credit market participants both on the demand and on the supply side. The targeted central bank scheme boosted the credit demand of enterprises significantly, while also directing the attention of credit institutions to the SME sector; competition for obtaining and retaining customers intensified. The share of loan redemption was still significant in the first phase, but with the help of these transactions, many SMEs were able to make their interest rate burdens more favourable and more predictable, or got rid of their foreign currency loans with exchange rate risks. In the first phase, banks concluded contracts amounting HUF 701 billion in total.

In order to achieve more effective growth, the focus shifted to new loans and to investment loans in particular in the second phase of the scheme, which was launched in autumn 2013. Credit purposes did not change notably compared to the first phase, but loan redemption was limited to 10 per cent of the total disbursed amount. While banks granted several hundred billion forints' worth of new loans in addition to loan redemption as early as in the first phase, in the second phase the share of new loans rose to around 95 per cent, of which approximately 60 per cent were investment loans that promote economic growth to the greatest extent. The range of funding instruments became more diverse: apart from loans, funding was also made available in the form of leases and factoring arrangements. Due to the longer availability period, credit institutions were able to finance investment projects in this phase, which required longer preparation, and the weight of smaller enterprises facing the most funding difficulties was increasing significantly. This is also what the MNB intended to facilitate, i.e. by launching the FGS+: under the new scheme launched in March 2015 and running simultaneously with the FGS, the central bank took over the SMEs' credit risk from credit institutions to a limited extent, in order to improve the credit terms for companies that were creditworthy but had previously been excluded from the FGS having been deemed too high risk. In the second phase of the FGS and under the FGS+, a total of HUF 1,425 billion loan agreement was signed.

In the autumn of 2015, the MNB decided to gradually phase out the FGS. By then, the programme had successfully met its objectives set at the start, but in the long run the desired aim was to increase the loan portfolio without central bank engagement. In that spirit, in early 2016 the Growth Supporting Programme (GSP) was launched, comprising, as one of its key components, the third and final phase of the FGS. On the one hand, this enabled a more targeted forint-based funding for investment purposes only, and on the other hand, SMEs with natural coverage gained access to foreign currency funding, which had not been available in the previous phases. In the third phase, ending in March 2017, SME loans amounted to approximately HUF 685 billion *(Table 3.1).*

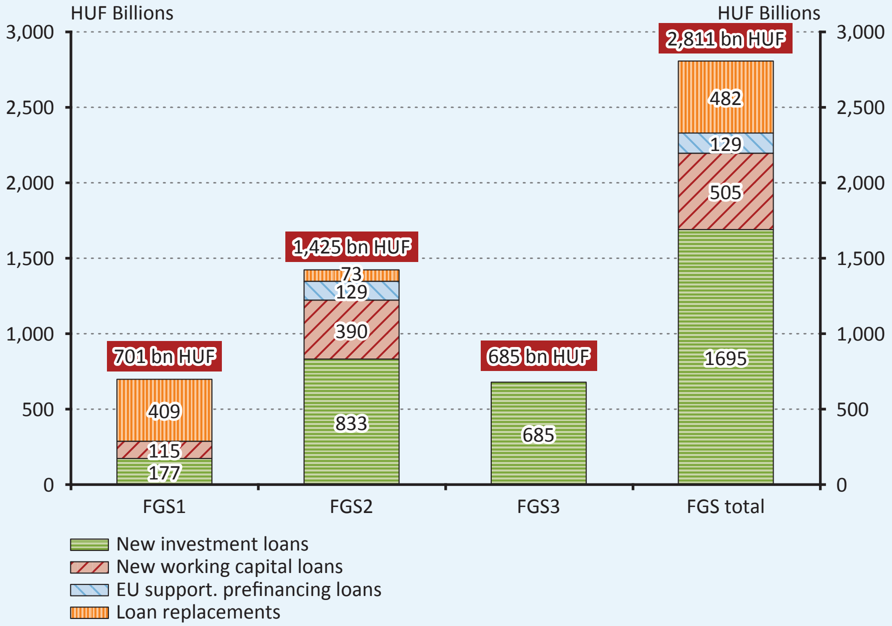
Table 3.1
Results of FGS

First phase (HUF 701 billion) June–Aug. 2013	Second phase (HUF 1,425 billion) Oct. 2013 – Dec. 2015	Third phase (HUF 685 billion) Jan. 2016 – March 2017
✓ Helped to avoid the risks of total credit freeze	✓ Investment loans prevailed that supported economic growth the most	✓ Targeted, only for investments
✓ Loan redemptions reduced the interest rate burdens of enterprises	✓ Every second investment loan is less than HUF 10 million	✓ Favourable foreign currency funding for SMEs with natural coverage
✓ The exchange rate exposure of SME sector decreased significantly	✓ Higher share of micro-enterprises	✓ Supplemented the EU funds
✓ Intensified the interbank competition	✓ Regional concentration continued to decline	✓ Along with the decrease in the maximum loan amount, the share of smaller participants increased
Nearly 40 thousand enterprises received funding in about HUF 2,800 billion in total. The programme contributed by approx. 3.5 percentage points to economic growth between 2013 and 2018.		

Source: MNB.

During the almost four-year functioning of the FGS, lasting until March 2017, a total of almost 40 thousand domestic enterprises obtained financing in the three phases of the scheme, which amounted to approximately HUF 2,800 billion. Almost HUF 1,700 billion financed investment purposes of the total loan amount of HUF 2,800 billion under the scheme. While loan redemption represented a high ratio in the first phase, in the second phase the granting such loans was restricted, and in the third phase, the total disbursed amount was for investment purposes only *(Chart 3.7).*

Chart 3.7
Distribution of loan purposes in the individual phases of FGS



Note: Data for the second phase of the FGS include the loans extended under the FGS+ scheme, worth HUF 23 billion, which ran simultaneously with the FGS.

Source: MNB.

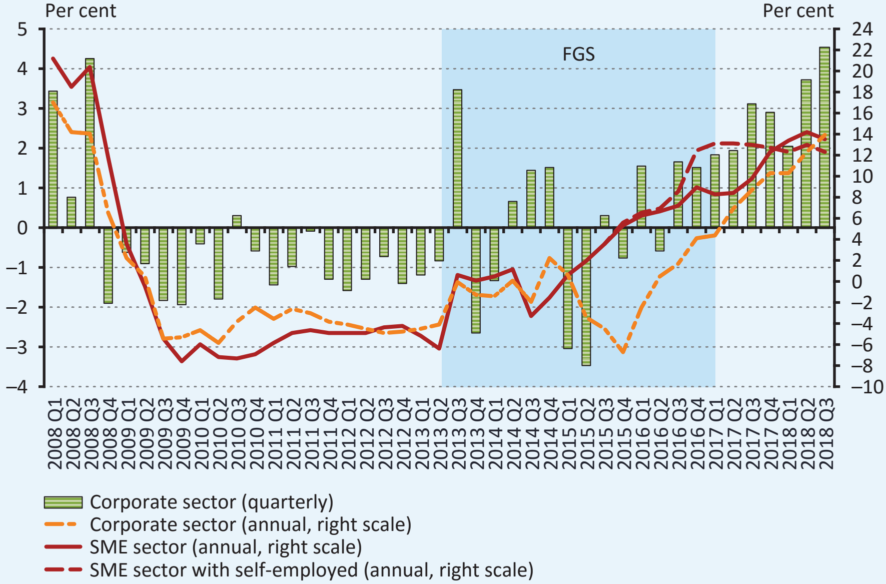
By improving financing conditions and facilitating the implementation of many investments, the FGS contribution to economic growth between 2013 and 2018 came to some 3.5 per cent according to the latest estimates of the MNB *(Table 3.2).* It is also worth noting that, in addition to improving the credit conditions for the SMEs, the programme has also had a significant indirect impact by restoring a previously underperforming credit market, which represents a further long lasting contribution to economic growth, even beyond the duration of the programme.

Table 3.2
Cumulative growth effect of credit programmes (%)

	FGS	MLS	Total SME lending contribution
2013	0.7	0.0	0.3
2014	2.1	0.0	0.3
2015	2.7	0.0	0.5
2016	3.3	0.3	1.5
2017	3.5	0.7	3.0
2018	3.5	0.9	5.0

The FGS brought about a trend reversal in SME lending. After the launch of the scheme, the persistent decline in SME lending of an annual 5–7 per cent came to a halt, which was followed by gradual increase. In 2016, dynamics were already in the range of 5–10 per cent, a pace that was considered necessary for long-term sustainable economic growth by the MNB *(Chart 3.8).* The FGS successfully achieved the objectives set upon its launch: the restoration of the corporate credit market, the supporting of economic growth and the strengthening of financial stability. The scheme had a favourable impact on both the volume of lending and the structure of loans outstanding: it contributed to a turnaround in lending and also helped fixed-interest loans to gain ground.

Chart 3.8
Growth rate of outstanding loans of the overall corporate sector and the SME sector



Source: MNB.

Facilitating the transition to market-based lending

In line with the gradual phasing out of the FGS, in parallel with its third phase, the Market-based Lending Scheme (MLS) was launched in early 2016. This tool was also part of the Growth Supporting Programme (GSP), the MNB's goal was to promote market-based lending without central bank refinancing. The MLS is a toolkit of positive incentives, within its framework the MNB helped banks with their transition to market-based lending through an instrument supporting risk management – the loan-linked interest rate swaps – and instrument supporting liquidity management. Participation in the programme was conditional on banks' increasing their net lending to SMEs in 2016, 2017 and 2018. The MLS was divided into two phases. The first one started in February 2016, and the second, supplementary phase in July 2017. The latter served to allow banks outperforming the previously committed lending dynamics to increase their loan commitments within the framework of the programme, thereby keeping SME lending rates in the upper half of the 5–10 per cent band considered healthy and desirable for economic growth by the MNB.

Two central bank tools, the loan-linked interest rate swaps (LIRS) and the option of preferential deposit facility placement were used to support lending activity in the MLS. The interest rate swap conditional on lending activity helped to boost lending by providing banks with an opportunity to hedge the interest rate risk associated with their long-term SME loans, while using the instrument, credit institutions made numerical and verifiable SME lending commitments. The preferential deposit facility placement is closely related to the LIRS instrument, and within this framework the central bank provided the banks concluding LIRS contracts with the opportunity to place a part of their surplus liquidity above their required reserves on a preferential deposit account, which bears an interest rate corresponding to the central bank base rate.

The MLS supported banks' transition to market-based lending, while not causing the MNB balance sheet to expand. Unlike in the case of the FGS, the MNB did not provide the banking system with funding and excess liquidity under the MLS, but instead supplied the banks with risk and liquidity management tools. The two central bank instruments of the Market-Based Lending Scheme were only available to banks together, i.e. access to the preferential deposit facility required the bank concerned to have an active LIRS transaction.

In order to access the LIRS, banks are required to step up their net lending to SMEs by at least a quarter of the transaction value during the term of the transactions, i.e. over a period of 3 years. The use of the LIRS transactions is subject to the condition that the sum of the net loans disbursed to the non-financial SME sector over a period of 12 months should amount to at least a quarter of the value of the transaction in question. The maturity of the interest rate swaps was 3 years, which could serve two purposes at the same time: on the one hand, it facilitated longer-term lending and on the other hand maintained the level of interest rate risks assumed by the central bank within the limits. The numerical commitments to net SME lending and the ex-post control enabled the programme to remain targeted and increased the commitment of the banks. In the case of MLS tools, the MNB monitored the fulfilment of banks' loan commitments annually.

In the first phase of the MLS, the SME credit growth undertaken as part of the transactions concluded on LIRS tenders amounted to approximately HUF 200 billion, which corresponded to a 5 per cent increase in the SME loan portfolio on the level of the national economy. The tenders for interest rate swaps conditional on lending activity were administered by the MNB in 2016 Q1 with a total allocation of HUF 1,000 billion. Between 28 January and 24 March 2016, five LIRS tenders took place. 17 banks participated in the tenders, entering into an overall HUF 780 billion worth of LIRS transactions with the MNB. In February 2017, after the first inspection, two banks took the opportunity of partial termination, which resulted in a decrease in lending commitments by HUF 76 billion, while one bank left the programme, which reduced the initial LIRS stock by an additional HUF 25 billion. With the terminations in February 2017, the total allocation of HUF 390 billion for the preferential deposit facility placement dropped to HUF 339 billion.

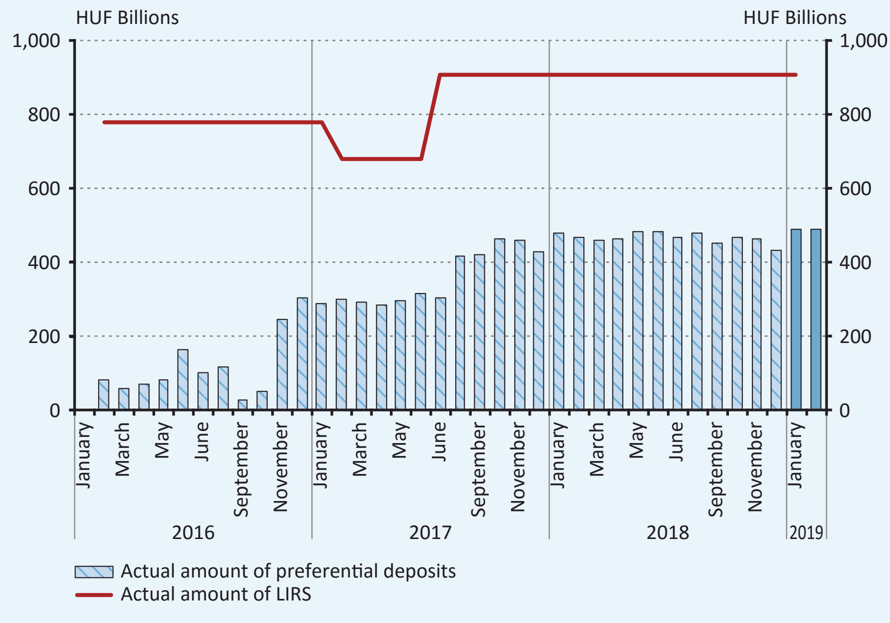
The second phase of the MLS was launched in July 2017, under which the MNB concluded LIRS transactions totalling another HUF 228 billion. As a result of this, banks' SME lending commitments for 2017 increased from HUF 170 billion to HUF 227 billion. In the second phase, the additional limit for conditional interest rate swaps was HUF 300 billion, while the maximum limit for the preferential deposit facility portfolio growth was HUF 150 billion. Only those banks could participate in the continuation of MLS, which already had a loan commitment and "active" LIRS transaction from the first phase of the programme. In the second phase of the MLS, the MNB concluded conditional interest rate swaps with banks totalling nearly HUF 228 billion, which resulted in an increase of about HUF 57 billion compared to previous loan commitments. In the second phase of MLS, the preferential deposit facility portfolio increased by some HUF 150 billion.

In the first year of the programme, banks exceeded their loan commitments by more than 50 per cent. In 2016, the MNB concluded LIRS transactions with credit institutions to the amount of HUF 780 billion, which represented an SME lending growth commitment of HUF 195 billion in total. In that year, the participating banks increased their lending to SMEs by more than HUF 300 billion, despite their commitment of HUF 195 billion. Although most banks participating in the MLS significantly exceeded their commitments in 2016, there was no possibility to raise them until mid-2017. The commitments for 2017 dropped from HUF 195 billion to HUF 170 billion as a result of the (partial) termination of certain LIRS transactions at the beginning of the year.

In 2017, the major credit expansion continued, and the SME lending activity of banks exceeded loan commitments to a greater extent than in 2016. All 16 banks with LIRS transactions at the end of 2017 met their commitments, which were had already increased in several cases. As a result, banks achieved a 250 per cent fulfilment at sectoral level, even surpassing the figure from the previous year. Partly attributable to the banks commitments, the annual growth rate of outstanding corporate loans reached 10 per cent and the growth rate in the SME sector, including the self-employed increased by 12 per cent in 2017. No credit institution wished to voluntarily lower their commitment for 2018, as a result, the MLS continued to support the expansion of the SME loan portfolio.

The preferential deposit facility effectively helped banks to manage their liquidity. Banks used the available preferential deposit facility almost in full during the programme. In parallel with the restriction of the three-month deposit facility from the last quarter of 2016, the banking sector's excess liquidity increased, part of which was channelled into the preferential deposits. As a result of the restrictions in respect to the three-month deposit facility, the opportunity to place deposits at base rate appreciated, and thus the volume of outstanding preferential deposits gradually increased. From the second half of 2017 the instrument was characterized by almost full utilization *(Chart 3.9).* During the period of the Market-Based Lending Scheme, the central bank enforced negative interest on the account balance

Chart 3.9
Developments in the volume of LIRS and preferential deposits



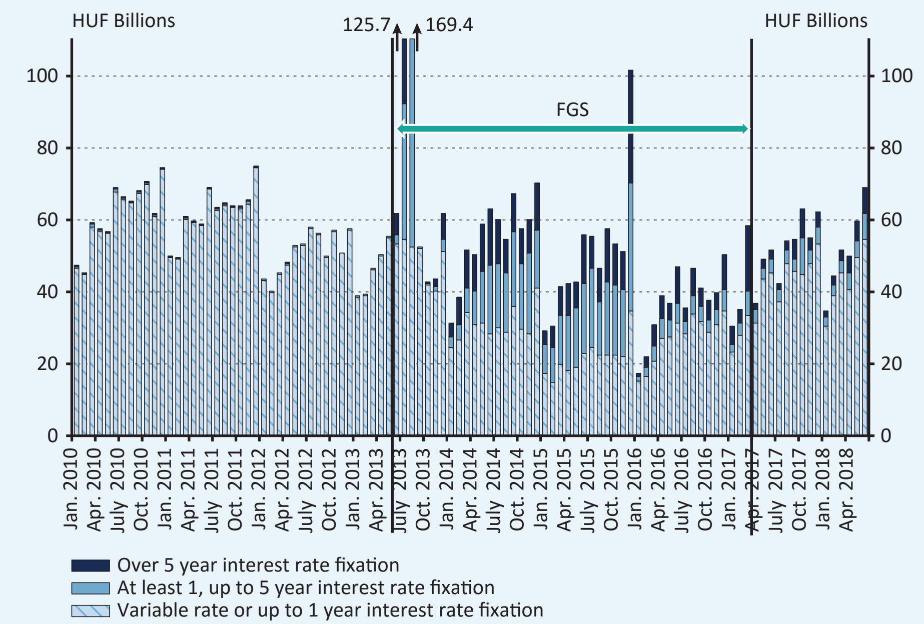
Source: MNB.

exceeding the required reserve, and thus the option of preferential deposit facility placement remained for the banks to be a very liquid instrument at a favourable interest rate.

Focus on improving the structure of lending

By 2018, the dynamics of corporate lending corresponded very well to the level desirable over the longer term, but its structure was not healthy enough. The phasing-out of the FGS caused no decline either in the volume of new loan contracts or in the disbursements. At the same time, the composition of lending is as important as its volume, and there has been a shift in this regard since the phasing-out of the scheme. Following the phasing-out of the FGS, the distribution of SME loans' maturity shifted towards shorter maturities and the share of fixed-interest loans also fell *(Chart 3.10);* and the MLS could not shift this trend in a favourable direction. Since long-term, fixed-interest loans are not concluded on a market basis in

Chart 3.10
Distribution of new corporate HUF loan contracts not exceeding EUR 1 million, by interest rate fixation



Source: MNB.

large volumes, the vast majority of enterprises are unable to take advantage of the favourable level of interest rates in the long run.

Increasing the share of fixed-interest loans is also important for financial stability. The higher interest rate level of fixed-rate loans drives clients towards variable rate schemes, which appear more advantageous in the short run; however, this poses a risk in the longer run. The predictability due to the fixed interest rate increases the appetite for borrowing and reduces the risk of those enterprises that have no reserves for the payment of higher interest in a potentially changing yield environment. This typically affects smaller enterprises, which not only have lower earnings potential and accumulated reserves, but in the absence of interest-bearing assets – as opposed to certain larger companies – the interest income earned on those instruments does not offset the rising interest expenditure either. Dynamic economic growth, which is free from stability risks, requires that enterprises can find funding with a predictable interest rate burden for the implementation of their investments.

The MNB therefore decided to return to the tool that had previously had a positive impact on both the volume and the structure of lending, and thus launched a new FGS construction in early 2019. The new construction announced under the name of FGS *fix*, with a total amount of HUF 1,000 billion, is identical to the previous phases of the FGS in terms of its most important parameters and operation, however it can be considered as a more targeted instrument. It is a relevant change for the borrower SMEs that only loans with maturities of longer than 3 years may be granted, and loans may only be granted for investment purposes, moreover the range of utilization will be narrower compared to the third phase. The scheme is neutral in terms of liquidity of the banking system, as the excess liquidity attributable to the loans disbursed under the FGS fix will be sterilized at base rate.

The role of the preferential deposit facility will change, from spring 2019 and serve to sterilize additional liquidity provided under the FGS *fix.* The deposit facility linked to the Market-based Lending Scheme will be terminated at the end of February 2019, however, the facility will continue to be available to the banks participating in FGS *fix*. The deposit will be available at the base rate, and thus the placement of the excess liquidity will be in line with the actual monetary policy framework and ensure the neutrality of the new FGS construction in terms of liquidity. The modified deposit facility, available from April 2019, is available to the banks participating in the scheme only in relation to the loans disbursed under the FGS *fix,* thereby ensuring that the placement of the excess liquidity is tied as closely as possible to the new FGS construction.

3.C FORINT CONVERSION, OR ELIMINATING THE TRAP OF FOREIGN CURRENCY LOANS

The emergence of the household foreign currency loan trap

In Hungary, the period of extensive household foreign currency lending started in 2004, and households remained net foreign currency borrowers right up until 2009. The rise of foreign currency lending was caused by several factors, among which it is worth noting the permissive regulation – in the proliferation of foreign currency loans, neither prudential nor consumer protection measures were taken to curb the phenomenon –, the phasing out of subsidized household forint loans in 2003 and the unfavourable interest conditions of forint loans. In terms of foreign currency loan stock built up before and during the first years of the crisis, it was also a risk that banks were increasingly lending to riskier, less creditworthy clients in the years of foreign currency lending, and that shortcomings in the regulatory environment made it possible for banks to unilaterally raise interest rates. In addition, in the absence of domestic foreign currency savings, banks hedging the exchange rate risk of credit transactions were increasingly dependent on the foreign exchange swap market.

In the case of foreign currency loans, households bore the risk of exchange rate fluctuations, while the banking system almost completely closed its exchange rate position. At the beginning of the 2000s, the exchange rate of the forint was relatively stable compared to the euro and the Swiss franc, so it might have seemed to many Hungarian households that there was little probability of a significant exchange rate depreciation, as a result of which many people might have underestimated the risk of depreciation of the forint. The repayment burden upon the population was able to increase, not only during the weakening of the forint, but also due to the fact that financial institutions could unilaterally raise interest rates on foreign currency-based contracts. The issue of unilateral interest rate increases was made particularly relevant by the fact that in the aftermath of the crisis, banks counterbalanced their higher losses partly by applying higher interest rates on household debt. The Hungarian practice was not common in the countries involved in foreign currency lending. For example, in Poland, the interest rate on foreign currency-based household loans was strictly tied to the change in

Swiss interbank interest rates. This was important because while in the case of Polish foreign currency debtors the reduction of reference interest rate after the crisis mitigated the repayment instalment of foreign currency loans, thus counteracting the weakening of the zloty, in Hungary the negative impact of exchange rate depreciation was not mitigated, but actually intensified by the unilateral raising of interest rates by the banks.

Between 2004 and 2009, the household foreign currency loan portfolio increased from 2.5 per cent to 16.5 per cent of the balance sheet total of the banking system; at the outbreak of the crisis, about 70 per cent of household loans were foreign currency or foreign currency based loans. With the weakening of the forint exchange rate following the outbreak of the global financial crisis and the increase in forint repayment burdens, many foreign currency debtors became insolvent. From 2009, the proportion of non-performing household loans increased significantly, and the collapse of foreign currency loans created a major financial stability problem in the banking system.

Phasing-out of household foreign currency loans

The MNB defined the phasing-out of household foreign currency loans after 2013 as a strategic target; and the conversion was made on the first possible date: in 2014–2015. After the outbreak and spill-over of the crisis, the issue of forint conversion of foreign currency loans arose from time to time, however the conversion had to wait until the monetary policy turnaround; prior to that, the central bank did not make any attempt to settle the foreign currency loan issue in a final and comprehensive manner. Finally, the phasing-out of household foreign currency loans took place in 2014–2015, i.e. in a legally feasible and an economically well-supported time, when the following conditions for the conversion of forint existed.

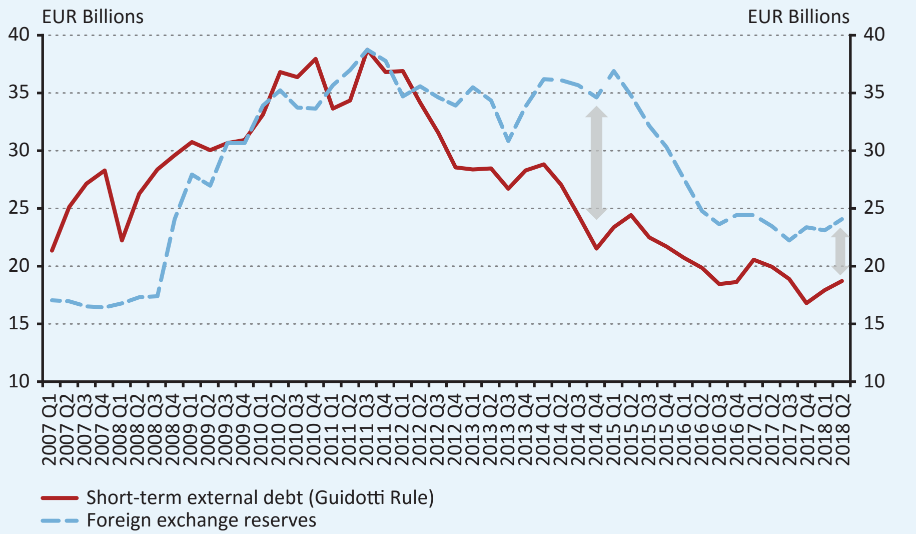
- **Secure legislative environment.** The legal environment had to ensure that conversion was implemented in a legally unambiguous situation, i.e. that no legal issues of significance remained open that, when judged differently at a later time, might question the legal grounds for the conversion process. In the legal sense, the foundations of conversion were laid by the uniformity decision of the Curia promulgated in June 2014. The Curia's uniformity decision ruled that the transfer of exchange rate risk to debtors basically cannot be regarded as unfair, however, if the average borrower does not understand the exchange rate risk included in the contract, this can void the contract. It was established that unilateral interest rate hikes are unfair and unlawful, if it is not clear and transparent to the debtor to what extent the change of individual circumstances affects the payment obligations, and that the use of currency spread as a fee is in all cases and under all circumstances unfair and void.

- **Low forint interest rates.** By 2014, forint interest rates had dropped to a level, which ensured that conversion would not imply, even in the short term, an interest rate increase for foreign currency borrowers. There were two reasons for this. First, the interest rate reduction started by the MNB in 2012, in the course of which by summer 2014, the central bank base rate had declined from 7 per cent to 2.1 per cent, accompanied by a similar decline in the level of interest rates in the whole economy. This was important to make sure that the conversion did not entail an increase in interest rates and instalments. The second reason was the adoption of the Fair Banking Act, which facilitated the household's transition to forint loans, and kept any subsequent re-pricing operations within the confines of transparency.

- **A stable and consolidated macroeconomic environment.** The conversion of a large volume of foreign currency debt can involve a substantial amount of uncertainty when the macroeconomic environment is not stabilized and consolidated; consequently, conversion requires a degree of improvement in the perception of the national economy concerned, which enables conversion to be implemented without any relevant market risks. Owing to the consolidation of economic policy and general government and to the improvement of Hungary's overall risk perception, by 2014 an economic environment had emerged in which household foreign currency loans could be phased out without any substantial market risks.

- **Available foreign exchange reserves.** The closing of the bank's foreign currency position opened due to the forint conversion creates a significant demand for foreign currency, which requires foreign exchange liquidity. The viability of forint conversion was aided by the fact that by 2014 the volume of foreign currency mortgage loans yet to be converted had dropped to EUR 9 billion from its previous peak of EUR 19 billion as a result of the ban on foreign currency lending, full early repayments and the amortization of loans as part of normal operations. The foreign currency requirement generated by the need to hedge the settlement and conversion of foreign currency loans could have placed considerable pressure on the forint exchange rate in the case of foreign currency purchases from the market. Thus, an essential condition of orderly conversion was that the MNB should have the amount of foreign currency required for bank hedges, and should be able to provide banks with that amount of currency in a way that even after conversion, the volume of foreign currency reserves would not drop below the level expected by the market and international organizations. With the reduction in short-term external debt, which had a particular influence on the required level of foreign exchange reserves, by 2014, the reserve adequacy of the MNB had reached the level that allowed for safe conversion *(Chart 3.11).*

Chart 3.11
Developments in the MNB's FX reserves and the short-term external debt



Source: MNB.

Targeted Central Bank Conversion Programme

The Magyar Nemzeti Bank made the orderly phasing-out of household foreign currency loans possible through a targeted foreign currency sales programme. The central bank's foreign currency sales programme related to the phasing-out of household foreign currency loans was based on the following strategic principles.

- Given its duty to ensure financial stability as set out in the Central Bank Act, and due to the responsibility, which it understands to have in resolving the issue of foreign currency lending, the MNB is required to occupy a role in the orderly phasing-out of foreign currency loans, and in the administration of settlement and conversion.

- The objective of the programme is to ensure that household foreign currency loans are phased out rapidly, in an orderly manner, while preserving the stability of the financial system, and without any major impact on the exchange rate of the forint.

- The central bank's reserve adequacy must be ensured throughout the programme.

Based on the above considerations and due to the particular importance attached to the foreign exchange reserve requirement, the related central bank toolkit was designed so as to ensure banks' interest in reducing short-term external debt, a fundamental factor in determining the required level of foreign exchange reserve, or, where no such reduction could be made, to ensure that banks' access to foreign currency was spaced out over time. With that in mind, the MNB introduced two central bank instruments when phasing out mortgage loans, which accounted for a majority of household foreign currency loans:

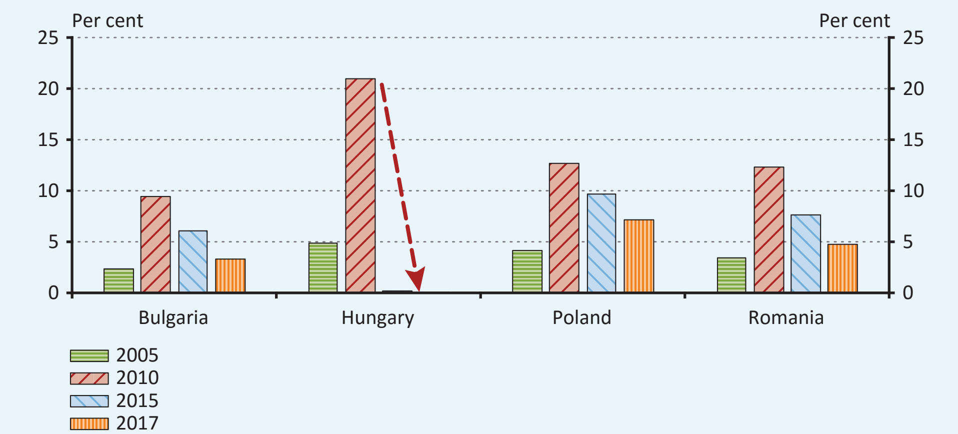
- the foreign currency sale instrument conditional on a reduction in short-term external debt, where the MNB required banks to reduce their short-term external debt by at least 50% of the foreign currency received;

- the longer-term unconditional instrument for the sale of foreign currency, which was a combination of a spot euro sale transaction and a FX swap, and primarily provided a hedging option for banks that could not reduce their short-term external debt due to their financing structures built on long swap transactions or long-term debt.

Due to the significant volume involved, the programme was crucially dependent on coordinated execution, which the MNB ensured through consultations and formal agreements with banks. The MNB held the first tender of the settlement phase for mortgage loans on 13 October 2014, whereas tenders of the conversion phase started on 10 November 2014. The MNB sold a total of EUR 9.7 billion to the banks for settlement transactions, or in tenders for the conversion of mortgage loans and consumer foreign currency loans. Settlement and conversion were hedged by the banks, in effect entirely with the MNB. The central bank's foreign currency sale programme enabled household foreign currency loans to be phased out in an orderly manner, rapidly, and without any major impact on the exchange rate of the forint. The last conversion-related FX swap transaction between the MNB and the relevant commercial banks expired on 20 December 2017, i.e. in a technical sense the phasing-out of household foreign currency loans ended on that day.

With the phasing-out of household foreign currency loans, the Hungarian financial system took a huge step towards a healthy balance sheet structure. Owing to applicable legislation and participants, including the central bank in particular, one of the greatest risks of the banking system was removed from institutions' balance sheets. In retrospect, the decision of autumn 2014 was clearly justified by the abandonment of the Swiss central bank's exchange-rate cap in January 2015, which led to the significant appreciation of the Swiss franc. Without forint conversion, there would have been a meaningful increase in both households' repayment burdens and the risks to the banking system, creating a major instability in Hungary's entire financial and economic system. Until now, Hungary is the only one of the affected states that has phased out household foreign currency loans completely, and thus eliminated the trap of foreign currency loans *(Chart 3.12)*.

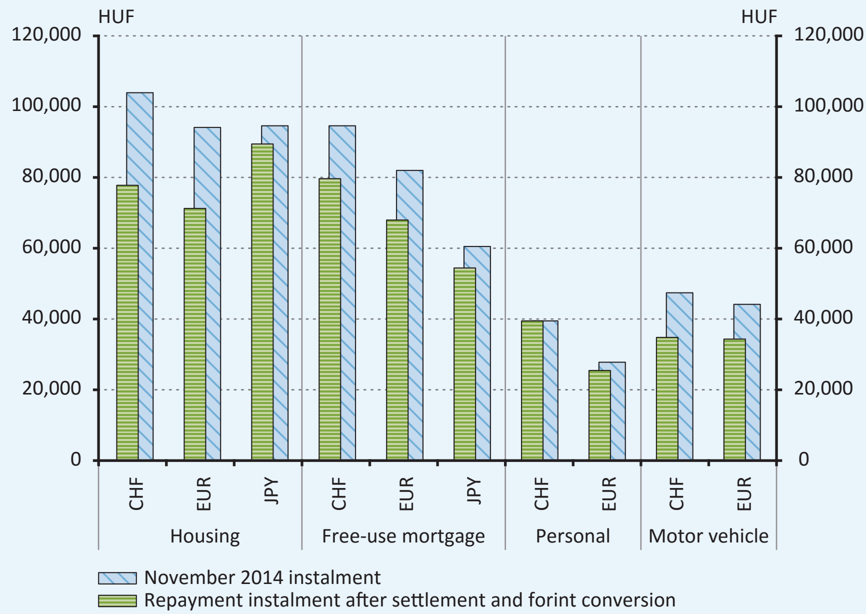
Chart 3.12
The ratio of household foreign currency loans to gross domestic product



Source: MNB.

In addition to the interest rate reduction cycle and the BUBOR reform, forint conversion and settlement also contributed significantly to the reduction of household repayment burdens. Due to the timely settlement and forint conversion, the exchange rate risk of Hungarian households was eliminated, repayment instalments diminished and the existing principal debt of households decreased as well. The loan stock priced at BUBOR amounted only to some HUF 2,700 billion in 2012, so its decline could not affect a sufficiently wide range of debtors. However, partly due to the conversion of household foreign currency loans, the loan stock priced at BUBOR, by 2015, had exceeded HUF 6,000 billion, so the decline in interbank interest rates following February 2015 could result in a lower debt burden for an increasing proportion of loans, now without exchange rate risk. In addition, forint conversion saved consumers from the unfavourable development of market exchange rates at the beginning of 2015, when the Swiss central bank terminated the fixing of the Swiss franc against the euro, resulting in the fact that its exchange rate against the forint stabilized at about 10–15 per cent stronger. Thus, they were exempted from further debt of HUF 341 billion. During the settlement – based on the detailed rules set by the MNB in regulations – on average, HUF 393 thousand charged unfairly before (unilateral interest rate hikes and currency spread) was reimbursed by the institutions. (On average, HUF 718 thousand for mortgage loans and HUF

Chart 3.13
Average repayment instalments before and after settlement and forint conversion for certain types of loans and foreign currencies



Source: MNB.

201 thousand for non-mortgage loans was repaid). The amount accounted directly or against the outstanding debt of debtors was about HUF 734 billion. On average, monthly payments for Swiss franc based housing loans declined by HUF 26 thousand (25%) *(Chart 3.13),* while the principal debt shrank to HUF 6.5 million from HUF 8 million.

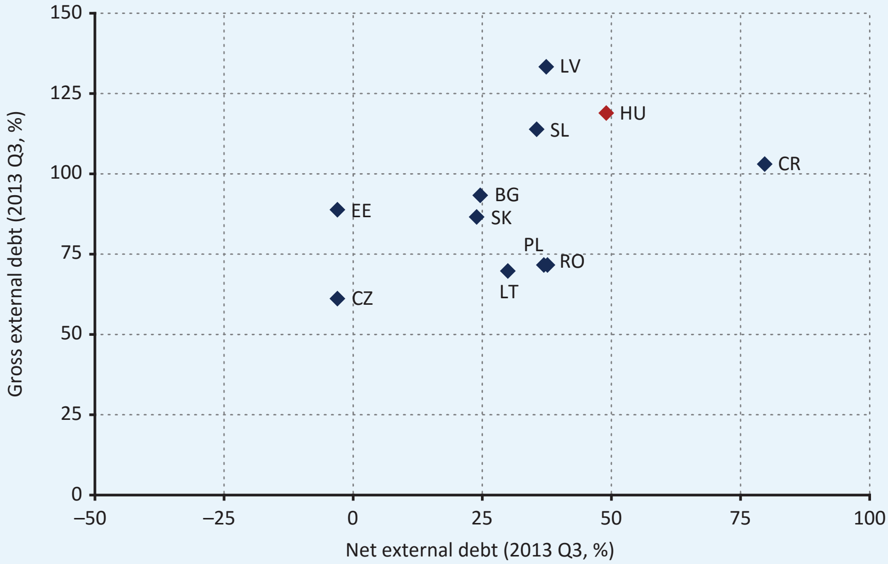
In the wake of the forint conversion of the lion's share of households' foreign currency loans the interest rate channel of monetary transmission increased in efficiency, so the far lower interest environment exerted a much more direct impact on households' consumption and savings decisions, thereby increasing the contribution of domestic demand to growth.

3.D SELF-FINANCING – MEASURES FOR A MORE STABLE ECONOMY

Motivation behind the announcement of the Self-financing Programme and the self-financing concept

After the crisis of 2008, excessive dependence on foreign and foreign currency resources made the Hungarian economy vulnerable and worsened the country's external perception. Following the crisis, a number of international organizations and credit rating agencies formulated opinions on Hungary's unfavourable indicators of external vulnerability. The high debt ratio, the very high foreign currency ratio of public debt and the massive external debt posed major risks to economic stability and sustainability. One of the main sources of external vulnerability was that in the financing of the economy, but especially the state, domestic investors were forced back. Due to the low risk appetite of the domestic sectors, the financial institutions opted to stay away from the government securities market and the high indebtedness of households, while foreign investors were gaining an increasingly strong role, which was further strengthened by loans from the IMF and the EU. At the beginning of the 2010s, the indicator of the external debt of the Hungarian economy exceeded that of the majority of the regional states *(Chart 3.14).* Indebtedness to the non-residents was reflected not only in the gross external debt but also in the more drastic increase in short-term external debt by residual maturity. In order to address the risks to macroeconomic stability, the reduction of high external vulnerability and the dependence on external resources as a strong contributory factor behind it was identified as a key economic policy objective.

Chart 3.14
External debt of some European Union Member States as a percentage of GDP



Source: MNB.

The concept of self-financing meant complementary implementation of economic policy measures aimed at reducing external vulnerability and related central bank actions. The MNB's Self-financing Programme announced on 24 April 2014, the negative (referring to repayments exceeding issuances) net foreign currency issuance of the ÁKK (Government Debt Management Agency) and the banks' demand for liquid securities eligible as central bank collateral, combined, made it possible to move towards a healthier debt structure and to gradually reduce the external exposure. In order to move towards financing from internal sources, the ÁKK renewed the maturing foreign currency debt in forint terms, which was facilitated not only by the curbing of foreign currency issuance, but also by an adequate amount of forint government securities issuance and the corresponding demand of domestic sectors, especially banks and households. In addition, the substantial increase in the issuance of household government securities, the new products to household introduced under more favourable conditions than before and the yield-reducing effect of the interest rate reduction cycle that began in 2012 also helped to increase the presence of households in the government securities market and their weight within the government debt financing mechanism.

Indirectly, the central bank was able to contribute to the realization of the self-financing concept by modifying the parameters of the monetary policy instruments. The permanently low inflation environment supported the loose monetary policy of the central bank, so besides the base rate reduction cycles that were launched in 2012 and continued in several phases, the central bank's unconventional instruments could also play an important role. Within the Self-financing Programme, the MNB reformed its monetary policy **instruments**, which encouraged the emergence of bank demand on the government securities market by channelling bank liquidity towards longer-term assets rather than central bank assets. Owing to the additional demand, the ÁKK was able to refinance foreign currency maturities in forint terms by increasing its forint issuance, without a yield increase. The launch of the Programme was also supported by the appropriate level of foreign exchange reserves and the forward-looking development of reserve adequacy, as the state converted the additional forint issue with the central bank into foreign currency, and the foreign currency debt was repaid from the foreign currency thus acquired, which also affected foreign exchange reserves.

REFORM OF THE MONETARY POLICY TOOLKIT IN CONNECTION WITH THE SELF-FINANCING PROGRAMME

Following the announcement of the first phase of the Self-financing Programme in April 2014, and that of the second phase on 2 June 2015, the central bank transformed its entire monetary policy toolkit and introduced new instruments, which affected, in particular, the policy instrument essential in relation to sterilization, the interest rate corridor, the credit facilities and the required reserve system.

- **Policy instrument** From the summer of 2014, the MNB transformed its two-week bond – the passive-side policy instrument used to tide up structural liquidity surplus, a characteristic of the Hungarian banking system – into two-week deposits, with the aim of channelling bank liquidity to the securities market by modifying the liquidity profile of the instrument (non-marketable and not eligible as collateral) and by eliminating foreigners' access to it. As of September 2015, the liquidity profile of the policy instrument was further modified: by raising its maturity to three months as well as by limiting the two-week deposit, and then by its phasing-out in April 2016, the central bank gave the banks an additional incentive to hold their funds in collateral securities that are eligible compared to the less and less liquid central bank instrument.

- **Central bank interest rate swap (IRS) facility.** The central bank IRSs helped to manage the rising bank interest rate risk due to the extension of the maturity of newly purchased securities on the condition that the banks participating in the IRS tenders undertook to increase their own holdings of eligible securities in line with the volume of the concluded transactions, and to not to deleverage them together with their base period stock up until the end of the maturity.

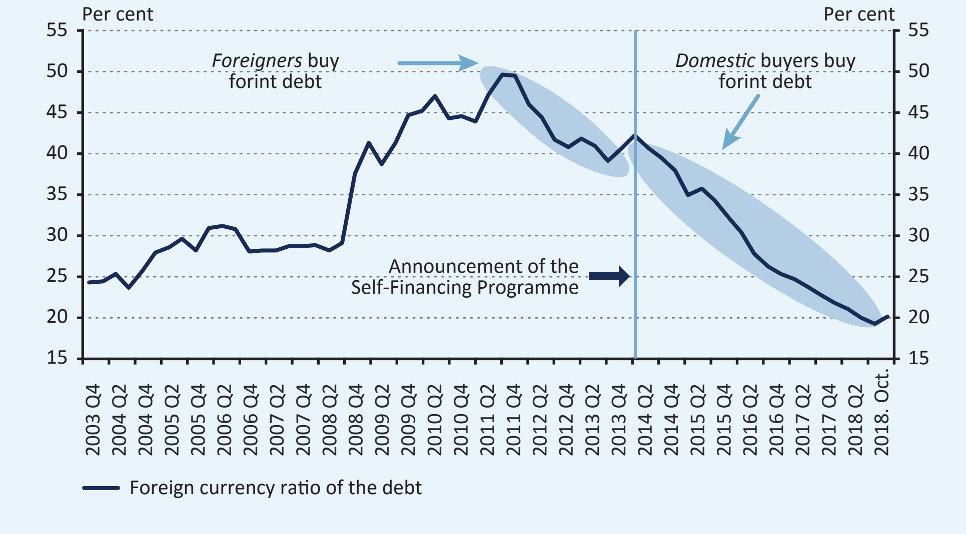
- **Interest rate corridor and credit facilities.** By the autumn of 2015, banks' additional liquid securities demand reduced the three-month DKJ yields to the level of the O/N deposit, which did not support the channelling of bank funds outside the central bank. As a result, in September 2015, the Monetary Council decided to make the interest corridor asymmetric and to reduce the interest rate on overnight standing facilities by 25-25 basis points. At the same time, it also modified the maturity of liquidity-providing collateralised loans; the six-month collateralised loans were replaced by the three-month one and the two-week collateralised loans by the one-week one, under more favourable terms. Following these measures, liquid securities appreciated again against the O/N deposit, and the facilitating of borrowing conditions supported the longer-term government securities purchases, which was in line with the self-financing concept.

- **Required reserve system.** From December 2015, instead of the previous regulation based on optional reserve ratios, the rate of the required reserve ratio decreased uniformly to 2 per cent, which was needed mainly because of EU harmonization, and the change was made possible by a significant increase in the liquidity of the banking system in previous years and an improvement in the liquidity situation of the financial markets. At the same time, the fixed reserve ratio was also indirectly linked to the Self-financing Programme, as it further increased the attractiveness of non-central bank securities eligible as collateral.

Results of the Self-financing Programme

The Self-financing Programme fulfilled the goals set at the time of the announcement, the country's external vulnerability decreased, financial stability strengthened, and Hungary's international perception improved. Due to the renewal of the maturing foreign currency debt through the increased issuance of HUF-denominated government securities, the financing structure of public debt has changed, its currency composition has improved, and its sensitivity to changes in foreign exchange rates has decreased. As of mid-2014, the Hungarian State, in a net sense, did not need foreign currency resources to pay off international loans and refinance foreign currency bonds. Thanks to this, between 2014 and 2016, the ÁKK repaid some EUR 11 billion of foreign currency debt from forint resources, without any significant foreign currency bond issuance in international markets. Banking adjustment contributed greatly to the fact that within financing of the public debt, the foreign currency debt of the central government decreased from the 42 per cent level at the end of 2013 to around 25% by the end of 2016, and to around 20 per cent by the end of October 2018 *(Chart 3.15)*. The gross external debt of the national economy was 70 per cent by the end of 2016, and 58 per cent by the end of September 2018, while the gross external debt of the state, by the end of 2016, decreased to 40 per cent, and by the autumn of 2018, to less than 30 per cent, a GDP ratio level. In addition, the adjustment of the banking sector continued. The results of the programme in the improvement of the domestic macroeconomic environment and the significant decrease in external vulnerability were also recognized by the international financial institutions, and clearly contributed to the fact that in 2016, the three major international credit rating agencies raised Hungary's debt rating back to investment grade.

Chart 3.15
Development of foreign currency ratio of the gross debt of the central budget

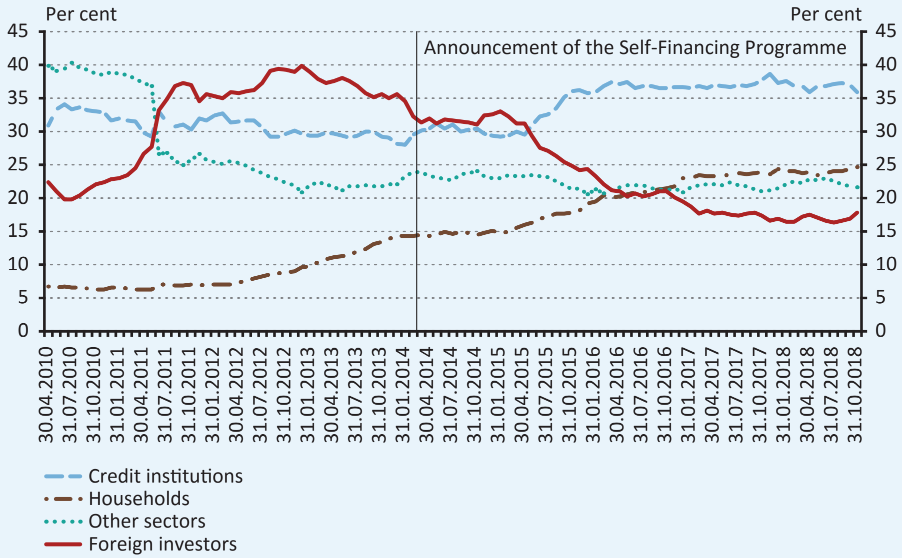


Source: MNB.

As a result of the measures of the Self-financing Programme, the amount of HUF government securities held by central bank counterparties, from the end of the first quarter of 2014 to the end of December 2016, grew by nearly HUF 3,000 billion, and by October 2018 by more than HUF 4,100 billion. In the same period, the increase in the holdings of the entire credit institution sector – including the individual banks outside of the group of central bank's counterparties, as well as the cooperative banks and credit unions – amounted to around HUF 2,400 billion and HUF 3,800 billion. With the crowding out of bank liquidity from sterilization instruments, bank funds flowed into the securities market, and – due to the peculiarities of the Hungarian securities market – especially into the market of HUF-denominated government securities, which was also supported by the introduction of stricter liquidity rules (LCR indicator) in line with international rules. In accordance with the conditions and design of the central bank's interest rate swap facility, banks primarily purchased longer-term government bonds. Between 26 June 2014 and 7 July 2016, in the 52 IRS tenders of the three-, five- and ten-year maturities, the MNB concluded transactions with a total value of HUF 1,808 billion with 17 banks. By the end of 2016, the IRS portfolio had decreased to HUF 1,731 billion as a result of closures, and to HUF 1,342 billion due to the 2018 maturities, thus the increase in government securities was significantly higher than the amount of IRSs allocated.

Between 2014–2016, HUF-denominated government securities saw a significant rearrangement in their ownership structure, with a major increase in the share of domestic sectors. In the banking system, as a result of the measures taken during the programme, the portfolio of liquid securities and remarkably government securities expanded significantly, so in the market of HUF government securities credit institutions became the most important actors: their share rose from 30 to 38 per cent *(Chart 3.16).* Of the domestic sectors, in addition to banks, the share of household ownership also increased remarkably: from below 10 per cent in 2012 to the beginning of 2014 by 15 per cent, to the end of 2016 by 23 per cent, and by October 2018 to 25 per cent. As a result of the ÁKK's household government securities programmes, the more active involvement of households in debt financing also contributed to the reduction of external vulnerability. The gradual increase in the share of credit institutions and the gradual decline in the share of non-residents started mainly after the announcement of the continuation of the programme and the reform of the monetary policy instruments, in June 2015. Due to the significantly expanding share of domestic sectors, the proportion of non-residents declined to 19 per cent by the end of 2016, and to around 16–17 per cent by the autumn of 2018 in the market of HUF government securities. Within the total securities debt, including foreign currency debt, the share of domestic sectors exceeded those of non-residents from as early as the beginning of 2015, rising to 63 per cent by the end of 2016 and to 69 per cent by the autumn of 2018.

Chart 3.16
Share of holding sectors in the market of HUF-denominated government securities



Note: Until December 2012, the share of credit institutions contains holdings of money market fund stocks, as well.
Source: MNB.

The reduction in the exchange rate exposure of general government and the rearrangement of the ownership structure of liquid securities were accompanied by a meaningful decline in long-term government securities yields. Due to the central bank's base rate reduction cycles, the base rate decreased to 0.9 per cent by summer 2016. Interest rate cuts primarily had an impact on short-term yields; however, expectations about the base rate were also incorporated into long-term yields. The central bank's base rate reductions and the measures of the Self-financing Programme contributed to a significant easing of the general government's interest burden through a decline in yields in the government securities market, resulting in fiscal savings for the state. In 2016, due to the decline in yields exceeding international developments, government securities yields with a maturity of over one year, dropped below the Polish yields.

The Self-financing Programme contributed significantly to the contraction of the central bank's balance sheet. The impact mechanism of the Self-financing Programme reduces the sterilization portfolio on the liabilities side and the foreign exchange reserves on the assets side of the MNB's balance sheet, i.e. it constricts the central bank's balance sheet by definition. Since the sterilization, costs paid on banks' funds held in the central bank's sterilization instrument exceed the yields to be realized on the foreign exchange reserves, the shrinking of the central bank's balance sheet generated savings not only for the MNB, but also for the whole national economy.

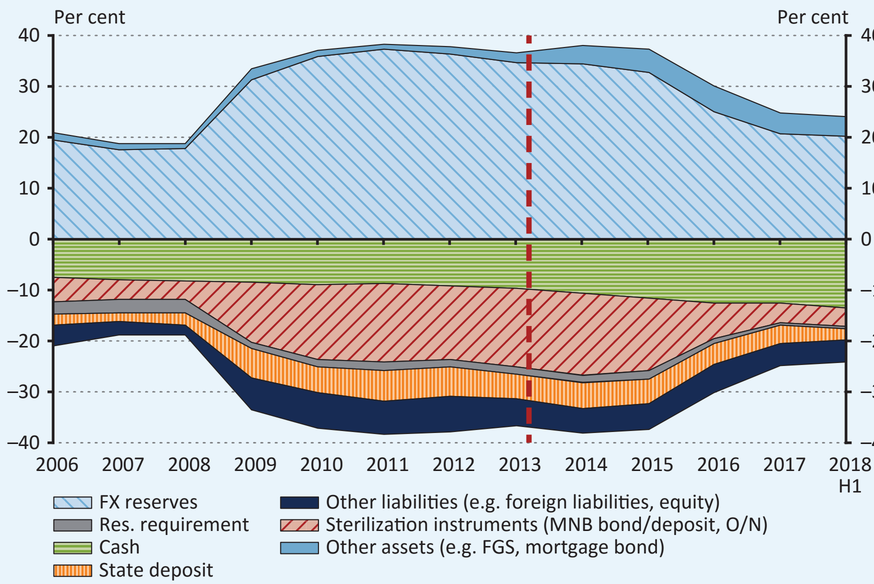
3.E WHEN LESS IS MORE – THE TURNAROUND OF THE CENTRAL BANK BALANCE SHEET

In dealing with the consequences of the financial crisis, central banks were soon faced with the constraints of conventional monetary policy instruments. It was then that they started using unconventional instruments, however, the domestic practice was radically different from the general one. Most central banks tried to loosen monetary conditions through asset purchases (Fed, ECB) or foreign exchange market intervention (Swiss and Czech central banks), which resulted in a swelling of the central banks' balance sheets. In the initial phase of the crisis, the MNB's balance sheet also expanded as a result of the increase in foreign exchange reserves due to high external vulnerability, however, from 2013, the central bank implemented the loosening of monetary conditions under the contraction and restructuring of the balance sheet.

The post-2013 monetary policy turnaround allowed the MNB balance sheet's contraction and then its structural transformation, the positive effects of which are apparent both at central bank and at national economy levels. Following the outbreak of the crisis, due to the unfavourable financing position of general government, Hungary was forced to borrow from international institutions, as a result of which on the assets side of the balance sheet there was an increase in foreign exchange reserves, whereas on the liabilities side there was an increase in the sterilization instruments. The external debt growth behind the swelling of the central bank balance sheet resulted in an increase in the country's foreign exposure, while high banking system liquidity meant a significant interest cost for the MNB. Thanks to the central bank's programmes and the country's high funding capacity, over the last six years – in parallel with the decline in external debt – the central bank's balance has declined substantially, which, on the one hand, has improved monetary transmission, and on the other hand has left room for monetary policy to do its job even in an extremely low yield environment at an international level. In addition, the contraction of the central bank balance sheet and the transformation of its liabilities side structure, coupled with interest rate reduction cycles, resulted in significant savings on interest for the MNB and the entire national economy.

The post-crisis balance sheet adjustment has reduced the external vulnerability of the Hungarian economy. Following the crisis, as a result of the narrowing of external and internal funding opportunities, the adjustment of economic operators, and the reduction in the financing needs of general government, the economy's net lending turned positive, and the country's external debt (including short-term debt, which was particularly monitored in terms of reserve adequacy) decreased. In this way central bank programmes reducing external vulnerability, which were accompanied by gradual decline in foreign exchange reserves, were able to start, without compromising reserve adequacy. Since 2013, the MNB, in cooperation with fiscal policy, has been playing an active role in stimulating the economy and reducing external vulnerability, without jeopardizing its primary mandate. In 2013, the

Chart 3.17
Development of the main components of the MNB balance sheet in terms of GDP
(Annual average values)



Source: MNB.

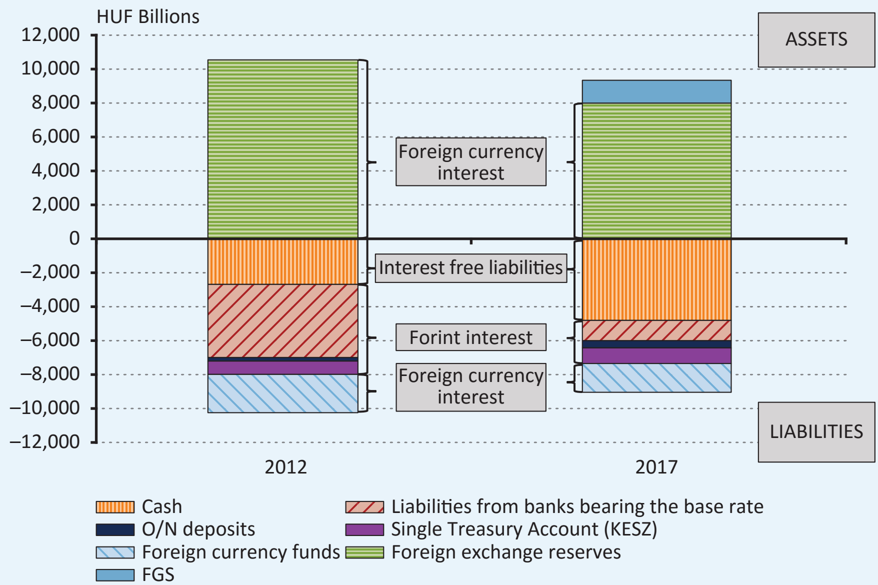
prepayment of the outstanding portion of the loan taken from the IMF was realized, and the related reserve reduction partly offset the increasing effect on the balance sheet total caused by the central bank's Funding for Growth Scheme launched to improve access to credit for small and medium-sized enterprises.

From the second half of 2014, the MNB's balance sheet started to shrink as a result of targeted central bank measures to reduce the country's external vulnerability *(Chart 3.17).* The Self-financing Programme launched by the MNB in the spring of 2014 was another milestone in reducing the country's external vulnerability. The reform of central bank instruments implemented within the framework of the programme, and the tenders introduced for interest rate swaps supported the increase in the domestic demand of government securities, and thus it became possible for the general government to finance its maturing foreign currency debt from newly issued forint-denominated government securities. As the funding from the banking system was used by the state to repay its foreign currency debt (including the EU loan taken during the crisis), the programme had a downward effect on the MNB's balance sheet. As of mid-2014, the fall in reserves resulting from the repayment of the FX debt of the general government more than offset the impact of the FGS, so the central bank's balance sheet total gradually decreased. From 2015, in addition to the Self-financing Programme, the contraction of the central bank balance sheet was also supported by the FX liquidity provided to the banking system in connection with the forint conversion of household foreign currency loans. The fall in foreign exchange reserves on the liability side of the balance sheet ultimately led to a decline in the deposit portfolio of the banking system, which meant significant interest savings for the MNB due to the difference between interest received on foreign exchange reserves and interest paid on forint funds (for more details see Section 6.B). It is important to point out that the contraction of the balance sheet due to targeted central bank measures was achieved by the fact that foreign exchange reserves had remained consistently above the level considered safe by investors.

From the end of 2016, while easing through unconventional assets, the MNB's balance sheet continued to decline, although at a slower pace. From the autumn of 2016, the decrease in the balance sheet total due to the previously presented factors was somewhat restrained by the fact that the MNB – in order to ensure sufficiently loose monetary conditions – provided forint liquidity to the banking system in exchange for foreign exchange through swap transactions. At the same time, the expansion of the fine-tuning swap portfolio was outweighed by the reserve-reduction effect of the previously presented processes, thus the central bank's balance sheet contracted more slowly but to a greater degree. In the first half of 2018, the Mortgage Bond Purchase Programme introduced to reduce long-term yields, together with an increase in liquidity-providing swap stock, already counterbalanced the impact of a lower foreign exchange reserve decrease due to the restrained government FX requirements, thus the central bank's balance sheet total stabilized at around 25 per cent of GDP.

In recent years, along with the contraction of the balance sheet, its structure also changed, which pointed to a decline in the MNB's interest-bearing resources. The expansion of cash portfolios played a significant role in the restructuring of the MNB's resources, which was partly due to the declining bank yields in parallel with falling inflation, as well as an increase in economic activity. The quantitative restriction applied from the autumn of 2016 to ease monetary conditions, led to a rearrangement in the MNB's banking resources: banks placed an increasingly high share of their excess liquidity in O/N deposits with lower interest rates (negative interest rates under current interest conditions). In addition, the rearrangement of liabilities side items

Chart 3.18
Changes in the central bank balance sheet

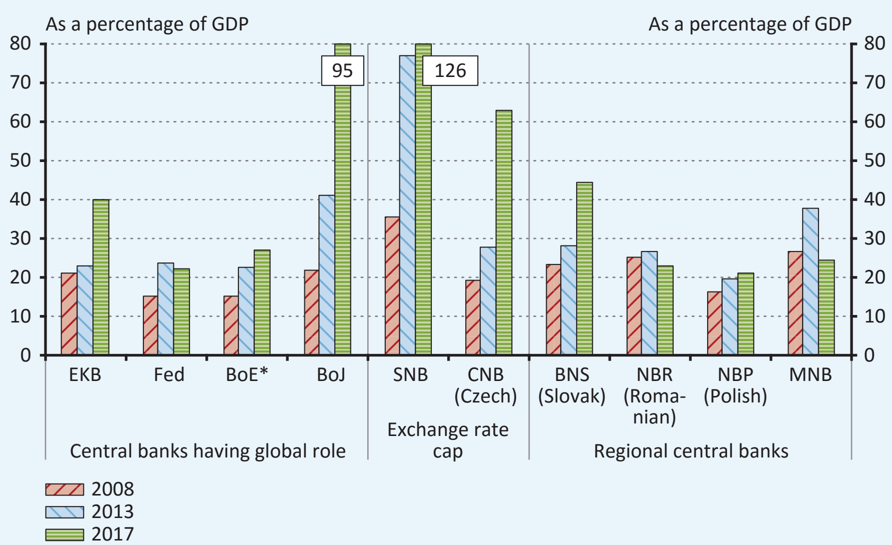


Source: MNB.

was also contributed to by the fact that – in line with the simplification of the MNB's monetary policy toolkit – the previous three-month deposit portfolio of HUF 75 billion was discontinued by December 2018. As a result of these processes, the interest rate sensitivity of liabilities side items was reduced.

Changes in the balance sheet of the Hungarian central bank since 2013 have been contrary to international developments. After reaching the limits of the traditional monetary policy, central banks (e.g. Fed, ECB, BOE, and BOJ) started to widely use unconventional tools for further monetary easing, which significantly increased their balance sheet total. In the case of the Czech and Swiss central banks, the swelling of the balance sheet was mainly due to the expansion of foreign exchange reserves, which was related to the foreign exchange market interventions dealing with the appreciation pressures on foreign currencies. Among the countries in the region, the balance sheet of the Slovak central bank had also expanded by 2017, although to a lesser extent than in the case of the Czech Republic, while in the case of the Polish and Romanian central banks only minor shifts have occurred

Chart 3.19
Balance sheet total of globally significant and regional central banks in terms of GDP
(Year-end data)



*Note: *For BOE, June 2017 data.*
Source: MNB.

during the last decade. Contrary to international developments, as a result of the measures implemented earlier, the MNB was able to maintain loose monetary conditions along with the contraction of the balance sheet. As a result, the central bank, with a balance sheet of a healthy size and structure, had considerable room for fulfilling its mandates under the Central Bank Act and was prepared for future monetary policy challenges.

3.F THE GOLD RESERVES RETURNED – INCREASING OUR GOLD RESERVES

The development of the role of gold in financial systems

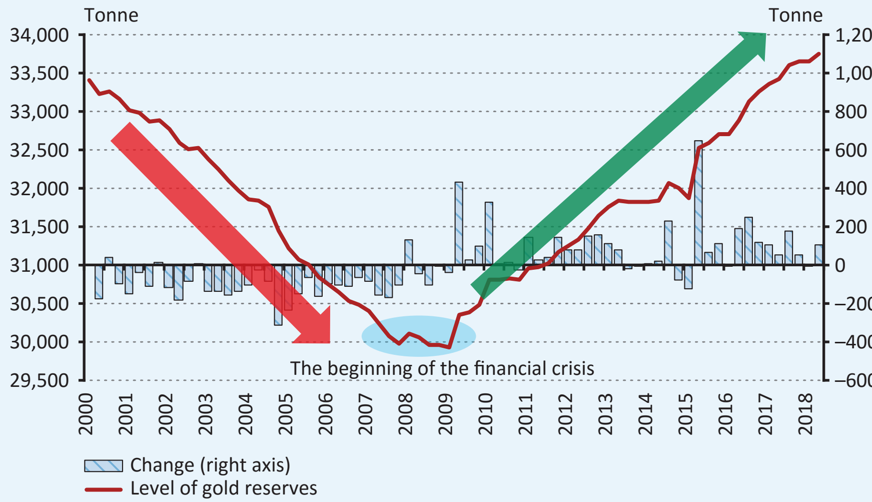
Gold's outstanding historical role in financial-economic systems was due to its qualities that well embody monetary functions. Gold is characterized by durability, divisibility, its intrinsic value, and – measured by historical standards until recently – it has had sufficient liquidity available for the dimension of economic processes. Due to these favourable qualities, it has been recognized as money for many centuries by economic actors, and because of its scarcity, gold has created trust as the foundation of monetary systems.

During the development of the current financial system, the role of gold has gradually evolved, in several stages. In centuries past, with the expansion of commodity production and the size of the world economy, a relative shortage of money gradually developed; money substitutes, worthless in themselves, which were convertible into gold and filled the functions of money along with precious metals, became more and more widespread. However, in times of war, global crises and severe economic imbalances, when additional money was needed, governments were forced to abandon the link between the amount of money in circulation and gold, which led to the collapse of the gold standard and later the Bretton Woods system. These processes have led to the establishment of fiat money, which, as a paper-based currency, cannot be converted into precious metal, but can fulfil the role of money because the issuing government makes it mandatory for its citizens to accept it.

Even in the changed financial-economic environment, gold played a special role among financial instruments. As fiat money gradually gained ground, gold's role in supporting the monetary system of a given country was reduced. The stability of money is no longer ensured by its physical convertibility into precious metal, but by the strength and economic, political stability of the issuing country. Yet, despite the change in its monetary role, gold has retained its wealth accumulation function, and continues to play a relevant role in central bank operations: the aggregate central bank gold reserves represent almost 12 per cent of the global foreign exchange reserves.

In recent years, as a result of changing central bank, economic and geopolitical processes, the role of gold has appreciated in many countries, especially due to its liquidity, credit-risk-free nature and shock-resistance. Since the 2008 crisis a turnaround can be observed, namely that central banks – primarily in the case of emerging economies – appear in the gold market as net gold buyers *(Chart 3.20).* This trend was reinforced later by the emerging Eurozone crisis, which made the government bonds issued by the Eurozone less attractive investment instruments in central bank reserve management. The combined effects of the 2008 economic crisis and the Eurozone crisis have shaken confidence in the global financial system. However, the underlying factors behind the increase in gold reserves include not only investment factors but also economic strategy considerations in a broader sense: gold's role of confidence builder under normal market conditions may be further strengthened in crisis situations. Geopolitical tensions emerging in the world economy in recent years have also strengthened the role of gold: as a credit-risk-free instrument, it does not depend on any issuer, thus diversifying international reserves.

Chart 3.20
Levels of central bank gold reserves



Source: World Gold Council, MNB.

Following the 2008 global economic crisis, gold reserves of the world's central banks rose significantly, which shows strong demand from this institutional sector. Over the past decade, China has tripled its gold reserves and Russia has increased them fourfold. For these countries, the dynamic gold stock accumulation trend can be explained mainly by economic strategy and geopolitical reasons, which may be due to the reduction of the dollar's role in the world economy. The steadily expanding gold reserves suggest that these countries also want to participate in world politics more and more actively, and to become increasingly important participants. In recent years, in addition to China and Russia, there has been strong demand for gold by other emerging market central banks as well. In the Central and Eastern European region, in addition to the Hungarian central bank, the Polish central bank also increased its gold reserves in 2018, making it the country with the largest gold reserves in the region.

The ownership of gold is characterized by strong concentration. About 70 per cent of the entire central bank gold stock is held by the 10 countries with the largest gold reserves. At country level, the USA has huge gold reserves of over 8 thousand tonnes, which is largely due to the fact that after World War II the country and the US dollar played a prominent role in the international financial system. Among the member states of the Eurozone, Germany, Italy, France and the Netherlands have the highest gold reserves. In addition to these countries, China, Russia and Switzerland also hold significant gold reserves of over 1 thousand tonnes.

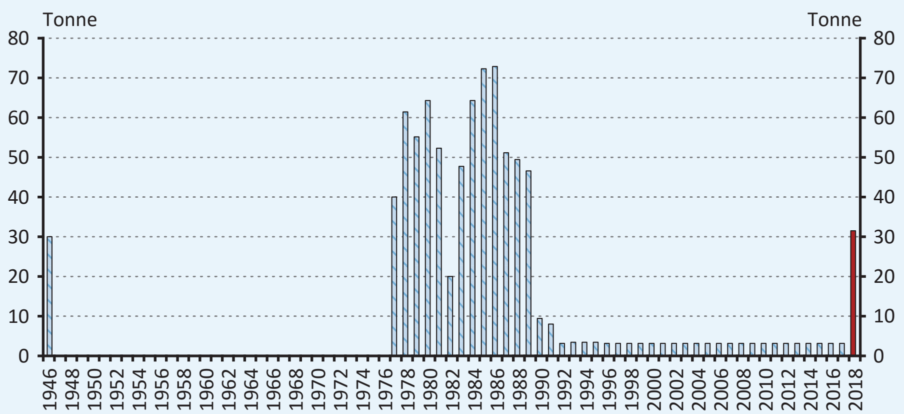
In recent years, several central banks have decided (e.g. those of Germany, Austria and the Netherlands) to repatriate some of their gold reserves. The decision was motivated by the fact that gold is no longer just a traditional reserve asset, but in extreme market conditions and in the event of geopolitical tensions is able to maintain and strengthen confidence. At the beginning of 2018, in line with international repatriation processes, the MNB also decided to store its gold stock in Hungary.

Gold reserve developments in Hungary

Gold has played a particularly important role in the history of Hungary. Much of Europe's gold mining was once provided by gold mines in Hungary (Körmöcbánya, Selmecbánya, Besztercebánya), owing, among other things, to the mining reforms of King Robert Charles. The Hungarian king was one of the first European rulers to introduce gold-based currency into his country. This was the famous gold florin, the Hungarian gold forint which, due to its high quality, for a long time remained a sought after currency throughout Europe.

In the 20th century, the amount of Hungarian gold reserves were at different levels within the various financial systems. At the end of World War II, the MNB's 30-tonne gold stock, high-value foreign exchange reserves and other values of the bank were taken to the West on the "golden train". The shipment was finally handed over to the US Army, which the US authorities fully returned to Hungary in the summer of 1946. After the period of hyperinflation following World War II, one of the important pillars of creating economic consolidation and financial stability was the introduction of the forint to replace the pengő, while the repatriation of the gold reserves also contributed to this, supporting financial consolidation as a kind of collateral.

Chart 3.21
Development of the MNB gold reserves



Note: Data are not publicly available for the period 1946–1977.

Source: MNB.

Around the time of political transition, Hungary's gold reserves dropped significantly after the MNB management of the time made the strategic decision to reduce its gold stock to a minimum level. Due to sales in the international gold market, from May 1989 to October 1992, the MNB's gold reserve fell from 46 tonnes in several stages to 3 tonnes. From then on, the level of stock remained unchanged up until 2018, its value fluctuated only depending on gold prices; quantitative change did not play a role *(Chart 3.21).*

In 2018, the MNB decided to restore and repatriate gold reserves. In the first stage, in early 2018, the central bank moved the 3-tonne gold reserves home, which it already owned. Subsequently, the Monetary Council decided on a ten-fold increase in gold reserves, which was implemented in autumn 2018. In the final stage, the MNB repatriated all of the newly purchased gold reserves. This completed the gold reserve recovery process; Hungary's 31.5-tonne gold reserves are again stored in the country.

After the ten-fold increase, the size of Hungary's gold reserves, both in terms of ratio and in an absolute sense, was in the middle of the international ranking, corresponding to the average of non-Eurozone region countries *(Table 3.3).*

Table 3.3
Size of gold reserves in Central and Eastern European Countries

	Country	Amount of gold reserves (in tonnes)	% of reserves
1	Poland	117	3.9%
2	Romania	104	9.8%
3	Bulgaria	40	5.4%
4	Slovakia	32	25.3%
5	**Hungary**	**31.5**	**4.4%**
5	Ukraine	24	5.6%
6	Serbia	20	5.9%
7	Czech Republic	9	0.2%
8	Latvia	7	5.7%
9	Lithuania	6	3.9%
10	Slovenia	3	13.4%
11	**Hungary**	**3.1**	**0.4%**
12	Estonia	0.2	3.0%
13	Croatia	0	0%
	Region average	**28**	**6.4%**
	Non-eurozone region average	**40**	**3.9%**

Source: World Gold Council (November 2018), IMF.

Advantages of holding gold reserves

There are many advantages of holding and increasing central bank gold reserves.

1) Gold reserves **continue to be used as a traditional reserve instrument,** an asset, a tool serving as a defensive line against serious crises.

2) As part of the international reserves, gold plays a **diversification role,** decreases reserve concentration, supporting the spreading and sharing of the financial risks of reserves.

3) In the case of physical gold as an investment form, the central bank **is not exposed to credit risks even in a crisis situation.**

4) Gold has an **economic strategic role** in every economic environment. By holding and accumulating gold reserves, the central bank is able to **strengthen confidence** in the country both domestically and abroad.

5) In the event of drastic **changes, or a systemic crisis in the global financial system,** the importance of gold may increase again; it may once again play a role in relations between countries, and may be particularly important **in terms of national strategy.** Observed gold purchases by other central banks in the post-crisis period well reflect the changes in international trends and the strategic approach of central banks.

6) In a crisis situation, the price of gold may increase **as a potential safe haven asset,** which increases the value of foreign exchange reserves, thus it can improve reserve adequacy and the country's resistance to crises and market turbulences.

Gold reserves mean more than a financial investment. The MNB decided to increase the stock primarily on the basis of national strategic considerations, taking into account long-term, stabilization factors. Holding gold in times of crisis may be particularly advantageous due to its favourable correlation with other investment instruments: as the price of other instruments falls, gold may appreciate, thus stabilizing the total value of reserves. All in all, increasing the previous level of gold reserves, which was very low both by regional and broader, international comparison, has had a confidence

building effect. In times of crisis, gold is a good diversification tool alongside the financial market reserve assets, which reduces the country's vulnerability and improves its external perception.

3.G FUTURE MONETARY POLICY – PREPARING FOR NORMALIZATION

The primary objective of the MNB, as defined by law, is the sustainable achievement of the inflation target. To ensure this, the MNB, by September 2018, was prepared for the cautious and gradual normalization of monetary policy. After reducing the base rate to 0.9 per cent by mid-2016, the MNB introduced a number of unconventional monetary policy instruments. In this section, we present the decisions made by the Monetary Council in September 2018, with which they prepared for the gradual and cautious normalization of monetary policy.

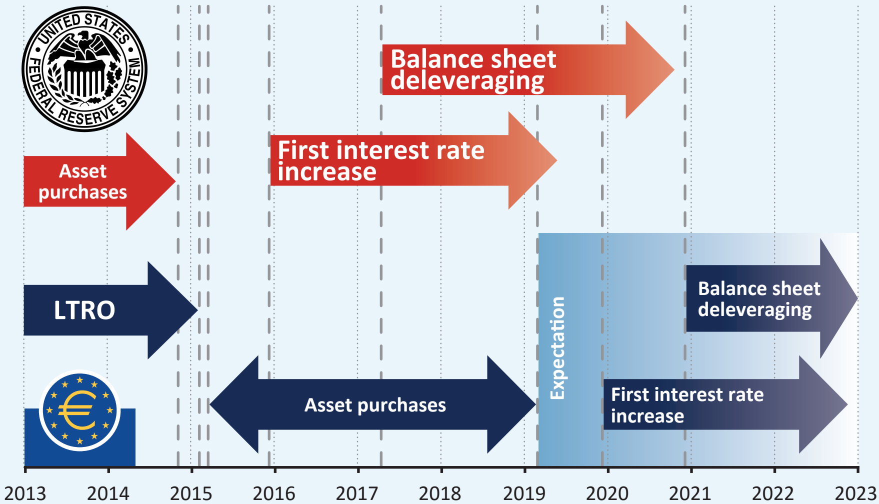
A changing international environment

In parallel with the recovery from the crisis, the persistently low inflation and interest rate environment is disappearing worldwide. During 2018, domestic inflation also showed an upward trend and was around the 3% inflation target. In order to close the period of a permanently ultra-loose monetary policy environment, some of the globally dominant central banks have already begun to gradually tighten monetary conditions, which has contributed to the strong fluctuations in emerging market capital flows, while others in recent times have formed the basis for normalization to be realized in the near future by shaping their communications. In a changing international monetary policy and money market environment, it is necessary for the Hungarian central bank to consider with increased caution the factors that may affect the sustainable achievement of the inflation target.

As a first step, major central banks starting normalization, prepared the normalization process of monetary conditions by shaping their communications. After the change in communication, it is typically the unconventional instruments that are the first to be phased out, followed by a raising of the policy rate, and finally the balance sheet expanded during the time of ultra-loose monetary policy orientation, is reduced *(Chart 3.22).* Some central banks previously published an explicit normalization strategy, while others were not bound like that and sometimes even took ad hoc decisions

(Federal Reserve System, 2014). In the course of normalization, the pursuit of graduality plays a key role in central bank communication.

Chart 3.22
Fed and ECB normalization strategy



Source: Fed, ECB.

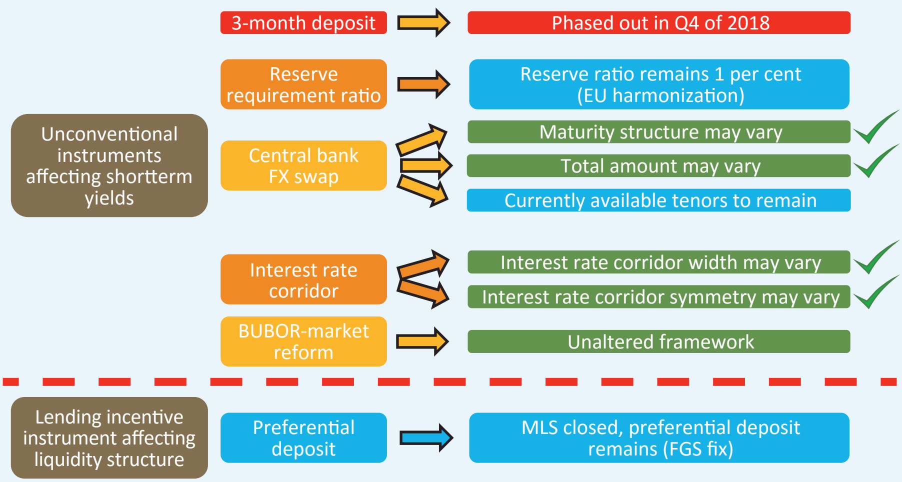
The MNB was prepared for the gradual and cautious normalization of monetary policy

Taking into account international practice, the Magyar Nemzeti Bank, following the rate-setting meeting in September 2018, indicated that it was prepared for the gradual and cautious normalization of monetary policy. In its statement of the September 2018 meeting, the Monetary Council stressed that it was prepared for a gradual and cautious normalization of monetary policy, which will start depending on the outlook for inflation. In the interpretation of the Magyar Nemzeti Bank, normalization is the process by which short-term yields can gradually and slowly rise from their permanently close-to-zero level as a result of application of the unconventional set of instruments modified according to the decision of the Monetary Council. In line with this, the Monetary Council, following its earlier communication, in a spirit of preparation for normalization, decided to simplify the unconventional instruments affecting short-term yields and to fine-tune the unconventional instruments affecting long-term yields. In addition, in September, the central bank published its instrument strategy affecting short-term yields. In this, it was stated that during normalization, the measures related to the unconventional instruments would be taken first.

As a result of changes in domestic and global economic processes, the MNB revised the instruments affecting long-term yields, the fine-tuning of which led to the phasing out of the monetary policy IRS instrument and the Mortgage Bond Purchase Programme. The global money market turbulence in mid-2018, drew attention to a massive change in the international environment. At its meeting in June 2018, the ECB decided to close its asset purchase programme at the end of 2018, which indicated a reduction in its commitment to influence long-term yields. In addition to the changes in the international monetary policy environment, domestic processes also justified the revision of the instruments affecting long-term yields. In September 2018, the Monetary Council decided on the phasing out of the Monetary Policy IRS; the last tender was held in December 2018. The Mortgage Bond Purchase Programme was closed in two stages; secondary market purchases lasted until the end of September 2018, while primary market purchases continued until the end of December 2018.

The MNB considers transparent operation an extremely important value and does its utmost to foster predictability and graduality in its measures. This is also served by the background paper titled “Future strategic framework for the set of unconventional monetary policy instruments affecting short-term yields”, published on 18 September 2018. The background paper sets out what future role, during the shaping of monetary policy role, the MNB will allot to the individual unconventional monetary policy instruments affecting short-term yields, what changes can be expected in the instruments and what principles the bank will follow when making these changes *(Chart 3.23).*

Chart 3.23
Possible future developments of the monetary policy toolkit affecting short-term yields



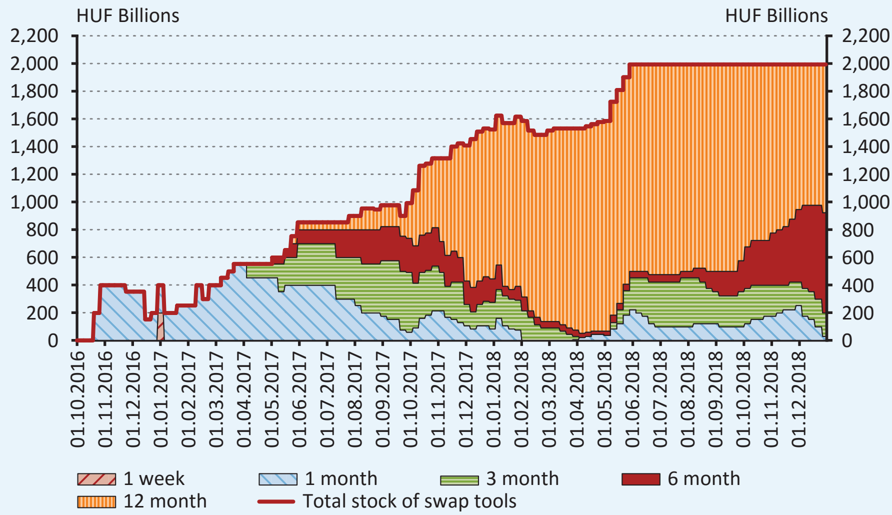
Source: MNB.

The MNB gradually phased out the 3-month deposit facility in the fourth quarter of 2018, making the central bank's instruments simpler and more transparent. In line with the Monetary Council's decision in September 2018, the 3-month deposit was phased out from October 2018. The last tender was held by the MNB in September 2018, and the stock was fully depleted by 19 December 2018. The decision served to simplify the instruments and increase transparency; the number of instruments affecting short-term yields decreased. After the termination of the 3-month deposit, the interest paid on the required reserve and the preferential deposit remains the same as the base rate of the central bank. Following the decrease of the 3-month deposit portfolio to zero, the role of the policy instrument was taken over by the required reserve.

In respect to the sequence of measures to facilitate normalization, the MNB "will exit along the path it entered": first it will use unconventional tools, followed by employing the optimal combination of measures associated with the FX swap tool and the interest rate corridor, and only then can it apply conventional measures. During the easing of monetary policy, the MNB first reduced the base rate and then introduced unconventional instruments, in tandem with the sustained maintenance of the base rate. In the future, monetary policy can be shaped first by modifying certain elements of the unconventional instruments affecting short-term yields: modifying the FX swap portfolio, the parameters of FX swap tenders and the edges of the interest rate corridor. Looking ahead, the use of the unconventional instruments affecting short-term yields will be simplified and the central bank will basically achieve its monetary policy goals by actively shaping these two instruments.

The MNB considers the FX swap tool to be a strategic element of the monetary policy toolkit, and in the future will permanently maintain its presence in the FX swap market, which is of major importance for monetary transmission. The FX swap market is of paramount importance for the development of monetary transmission and market yields, so the central bank wants to maintain its presence in the FX swap market; it will continue to hold swap tenders *(Chart 3.24).* Due to its strategic role in monetary policy transmission and banking liquidity management, the MNB keeps a substantial part of the FX swap portfolio permanently in its balance sheet. Each of the maturities used (1 week or 1, 3, 6, and 12 months) may be announced, however, the distribution of the stock by maturity may vary.

Chart 3.24
Developments in the liquidity-providing swap portfolio and its structure according to the original maturity



Source: MNB.

In terms of the monetary transmission, central bank instruments on the deposit and the loan side and, consequently, the width and symmetry of the interest rate corridor are all considered important by the MNB. The two edges of the central bank interest rate corridor are determined by the O/N deposit and the O/N loan interest rate. The MNB attaches great importance to the sound functioning of interbank markets, which it takes into account when determining the optimal width of the interest rate corridor. The purpose of the deposit and loan instruments used at the edges of the interest rate corridor is not to take over the operation of the market; the simultaneous and substantial utilization of the central bank's deposit and loan side instruments may intensify the segmentation of the banking system. In determining the optimal width of the interest rate corridor, the central bank takes into consideration relevant international experience, in addition to the characteristics of the domestic money market.

In future monetary policy developments, the central bank will not change the reserve requirement ratio of 1 per cent. Since December 2016, domestic credit institutions subject to reserve requirements have had to place a mandatory reserve equivalent with 1 per cent of their liabilities subject to reserve requirements, with the central bank. This rate is in line with the practice of the European Central Bank. During normalization, the MNB, in the context of European Union harmonization, maintains the reserve ratio of 1 per cent.

The extension of the preferential deposit facility ensures that the FGS *fix* is neutral in terms of liquidity. Launched in 2016, the Market-Based Lending Scheme (MLS) ended in December 2018, and related to this, the banks participating in the MLS were able to use the preferential deposit facility until the end of February 2019. At the same time, from March 2019, the MNB provided a new preferential deposit facility for credit institutions participating in the FGS *fix* launched at the beginning of 2019 to ensure the liquidity neutrality of the Scheme by sterilizing excess liquidity at the base rate. The newly opened deposit facility is available to the participating banks to the extent of the funds disbursed within the framework of the FGS *fix*.

4 Comprehensive steps to create and sustain financial stability

4.A EFFECTIVE AND STRICT SUPERVISION – THE CENTRAL BANK'S MICROPRUDENTIAL SUPERVISION

Combining tools – supervising strategy: stability and confidence

The transformation of the MNB into an integrated organization was implemented on 1 October 2013 pursuant to Act CXXXIX of 2013 on the Magyar Nemzeti Bank. Subsequent to the merger, it was necessary to develop a new, **long-term strategy that is in line with the central bank tasks and takes into account both the macro- and microprudential supervisory objectives.** As set out in the "Stability and confidence" strategy for supervision and consumer protection, written for the period 2014–2019, the vision for supervision is: to create a stable, competitive, prudent, transparent and trusted financial sector and a strong MNB that oversees it. Its purpose is to maintain and support the stability of the financial system, to restore and strengthen the confidence of system operators in the system and with each other through the integrated supervisory toolkit.

In order to achieve these goals, the strategy set out detailed objectives and related specific tasks for the specified period in respect to supervised markets and supervision as an institution. Market objectives included increasing the shock resistance of the financial sector; increasing healthy, sustainable competition as well as increasing the credit, financing capacity and readiness of the financial system. In terms of supervision, the MNB set the following goals: implementation of integrated operations, strengthening of risk-based supervision, effective consumer protection and market surveillance activities, determined, timely enforcement of rights, an active regulatory role, international engagement and development of an up-to-date knowledge base. In the field of macro- and microprudential supervision, market surveillance and consumer protection, and in order to achieve the strategic objectives set for each supervised sector, an organization had to be set up that **would have**

the necessary tool system, continuously evolve and be sufficiently proactive, sanctioning infringements immediately and strictly; and at the same time, able to properly support supervised market actors and consumers. Based on the results of the MNB until 2019, the strategic objectives of supervision and consumer protection were achieved.

Truly, on-going supervision – a forward-looking approach

The primary objective of financial supervision is to detect and manage risks as soon as possible, preferably at the stage of development. Thus, the former supervisory approach and methodology that had reacted reactively to protracted, even decade-long problems, had to be transformed into a forward-looking, proactive approach. Problems of the future can be prevented by influencing and controlling processes of the present. Mistakes of the past are already a "forced path", their management – even if necessary – is not real supervision.

In order to develop a proactive, forward-looking and (also) present-focused supervision, **over** almost the last **six years, the organizational structure of the MNB Supervisory Authority has been transformed, there has been renewal in the supervisory methodologies, procedural arrangements, and indicators, while new supervisory tools and analytical frameworks have been introduced.** A number of methodological tools have been developed, thereby enhancing the automation of supervision.

As a new feature, within on-going supervision, the MNB **broadly monitors** the work of the decision-making bodies of supervised institutions. The MNB Supervisory Authority controls the work and activity of the institutions with new indicators and a monitoring system. The "risk alert" system (supported by an IT solution) based on hundreds of indicators, indicates, or "rings" in the responsible areas if, for example, certain limits have been exceeded or trends have changed. In the event of a significant shift of any known indicators without known reasons, a procedure can be initiated (e.g. an immediate operative targeted examination, without prior notice, which has been developed as a new control method).

An important innovation is a monitoring system designed to closely follow-up the implementation of supervisory obligations. It is not enough– even in full detail – to order the institutions to reach a decision to manage the identified risks. The implementation of obligations should be monitored and, if necessary, enforced.

The MNB has made significant advances in the quality and reliability of data requested from supervised institutions by shifting the focus to transaction-level, granular data, in line with European trends. It has used these data effectively to build up a monitoring system, while also exploiting the opportunities provided by the multivariate statistical theories. The range of applied mathematical methods is constantly expanding. At present, the most frequently used ones are: defining the distribution and characteristic values of observations (parameter estimation and hypothesis testing), Value-at-Risk (VaR) models, multivariate regression analysis and graph theory solutions, but the MNB is already examining the possibility of using "big data" methods and the supervisory application of artificial intelligence.

Business modelling and forecasting methodology has been developed as a new analytical framework to facilitate forward-looking supervision. By using this, a forecast of the most important stability indicators can be prepared for the next 12 months per institution. This new method has been considered a widely studied and exemplary innovation even in international practice. By monitoring the strategy and business plans of the supervised institutions more thoroughly than before, and building forecasting models, the MNB Supervisory Authority no longer guards and guides the operation of financial institutions by "looking back in the rear-view mirror" but **by focusing on the future, exploring potential risks.**

The supervisory review of banking capital requirements is also characterized by a forward-looking approach (ICAAP reviews). In all this, a trans-cyclical mentality plays an important role for which supervisory models have been created that, even in a recession, do not allow for an excessive reduction in the level of solvency capital, but ensure adequate capital supply for institutions, independently of the cycle.

More frequent, targeted, novel inspections

In addition to the modernization of the methodology of all inspection types, one of the most significant results of renewed supervision is that the organization **has moved towards more frequent, more targeted and faster inspections.** Over the last 6 years, a number of focused thematic and targeted inspections have been conducted across all sectors, and compared to previous periods, the post-one-year follow-up of comprehensive inspections have become more important.

As a new element, methodology of operational inspections has been introduced, which enables the MNB Supervisory Authority **to appear** at certain institutions **without prior notice, i.e. it can react more quickly,** and the latest IT solutions have also been incorporated into the inspections. An example of this is the method of complete population test whereby a solution developed by an institution is reconstructed using an IT tool, which allows an audit not only to be carried out in the context of sampling, but with respect to the entire dataset.

Significant progress has been made in revamping the methodology for data collection during inspections. Three levels of data collection have been developed by the MNB. The lowest level is when during the procedure the MNB **requests data with a predetermined content and deadline.** It is the task and responsibility of the supervised institution to produce them (data supply). The second level is, when the on-site inspection is carried out in the presence and under the supervision of an MNB colleague, whereby, among other things, the registry system, **the entire database** of the trading system **will be saved.** In this case, the MNB is responsible for the restoration and processing of the transferred database at the MNB site. The highest level of data collection is, when the MNB **makes a physical mirror copy or a certified copy** of the "media", including data stored by a hosting service provider, and scans the data stored on the media using the copy. In such a case, the MNB is responsible not only for the restoration and processing of the data, but also for **proving the integrity of the data,** which is currently guaranteed by the MNB through the use of so-called hash codes or hash functions. This new method helped for example in the exploration of the issues known as "broker scandals" of 2015 (Quaestor, Hungária, BudaCash).

As an innovation on the MNB's electronic interface (online Securities Account Query Application [ÉSZLA]), **from 10 February 2016, customers of brokerage firms can query their securities and customer account balances held with their service provider.** The new system makes it possible to prevent the creation of fictitious invoices, as data supply ensures that no client and securities portfolio belonging to his/her person is left out of the data transmission, so the system provides important feedback and control both to the MNB and the client. Upon entering the system, customers can report to the Supervisory Authority if they see a discrepancy between the MNB's balance sheet data and those sent to them by the account manager, with an accurate indication of the error. Notifications are investigated by the MNB and, if necessary, the reason for the deviation is clarified during inspection.

The MNB treats as a priority the protection of ensured client claims and client portfolios with investment service providers; in the context of itemized investigation checks the business-critical systems used by the institutions, the operations carried out there, as well as related control activities to identify potential misuse actions. The checking of portfolio management activity and proper use of customer accounts, as well as the inspections related to the transparency of the economic interests of senior managers and employees and to their transactional engagement, are also very important.

As regards investment fund managers, the MNB has also redesigned its audit practice, **placing major emphasis on controlling risk management, liquidity management, corporate governance and investment decision-making activities, which are to be performed by investment fund managers in accordance with legal regulations.** In addition, there is a growing emphasis on transaction-based investigation. In each comprehensive study, the entire database of the registry system is saved, on the basis of which individual transactions concluded by fund managers are monitored at transaction level. In connection with the transactions inspected, particular attention is paid to the risks associated with the operation of real estate funds. This approach is further consolidated by the growing range of data services used in continuous monitoring.

Recently, **supervisory activity related to Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT) has also undergone a major transformation.** In line with international expectations, risk-based supervision has been developed within the MNB in this area as well, which has brought about two major changes: on the one hand, the intensity (1/2/3 years) and depth of investigations vary according to the institutions' money laundering and terrorist financing (ML/TF) risks, and on the other hand, in the case of institutions with higher ML/TF risks, the inspections are separated from comprehensive prudential inspections.

Over the last five years, **market surveillance has undergone significant changes.** This is due, on the one hand, to changes in the legislative environment, such as the appearance of the Market Abuse Regulation (MAR), and the regulations requesting and assisting a broader range of supervisory actions resulting from the possibility of fining individuals involved in offending activity, or from criminalizing the activity aiming at mediation in the absence of notification; and on the other hand, to the continuous development and expansion of the supervisory toolkit and monitoring. On the basis of the experience of recent years, all this has contributed to the fact that, on the one hand, market surveillance can identify unauthorized, unlicensed or unreported activities at a stage when investor interests have not yet been compromised, and, on the other hand, by preserving the unity of capital markets, more effective sanctioning of prohibited insider trading and market manipulation behaviour can be achieved.

In order to increase the transparency of the capital market, **the MNB has introduced decisive measures to make the issuers' supervision more proactive.** The emphasis has shifted significantly towards continuous supervision, so that, in the event that the issuers' obligation to provide information on a voluntary basis is not met, the MNB – if necessary – should enforce the disclosure of the information as soon as possible. The primarily goal is not to impose fines on issuers – sometimes even years after the infringement – but for the information affecting the judgment of the issuers, the value or the yield of their securities to be available to investors as soon as possible. At the same time, the MNB boldly applies some of the measures that were not previously used or were abandoned, such as the suspension of stock exchange trading of securities, removing them from the product list, or fines for senior managers. As a result of intensified supervisory activity, the discipline of issuers regarding disclosure obligations has greatly improved over the last 3 years.

Renewed Enforcement

Supervision enforcement activities have also been redesigned by central bank integration. Today, legal activity, such as supervision activity, is also determined by a risk-based approach. This means that the MNB identifies risks **at an early stage in their development and, if necessary, it manages enforcement tools** in order to prevent the build-up of risks, staying one step ahead. Therefore, instead of the legal assessment of the facts already realized, the emphasis has been placed on preventing the potential occurrence of infringement.

In harmony with the risk-based approach, the MNB has implemented a number of early interventions that have successfully prevented clients' money from being compromised due to inadequate institutional performance. This includes, among others, decisions that have penalized supervised institutions for irregularities in risk management, internal protection lines or the keeping of accounting and analytical records. The proactive supervisory approach is also evidenced by cases, where the MNB, in order to minimize potential losses for customers, **withdrew license** from institutions with a non-sustainable business model **long before their actual insolvency.** This approach is also strongly reflected in market surveillance procedures, as after the procedure is launched, the MNB immediately publishes a warning, which aims to draw the attention of customers to the fact that the service provider subject to the procedure is potentially unauthorized to engage in licensed activities.

The MNB **has defended** financial stability, as well as the interests of consumers **with outstanding success in court**, even by initiating a constitutional complaint at the Constitutional Court – ending with a favourable decision for the MNB –, which is also of legal significance in the field of administrative law.

The MNB **has established** a consistent and more pronounced **policy of fines with** significantly **higher amounts** than before for sanctioning detected infringements. It has become an important consideration in determining the amount of a given fine, that if the infringement constituted a lack of investment, such as IT development, then the amount of the fine should offset the cost saved by the failure to invest. In addition to supervised institutions, the MNB **proceeds with increasing rigor** against individuals, whose personal responsibility can be established for violations of the institutions.

The message of the MNB's consistent fine policy is clear and unambiguous: economic advantages gained through unlawful or negligent activity must be compensated by the sanctions applied, eliminating the financial motivation for infringement. Moreover, the amounts of fines collected on the basis of supervisory decisions is not used by the MNB for its own operation. They are spent by law on charitable purposes and on the development of financial literacy and economic thinking.

Market shaping with recommendations

The MNB also guides the operation of supervised sectors by recommendations. The explicit purpose of recommendations is for the MNB to express its expectations by completing the legislative framework, and in respect to regulated issues to provide the institutions with expectations beyond regulatory requirements affecting their wide scope of operation (from the management of various prudential risks to the consumer protection issues).

Following the supervisory integration in 2013, the MNB made it clear on several forums that **it expects not only formal compliance but also fair behaviour from financial institutions.** In this new approach, the MNB thoroughly examined which markets are experiencing toxic, remediable phenomena, looking for appropriate measures and regulatory tools. As a result, in the credit industry sector – in support of legislation – a **regulatory package known as "fair" (i.e. ethical) banking system** was set up in the autumn of 2014, which made the development of interest rates on consumer credit contracts transparent and thus traceable. In this way, the programme of Qualified Consumer-Friendly Housing Loan announced by the MNB in 2017 was a step forward, which provides consumers with a favourably uniform set of conditions (favourable interest rate levels, short lead times).

The fair approach has also taken root in the insurance market. The first step in this is the recommendation on pension insurance issued in the spring 2014, which is a fair pricing regulation. Following the positive experience, the MNB developed what it termed the ethical concept for the life insurance market combined with full savings, where the recommendation on unit-linked insurances modified in 2016 became an important element in addition to the basic statutory rules. The recommendation expects transparency, responsible investment behaviour and limited costs similar to pension insurances. On the whole, both packages have improved market competitiveness and customer confidence without causing market shocks, contributing to long-term sustainability. In addition to the above, stability preservation has been ensured by a further recommendation with respect to the volatility capital buffer. This, with the new risk-based capital calculation system (Solvency 2) introduced in 2016, has successfully managed increased volatility. Recognizing the importance of digitization development, the MNB – ahead of its time – regulated the various forms of online insurance mediation with a recommendation as early as 2015.

On the basis of the above, it can be seen that the MNB – in pursuit of its stated objective –, playing an active regulatory role, helping with legislation and applying independent regulation, **has introduced significant measures to develop a framework for fair competition in supervised markets and to maintain financial stability.** Experience shows that the level of alignment with the recommendations is high. Since 2013, the MNB has contributed to the improved functioning of markets, risk reduction and thus preserving financial stability by issuing some 80 recommendations.

In addition to acting strictly and consistently against infringements, **the MNB**, in the spirit of the service provider central bank's concept, **strives to provide market players with all the assistance needed to promote law-abiding behaviour** and to meet prudential expectations. To this end, it has the intention of providing guidance to market actors **by issuing resolutions as well as providing opportunities for consultation.** Particular emphasis should be placed on the organization of issuer workshops for preparing new market entrants of the stock exchange with the aim of familiarizing them with the legal obligations of issuers and of transferring good practices developed to promote an efficient Hungarian capital market.

Recommendations and management circulars issued by the MNB in the context of its consumer protection activities concern the following topics: delivery of items, fair banking rules, claims management, product development, complaint handling, collateral loans, treatment of disabled consumers, recovery of overdue mortgage loans, investment (unit-linked) life insurances, and settlement of foreign currency loans.

Financial consumer protection in a new spirit: thematic and targeted inspections, actions and public interest lawsuits

Legislation cannot always keep pace with continuously and highly changing technological, market and social development, therefore, products or service elements undesirable from a consumer point of view are very likely to appear. For this reason, the MNB, in the spirit of proactivity, **has placed particular emphasis on managing emerging risks on the basis of consumer protection principles.** One of the most important tools of this is the continuous consumer protection supervision, which is implemented by the operation of institutional responsibility system of consumer protection. In this context, the most common soft tool is the consumer alert, the use of which has resulted in the rapid and efficient elimination of emerging issues that are typically less weighty. This includes, for example supporting compliance with new legislation on disabled consumers and raising awareness of the updated content of the indebtedness prospectus. The MNB continues to apply the consumer alert, in order to draw the attention of institutions to the legal compliance of information available on their websites, as well as to behaviour that is of concern in individual cases or in general. **Recognizing the proactive approach, institutions are increasingly interacting with the MNB** to seek professional guidance on legal interpretation or even on the introduction of specific services and products.

The cornerstones of renewed financial consumer protection are: **consumer-centred approach, prevention, as well as quick and effective action.** In the course of its consumer protection activities, the MNB carries out its analyses and inspections taking into full consideration the consumer's perspective. Beyond complying with the letter of the law, the MNB expects the institutions to apply the spirit of the legislator's intentions and, in the case of several possible interpretations, to apply the one more favourable for the consumer. As a result of requiring these principles to be followed, in recent years, consumers' interests have continuously been given priority over institutional interests.

In its non-classical regulatory activities, the MNB has also made significant progress by ensuring that general contract terms and conditions for consumers are fair. Thanks to its intercession, clauses creating unjustified disadvantages for consumers have been removed from some 150 thousand vehicle leasing and loan agreements and, additionally, from a large number of mortgage loan agreements. In 2018, the MNB started to review the general terms and conditions of credit card contracts, and – with respect to the insurance sector – it is currently negotiating with the relevant market participants on certain travel insurance terms and conditions.

The MNB **has** also **placed the operation of customer service on a new foundation.** The ultimate goal is for customers turning to the MNB to receive, as soon as possible, customized, understandable and satisfactory information from the new customer service, which is also physically renewed. In recent years, customer service has handled nearly sixty thousand written, and over one hundred and fifty thousand telephone and personal inquiries.

The purpose of the MNB is to develop a conscientious consumer society, to reduce the damage and risks arising from improper consumer decisions, and thereby to develop domestic financial literacy as well as promote public awareness of the MNB's role in financial consumer protection. Therefore, in the context of its complex activities, the MNB **has established a uniform information system, operates a nationwide consulting office network,** has initiated close cooperation with NGOs, higher education institutions and major actors in the domestic commercial and service sector, moreover, it draws attention to current financial actualities through regular communication campaigns.

The **trademark protected information tool system available as the Financial Navigator** – designed for the efficient, easy-to-understand delivery of financial consumer protection information useful in everyday life – consists of booklet series, shorter and longer tutorial films, a website, product selection search and comparison applications and mobile application. The individual information materials, on the one hand, deal with always-timely topics – related to financial products, services and compiled on the basis of real life situations – and, on the other hand, respond to market actualities of high interest.

As to the periodically actual topics, the MNB does not only sends them to the customers through civil partners. In 2016, it started cooperation **with supermarket chains** with a big customer base, **service providers with a significant client base, and transport companies.** Today Aldi, Auchan, CBA, Decathlon, KLUB Rekreáció Kft. (distributor of the All you Can Move SportPass), Magyar Posta, Media Markt, Spar, Tesco and Volánbusz are also Financial Navigator Partners helping to develop the financial literacy of the consumer society by providing interfaces to financial consumer protection content during MNB campaigns. Through this cooperation, they occasionally place leaflets and posters on a given topic free of charge in more than 700 department stores and nearly 500 post offices, moreover, the partners also publish current campaign materials on other platforms (websites, social media, newsletters, press ads).

Stricter action: clean-up processes in the financial sector

In the Hungarian financial intermediary system, there has been a clean-up process, which is partly due to the strong supervisory and consumer protection engagement. Over the last six years, the actors of the sector have strengthened significantly, their shock resistance has increased to a great extent, and the functioning of the entire transmission system has become much healthier.

One of the most important aspects of the credit institution sector's clean-up process is that **the amount of outstanding non-performing loan (NPL) accumulated by the institutions as a result of the crisis – which back in 2013 was very serious – has decreased significantly.** In effect, the banks with the guidance and support of the MNB, have been relieved of the burden of non-performing stocks. There has been a substantial portfolio clean-up on both the retail and corporate side. This process was facilitated by the fact that the MNB steered the conversion of FX-based loans with excellent timing, thus preventing further growth of non-performing loans. The measures of the Magyar Nemzeti Bank, such as the establishment of a special asset management company, the introduction of the systemic risk capital buffer for non-performing projects, or the bank capital requirements for non-performing project portfolio, greatly supported the reduction of the NPL stock. In addition, the MNB also formulated recommendations on the deleveraging of non-performing transactions.

The renewed supervision did not hesitate **to remedy and stop the risks by taking strong measures.** During the clean-up process, in many cases, it was necessary to appoint an administrative supervisor or even to take stronger measures. The licence of several institutions (e.g. Körmend és Vidéke Takarékszövetkezet, Széchenyi Bank, Orgovány és Vidéke Takarékszövetkezet, Dimenzió Biztosítóegyesület and several smaller funds) was withdrawn. As a result of stricter supervisory practices, a clean-up and consolidation process was also launched among investment service providers.

The emblematic measures of the clean-up process of the financial system are the supervisory inspections and findings known as **"brokerage scandals".** From a professional point of view, **these cases have also confirmed that integrating supervisory functions into the central bank was appropriate; methodological renewal is necessary and successful.** Namely, the case of BudaCash, Quaestor and Hungária Befektetési Szolgáltató shows that the renewed Supervisory Authority, transferred to the MNB, at its very first inspection – based on the new methodology within the framework of the MNB – has revealed a series of abuses lasting more than one and a half decades, with respect to these companies. Consequently, within just 15 months after the supervisory integration, the central bank discovered and stopped abuses that had remained undisturbed for more than 15 years, causing damage worth hundreds of billions of forints.

At the forefront of development

Technical innovation has strong roots in Hungary. Indeed, nowadays, the headquarters of many start-up companies considered successful are located in Budapest. In this environment, the Magyar Nemzeti Bank also has a strong tradition. Besides controlling today's traditional banking IT systems, **it keeps track of new technologies** (such as electronic signatures and cryptocurrencies).

In addition to the organic development of IT supervision, the MNB, in 2018, considered it appropriate to create an independent, dedicated innovation area, **the Fintech Lab.** Ultimately, efficiency improvement due to innovation and digitization can contribute to both financial stability and the consolidation of growth potential. While supporting innovative solutions, the Supervisory Authority pays particular attention to financial stability and consumer protection factors. It has become necessary to find the golden method, which, on the one hand, does not fall into the fault of excessive rigour and thus control loss (see cross-border activities) and, on the other hand, does not assume excessive prudential and consumer protection risks by too permissive regulation. The importance of the safe distribution of FinTech innovations has been proactively recognized by the MNB, and in order to advance it, it was among the first in Europe to create two important instruments: the Innovation Hub and the Regulatory Sandbox. On the Innovation Hub website, developers can obtain information on the applicable rules for their services, request quick guidance from the Supervisory Authority, have easy access to the Fintech ecosystem (start-ups, venture capital investors, regulators and incumbent financial institutions) and get first-hand information on international cooperation. By joining the Regulatory Sandbox framework for a predetermined period of time, Fintech innovations can be tested on a limited but real client base, enjoying temporary exemptions from a number of regulatory requirements.

Financial Arbitration Board for settling disputes

The Financial Arbitration Board has been dealing with the resolution of financial consumer disputes through conciliation since 1 July 2011. Since its establishment, **more than 30 thousand consumers have turned to the Board with a request for an out-of-court settlement of their financial dispute. On**

the grounds of the legal settlement of foreign currency lending, in 2015–2016, a further close to 17 thousand individuals requested a decision on their case.

Over the last six years, the internal organization has evolved considerably. The Office of the Board has been established, which supports substantive conciliation through administrative means and the case record system has also been renewed. Since April 2015, the Board has received its clients in 13 modern conference rooms on the ground floor of the Capital Square Office Building, located in the 13th district of Budapest at Váci út 76. Between 2014 and 2017, significant IT development took place; the case record system stores data and documents related to cases electronically and using this allows it to quickly compile statistics of any kind.

Between 1 March 2013 and 31 December 2018, 24,144 new conciliation cases were received, 23,975 cases were closed by the Board, of which **in 6,078 cases an agreement was reached between the parties before the Board, which was approved by it (in the absence of proceedings the number was twice as many); in addition 110 recommendations and 31 obligations were made.**

In order to promote alternative forms of dispute resolution, on 30 November 2016, the Board held the first national "Alternative Dispute Resolution Conference" as a professional forum for organizations, stakeholders dealing with conciliation and mediation. The aim of the event was to provide a basis for professional cooperation between all Hungarian organizations dealing with alternative dispute resolution. The conference, which proved to be successful, has been held every year since then. The second conference was titled "Alternative Dispute Resolution in the Economy", and the third one in 2018 – which was not only domestic but had reached the international level – covered the topic: Challenges of the Digital World in the Alternative Dispute Resolution.

The Board also strives to assist the development of law students' legal knowledge and discussion culture. To this end, first in 2017, and for the second time in 2018, it supported a total of four national competitions for students professionally, and – with the help of the Magyar Nemzeti Bank – financially as well. In the spring, alternative dispute resolution competitions, while in the autumn the financial case competitions were organized, whose support in the future is planned for the longer term by the Board, which, since 2017, every summer has also been hosting 25–30 cross-border young

Hungarians for one day. For them the Board holds and organizes lectures on the developments of the Hungarian financial world and the peculiarities and novelties of Hungarian financial legislation.

4.B PREVENTION AND ENSURING FINANCIAL STABILITY THROUGH PROACTIVE MACROPRUDENTIAL POLICY

The financial crisis demonstrated that reducing systemic financial risks with targeted tools is essential for achieving and maintaining financial stability. In 2013, a clear and strong macroprudential mandate was bestowed upon the MNB to address these risks. The central bank maintains the stability of the financial system with extensive and targeted macroprudential instruments and ensures its sustainable contribution to economic growth, so that it does not jeopardize its primary objective of price stability. With the effects of the crisis diminishing, the focus of the MNB's macroprudential policy has been on the introduction of preventive macroprudential instruments, the monitoring of financial systemic risks and the promotion of a more efficient operation of the banking system.

CONSUMER FRIENDLY TURNAROUND IN HOUSEHOLD LENDING: HEALTHY STRUCTURE, SUSTAINABLE GROWTH

Since 2015, the MNB has been among the first in Europe to introduce debt cap rules to prevent excessive household indebtedness. The regulation limits the maximum loan amount to a proportion of the collateral value and limits the instalment, which can be assumed to a proportion of the declared legal income of the debtor. Domestic debt cap rules effectively support household lending's expansion in a healthy structure. Limits are also important in respect to consumer protection, as they protect each borrower from over-indebtedness that goes beyond their ability to manage.

Household mortgages with variable interest rates carry a significant interest rate risk. Although the initial instalments of these loans are lower than those of fixed-interest loans, subsequent repayment instalments may increase significantly if the interest rate environment changes, the risk of which cannot be accurately assessed in advance by all borrowers. In the event of a possible interest rate shock, the significantly higher repayment burdens of household mortgage loans with variable interest rates may catch debtors off guard. In extreme cases, these loans can even become non-performing on a massive scale.

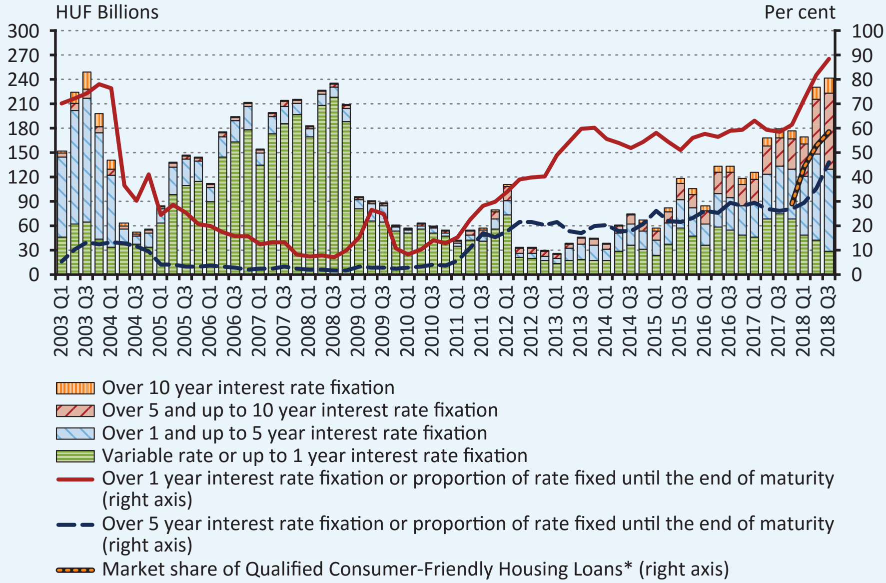
In June 2017, the MNB launched the Qualified Consumer-Friendly Housing Loan (QCFHL) programme to mitigate the interest rate risk of households, to stimulate competition in the housing loan market, and to facilitate consumer-friendly lending processes **going beyond statutory provisions.** Qualification can only be obtained for housing loans granted with longer interest rate fixation, which have standardized, easily comparable parameters. By the second half of 2018, QCFHL products reached a share of 60 per cent among the new housing loans with a longer interest period. Qualified loans can effectively help maintain the healthy structure of household lending by supporting the spread of fixed-rate schemes. In addition, they promote transparent pricing of products, stimulate competition in the housing loan market, and in addition include a number of consumer benefits.

In October 2018, the MNB modified the debt cap rules to mitigate the risks of housing loans with variable interest rates. The new rules, in addition to a previously lower payment-to-income ratio, allow housing loans with variable or shorter interest periods to be taken out. The purpose of the modification is to ensure that borrowers have an income reserve proportional to the interest rate risk assumed, so that they do not face any difficulties with payment in the event of a possible increase in interest rates.

By supporting the long-term funding available at affordable prices, the MNB also contributed to the long-term interest rate fixing of mortgages. The macroprudential standard for mortgage bond-based financing (Mortgage Funding Adequacy Ratio [MFAR]), the MNB's Mortgage Bond Purchase Programme and monetary policy interest rate swap (MIRS) facility contributed to the ability of banks to attract long-term funds at a more favourable price, which facilitated their being able to expand the range of mortgage loans with longer interest periods. In addition, the further development of the mortgage bond market and the enhancement of transparency are also supported by the BMBX mortgage bond index family developed jointly by the MNB and the Budapesti Értéktőzsde (Budapest Stock Exchange).

Due to the measures taken by the MNB, by the third quarter of 2018, the share of longer-term fixed-rate housing loans rose – from the typical previous level of 50–60 per cent – to over 90 per cent. As housing loans with the interest rate fixed for a longer period proliferated, households' resilience to interest rate shocks has considerably improved, ensuring the growth of lending in a healthy structure. Besides this, interest rate spreads of loans with longer interest rate fixations also declined significantly, aligning with international practice.

Chart 4.1
Distribution of housing loan disbursements by interest period



** The market share of Qualified Consumer-Friendly Housing Loans was calculated as the proportion of qualifying bank housing loan products, the new housing loans with a minimum of three-year interest period.*

Source: MNB.

4.C STABILITY TODAY – STABILITY TOMORROW: A FORWARD-LOOKING REDUCTION OF SYSTEMIC RISKS WITH THE MACROPRUDENTIAL TOOLS OF THE MNB

Instruments to prevent excessive credit growth

In addition to debt cap provisions directly reducing household over-indebtedness, the MNB introduced a countercyclical capital buffer framework aimed at dampening the fluctuations of the financial cycle. The capital buffer to be imposed in proportion to the actual rate of cyclical systemic risks can primarily reduce the negative lending effects of a potential financial crisis by the partial absorption of the losses that the banks may incur. In the absence of processes indicating excessive lending and because of the low vulnerability of the financial system, the MNB - since the introduction of the framework in 2016 - has not yet required banks to build a countercyclical capital buffer.

Instruments to prevent systemic liquidity and financing problems

In order to bring domestic liquidity standards closer to international rules, the MNB, from 2015 onwards, replaced the previous applicable standards with the liquidity coverage ratio (LCR), which is uniform in the European Union. The requirement that the MNB introduced in a preventive manner faster, but now operates at the same level as the EU standard, expects banks to have liquid assets in sufficient quantity and quality in the event of a possible short-term liquidity shock.

In order to ensure the currency and maturity match of domestic credit institutions, the MNB applies comprehensive regulations.

Since 2014, the Foreign Exchange Funding Adequacy Ratio (FFAR) regulation, which is part of the MNB's toolkit, has expected banks to hold long-term foreign exchange funds in a fixed proportion of their assets requiring stable foreign exchange financing. The regulation with respect to the Foreign Exchange Coverage Ratio (FECR), coming into effect in 2016, limits the on-balance sheet open foreign currency, which reduces the risk that banks hedge currency mismatch to an excessive degree with short-term swaps, which are difficult to renew in turbulent situations. In addition, from 2018, the MNB, through the regulation in respect to the Interbank Funding Ratio (IFR), generally restricts banks to relying heavily on interbank funds that are particularly difficult to renew in the event of financial strain.

From 2017, the MNB has supported long-term, mortgage bond-based financing of forint mortgages through the regulation of the Mortgage Funding Adequacy Ratio (MFAR). The regulation stipulates that credit institutions must finance their mortgage loans at a specified proportion from long-term funds, thereby reducing the forint maturity mismatch.

Instruments for strengthening shock resistance

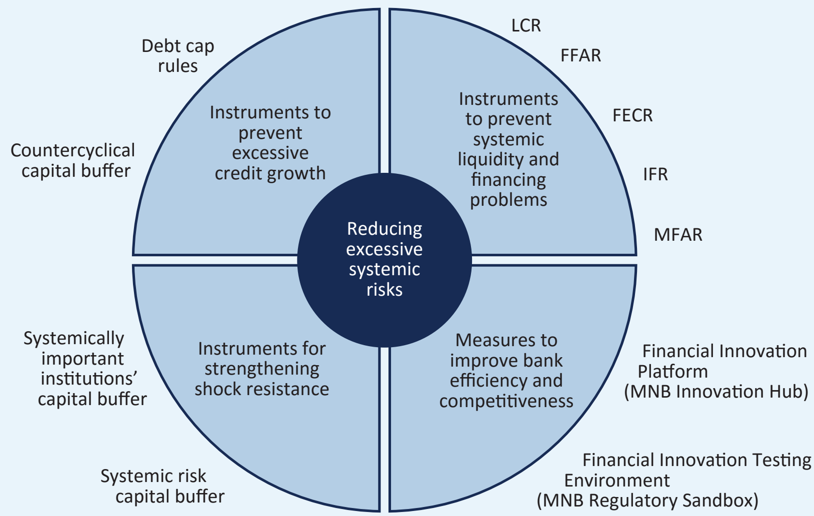
From 2017, the MNB has expected the systemically important institutions of the domestic banking system to gradually accumulate additional capital buffers over four years. Since 2015, the central bank has defined and annually reviewed the range of institutions that are obliged to build up capital buffers because of their systemic importance. Within the annual review, the MNB also decides on the level of capital buffer expected from the institutions involved, which varies from institution to institution. The primary objective of prescribing the capital buffer is to increase the loss-absorbency of the systemically important banks.

The systemic risk capital buffer prescribed by the MNB from 2017, encourages the elimination of problematic exposures, thus increasing the shock resistance of the banking system and reducing the risk of rebuilding troubled stocks. The problematic commercial real estate loan exposures built up during the crisis, significantly worsened bank profitability and resulted in a modest credit supply through the tying up of capacities. During the period since the announcement of the measure, the banks concerned, taking advantage of the favourable macroeconomic and market conditions, have cleared around 90 per cent of the sector-wide problematic stock.

Measures to improve bank efficiency and competitiveness

Since 2017, the MNB has actively promoted the proliferation of FinTech innovations in a safe manner that does not pose risks to financial stability in the financial system. In March 2018, the central bank – as practically the first in the region – established the Financial Innovation Platform (MNB Innovation Hub), which aims to facilitate communication between market actors and regulators, to support international cooperation and to issue guidelines on legal issues raised by FinTech solutions. Besides this, in the MNB's Financial Innovation Testing Environment (Regulatory Sandbox), launched at the end of 2018, financial institutions – that meet the defined criteria – may fulfil certain provisions of MNB Decrees with a deviation for a limited time while testing innovative solutions.

Chart 4.2
The macroprudential instruments of the MNB



Source: MNB.

4.D FRAMEWORK FOR A COMPREHENSIVE ASSESSMENT OF REAL ESTATE MARKET DEVELOPMENTS

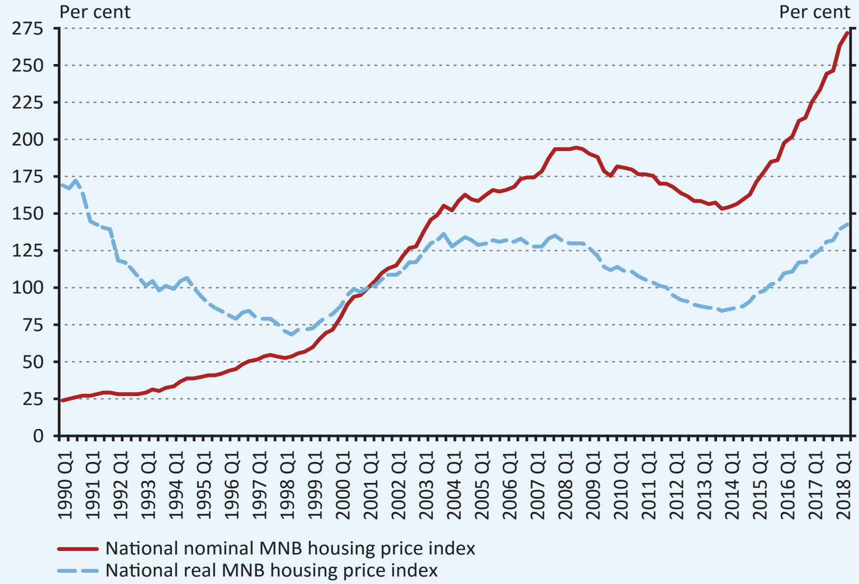
Since 2016, – on the one hand, based on the lessons learned from the crisis and, on the other hand, with respect to current market conditions – the MNB has paid particular attention to the assessment of developments in the real estate market. The MNB **regards** the real estate market **as one of the possible sources of build-up of financial stability risks** and therefore pays particular attention to these potential risks.

In 2016, the central bank introduced a new index family. The creation of the MNB housing price index has resulted in significant improvements to the domestic housing market statistics. The index family not only provides the longest time series so far in terms of changes in housing prices, but also provides an insight into the strong territorial heterogeneity observed in domestic housing market processes.[1] Since the spring of 2016, the MNB, in its housing market report has presented the macroeconomic factors affecting the demand and supply side as

[1] For a detailed methodological description of the MNB housing price index, see: MT 127. Banai Ádám – Vágó Nikolett – Winkler Sándor: Az MNB lakásárindex módszertana, MNB-tanulmányok 2017. (The MNB's house price index methodology, MNB Occasional Papers, No. 127) Link: https://www.mnb.hu/letoltes/ az-mnb-lakasarindex-modszertana-mnb-tanulmanyok-127.pdf

well as the current situation in the housing market and the housing loan market, in particular by assessing the evolution and level of prices. Within the framework of this publication, the MNB not only makes estimates on the cyclical position of the real estate market, but also presents the aggregate opinion of the most important actors in the domestic housing market.

Chart 4.3
The aggregate nominal and real MNB housing price index
(Q1 2001 = 100%)



Source: MNB.

The MNB cooperates with a number of market participants to accurately map the risks of the commercial real estate market. In recent years, the MNB has developed a framework for analysing the commercial real estate market by exploring data sources. The analysis of market processes is based on data from microlevel databases, the processing of data and analyses from real estate market consultancy firms, and a questionnaire market survey relaunched jointly by the MNB and the Royal Institution of Chartered Surveyors (RICS). Regular monitoring of commercial real estate financing is also a key focus of these analyses. The latest initiative of the MNB is to channel market participants' opinions into analyses as widely as possible, which, similarly to the extension of the housing market analysis framework, can be carried out through in-depth interviews with experienced professionals.

5 Measures to facilitate a more efficient financial infrastructure

5.A DEVELOPMENT AND TRADITION: BANKNOTE EXCHANGE PROGRAMME

The MNB plays a key role in the operation of cash supply processes of the country, including its non-central bank actors. The central bank ensures the production of new banknotes and coins to the amount required each year, which it issues through its main customers – credit institutions and the post office – according to the demand of cash flow operators. In addition, the central bank, through its decisions, determines the denomination structure of the cash in circulation, ensures security of supply, regulates the operation of actors in the cash supply chain, and is responsible for protection against counterfeiting. The final cash position is also the MNB: the destruction of banknotes of inadequate quality is the exclusive task of the central bank, as is any decision to withdraw obsolete denominations.

The central bank keeps pace with the changes. In the last two decades, the rapid development of information technology and reproduction equipment, as well as the general proliferation of banknote accepting, dispensing and processing devices, have had a significant impact on cash flow in Hungary too. The changing technology environment in the field of cash issuance has set complex, new requirements for the central bank. The MNB has to keep pace with the technical development that determines our age in such a way that forint banknotes are able to facilitate the smooth operation of cash flow for all participants concerned, be it the population, a commercial cashier or an ATM handling banknotes.

In response to the challenges, the MNB renewed forint banknotes. On 11 June 2013, the Monetary Council of the MNB decided to renew the forint banknote series in circulation at that time, and to issue improved banknotes redesigned for their security features and visual appearance. The renewed banknotes started appearing in cash circulation at the end of 2014, and from

February 2019 onwards, the new, up-to date versions of all six banknote denominations can be used for purchases. In line with the modernization, the central bank aims to withdraw old, obsolete banknote versions from cash circulation, which is expected to be realized by the end of 2019 for all denominations. The exchange of forint banknote stock in circulation, in line with cash flow demand, has been smoothly implemented. The successful implementation of the banknote exchange is also underpinned by the MNB's official audit experience.

The professional motto for renewing the forint banknote series is: "Development and tradition". The new forint banknotes simultaneously meet changing consumer demands in their appearance and the most modern security expectations in their reliability. Accordingly, the appearance of the renewed forint banknotes reflects both the necessary improvements stemming from user needs, and the values to be preserved: the graphical tradition of Hungarian banknotes of several decades, the carefully drawn portraits and the pictures on the backs. All of the banknote denominations of the renewable forint banknote series have the security features and elements that guarantee modernity, as well as reliable functioning for every cash flow operator. As a worthy continuation of tradition, the system of security elements fits harmoniously into the environment of already known main graphic motifs. The renewed banknotes are printed by the MNB's exclusive subsidiary, Pénzjegynyomda Zrt. (Hungarian Banknote Printing Shareholding Company), and the banknote paper is manufactured by the Diósgyőri Papírgyár Zrt. (Diósgyőr Paper Mill Limited), which is also owned by the central bank.

5.B RESPONSE TO THE CHALLENGES: PAYMENT IMPROVEMENTS, INSTANT PAYMENT SYSTEM

A key strategic objective for the MNB is to support the further expansion of electronic payments, the functioning of financial markets and financial stability with financial infrastructures operating reliably and effectively. In Hungary, according to the MNB's surveys (Ilyés–Varga, 2015, 2018), a significant proportion of payment transactions – currently about 80–85 per cent – are in cash, like in most countries in the world. In order to reduce cash use, the MNB is constantly striving to promote and implement payment infrastructure improvements, which enables payments to be made electronically. The fact, that cash transactions are real-time and that consumers in the digital age expect payments to be executed instantly, both point to the need to speed up the processing of electronic transactions and to provide users with innovative payment solutions. To facilitate this, the frequency of intraday clearing cycles of the Interbank Clearing System (ICS) was increased, the operating time was extended, and the introduction of an instant payment system was started.

In addition, MNB's recent measures, such as joining the CLS and T2S international systems, have contributed to increasing the efficiency of financial markets and to consolidating financial stability.

From September 2015, the GIRO Zrt., owned by the MNB, raised the number of intraday clearing cycles from the previous five to ten in order to reduce the lead-time for credit transfers. One of the main disadvantages of credit transfers compared to cash transactions is the relatively long processing time, which is not in line with today's customer expectations, therefore the MNB, after the introduction of intraday clearing, initiated further acceleration of credit transfers. Accordingly, since September 2015, the number of intraday clearing cycles has doubled and the system's running time has also been extended. While the first cycle starts one hour earlier than before, the last clearing cycle has been shifted to half an hour later. As a result of improvements, there has been an increase in the number of payments that can be executed within the day of the credits received, which has further improved the efficiency of the financial management of the corporate sector. In addition, waiting time has been reduced in the case of transactions where delivery may only take place following payment. Besides this, reducing the lead-time of credit transfers has allowed the amounts transferred to be used up to several times within the same day, thereby improving corporate liquidity management. As a result of the development, there has been an increase in the number of electronic transactions, which, in addition to improving the efficiency of the payment system, plays an important role in reducing the significant social costs involved in the execution of payments.

Table 5.1
Changes in indicators measuring the level of development of the Hungarian payment system compared to the EU

Indicator	Calculation method	Hungary					EU
		2014	2015	2016	2017	2018	2017
Credit transfers	Annual value of credit transfers / GDP	14.2	14.5	16.0	16.1	15.8	17.7
Electronic payment of retail purchases	Annual value of payments made by payment cards and other electronic solutions / Annual household consumption	14.6%	17.2%	20.6%	24.2%	26.8%	36.5%
Electronic payment of utility bills and other service charges	Estimated annual quantity of direct debits and other electronic bill payments / Estimated annual quantity of bill payments	25.4%	33.3%	39.2%	43.9%	47.2%	70%[1]

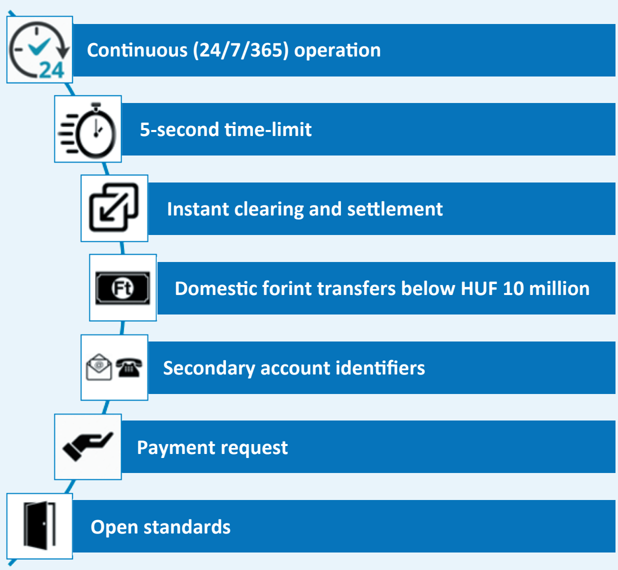
[1] Estimated values based on per capita direct debit figures of EU countries and central bank analyses. Note: There are deviations from previously published data due to data supplier modifications.

Source: MNB, ECB, Eurostat

The new instant payment system, launched on 1 July 2019, on the initiative of the MNB, could bring about radical changes in the proportion of the distribution of cash and electronic transactions. In addition to the benefits of increasing the frequency of cycles with respect to the intraday clearing system, further interventions were needed to increase the efficiency of electronic payment, so the operational model of the instant payment system was completed by 2016. Development, started at the initiative of the MNB, will transform the entire domestic payment system, which will result in payment solutions that can be used continuously, every day of the year, i.e. on a much wider scale than the current electronic payment services. An important feature of domestic instant payment is that if consumers transfer money that amounts less than HUF 10 million – such cases represent a significant part of total turnover – an immediate (within 5 seconds) processing obligation is required by law, therefore instant transfer will be the new basic service level. The statutory provision also guarantees continuous (24/7/365) service availability for users.

The basic domestic infrastructure of the instant payment system is created by GIRO Zrt., owned by the MNB. In the beginning of 2017, a national project was set up to create the instant payment system, which is under the management of the MNB continuously monitor and coordinate the preparation of the participants concerned in the implementation of the developments in order to make the payment service available to all payment service providers by 1 July 2019, which will raise the handling of small-value payments to a new level in Hungary. In the work-groups of the project, over 100 experts from over 40 institutions are involved in the on-going coordination of various professional topics. In 2017, based on the decision of the Board of Directors of the MNB, the GIRO Zrt. started to set up the central infrastructure that processes instant payments, and other systems that support the related ancillary services, and, in parallel with that, developments were also started in respect to payment service providers that were to join. After consultation with the market participants, at the end of 2017, the MNB published the statutory provisions concerning instant payments, and the rulebooks describing the details of the functioning of the system also became public. By the end of 2018, the central infrastructure was completed and, from early 2019, banks and market participants that had joined it, started their testing processes, so the creation of the instant payment system has reached its final stage.

Chart 5.1
Main parameters of the instant payment system



Source: MNB.

The introduction of instant payment means not only accelerating the processing of credit transfers, but also supporting innovation and a widely applicable alternative to cash payments. The implementation of a development of this magnitude is of paramount importance, as the currently available electronic payment solutions typically represent a real alternative to cash only in a limited range of payment situations. The basic purpose of introducing an instant payment service is to introduce an electronic payment service that vies with the high speed, continuous availability and simplicity of cash payments, thereby creating an electronic payment alternative in an ever widening range of payment situations. The design and operational logic of the infrastructure created by the GIRO Zrt. will flexibly support the creation of innovative payment solutions. With this in mind, the instant payment system, in addition to accelerating credit transfers, will allow market participants to create innovative payment services. This will enable the domestic instant payment service to be used for sending money between individuals, bill payment and making purchases at the physical and online acceptance locations.

The MNB actively supports developments designed to create widely utilizable innovative payment solutions based on central infrastructure. When initiating payments, data entry will be possible either by QR code or by touch technology similar to bankcards or by Bluetooth technology. At the same time, it is essential that resulting solutions should be open in accordance with statutory provisions, which excludes the emergence of closed systems operating in parallel with one another. In addition to statutory provisions, in order to facilitate interoperability of payment solutions of different providers, and to reduce the time required for the creation of new services on the side of market participants, the MNB has issued a recommendation for each of the core operational processes, furthermore, national standardization of data entry methods has begun in the national project's working group dealing with additional services.

Besides the processing of credit transfers, the system will also support secondary account ID and payment request services, on the basis of which widely applicable payment solutions can be created. Within the framework of the development, a central database handling secondary account identifiers will be created to support the initiation of payments by using e-mail addresses, mobile phone numbers or even tax (identification) numbers. In the future, there will be no need to enter long account numbers to initiate credit transfers, which will make the process much easier. The other additional service is the payment request, which is also intended to simplify the initiation of payments. Payment request is a message from the payee to the payer, which does not involve cash flow, but contains all the data required for giving an instant transfer order, so in the future, payment transactions can be initiated smoothly after verification and approval.

With the accession of 2015, of the currencies of the Central European Region, the Hungarian forint was the first to gain access to the FX settlement risk mitigation tool provided by the CLS. The purpose of the Continuous Linked Settlement (CLS) system is to eliminate the risks caused by defaults in respect to foreign exchange transactions. Basically, this situation can come about if the settlement agreement does not provide the banks involved in the transaction with the following: the final transfer of one of the currencies can only take place when the final transfer of the other currency in the transaction has also taken place. For example, if one of the parties files for bankruptcy, it may happen that the time wise uncoordinated delivery of the two legs of the foreign exchange transaction results in the innocent party not receiving the foreign currency due. The CLS eliminates this risk by linking the two oppositely directed transfers of the foreign exchange transaction, i.e. participants can only get their money if they have already performed themselves. CLS-related developments have directly affected the MNB as the owner and operator of the VIBER.

The CLS not only reduces the risks of domestic market participants, but also makes their liquidity management more efficient, and these benefits are also underpinned by increasing turnover. Owing to the accession to the CLS, the domestic market has a new tool that has significantly reduced the exposure of market participants; for example during the market turbulence experienced in September 2008. However, in addition to eliminating foreign exchange settlement risk, it is also important that the use of the system has resulted in improved efficiency in a calm market environment due to net position-based operations. The positive qualities are also shown by the increase in the number of members participating in forint settlement and by the increase in turnover. In 2017, the system carried out foreign currency settlements for 81 thousand transactions with the forint on one side, and on a daily average, the value of FX transactions involving the forint that were settled through the CLS, amounted to HUF 432 billion.

The fact that the KELER Zrt., majority-owned by the MNB, joined the pan-European T2S securities settlement platform in 2017, improves the competitiveness of the Hungarian securities market. Increasing the efficiency of cross-border securities trading had been part of European integration plans for years, and as a result, in 2015, the TARGET2-Securities (T2S) system was launched. In February 2017, the KELER Zrt., acting as the domestic central securities depository, joined the system. Use of the system can reduce the cost of cross-border securities trading, thus foreign investors can also buy Hungarian securities at a lower price, and similarly, domestic actors can buy securities issued in other European countries at a lower cost, too. T2S, on the one hand, increases competition between post-trading securities market infrastructures, and on the other hand, it can support more efficient liquidity management and operation by allowing an international institution to group together resources in just one place. In addition, security is enhanced by the fact that T2S operates with central bank money, and that the DvP (Delivery versus Payment) type transactions, i.e. cash leg settlement occurs in central bank money, so there is no commercial bank settlement risk or counterparty risk.

T2S accession also provides the KELER Zrt. with new service opportunities. Simultaneously with the T2S accession, the KELER Zrt.'s existing relationship with the Austrian securities depository (OECB) became a T2S link, in which the OECB and the KELER Zrt. were registered as investor central securities depository and issuer central securities depository, respectively. As a result, purchasing and holding Hungarian securities became more efficient for the Austrian market participants. At the same time, the utilization of all T2S functions would be facilitated as a strategic goal, if the number of links increased, and the Hungarian forint also became a settlement currency on the platform. Furthermore, the KELER Zrt. introduced its compensation services related to corporate actions, which can be used for securities transactions settled against euro, thus, when the physical and legal owners of a security become temporarily separated from one another, these services allow the carrying out of the corporate actions arising in the meantime in line with the legal owner's interests.

5.C CENTRAL BANK ACQUISITIONS IN FINANCIAL INFRASTRUCTURES

Central bank acquisitions in financial infrastructures has taken place partly to achieve the statutory core objectives of the MNB. A reliable financial infrastructure is a prerequisite for the effective implementation of monetary policy operations and the functioning of financial markets. In addition, to maintain financial stability, it is also essential to keep a record of market participants' relative positions and to clear and settle concluded transactions. Furthermore, efficient payment systems also directly affect national economic performance. On the one hand, a number of studies show that through the use of more modern electronic payment methods, significant cost savings can be achieved at the social level and, on the other hand, the declining use of cash due to more efficient financial infrastructures can reduce tax evasion and the black economy.

Through central bank measures and ownership engagement, the efficiency of the Hungarian payment system has increased considerably by international standards. In 2012, the MNB started to measure the efficiency of the payment system in three main areas (credit transfers, cashless purchases, electronic bill payments), and the international comparisons showed that there was a significant backlog in terms of all three segments compared to the European Union average. The smallest deviation was in the area of credit transfers, while in the case of electronic purchases, the dynamic growth in payment card turnover due to the MNB's and the government's measures was a positive change. Compared to the EU level, the biggest backlog could be observed in the case of electronic bill payments, but there has also been notable progress in this area.

Only an active central bank engagement has any chance of eliminating identifiable market failures in the domestic payment system. The development of payment services – both in the international and in the domestic markets – is hampered by a number of market failures, which can only be avoided by central intervention. Due to the networked nature, it is not rational for any actor to implement certain developments, as these are certainly costs, while in the case of individual development, the benefits cannot be realized for the customers if the other party manages its account with a different (non-developer) payment service provider. In the case of joint development by all participants, this problem is solved, but the costs are not offset by the competitive advantage to be gained through innovation, as the service level increases with each service provider. In order to resolve this situation, there is a need for central bank intervention, whereby it is not the short-term interest of the market participants but the long-term one important for the public good that can prevail. High entry costs are a similar problem, as access to the payment market on the side of service providers generally involves a significant infrastructure investment, which can then be "dissipated" by a large number of processed transactions. That is to say, due to economies of scale, those participants are able to offer the lowest prices who have accounted for the most transactions. For new participants, however, market acquisition – that is, increasing turnover – can be a major problem because of the inefficient developments due to networked structure and the cumbersome provider switching. This results in high market concentration and decreasing competition, which is not favourable for consumers either.

The MNB acquisitions in the domestic financial infrastructure enabled it to have a direct influence on the developments in the payment market. The reasons outlined above confirm that, without central intervention, only the short-term market interests of market participants prevail, which also means that the efficiency of the payment system is below the optimal level. This proprietary action accords with the MNB's payment system strategy, which, in addition to regulation as well as initiating and coordinating developments, uses its direct influence on financial infrastructures to achieve a competitive, efficient market position.

GIRO Zrt. – successful fee reduction

Direct central bank influence is also manifested in the initiation of clearing house developments such as the higher cycle frequency in intraday clearing or the introduction of instant payment in Hungary. The GIRO Zrt. clearing house became the property of the MNB in 2014 and, through this change, is able to directly influence the overall developments affecting the domestic payment sector. This coordinating, initiating role has prevailed in recent years, among other things, in the increasing of cycle frequency in the intraday clearing system, and in the initiation of developments with respect to the introduction of instant payment. Due to the market failures described above, typically, payment service providers undertook only limited improvements, however, central bank initiatives for the development of central infrastructure, along with statutory provisions, effectively supported comprehensive changes across the sector.

Following the ownership engagement of the MNB, the clearing fees payable by the clearing members decreased considerably. In order to spread electronic payment methods more widely, it is also necessary to continuously reduce their costs. For the former bank ownership of the Hungarian clearinghouse, profitability of the organization was also an important factor, and the fee structure was more favourable for some larger owners. After coming into the ownership of the MNB, the GIRO Zrt., in two stages, made a reduction of almost 30 per cent in clearing fees payable by clearing members, thereby also contributing to the strategic goal of lowering the cost of electronic payments, as much as possible. This is also the purpose of transforming the fee structure of the clearinghouse in 2019, which is based on the annual flat fee (system usage fee) divided in proportion to turnover, instead of transaction fees. Due to this, the increase in turnover beyond the planned amount will not result in a rise in clearing fees, as it did in the past practice, but exactly the opposite, since the unit fees per transaction will decrease. Furthermore, market participants who can increase their turnover more than the average, are better off, thus the new GIRO pricing will be able to support the use of electronic payment methods even more effectively than hitherto.

BÉT Zrt. – for the development of the capital market

At the end of 2015, the Budapesti Értéktőzsde (BÉT) – Budapest Stock Exchange – also became majority-owned by the MNB; thus, the most important financial infrastructures of Hungary are now controlled by the MNB. Based on the contract concluded with the Austrian CEESEG AG and Oesterreichische Kontrollbank AG in November 2015, the MNB raised its stake in BÉT to 75.75 per cent, which increased to 81.3501 per cent as a result of further transactions with the smaller shareholders following a public offer. The purpose of the MNB, with the qualified majority, is to create an efficient capital market by opening new markets and involving new issuers. Thus, through stock market transparency, central bank developments contribute to the further development of the Hungarian financial system and support the ambition to increase the weight of capital market borrowing in the domestic market, alongside bank lending. The renewed strategy of the BÉT is aimed at the introduction of new services, and it also places emphasis on reinforcing the global relationship network and on cooperating with the relevant market participants. Besides this, the increase in the MNB's ownership interest in the Hungarian stock exchange resulted in an increase in its indirect ownership interest in the KELER Group (central securities depository and central counterparty) as well, because on 31 December 2018, the BÉT held an ownership interest of 46.67 and 0.09 per cent in the KELER and in the KELER KSZF, respectively.

With the acquisition of majority ownership in the BÉT, the MNB set itself the primary goal of facilitating the strategic development of the Hungarian capital market. The basic purpose of the MNB is to ensure the development of the market and to achieve an adequately sized, effectively operating capital market in Hungary, as a developed capital market and diversified financial intermediary system is a fundamental basis for a competitive economy and sustainable growth. Accordingly, the BÉT's strategic direction up to 2020 was defined by the following measures:

- increasing the number of successful official listings on the stock exchange,
- renewal of market structure,
- consolidating the investor base and international relations,
- as well as intensification of government support related to these.

The strategy focuses on widening the investor base and making more attractive the conditions of supply, 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 could foster the further reduction of the shadow economy by ensuring the transparency of the listed companies. Supporting the Hungarian companies' more active participation in entering the stock market, as well as consolidating the presence of small and medium-sized capital companies within the supply side, has become an important objective in connection with the stock exchange development. To support this, a number of initiatives have already entered the implementation phase over the last 3 years.

The development of the market structure has been fostered by the launch of the new market, a multilateral trading system called Xtend, supporting medium-sized enterprises. The Xtend platform, created on the basis of the English and Polish samples, was launched in the autumn of 2017, and from the beginning of 2018, the range of participants was further expanded. On the demand side, where institutional and small investors can trade with shares of different SMEs, there are currently 10 institutional investors registered. On the issuer side, there are 2 companies that were listed in the Xtend market in October 2018 (Megakrán, Cyberg). For issuers to appear on the Xtend platform, cooperation with advisers appointed by the BÉT is a prerequisite. Mandatory advisors – NOMADs (Nominated Advisors) – assigned to each company, judge in the first round, whether the given company is eligible for a public market presence, then they provide contract advice and support for stock exchange listing and trading.

To support the listing of potential companies, the BÉT has set up the Nemzeti Tőzsdefejlesztési Alap (NTFA) – National Stock Exchange Development Fund –, which operates as a venture capital fund to support domestic medium-sized enterprises and implements capital investments promoting stock exchange listing. The capital fund, launched in the first quarter of 2018, provides capital to businesses that undertake being listed on the BÉT Xtend market. The tender for the selection of the NTFA's fund manager was won by the Széchenyi Tőkealap-kezelő Zrt., and at the end of May 2018, the NTFA, promoting the listing of SMEs, could also officially be launched. The fund manager examines about 60 investment opportunities. The fund would typically invest amounts of around HUF 1 billion in businesses, for a period of 2–3 years.

At the end of 2017, the BÉT launched an analysis-quotation programme to support investor information provision and to increase the liquidity of the offer book, and from the beginning of 2018, it further expanded the range of participants. Currently, through funding from the BÉT, 4 investment service providers publish free-of-charge independent analyses and quotes on the shares of 11 small and medium-sized companies. The BÉT also promotes the demand side through an educational activity through its subsidiary, the Budapest Institute of Banking Zrt., founded in 2017.

At the end of 2017, a Mentoring Programme was established between the BÉT and the Nemzetgazdasági Minisztérium (NGM) – Ministry of National Economy – to be realized through the European Union's GINOP funding. Within this framework, from 2018, domestic SMEs can claim support to enter the stock market in respect to preparation and implementation. The Mentoring Programme consists of two elements: a training programme with international cooperation, and a programme supporting the SMEs' preparation and entering the stock exchange.

By establishing the ELITE programme and the international company development training and relationship building, existing in many countries,

the BÉT enables the development of corporate financial culture. The programme provides management and financing skills, and supports the development of a relationship network that can enable companies to access new forms of external financing

(such as entering the stock exchanges). In 2017, the ELITE business development programme started with the participation of 10 companies, and in 2018, the number of Hungarian medium-sized companies participating in the training expanded to 17.

In order to consolidate its international presence, the BÉT organized international forums and conferences to stimulate the supply side of issuances. In addition, in 2018, the BÉT concluded an agreement with the Shanghai Stock Exchange, under which joint development of investment products, joint research work and an exchange of information between the two stock exchanges can be undertaken.

The domestic reforms and programmes launched in the last 1–2 years create incentives for both the potential investors and the issuer side to increase their presence in the capital market. Innovations include support for issuers' stock market entry and other funding to strengthen them (Xtend platform, NTFA venture capital fund), training programmes, networking opportunities (Mentoring Programme, ELITE programme) as well as elements consolidating market liquidity (quotation), information flow and transparency (independent company valuations).

5.D RECOVERY OF BANKS IN DISTRESS – THE RESOLUTION ACTIVITY OF THE CENTRAL BANK

Resolution protocol – creating a unified resolution toolkit

Based on the experience of the 2008 economic and financial crisis, the development of a suitable, effective toolkit for managing the crisis became urgent. In the case of the institutions constituting the financial intermediary system, specific and systemic crises may develop despite appropriate regulatory and supervisory activities.

State bank rescues took up large amounts of taxpayer money; moreover, they had a detrimental effect on the general government balance. From October 2008 to October 2011, the European Commission approved state aids for financial institutions to the amount of EUR 4.5 billion (~EU GDP 37%) – (EC 2012).

Liquidations aimed at eliminating insolvent institutions and satisfying creditors to the extent possible, delayed, and in several cases were not able to maintain confidence in the financial intermediary system, to eliminate the effects of infection and to tackle the crisis situation of cross-border groups in a coordinated, effective manner. A new approach was therefore needed: a framework, that implements a coherent set of tools, serves the achievement of specific goals and is thereby predictable.

Resolution is a crisis management process for credit institutions and investment firms, aimed at preserving the critical functions of institutions through restructuring under control of an administrative authority to ensure the stability of the financial intermediary system. The financing of the measures is primarily directed at the owners of the institutions, and the actors of the financial sector (Földényiné [et al]., 2016, 5–6; Stréda, 2016, 1).

In 2011, the Financial Stability Board (FSB), established by the G20, published the characteristics of effective resolution frameworks (Key Attributes, see FSB 2011), on the basis of which the Directive 2014/59/EU[2] on the establishment of a framework for the recovery and resolution of credit institutions and investment firms was adopted in June 2014 in the European Union.

In Hungary, the establishment of the national resolution framework was in progress in parallel with European Union legislative processes. As a result, the MNB was appointed as a national resolution authority as early as in October 2013. The resolution area of the MNB actively contributed to the preparatory work related to the national legislation, with remarks.

A few weeks after the publication of the EU directive, the Hungarian Parliament was among the first within the European Union to adopt the Resolution Act, which transposes the EU directive into the domestic legal system[3]3. Certain parts of the Act, such as the provisions pertaining to the Resolution Fund, came into effect as early as 21 July 2014, while the rest of

[2] Directive 2014/59/EU of the European Parliament and of the Council (15 May 2014). A major update of BRRD ("BRRD2") is currently underway.

[3] Act XXXVII of 2014 on the further development of the system of institutions consolidating the security of the individual actors of the financial intermediary system.

the legislation – including the entire set of resolution instruments – entered into force, after a 60-day preparatory period, on 16 September 2014.

Taking into account the domestic and international practical experience since then, the MNB has supported the legislator with a number of legal development remarks in the drafting of the government decrees made on the basis of the periodic amendments to the law and the authorization of the resolution act, while the Governor of the MNB, within the scope defined by law, also makes decrees.

In addition to establishing regulatory frameworks, the MNB plays a significant role in the practical operation of certain elements of the resolution framework. It primarily exercises resolution powers, which are essentially grouped in connection with two main tasks: resolution planning and, if necessary, the execution of resolution procedure. Both activities are guided by the resolution objectives.[4] These objectives include ensuring the continuity of the institution's critical functions, eliminating the threats to the stability of the financial intermediary system, protecting clients' funds and assets, maintaining confidence for the stability of the financial intermediary system, and protecting public funds by minimizing the need for extraordinary public financial support.

In Hungary, resolution planning is the task of the MNB acting in its capacity as the resolution authority. In 2015, the MNB as the group-level resolution authority created the OTP's resolution college, as the first one in the European Union. Professional work in the college and cooperation between authorities contributes to the development of good practice in the EU.

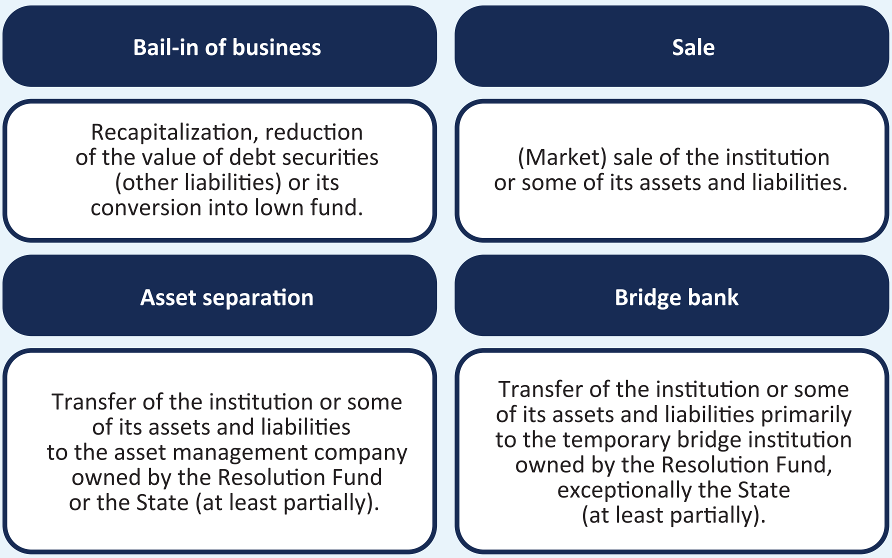
Primarily, failing institutions can continue to be removed from the market through liquidation. A resolution can only be ordered if, in addition to insolvency, two other conditions are met, i.e. there is no other solution, including private or supervisory measures, and the public interest justifies[5] a resolution procedure.

In the event of a resolution, the MNB should use the resolution tools that best serve the resolution objectives to be achieved in the relevant case. Three of the four available resolution tools result in the transfer of the

[4] RA, § 16
[5] RA, § 17, (1)

institution or a part of the institution's assets, rights, liabilities to a market participant (sale of business) or to an asset management vehicle (RAMV) controlled by the MNB (asset separation) or to a bridge institution (bridge bank). The bail-in-differs in nature from the previous three tools, as it aims to ensure that the shareholders and creditors of the institution bear the appropriate losses and the corresponding part of the costs incurred for resolution.

Chart 5.2
Resolution tools



Source: MNB.

The resolution authority can exercise its broad powers under a number of provisions of a guarantee nature. Of these, it must be pointed out that although the contribution of the owners and creditors to the bearing of losses is a priority, it should not exceed the loss they would have suffered in the event of a liquidation procedure (no creditor worse off [NCWO] principle), otherwise they are entitled to compensation determined by an independent evaluator.

A key element of the resolution framework is the Resolution Fund for covering specific financing needs linked to resolution. Its assets must reach at least 1% of the amount of the covered deposits of the credit institutions authorized in Hungary, by the end of 2024 at the latest. The Resolution Fund will be financed by the institutions' accession fees and regular annual fees. The Resolution Fund adopts its contribution policy on the basis of the MNB's proposal, and the MNB is responsible for determining and communicating to the member institutions the regular annual fee payable to the Fund. The MNB is also involved in the management of the Resolution Fund, as two members of the Board of Directors are appointed by the Governor of the MNB acting in its resolution function (one of whom is responsible for managing supervisory tasks, while the other is in charge of the execution of resolution tasks).

Successful detoxification – resolution and sale of the MKB

In Hungary the first trial of strength for the resolution framework was the resolution of MKB Bank Zrt. (MKB Bank). The reasons for this are to be found partly in the losses suffered because of the economic crisis, and partly in the non-optimal operation of the subsequent period. Between 2010 and 2014, the bank did not close a profitable year (Földényiné et al., 2016, 9), which was due to the poor quality of credit exposure as well as the loss caused by the non-prudent risk management and the forint conversion of the FX loans granted (EB 2015, 5–8).

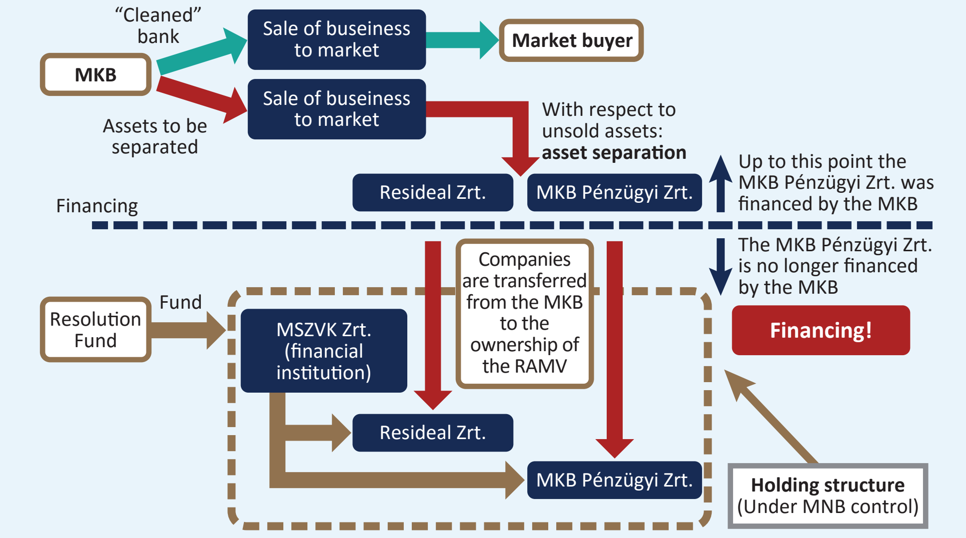
In order to preserve financial stability, the Hungarian State purchased the MKB Bank on 30 September 2014 from the German Bayerische Landesbank, which was also struggling with losses, but only temporarily managed to strengthen its capital position. On 16 December 2014, in line with the results of the European Asset Quality Review (AQR), the supervisory area of the MNB concluded that the MKB Bank was expected to be failing within 12 months. One day later, the Hungarian State, as the owner, declared that it would not provide the capital needed to restore the bank's viability, and, that due to the potential negative impact of the possible liquidation on financial stability, the public interest was also affected. This fulfilled the three conditions for ordering the resolution of 18 December 2014 (EB 2015, 8; Földényiné et al., 2016, 10–11).[6]

Reorganization was aimed at avoiding future losses and reducing costs. Most of the shares related to the loss-making business was sold, the individual subsidiaries were redesigned, the number of branches was reduced and the organizational structure was also rationalized. In addition, in line

[6] On the basis of the MNB Decision No. SZAN-I-H-3/2014.

with the EU competition law, the Hungarian authorities undertook to the European Commission that, for a transitional period, the MKB Bank's post-transformation operation would be carried out with limited expansion, with the exclusion of certain activities that previously had proved to be too risky[7] (Földényiné et al., 2016, 13 and 21; EB 2015, 9–10, 13–16).

Chart 5.3
Resolution action plan for the MKB Bank



Source: Földényiné et al., 2016, 12

Among the resolution tools specified in the Resolution Act, the sale of business and asset separation tools was used in order to separate problematic assets. Assets still marketable were sold through the sale of the business tool in open market proceedings, complying with the relevant legal requirements, at a purchase price of nearly HUF 100 billion. Non-marketable toxic assets worth HUF 214 billion gross were separated through the asset separation tool in accordance with the provisions of the Resolution Act for a RAMV, the Magyar Szanálási Vagyonkezelő Zrt. (MSZVK Zrt.) – Hungarian Resolution Asset Management Company – established for this purpose. The latter was created by the Resolution Fund, which ensured resources worth almost HUF 100 billion from which the MSZVK Zrt. purchased the

[7] For example: stopping commercial real estate lending and reducing existing stock; a ban on household foreign currency lending, a ban on dividend payments; limiting certain investments, reducing marketing costs, etc.

separated portfolio[8]. The MKB Bank received a consideration that exceeded the estimated market price by HUF 32 billion, which contributed to the stabilization of its capital position (Földényiné et al., 2016, 14–18). This difference was considered as compatible state aid, because the European Commission declared it compatible with the internal market in December 2015, as the competition distorting effect of the measure had been diminished in several ways and the burden-sharing was in line with the Commission's 2013 communication[9] (EB 2015, 17–19 and 25; Földényiné et al., 2016, 18–19).

During the resolution, the MKB Bank's portfolio was cleaned of toxic assets, its long-term stable operation was established, and all of this was achieved in accordance with one of the main objectives of the resolution, which is the protection of creditors' and depositors' money. One of the closing measures of the procedure was that, on 31 March 2016, the meanwhile more cost-effective and valuable bank was sold in the form of sale of business, applying open, transparent conditions, seeking out more potential investors, in non-discriminatory procedures, and observing the principle of price maximization.[10] The buyer bought the shares of the MKB Bank for HUF 37 billion and then the state aid of HUF 32 billion was repaid from the purchase price (Földényiné et al., 2016, 22–23).

After all this, on 30 June 2016, the first domestic bank resolution conducted in accordance with EU regulations, was successfully completed (Földényiné et al., 2016, 24)[11], moreover, in respect to a large universal bank with national coverage. Effectiveness is also proved by the fact that, in May 2016, the Moody's Investors Service improved several of the MKB's rating indicators (Moody's 2016).

[8] By the end of 2017, managed real estate and receivables portfolio declined significantly as a result of successful resolution asset management activity. Due to the changes in the loan portfolio market, the market value of the portfolio was now much higher than the expected revenues from further asset management; therefore, the majority of the portfolio was sold by the MSZVK in June 2018. As a result, loans borrowed from the Resolution Fund in 2015, their interest rates and additional ancillary costs were fully repaid and the subsequently remaining financial assets increased the assets of the Resolution Fund, which contributed to the further consolidation of the financial stability safety net.

[9] https://eur-lex.europa.eu/legal-content/HU/TXT/HTMl/?uri=CElEX:52013XC0730(01)&from=EN

[10] MNB Decision No. H-SZN-I-23/2016

[11] MNB Decision No. H-SZN-I-75/2016

Resolution in peacetime – preparing for the challenges of the future

Managing an institutional crisis can only be successful if the resolution authority has access to relevant data and, on the basis of data analysis, it can also perform its planning activities, therefore resolution planning plays a prominent role[12].

Resolution planning is a cyclically recurring, multi-stage process whereby the characteristics of the actors involved are taken into account.

As liquidation is the primary tool of withdrawing institutions from the market, the MNB has developed a methodology for identifying critical functions and assessed for all institutions whether their termination by liquidation in a potential crisis situation could be considered credible and feasible. For institutions where liquidation is not feasible and the application of a resolution measure is justified, a detailed resolution strategy may be developed, by analysing the feasibility of the applicable resolution tool(s) and other related measures[13].

The establishment of the methodology for determining the minimum requirement for own funds and eligible liabilities (MREL)[14] – published by the MNB in November 2018 – was an important milestone in the development of the methodology for resolution planning[15]. The MREL requirement obligates institutions to maintain an adequate amount and quality of fund elements, which, like in the case of capital requirements, they must comply with continuously. In respect to the function of MREL requirements, it consists of two parts: the loss-absorbency amount and the recapitalization amount. In a crisis, the MREL-eligible instruments may be written down or converted to capital in part or full, thereby ensuring that primarily owners and then creditors absorb the losses. For the first time, the requirement is expected to be determined both for Hungarian subsidiary banks of foreign institutions and for domestic-owned institutions in 2019.[16]

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[12] RA, Chapter III

[13] International practice distinguishes between Single Point of Entry (SPE) and Multiple Point of Entry (MPE) strategy. The former is a resolution strategy used only at the parent institution, while the latter is also used at the level of subsidiary banks.

[14] RA, § 62–65.

[15] http://www.mnb.hu/szanalas/mrel

[16] The home authority that is most relevant to domestic institutions, the SRB, started to impose the MREL requirements in 2018, providing a maximum of a 4-year transition period for meeting them.

The "transitional period" for compliance is envisaged by the MNB for a maximum period of four years from the date of the regulation. The MNB does not see major risks in meeting the MREL requirements.

The previously assessed potential MREL deficit is forecast to be HUF 300–500 billion. Typically, large, complex institutions may need to adapt. In our estimation adequate investor demand can be expected for the sources to be involved necessary for compliance.

The majority of the MREL-instruments of the institutions in Hungary are currently made up of own funds, therefore any potential impediments to resolvability resulting from the violation of the NCWO principle cannot be identified, which would necessitate the imposition of subordination requirements. Nevertheless, the MNB continuously monitors the composition of institutions' MREL instruments, and if NCWO aspects or legislative amendments justify, it will revise the framework of determining the MREL requirements and might formulate new qualitative requirements.

Overall it can be stated that the MNB, as the Hungarian resolution authority, is a major actor of the domestic financial stability safety net not only in a crisis situation since it also performs an important task in "peacetime" by preparing for possible crises. With the resolution of the MKB Bank, it also stood the test of the systemic major banking crisis of the Hungarian safety net.

6 Supporting the Government's economic policy

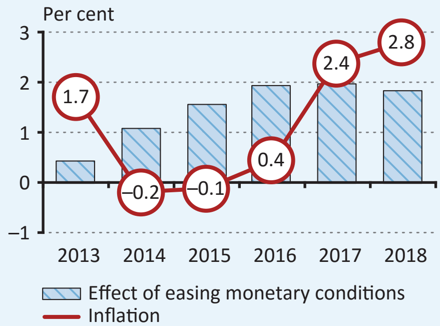
6.A FAR-REACHING CONSEQUENCES – THE INFLATIONARY AND GROWTH EFFECTS OF MONETARY POLICY

The central bank programs implemented between 2013 and 2018 contributed substantially and permanently to the improvement, development and stability of the domestic macroeconomic environment. The macroeconomic impact of significant traditional and unconventional central bank actions can be captured and quantified through interest rate policy and targeted credit promotion. At the same time, due to predictability, stability as well as consistent growth-supportive and equilibrium policy, all programs of the central bank have made a significant contribution to the Hungarian economy's showing the highest growth figures since the political transition. All of this could be achieved through persistently maintained current account surpluses, gradually declining public debt ratio, stable inflation around the target and predictable labour market.

In many areas, central bank programs, implemented from 2013, have had a direct and indirect impact on the evolution of macroeconomy. Through the lower interest rate environment and targeted central bank measures, monetary policy has contributed to reducing the vulnerability of the domestic macroeconomy and the banking system, as well as to the reduction of risk premiums. **On the whole,** the measures of the central bank **have substantially supported the realization of the low inflation environment and the vigorous growth of the economy.**

The central bank reduced its policy interest rate from 7 per cent to a historic low of 0.9 per cent which prevented inflation from being permanently in a negative range, and thereby eliminated deflation risks *(Chart 6.1).* In recent years, the central bank steps taken have raised average annual inflation by nearly one and a half percentage points, thus deflation risk has never been a serious threat in Hungary (Virág 2014, Soós–Hajnal 2014). Following the inflation around zero, observed in 2014–2015, prices rose moderately, and the consumer price index was around the inflation target with respect to the 2018 average.

Chart 6.1
Interest rate reduction and inflationary impact of central bank programs



Source: MNB calculation

Conventional and unconventional central bank actions have substantially and comprehensively supported macroeconomic growth. Since the persistently low interest rate environment had a general, wide-ranging impact on the economy, it considerably influenced the decisions of economic operators. On the one hand, due to the depreciating real exchange rate, the persistent reduction of interest rate conditions has improved the country's competitiveness and supported exports; and on the other hand, it has increased domestic demand through the upturn in consumption and investment activity (Felcser et al., 2015). In addition, unconventional tools – central bank programs supporting lending and growth, the termination of foreign currency loans, as well as the Self-financing Programme, the transformation of policy instruments, macroprudential regulation and other unconventional tools – contributed to stronger and more predictable economic activity and stability. The FGS and GSP programs have improved the SME sector's access to finance in a targeted way, thus lending and investment activity has strengthened since 2013 (Balog et al., 2015). In addition, as a result of the forint conversion, a significant risk item (foreign currency loan) was removed from the budget constraint of households, increasing the growth effect of interest rate transmission. **Overall, interest rate reduction and central bank programs contributed nearly 6 per cent to GDP growth over the period 2013 to 2018.** At the beginning of the period under consideration, the direct effects of interest rate reduction and programs dominated, while in the second half of the period, indirect effects were strengthened. As a secondary effect of central bank measures, the recovery of the SME market in itself contributed significantly to growth. *(Table 6.1)*

Table 6.1
Cumulative GDP growth and cumulative growth impact of programs (%)

	GDP	FGS	MLS	Interest rate reduction	Monetary policy in total	Total SME lending contribution
2013	**2.1**	0.7	0.0	0.5	**1.2**	**0.3**
2014	**6.4**	2.1	0.0	1.1	**3.2**	**0.3**
2015	**10.2**	2.7	0.0	1.4	**4.1**	**0.5**
2016	**12.7**	3.3	0.3	1.5	**5.1**	**1.5**
2017	**17.3**	3.5	0.7	1.6	**5.8**	**3.0**
2018	**22.9**	3.5	0.9	1.7	**6.1**	**5.0**

Source: MNB calculation.

In parallel with strong economic growth, labour demand for the economy gradually increased, resulting in a historically low level of unemployment. Thus, in addition to governmental measures, monetary policy actions have also contributed significantly to the domestic economy's approaching full employment.

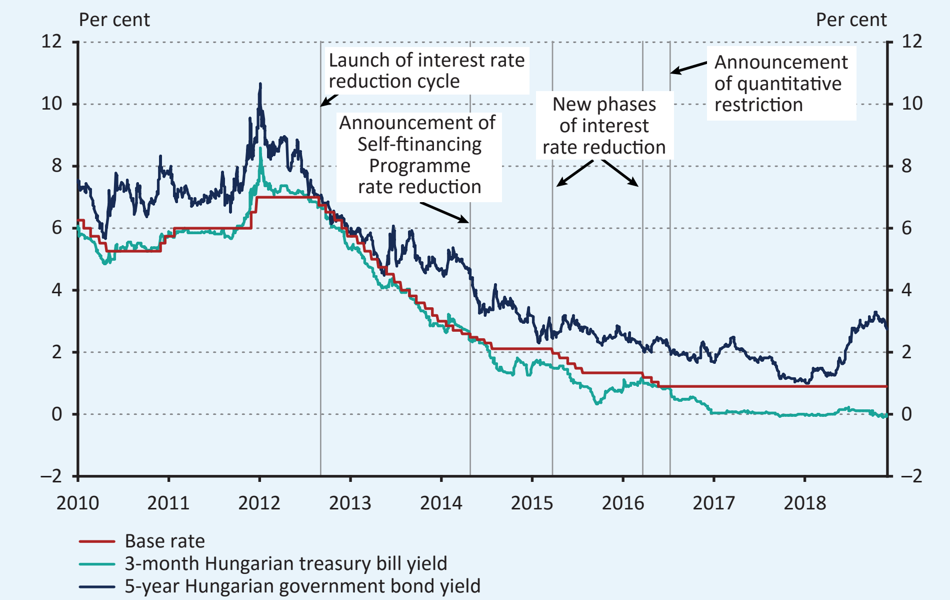
Overall, the central bank programs contributed substantially and permanently to the expansion of GDP over the period 2013 to 2018. Monetary policy actions have managed to tackle the deflationary risks and inflation is within the central bank's tolerance band, near the inflation target.

6.B THE IMPACT OF MONETARY POLICY ON BUDGET AND CENTRAL BANK EARNINGS

Since 2013, in accordance with the MNB Act and without prejudice to its primary objective, the MNB has endeavoured to support the economic policy of the Government using the instruments at its disposal. The central bank programs implemented since 2013 have helped budget stabilization and the reduction of public debt through three channels. Firstly, central bank interest rate cuts and the Self-financing Programme greatly contributed to the 2-percentage point decline in the budget's interest expenditure-to-GDP ratio between 2013 and 2018. Secondly, through their favourable effects on economic growth and the expansion of tax bases, certain central bank programs, in particular, interest rate cuts and the introduction of the FGS, increased tax revenues of the budget. Thirdly, the monetary policy turnaround helped the MNB avoid losses; in fact, the central bank has been profitable since 2013.

The MNB's monetary policy contributed, to a large extent, by the fact that between 2013 and 2018 annual interest rate expenditure of the budget dropped by 2 per cent of the GDP, through a decline in government securities market yields. After the launch of the interest rate reduction cycle, short-term yields closely followed the decreasing base rate, while long-term yields decreased following the international risk appetite and the change in risk assessment of Hungary. Following the announcement of the Self-financing Programme, domestic demand for government securities increased, leading to a further decline in yields. And after the quantitative restriction on the central bank's policy instrument, crowded out liquidity, seeking its place in the market, also helped to reduce government securities yields *(Chart 6.2).* Due to the declining government securities market yields, by 2018, the budget's interest expenditure-to-GDP ratio declined from 4.3% (in 2013) to 2.3%.

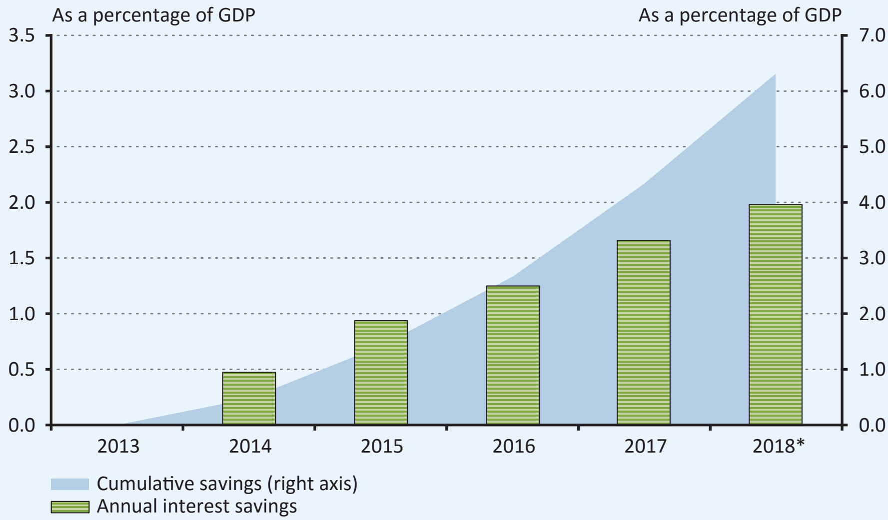
Chart 6.2
Developments in the short- and long-term government securities yields and of the base rate



Source: Government Debt Management Agency, MNB.

After 2013, the budget's cumulative interest savings reached nearly 6.5 per cent of GDP by the end of 2018. The decline in government securities market yields gradually appears in interest expenditures as public debt is repriced to the new yield level. Since 2013, annual interest savings had gradually increased and in 2018 reached HUF 800 billion. Thus, by the end of 2018, cumulative savings amounted to nearly 6.5 per cent of the GDP, which, through lower budget deficits, contributed to the decline of the public debt ratio *(Chart 6.3)*.

Chart 6.3
Annual and cumulative government interest savings compared to 2013



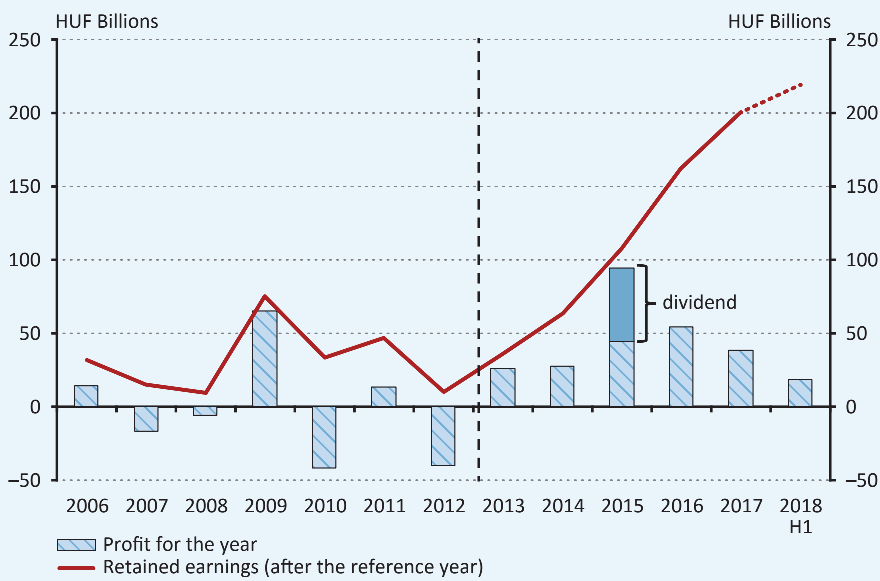
*Note: *MNB forecast for 2018.*

Source: Eurostat, MNB calculation.

Since 2013, the monetary policy of the MNB has also contributed to the improvement of the fiscal balance through the support of real economic expansion. Interest rate reductions boosted Hungarian investments and consumption as well, while the Funding for Growth Scheme directly supported the financing of small and medium-sized enterprises. These macroeconomic channels have had a positive impact on the revenue side of the budget at several points: higher consumption of households increased revenues from sales- and consumption-type taxes, the upturn in investments also contributed to the increase in VAT revenues and the better income position of companies generated higher corporate tax revenues. As for employment growth, it has resulted in a substantial increase in tax on labour. The positive effects have resulted in a significant increase in budget revenues and helped to maintain the balanced budget position.

The central bank, that was profitable throughout the period 2013 to 2018, has accumulated significant retained earnings and also directly contributed to the decline in public debt by paying dividends. At the beginning of 2013, the MNB's retained earnings were only HUF 7 billion, that is to say, in case of a major loss, budgetary reimbursement would have been necessary to finance the loss, which would have had a negative impact on the budget deficit in addition to public debt. The MNB has had positive financial results every year since 2013, which has resulted in a steady increase in the MNB's retained earnings. Due to the continuously improving interest earnings and the gains from exchange rate changes, the MNB's annual profit were outstanding in 2015, which, in addition to increasing the retained earnings, allowed the MNB to pay HUF 50 billion in dividends to the budget, thereby participating in the fight against public debt. The MNB's retained earnings in 2018 already exceeded 200 billion forints, which provides cover for future potential risks, so that it can ensure a longer-term budget-independent operation of the central bank *(Chart 6.4).*

Chart 6.4
Development of in the MNB's P/L and retained earnings

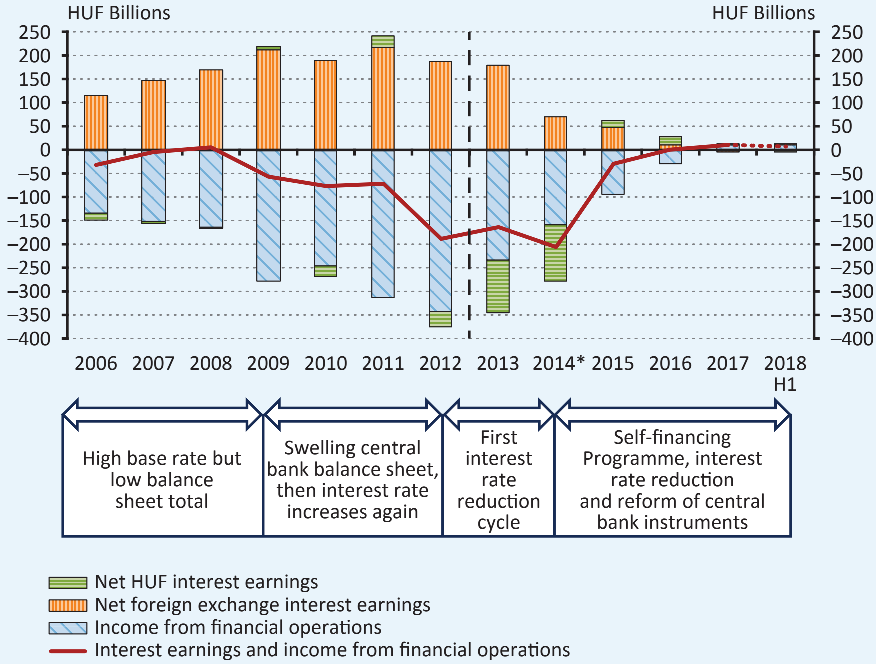


Source: MNB.

As a result of the monetary policy turnaround, the MNB's interest earnings gradually improved from 2013, which was later supported by the balance sheet contraction effect of central bank programs and the rearrangement of the liabilities side on the balance sheet. The reduction of the base rate, while supporting the achievement of monetary policy objectives, also mitigated the MNB's interest expenditures. The measures taken to increase financial stability and broaden the margin of manoeuvre for monetary policy (e.g. Self-financing Programme, forint conversion) also improved the MNB's interest earnings through the balance sheet contraction: the remission of interest expenditure paid on forint liabilities was well above the decline in foreign exchange interest income due to the fall in the reserve. The unconventional central bank steps supporting the achievement of the inflation target also increased the MNB's interest earnings, as due to the reform of central bank instruments and quantitative restrictions, the O/N deposit – with lower (currently negative) interest rates – had a more pronounced role among the central bank liabilities. In addition, the increase in cash depending on the cash demand of the economy – which is an interest-free liability for the MNB – also improved interest earnings. As a result of the above processes, the MNB's net interest and interest-type earnings turned positive from 2017 onwards, which, from the beginning of 2018, was also supported by the additional interest income of newly introduced programs (mortgage bond purchase, MIRS programme) aimed at reducing long-term yields.

Income arising from exchange rate changes has played a significant but decreasing role in the development of the profits of recent years. This can be linked to two factors. First, after the outbreak of the crisis, in some periods, the difference between the official exchange rate and the cost rate increased (i.e. the earnings realized on per-unit currency conversion) and, second, due to the central bank's measures to reduce economic vulnerability, the volume of foreign currency sales increased, as well. In recent years, in line with the weakening of the Government's foreign exchange demand, also supported by the Self-financing Programme, the role of exchange rate earnings has gradually decreased *(Chart 6.5).*

Chart 6.5
Gains from financial operations and components of interest earnings



** Changes in rules regarding the entry in the accounts caused temporary higher losses*

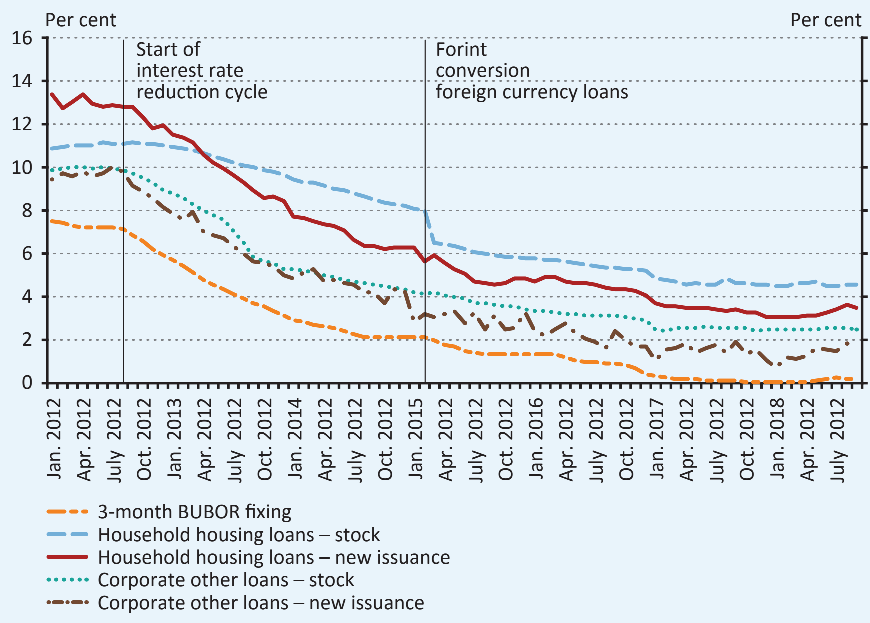
Source: MNB.

6.C THE IMPACT OF MONETARY POLICY ON THE PRIVATE SECTOR – THE DEBT BURDEN OF THE CORPORATE AND HOUSEHOLD SECTORS

The MNB's monetary policy measures (both conventional and unconventional actions) contributed substantially in reducing the interest burden on economic actors, making it more predictable. In August 2012, the central bank launched a gradual interest rate reduction whereby the policy rate fell from the previous level of 7 per cent to 0.9 per cent by the spring of 2016, which is the lowest value in the history of the central bank. As a result of the BUBOR reform introduced in May 2016, the reference interest rate departed from the base rate, thus the declining short-term money market yields were also reflected in the BUBOR quotes. The easing of monetary conditions affects loan interest rates through a reduction in reference interest rates, both for the new issuance and for the existing portfolio, if the latter is tied to a reference interest rate.

During the interest rate cut cycle, the interest rate on private sector forint loans declined by an average of around 8 percentage points. In the course of more than six years since the beginning of the interest rate cycle (between August 2012 and September 2018), the newly issued household forint housing loans experienced a decline of 9.3 percentage points, while for the forint housing loan portfolio a decline of 6.5 percentage points was observed. With respect to corporate forint loans (other loans), in terms of scale, there was a 7.8 percentage point reduction in loan interest rates *(Chart 6.6).*

Chart 6.6
Changes in the three-month BUBOR and the interest rate on household housing and corporate loans
(Stock and new issuance with interest rates variable within the year)

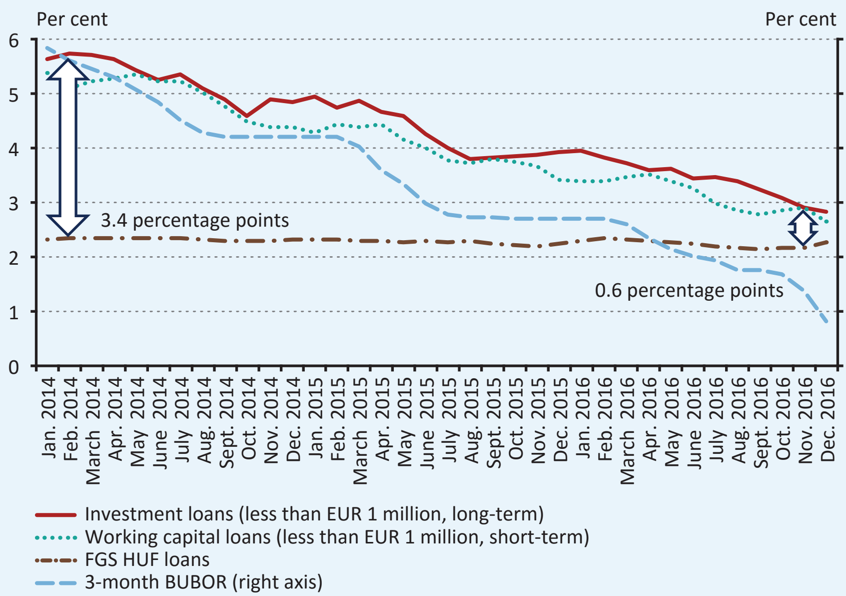


Note: The average loan cost index (weighted with the contract amount) of HUF housing loans granted to households (up to one year interest rate fixation), the average annualized interest rate (weighted with the month-end portfolio) of HUF housing loans granted to households, the average annualized interest rate (weighted with the contract amount) of other HUF loans (up to one year interest rate fixation) granted to non-financial corporations, the average annualized interest rate (weighted with the month-end portfolio) of other HUF loans to non-financial corporations.

Source: MNB.

The Funding for Growth Scheme has resulted in more predictable and moderate interest rates for small and medium-sized enterprises. As a new targeted element of the monetary policy toolkit, in June 2013, the central bank launched the Funding for Growth Scheme (FGS) to mitigate the persistent market disruption in SME lending. A fixed, favourable level of interest rates for the long-term ensured predictability for the SMEs, thus boosting the demand for loans from the side of corporations; in addition, it increased competition on the side of credit institutions for the acquisition and retention of customers, thereby increasing also the lending willingness and contributing to easing the credit conditions. The construction meant a predictable and lower forint interest rate burden not only for the participating enterprises, but also through the intensification of competition – and in parallel with the interest rate reduction cycle – it also contributed to the decline in interest rates on market-based loans. As a result, by the end of 2016, the interest rate advantage of FGS loans narrowed considerably *(Chart 6.7).*

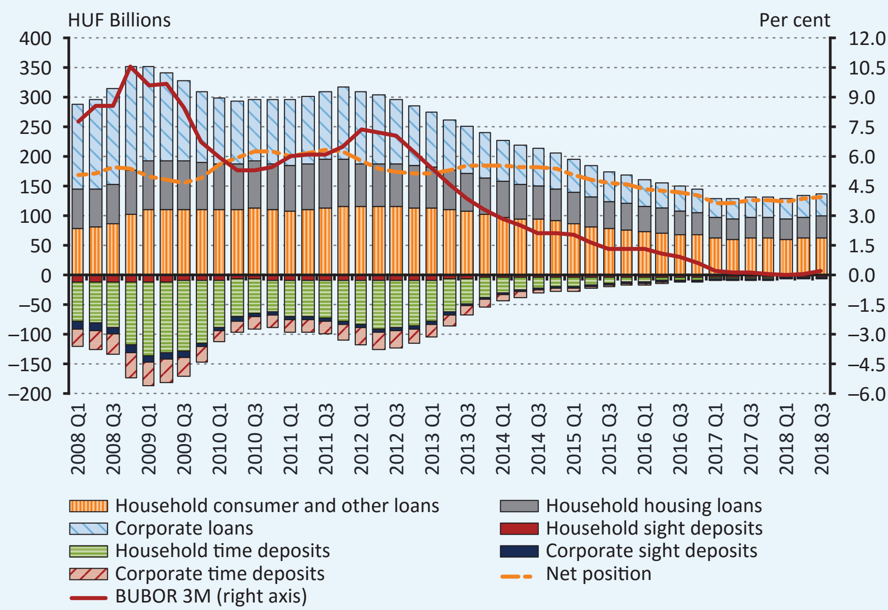
Chart 6.7
3-month average interest rate level of SME forint loans in a breakdown by loan purpose



Note: Based on investment loans with maturities of over one year and working capital loans; banking sector data.
Source: MNB.

The decline in private sector interest burden is also reflected in the net interest margin of credit institutions. Decrease in the total private sector interest burden can also be estimated on the basis of the net lending position of credit institutions to the private sector *(Chart 6.8).* In the second quarter of 2012, i.e. before the commencement of the interest rate reduction cycle, banks realized a total of HUF 304 billion in interest income on household and corporate loans (HUF 189 billion on household consumer and housing loans, HUF 115 billion on corporate loans), which in the second quarter of 2018, that is, after the interest rate reduction, settlement and forint conversion, dropped to HUF 134 billion (of which HUF 98 billion was household interest income and HUF 36 billion was corporate interest income).

Chart 6.8
Estimated value of credit institutions' net interest position to the private sector



Note: The incomes and expenses vis-à-vis the individual segments were calculated based on the month-end balances and the annualized interest rates.

Source: MNB

The spread of longer fixation period loans is crucial, which the MNB encourages by several means. On the basis of the above, it is clear that due to the central bank's actions, both corporate and retail interest burdens have been substantially moderated. At the same time, as a result of the globally rising yield environment and the gradual normalization of monetary policy, in recent years it has become increasingly important to reduce the interest rate risk on loans and, in this context, to stimulate the spread of longer fixation period loans. The spread of these has been supported by the MNB through several instruments (Qualified Consumer-Friendly Housing Loan [QCFHL], Mortgage Funding Adequacy Ratio, and previously the Mortgage Bond Purchase Programme, the monetary policy interest rate swap [MIRS], etc.) and this is facilitated by the tightening of provisions on the Payment-To-Income Ratio (PTIR) and QCFHL products[17]17, introduced in October 2018. As for household loans, the share of fixed loans – especially since the launch of the QCFHL in September 2017 – has been steadily increasing, but in the case of the corporate loan portfolio, there remains a risk that disbursements have a high share of loans that get repriced quickly, because currently there is no widespread extension of long-term fixed-rate loans in the SME credit market. With a view to diverting the outstanding borrowing to a sounder structure, the MNB launched the Funding for Growth Scheme Fix (FGS Fix) at the beginning of 2019, with a facility amount of HUF 1,000 billion.

6.D COMPETITIVENESS ANALYES

In addition to fulfilling its primary objective, i.e. the achievement and maintenance of price stability, the Magyar Nemzeti Bank is required by law to use the instruments at its disposal to support the economic policy of the Government, including the strengthening of competitiveness, a prerequisite for convergence. After 2010, economic policy was renewed in Hungary, the main purpose of which was to ensure macrofinancial balance and economic growth at the same time. (Matolcsy, 2015). In 2010, a successful fiscal stabilization was started, which allowed the monetary policy turnaround to take place from 2013 onwards. As a result of successful reforms, the long-absent coordination between the two main branches of economic policy has been re-established, creating an economic model of macro-financial balance accompanied by growth (Matolcsy–Palotai, 2016). This stable economic structure has created the opportunity to launch a competitiveness

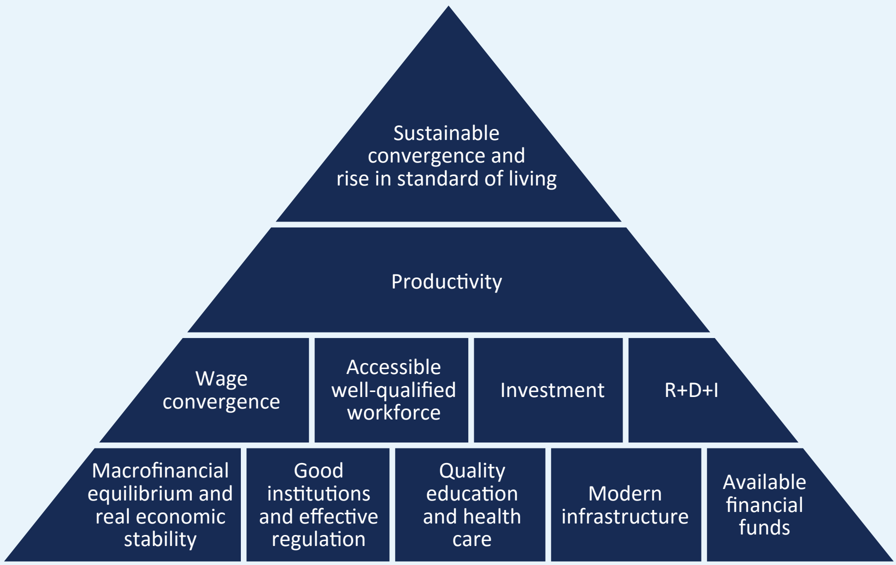
[17] In fact, from 1 October 2018, loans with a 3-year interest period were taken out of the scope of the QCFHL products, while credit institutions could start marketing the 15-year fixed-rate QCFHL products.

turnaround that is essential for successful economic convergence. In 2015, the Hungarian Government requested the MNB to use its central bank expertise to support the sustainable convergence of our country and to increase its competitiveness.

The MNB defines competitiveness as the aggregate level of all factors that determine the long-term development of the economy. In our approach, a national economy is competitive if it utilizes its available resources in an optimal way to achieve the highest possible, but at the same time sustainable level of welfare. The factors of long-term growth go beyond the stable macroeconomic environment. Apart from macrofinancial balance and the solid fundamentals of the real economy, the competitive functioning of the economy requires a corporate ecosystem based on innovation and renewal, good institutions and efficient regulation, high quality education and healthcare, modern infrastructure and available financial resources. Building on these pillars, a well-functioning and predictable business environment may be established, and incentives may be provided for investments and innovation, which, through the appreciation of labour, may lead to increased productivity and sustainable economic and social convergence *(Chart 6.9).*

Major European central banks and international organizations are also actively engaged in the issue of improving competitiveness, and this activity has been intensified since the 2008 global crisis. The significant appreciation of the competitiveness policy in recent years has been due to the fact that several economies are close to the limits of extensive economic growth based on labour, and their focuses are shifted to efficiency and productivity, which is based on increasing competitiveness. It is also important for central banks, including the MNB, to analyse competitiveness, as it determines the long-term growth potentials of the economy, which have an impact on current economic and financial developments. These structural areas and factors, affect the consumption, savings and investment decisions of economic actors both in the medium- and long-term. In addition, they have an impact on the potential growth of the economy, the labour market, the financial balance, the expected yields, the price level and inflation.

Chart 6.9
Stylized structure, foundations and objectives of competitiveness



Source: MNB.

The objective of the competitiveness turnaround is to continue Hungary's sustainable convergence and thus, in terms of economic performance, Hungary will approach Austria's highest standards of living in the region. In the case of economies with higher growth rates, the additional economic growth compared to advanced regions usually exhausts before they catch up with advanced economies. In the economic literature, this phenomenon is referred to as the middle-income trap. The key challenge in the convergence process for Hungary is to escape this middle-income trap, which hardly a dozen countries have been able to accomplish over the past hundred years. Most of these are linked to the Far East (Hong Kong, South Korea and Singapore). In Europe, only Austria, Finland and Ireland have been successful in the past more than half a century. Nevertheless, successfully converging economies are rather heterogeneous in terms of culture, size, economic structure, resources and geographic location. As there is no general and widely accepted definition of competitiveness, there is no single and universal recipe for successful economic convergence. At the same time, however, there are features that generally characterize the successful convergence of economies.

These countries put efficiency and productivity at the centre of economic policy, which was based on the adaptation and further development of modern technologies and the high level of human capital. It is also an important feature that their population has been on a growing path, i.e. favourable demographic processes supported economic growth.

The competitiveness turnaround requires an objective and comprehensive assessment of the situation, as well as country-specific recommendations aimed at overcoming the shortcomings and expected challenges. All of these trigger a positive feedback loop that support sustainable convergence. The development of a successful convergence strategy requires, above all, a situation assessment based on objective indicators, including both international comparison and time-series analysis. The recommendations should be formulated taking into account the current situation identified by the assessment, as well as international experience and best practices. These recommendations may become competitiveness measures after taking into account the opportunities and constraints. The good measures have multiplier effects that point beyond the measures themselves, triggering a diversity of positive developments throughout the economy with multiple levels of feedback. Sustainable long-term convergence is supported by productivity improvement due to the measures, doubling real wages, sustained faster economic growth, maintaining full employment and increasing capital intensity *(Chart 6.10).*

Chart 6.10
Feedback processes of sustainable convergence in Hungary

Source: MNB.

Since 2015, the Magyar Nemzeti Bank has devoted special attention to the topic of competitiveness and successful convergence to Hungary's competitiveness position as well as to its improvement opportunities. The central bank accepted the Government's request for a comprehensive, active workshop to strengthen competitiveness. The MNB analysed and assessed the published international and national literature, reports and surveys on competitiveness (e.g. World Economic Forum, 2018; IMD, 2018; World Bank, 2018). On this basis, it made its own detailed and objective analysis and then put forward recommendations to strengthen competitiveness. In 2016, on the initiative of the MNB employees, the Competitiveness Section of the Hungarian Economic Association was set up to stimulate the exchange of ideas on economic competitiveness at a higher level.

The Magyar Nemzeti Bank has published several publications to make its analyses, research and recommendations on competitiveness widely known:

- **In 2016, in the book "Versenyképesség és növekedés" (Competitiveness and Growth) the central bank put forward 50 recommendations (Palotai–Virág, 2016).** The book, published in 2016, reviewed the theory of economic convergence, in which the analysts of the central bank touched on growth theories, presented empirical results on convergence, explained the functioning of convergence clubs and analysed growth traps. The book also focused on presenting the history and characteristics of the countries that were successful in convergence. It dealt in detail with the convergence of East Asian, Central European and Southern European countries, as well as Austria, Finland and Ireland. The book presented the financial policies of convergence and the fiscal policies of the countries that were successful in convergence. The volume "Competitiveness and Growth" assessed Hungary's convergence through macroeconomic and softer indicators of competitiveness. The book also examined the situation and vision of the Hungarian banking system. In the book, the central bank's experts formulated 50 recommendations in seven areas to promote sustainable convergence: corporate sector, labour market, state, human resources, EU resources, banking system and priority topics.

- **The Competitiveness Report 2017 is a comprehensive and objective assessment of the competitiveness of the Hungarian economy.** The report covered 11 topics with more than 100 indicators, more than 90 per cent of which are objective. Competitiveness reports are only published in Austria, Belgium, Denmark, Estonia, France, Ireland, Latvia, Poland, Slovenia and the

UK, in addition to Hungary in the European Union. However, similarly to the MNB's Competitiveness Report, a large number of indicators covering many areas are only examined by Ireland and Latvia.

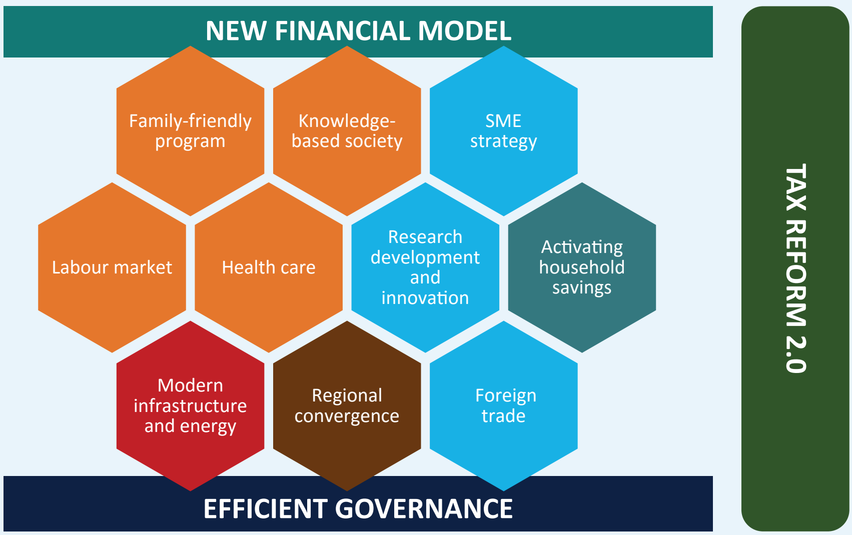
- **The workshop summary, entitled "180 lépés a magyar gazdaság fenntartható felzárkózásáért" (180 Steps to Sustainable Convergence of the Hungarian Economy) included further recommendations of the central bank to support sustainable convergence.** In the summary published in July 2018, the Magyar Nemzeti Bank put forward 180 specific recommendations and related objectives in 13 areas. The aim of the proposals was to improve domestic productivity, ensure the achievement of capital-intensive growth, maintain full employment and lay the foundations for demographic turnaround, while maintaining the positive trends developed in the Hungarian economy, primarily in the external and internal balance and debt indicators, as well as in the labour market. The topics of the workshop summary are demography, new financial model, education, health care, labour market, SME strategy, industrial strategy, innovation, export strategy, capital-intensive growth, efficiency of the state, efficient energy mix and modern infrastructure. The main objective of the workshop summary is that, by 2030, Hungary will achieve 80 per cent of the Austrian living standard. The 180 proposals of the Magyar Nemzeti Bank were also discussed by the National Competitiveness Council in July 2018.

- **The 2018 Growth Report defined and explained the conditions under which Hungary could approach Austria's development.** The Report provided an overview of the most important trends shaping economic growth over the short, medium and longer term and presented an assessment regarding these. The 2018 analysis presented a macroeconomic path that provides a way out of the middle income trap and generates a major increase in prosperity by 2030, as well as channels for the development of the financial system, businesses, human capital and an effective state that contribute to economic growth. The analysis presented the indicators in which Hungary's progress can contribute to a successful convergence together with the current and target values.

- **The new competitiveness programme of the MNB, analyses Hungary's competitiveness in 12 areas and makes concrete recommendations for successful convergence.** The competitiveness programme is a continuation, extension and detailed explanation of the workshop summary that includes 180 steps.

The new publication on competitiveness recommendations presents in detail the measures necessary to achieve the objectives set out in the Growth Report, grouping the proposals into 12 areas. These include a family-friendly programme to improve demographic processes, the development of a new financial model supporting competitiveness, the reform of the domestic SME sector, and measures to improve the competitiveness of the labour market. In addition, the new publication includes recommendations for education and health care reforms, proposals to expand modern infrastructure and strengthen the green economy, recommendations to mitigate territorial inequalities within the country and steps to improve the efficiency of state administration *(Chart 6.11).*

Chart 6.11
12 key areas of the competitiveness turnaround



Source: MNB.

Presentation of the Magyar Nemzeti Bank's competitiveness recommendations

The macroeconomic path of sustainable convergence

The Magyar Nemzeti Bank considers approaching the Austrian standard of living as the main objective of convergence, the most tangible result of which can be a doubling of real wages along with a permanent macrofinancial

balance by 2030. However, this requires an ambitious turnaround in competitiveness, which covers all areas of the economy. The value added and income per capita in Hungary currently reaches 55 to 60 per cent of the Austrian level. The main reason for this is that labour productivity is lagging behind Austrian productivity. According to the MNB's vision, through the implementation of appropriate competitiveness reforms, labour productivity could be considerably increased and, by 2030, it could approach 90 per cent of the Austrian standard, which would attract a similar increase in incomes. The increase of productivity and the reduction of labour taxes would thus make it possible to double the net real wages. There is a close relationship between wages and productivity, therefore long-term wage growth is also essential for successful convergence (Virág, 2018). This development requires a competitiveness turnaround, the essence of which is that the extensive growth model used so far, which was based primarily on the improvement of quantitative conditions, should be replaced by a knowledge and capital-intensive growth model based on quality conditions.

Along with the successful implementation of competitiveness reforms, GDP growth in the 2020s may be sustained between 4 and 5 per cent, the public debt may fall below 40 per cent of GDP, while Hungary may become a net creditor to the rest of the world. The potential growth rate of the economy would also rise to 4.5 per cent; therefore, rapid economic growth would not create additional inflationary pressures. Over the next decade, the average increase in consumption – in parallel with the dynamic wage growth – may be double (4 to 5 per cent) compared to the non-reform situation (2 to 2.5 per cent). Then, in companies, the permanent demand for their products and services has a positive impact on the investment activity. As a result of the implementation of reforms, net exports can remain positive, i.e. foreign trade would continue to support the GDP growth. In addition, with the strengthening of internal sources of financing, the current account balance and the net external financing position of the economy can remain positive in the long run, which further reduces the external financial vulnerability of Hungary. By maintaining a favourable net financing capacity, Hungary's net external debt would be eliminated; in fact, the economy can expectedly become a net creditor to the rest of the world. Furthermore, the widespread growth of household real wages increases the volume of outstanding loans and the number of borrower households. The implementation of competitiveness reforms along with dynamic growth would make tax cuts bring returns, and the balanced budget position would already be available before 2030. Robust growth and the fiscal balance turning to surplus may result in a public debt-to-GDP ratio less than 40 per cent.

Recommendations for improving competitiveness in the corporate sector

The growth of productivity in the corporate sector, including SMEs in particular, is the key to sustainable convergence. SMEs account for 99 per cent of Hungarian enterprises; most of them are Hungarian-owned, employing 71 per cent of employed persons, and producing almost half of the value added of the economy. In their case, however, the challenge is that their labour productivity is only one third of the productivity of large companies; therefore, they are also disadvantaged in the labour market as compared to large companies in terms of competition for the skilled workforce. The Hungarian small and medium-sized enterprise sector is extremely fragmented, and thus domestic SMEs do not utilize the advantages stemming from economies of scale. In addition, the domestic SME sector does not take advantage of opportunities offered by advanced infocommunication technologies. Their dissemination and application also mean a growth and productivity reserve that can be mobilized in the short term. In the medium term, it is necessary to create an enterprise ecosystem that ensures economic renewal and flexibility, supports entry into new markets and thus export orientation. According to our calculations, such a strategy could double the productivity of SMEs by 2030 (an increase of 6 per cent per year), and corporate duality would be greatly reduced.

Therefore, increasing productivity is at the centre of the MNB's SME strategy that can be achieved by increasing wages, investments and economies of scale. The MNB estimates that 5,000 new small and 1,000 new medium-sized companies need to be set up for a healthy and efficient corporate structure. Supporting corporate acquisitions and mergers, reducing entrepreneurial administrative burdens as well as simplifying liquidation procedures would allow better use of the benefits of economies of scale (World Bank, 2018). This objective would also be supported by an efficient capital reallocation and the creation of a corporate bond market among SMEs. The increase of capital intensity would be encouraged by the immediate deductibility of investments from the corporate tax base and the deductibility of the value of investments from the local business tax base. In addition, the MNB proposes the introduction (de minimis) of wage subsidies subject to investment commitments and the conclusion of strategic partnership agreements with innovative SMEs.

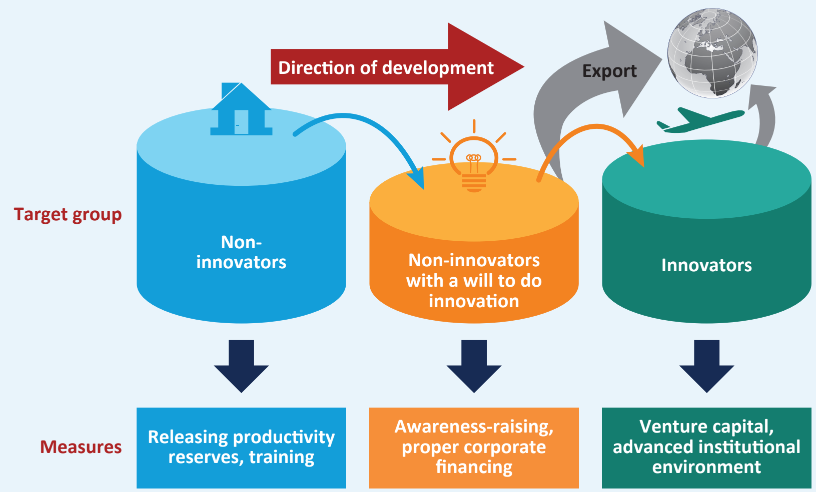
The increase in export orientation and foreign trade activity also strengthens the competitiveness of SMEs, as participation in foreign trade increases employment and is associated with higher productivity. The share of exporting Hungarian SMEs is lower than that of Austrian companies of this type.

According to the MNB's estimates, approximately 10,000 new exporting SMEs would be needed. These objectives can be supported by utilizing the geostrategic advantages of the "One Belt – One Road" initiative, entering into fast growing new markets with stable institutions, and strengthening service export, while maintaining goods export.

FDI policy will also play a key role in the future growth path. Due to the presence of foreign direct investment, the Hungarian economy is heavily production-oriented, also in international comparison, which is mainly an import-intensive activity; therefore, Hungary's internal value-creating ability is low. The internal value-creating ability of the economy can be increased if labour market and state subsidies reach companies that perform well-embedded production in the domestic sector, thus giving a multiplicative effect to state support. In the future, it is necessary to help as many Hungarian companies as possible to join international value chains, most importantly in the field of knowledge-intensive services. Clusters can also play an important role in this.

Another reason for the low productivity of the domestic SME sector is that technological and innovation readness is poor, therefore, improving the situation requires a change of attitude. Compared to Western Europe, in Hungary there is a significant lag in terms of the application of entrepreneurial culture, modern technology and innovation (World Economic Forum, 2018). Compared to German companies, in Hungary risk-taking is low, recognizing opportunities is less frequent and the use of new technologies is less common. Only 20 per cent of SMEs carry out innovation, one in five SMEs has no website and a small number of them have operational support software. It would already increase productivity if the sector were to make greater use of available technologies. For companies already innovating, the goal is to enter the foreign market, which requires the development of venture capital solutions and the guaranteeing of a stable, modern (i.e. advanced) institutional environment. In the case of non-innovative but open-minded enterprises, awareness-raising and the ensuring of cheap corporate financing are essential *(Chart 6.12).*

Chart 6.12
Theoretical framework for differentiated business development



Source: MNB.

Reducing the energy consumption of the Hungarian economy and strengthening the green economy can also contribute to successful convergence. Both household and corporate energy management need modernization in Hungary. Although the energy consumption per unit of the economy is decreasing in a trend-like manner, the energy intensity of the Hungarian economy is still twice as high as the EU average. Energy management could be modernized by, among other things, having and expanding household energy modernization programmes. In addition, promoting the spread of environmentally friendly energy sources can also contribute to increasing corporate competitiveness.

Developing the financial system

Sustainable growth of the economy requires the supportive contribution of the financial system through lending, ensuring the sustainable financing of the economy built on innovation, knowledge and productivity growth. According to the MNB's estimate, the level of corporate and household debt - to - GDP ratio is significantly lower than its long-term trend and also lags significantly behind the level of a similar indicator in V4 countries. On the road to regional convergence, credit penetration can double In Hungary. Even with dynamic credit expansion, it will probably take years for the negative credit gap to be closed.

In the rising stage of the credit cycle, the structure of newly issued loans is of paramount importance in terms of stability. In corporate finance, it is particularly important for companies to have access to, especially fixed-rate and long-term, loan and capital market funds under appropriate conditions throughout their life cycle. In spite of the lending turnaround in recent years, the development of banking competition is still hampered by the excessive amount of administrative burdens and costs associated with loan refinancing and bank account switching. The high profitability of the past period seems to have masked the structural weakness of the sector, which means that asset-related operating costs in the Hungarian banking system are the highest when considering countries of the European Union. The sub-pillar of the Banking System Competitiveness Index (BCI) developed by the MNB in 2017 (Asztalos et al., 2017), capturing digitization in banking, shows shortcomings in the development of digital financial channels in an international comparison. The incorporation of the latest technological advances should be part of future development activities so that the banking system can compete with the solutions offered by FinTech companies coming from outside the sector, and to improve the sector's cost-efficiency and reduce relatively high premiums. The sale of banking products through digital channels can also contribute to this. However, technological development requires a supportive and modernized regulatory environment.

The development of capital finance is aimed at creating an adequately diversified financing environment. The alternative sources of financing currently represent a small share of Hungary's financial system. On the capital market, both stock market capitalization and the number of listed firms are below the average of neighbouring countries. On the basis of international comparisons, bond issuance by non-financial corporations could be expanded. A possible shrinkage of available bank loans may freeze companies' access to funds, which may be further aggravated in the future by a possible decline in EU funds. In order to avoid this, it is desirable to create a well-diversified financing environment by developing capital finance. The basic prerequisite for a successful expansion of the capital market is to stimulate the demand and supply side and create a more balanced investor base.

Following the lending turnaround in the new credit cycle, it is desirable to stimulate an upturn in lending to households and corporates, primarily SMEs, and to increase banks' willingness to lend, without endangering financial stability. It is important that borrowing should not be carried out in a concentrated manner, but along with increasing the number of households with loans and, in terms of its structure, the aim is to increase the proportion of long-term fixed-rate loans. In the corporate sector, the Funding for Growth Scheme (FGS) launched in 2013 brought about a turnaround in lending, through which 40,000 SMEs received loans of approximately HUF 2,800 billion, under favourable conditions. In 2019, the MNB launched a new credit programme called FGS Fix, which provides fixed-rate funds at an interest rate of up to 2.5 per cent in the amount of HUF 1,000 billion allocated for this purpose. Keeping the healthy structure of retail lending under proper control can be ensured by increasing the proportion of products that qualify for the Qualified Consumer-Friendly Housing Loans developed by the central bank. Furthermore, the development of electronic payment methods and mobile payment applications offer convenient solutions not only for existing clientele but also for younger generations.

Proposals for strengthening human capital

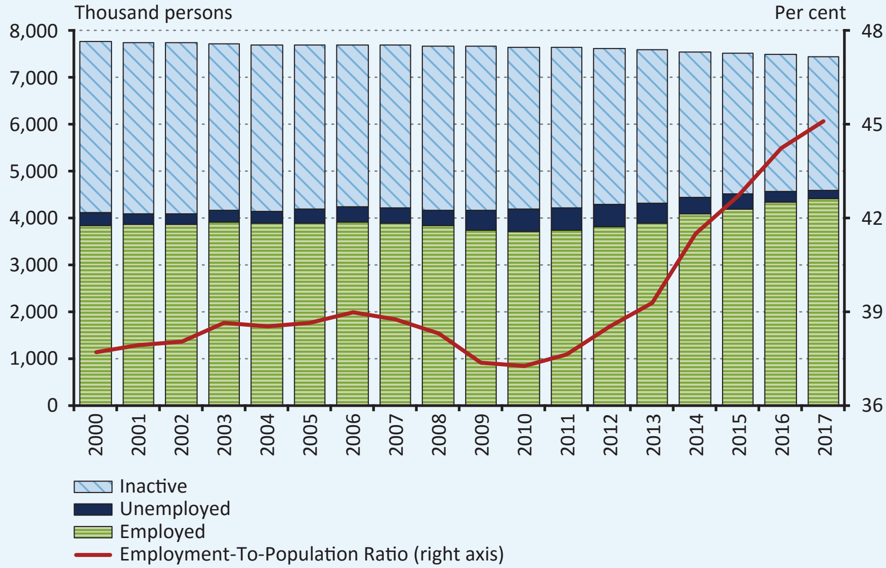
One of the most important factors of competitiveness and successful convergence is human capital, because it affects the performance of the economy through its quantity and quality as well. Over the long term, the available workforce is determined by demographic developments, but within that, the activity rate and the number of people entering the labour market are greatly influenced by economic policy. The productivity of human capital is largely determined by the qualifications, health status and attitude towards work of the employed. In the case of human capital, at present, major reserves can be identified in terms of both quantity and quality, and capitalization of these reserves may contribute to successful convergence through increasing the size and productivity of corporates.

In Hungary, similarly to other European countries, basic demographic processes are characterized by a steady decline in and the ageing of the population. Without intervention, these developments may increasingly restrain labour supply, while the decline in the working-age population may have a negative impact both on economic growth and on the state budget.

As a result of the economic policy, after 2010 the total fertility rate rose from its historical low of 1.23 in 2011 to 1.53 by 2016, however, the level of 2.1 needed for reproduction has still not been reached. By raising the fertility rate, a favourable demographic turn can be achieved, but it exerts its positive effect on the labour market only over a horizon of several decades. By repatriating Hungarian citizens who work abroad, the labour force available to the economy can be increased even in the shorter term. Then, in the longer term, favourable demographic processes can also make a major contribution to economic growth. Our recommendations aimed at the achievement of this turnaround include specific elements of the family support system, the family tax system, the institutional system providing day care for children, as well as measures to promote women's participation in the labour market, taking into account the fact that different types of incentives are needed for the birth of the first child, for further expansion of the family and for having more than 2 children. Among these, we attach particular importance to supporting mothers' re-entry to the labour market which would be facilitated through the spread of atypical forms of employment, the development of a family-friendly workplace environment, an increase in nursery capacities, as well as the adjustment of school hours to working time in the public education.

One key to successful convergence with Austria is to achieve and sustain full employment *(Chart 6.13).* Utilizing and releasing reserves as efficiently as possible, raising wages sustainably and developing the skills of employees are of paramount importance. In the past years, expansion in employment was one of the main driving forces of economic growth, with major contribution from the reform measures stimulating labour market activity after 2010 (Matolcsy–Palotai, 2018). Even so, in terms of the amount of workforce, significant reserves can be identified among public workers, the registered unemployed, inactive disadvantaged groups (individuals close to retirement age, young people, low-skilled people, women of childbearing age) and Hungarians living abroad. As for the groups which are loosely linked to the labour market, increasing their activity can be realized in a second tax reform. Hungarians living abroad can be encouraged to return home, for example, by increasing wages paid in high-demand jobs, and it is also advisable to make efforts to increase the awareness of the elements of the Hungarian family support system as widely as possible among those working abroad. A sustainable growth path can be achieved through further reductions of labour taxes and trilateral wage agreements for several years. The prerequisite for further significant increase in wages is productivity growth. In order to continuously improve the workforce, companies should also be actively involved in investing more and more in the continuous development of their employees.

Chart 6.13
Changes in the population aged 15–74 according to economic activity



Source: HCSO, MNB.

Providing the economy continuously with a well-trained workforce is indispensable for increasing the productivity of the economy and thus for the implementation of sustainable convergence. The employment rate and earnings of employees with a higher level of education exceed the corresponding data of those with a lower level of education. It would be advisable to increase the ratio of tertiary graduates meeting the needs of the labour market, especially in the area of science. One of the main challenges for the education system is to prepare the young for a future state of the labour market that is increasingly difficult to predict because of accelerating development. It would be welcome if the attitude were to spread in Hungarian society that it is only possible to meet the challenges of the modern era with the help of continuous (self-)development and lifelong learning. In the future, in addition to providing basic encyclopaedic knowledge, the education system should primarily focus on the acquisition of adequate basic skills (including IT and the English language), and students should be vested with the ambition and ability of continuous learning. It is also important that the education system be more effective in reducing the inequalities between students resulting from their social and economic backgrounds, and in reducing the level of early school leaving, which is high by regional comparison. Since, expenditures on (public) education only pay over the long term, the achievement of short-term results requires further strengthening of adult education and the system of corporate training.

The health status of the population has a significant effect on the quantity and quality of the labour force available in the economy, and in addition to the labour market it contributes to economic growth through various other channels as well. The dissatisfactory health condition of the Hungarian population represents a major efficiency, productivity and growth reserve for the economy. The greatest contributions to the sustainability of the health care system and to an increase in a healthy life expectancy could be made by increasing the health awareness of the population, and by placing much more emphasis on prevention than at present in the care system. In Hungary, a significant proportion of the population suffers from diseases (such as hypertension, diabetes, obesity) that could be prevented by a healthier lifestyle (healthy diet, regular sporting activities) and for which the health care system can only mitigate further deterioration. On the financing side, one of the main problems of the Hungarian health care system is that private expenditures on health are not spent in institutionalised forms (through health funds or private health insurance).

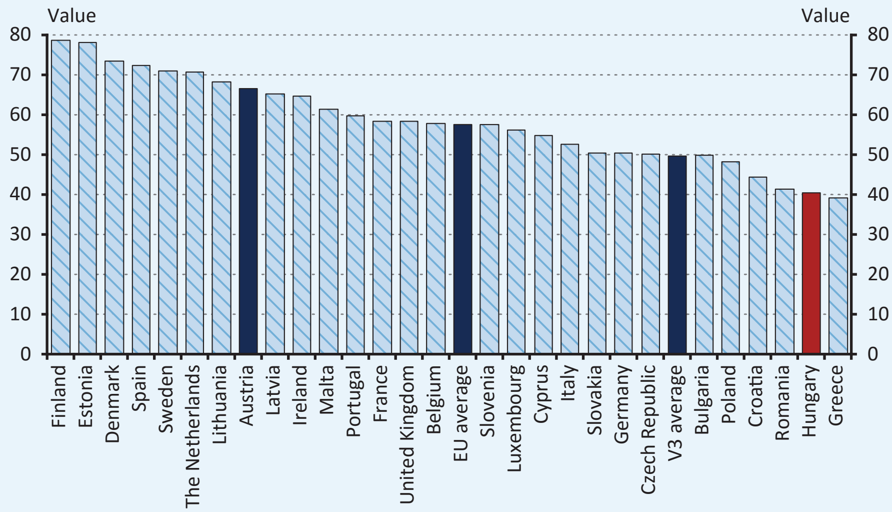
Resources could be used more efficiently if the ratio of households' direct (out-of-pocket) health care expenditures were reduced to below the average of countries in the region. Currently, individual parts of the health care system strive to be cost-effective separately, which, in turn, does not result in the most efficient solutions on a system level. We consider it important that health policy should focus on long-term, systemic cost effectiveness. Further strengthening of prevention and primary care would increase the efficiency of the health care system and improve the health status of the population.

Proposals for increasing the efficiency of the state

The amount of Hungarian red tape is large by international comparison, from which labour capacities can be freed up for the private sector. The state may spend the budgetary saving thus realized on, among other things, wage increases. The growth capacity of enterprises is strongly influenced by the institutional environment in which they function and the amount of resources used by the state (IMD, 2018). Among EU Member States, spending on maintaining public administration is relatively high and the proportion of employees working in public administration exceeds the EU or the Austrian level. In addition, the shortfall in the wage of public administration employees compared to the average of the economy is the highest in Hungary among European countries. In addition to reducing red tape, it would be worthwhile to shift from headcount management to wage bill management and performance measurement in the field of public officials' salaries. This also contributes to an increase in average wages in public administration, which is supported by the rollout of the new classification and compensation system already introduced in government offices to the entire public administration sector. As productivity in the private sector is higher than in the public sector, the regrouping of employees from the public to the private sector supports the growth of macroeconomic productivity and can provide a solution to the shortage of labour hampering the production of companies.

The development of e-governance is able to provide substantial support for the more efficient functioning of state and labour force reduction in the government sector. IT developments are carried out not only in the field of corporate activity but can also support the functioning of the state. The spread of e-governance reduces the time spent on official administration, as it draws less resources from both the state and the private sector, and enables more efficient processing of public sector data and providing information. Based on the Digital Economy and Society Index prepared by the European Commission, in the pillar of the digital public services, Hungary is among the worst-performing member states in the EU. The digital public administration would be developed by: interconnection and automation of data stored in databases, enhancement of mobile applications, increasing the share of pre-completed parts in electronic forms and data sheets, as well as extension of the electronic tax reporting system – pre-completed by the tax office – to new tax types. Public administration operation can become more efficient by digitalizing administration and simplifying regulation *(Chart 6.14).*

Chart 6.14
EU Digital Economy and Society Index – Digital Public Services



Source: European Commission.

The reduction of tax evasion and hidden economy supports competitiveness through several channels, so the measures taken after 2010 aimed at reducing the hidden economy should be continued and extended. The most important step was the introduction of online cash registers that commenced in September 2013, and now cover the entire retail sector. In 2015, the EKÁER (Electronic Public Road Trade Control System) was also introduced with the aim of filtering out tax evaders and strengthening the position of law-abiding economic actors. The introduction of an electronic personal income tax return prepared by the tax office was an outstanding step in the spread of digitalisation within public administration. From July 2018, the online reporting of electronic invoice data (online invoicing) was also launched in order to enable the tax authority to monitor transactions between the taxpayers remotely and take more efficient measures against VAT fraud. The introduction of online cash registers and EKÁER helped reduce the hidden economy and substantially improved the budget position. The decrease in the degree of tax evasion is also evidenced by the growth in the effective VAT rate without increasing the tax rate. The reduction of the size of the hidden economy can be additionally enhanced by the further extension of the online cash register and the EKÁER, as well as the expanded development of the tax office and the increasing of its efficiency.

Preserving Hungary's internationally advanced position in the field of maintaining and developing of traditional infrastructures (road, rail, water transport, etc.) and infocommunication developments is also an important competitiveness factor. One of the key roles of the state is to provide the private sector with the fundamental infrastructures. The traditional infrastructures continue to be important for a country's competitiveness; in addition, in the fourth industrial revolution, telecommunications network and the significance of wireless data transmission are also gaining importance. The density of Hungary's railway and road network is adequate, but its quality falls short of the European average in several aspects. The competitiveness of rail transport can be enhanced by increasing the share of electrified railways, building high-speed railway tracks and modernizing the railway fleet. The quality of road transport can also be improved by the continuous maintenance of road networks and the expansion of expressways. In Hungary, infocommunication infrastructure is modern, but since its development is fast, keeping up with the latest technologies requires constant effort. Accordingly, it is necessary to support the building of new generation telecommunications networks.

6.E ACTIVE ROLE IN THE FISCAL COUNCIL

The current duties of the Fiscal Council are set out in the Fundamental Law adopted in 2010 and in the Act CXCIV of 2011 on the Economic Stability of Hungary. Therefore, enforcement of the debt rule in the Fundamental Law is a priority; however, the Council is also involved in assessing the credibility and feasibility of the draft budget. In 2018, the legislation extended the remit of the Fiscal Council to include responsibility for examining the budget balance and the structural balance of the budget.

Pursuant to the debt rule in the Fundamental Law, the public debt-to-GDP ratio should decline every year until reaching 50 per cent (and only special circumstances provide derogation from this provision). If the Fiscal Council deems that the reduction of the debt ratio is threatened, before the final vote on the Budget Act, it draws attention to this with detailed explanation. On this basis, the Government has to amend the budget to ensure the reduction of the debt ratio. This provides the Council with a right of veto in the adoption process of the budget, which is a strong power by international standards.

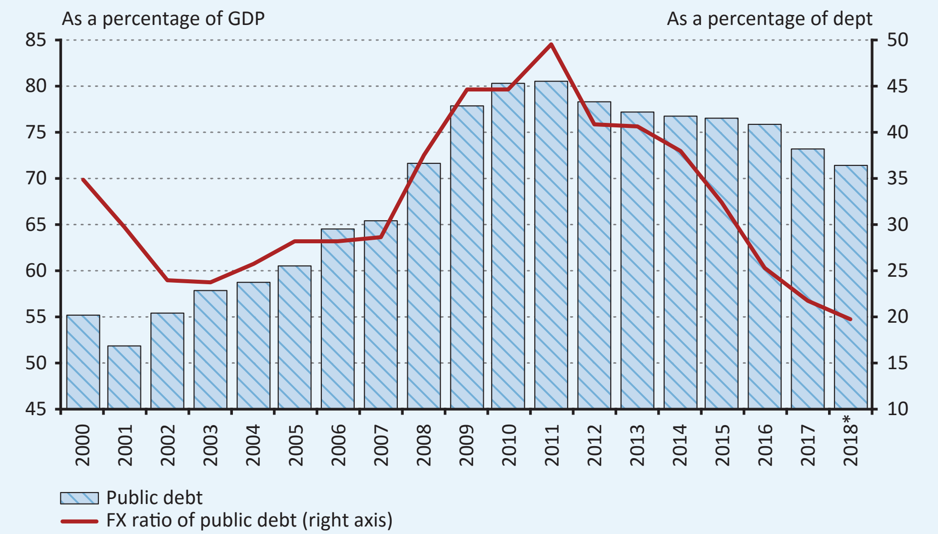
Strong power and a wide range of responsibilities require solid foundations. Pursuant to the Stability Act, the Governor of the State Audit Office (SAO) and the Governor of the Magyar Nemzeti Bank (MNB) are members of the Fiscal Council (FC). The SAO and the MNB support the operation of the FC by providing the Council with the analyses and evaluations related to the issues discussed by the Council. From the budgetary point of view, the analysis of the macroeconomic scenario is of paramount importance and, in connection with this, the forecasts of the SAO and the MNB may be supplemented by prognoses of international organizations and additional analyses commissioned by the FC from Hungarian research and analysis institutions. The wide range of different forecasts helps not only to formulate the Council's prognosis, but also to assess the risks surrounding the prognosis.

The credibility of the FC's decisions is reinforced by the fact that it bases its own macroeconomic expectations by relying on independent forecasts. These forecasts may differ from the prognosis in the Budget Act. In all cases, the Council makes its opinion public, and also presents its independent analyses serving as a background for the consideration.

In order to carry out its duties, the MNB continuously conducts fiscal analysis whereby it is capable of supporting the operation of the Council in an appropriate manner. To support the fulfilment of its fundamental duties set forth in Act CXXXIX of 2013 on the Magyar Nemzeti Bank, in particular the tasks related to the determination and implementation of monetary policy, the central bank analyses and forecasts the developments of budget deficit and debt, as well as the financing of general government. The MNB prepares background analyses for the duties of the FC stipulated in the Stability Act and provides them to the FC. The general public can learn about the results of the expert analyses from the publication entitled Public Finance Report. The Public Finance Report appears twice a year in line with the Council's duties. One publication discusses the submitted budget bill and the other deals with the mid-year budgetary developments, linked to the Council's opinion on the implementation of the budget.

The effectiveness of the work of the Fiscal Council is indicated by the fact that, since operating in its present form – i.e. from 2011 – the objective set out in the Fundamental Law, the reduction of the debt ratio, has been achieved in all years. Between 2002 and 2010, due to the defective economic policy, the public debt-to-GDP ratio steadily increased, exceeding 80 per cent of GDP at the end of the period, which became one of the most significant sources of vulnerability in the Hungarian economy. In order to increase economic stability, the new economic policy, in 2010, set the reduction of the public debt rate as one of the most important objectives. After 2011, the disciplined but growth-friendly fiscal policy representing a new approach, successfully reduced public debt, which, at the end of 2018 – in line with the MNB's forecast – was around 71 per cent, thus Hungary is the only Member State in the EU with a steady decline in public debt-to-GDP since 2011. During this period, the Fiscal Council has been continuously supporting fiscal policy with its remarks and by expressing justified conclusion on the feasibility of budget proposals.

Chart 6.15
Public debt and the currency structure of debt



Note: The 2018 value is an MNB forecast.

Source: MNB, Government Debt Management Agency (ÁKK).

During the operation of the current Fiscal Council, in addition to the level of the debt ratio, the debt structure has also developed favourably. At the peak of the crisis, when the current Fiscal Council was established, in addition to the high level of debt, its composition also increased the vulnerability of the economy. In fact, in 2011, about half of the debt was in foreign currency and two-thirds of it was owned by foreign investors. The new debt management strategy adopted thereafter, aims to increase domestic , HUF-denominated financing. This was supported by the MNB's Self-financing Programme, which channelled the liquidity of banks at the central bank to the financial markets, including the government securities market. The Self-financing Programme, the increase in domestic savings and the renewal of the range of government securities provided to households enabled the objectives to be achieved. As a result of renewing the maturing FX debt from forint funds, by the end of 2018, the FX ratio of central government debt declined to below 20 per cent, while in the case of the total general government it fell below 24 per cent. As to the debt owned by foreign investors, their stock further declined to below 37 per cent of the total debt.

On the basis of the facts, from year to year the Fiscal Council has correctly assessed the credibility and feasibility of the Budget Act to be appropriate. The increase in public debt in the years prior to 2010 resulted from a very high budget deficit and further consequences of economic policy mistakes. The reversing of the debt trend made it necessary to keep the deficit low. Since 2012, the deficit has been below 3 per cent of GDP and from 2015 onwards, it has fluctuated around the level of 2 per cent. This turnaround was supported significantly by the central bank as well, because the base rate reduction – through the reduction of government securities market yields – also reduced the interest expenditures of the budget, which decreased by 2 per cent of GDP between 2013 and 2018.

7 The role of the MNB in domestic and international scientific circulation

7.A HIGHER EDUCATION AND FURTHER TRAINING PROGRAMMES

Cooperation between the MNB and the Corvinus University of Budapest

Cooperation between the Magyar Nemzeti Bank (MNB) and the Budapesti Corvinus Egyetem (BCE) – Corvinus University of Budapest – was launched by an agreement concluded in 2015, which has become the largest educational programme of the MNB in the three and a half years since then, both in terms of the degree of professional involvement and the amount of subsidy. The primary goal of the cooperation is that **the MNB – in accordance with its Statute – supports the development of Hungarian economics expertise, Hungarian economics as well as related areas at the BCE, which is the most prestigious institution of Hungarian economist education.** This goal is achieved by the MNB, on the one hand, by the establishment of organizational units and training programmes that integrate the central bank's intellectual capacities and, on the other hand, through various horizontal tools, such as the promotion of outstanding talents, expanding the innovative areas of cooperation year after year. The cooperation has so far contributed in many areas to educational innovation, quality development, promotion of student performance and recognition of excellence, teacher-researcher mobility, curriculum development and new scientific results. A particularly important support objective is to encourage the international involvement and presence of the university.

MNB Department

The MNB Department, with the support of the Magyar Nemzeti Bank, has been operating at the Faculty of Economics of the Corvinus University of

Budapest since 2015. **The Department's main activity is to endorse the Central Bank Analyst Specialization operating since 2016 as an Economic Analysis Master's degree major.** Due to the high professional standards and the uniquely colourful and active professional programmes of the Department, the specialization is very popular among the students in the field. Graduates of the Specialization find jobs at the Magyar Nemzeti Bank as well as at the most prestigious domestic and international financial institutions, banks and consulting firms.

In addition to compulsory subjects and subjects related to the Central Bank Analyst Specialization, the Department provides a number of elective subjects for students of the Economic Analysis Master's degree major, as well as for young people studying at the basic and master's degree level of the University, both in Hungarian and English. Topics range from ethical economics, new trends and theories in economics and monetary policy to FinTech and the phenomenon of the shadow banking system, covering a wide range of today's most current economics topics. **The Department's programmes also have guest speakers invited from various fields of expertise of the MNB, foreign central banks and leading universities, which also raises the level of training.** In addition, the MNB Department often times takes the lead in organizing study competitions or acts as a co-organizer, thereby also supporting the process of experience-based, interactive learning among high school and university students.

The official blog of the MNB Department, Economania, has been operating since 2017. The purpose of the blog is to write in plain language about professional matters related to economics and central banking, and to familiarize interested readers with the latest economic theories. Since its launch, the blog has been read by tens of thousands, and some of the Department's articles have been published by standard specialized and news portals. Our goal is to strengthen our presence in social media and professional discourse with high-quality professional content, thereby contributing greatly to the development of domestic economics thinking and the broadening of economic and financial knowledge of society.

Institute of Economic Geography, Geoeconomy and Sustainable Development (GEO Institute)

Another important pillar of cooperation is the Institute of Economic Geography, Geoeconomy and Sustainable Development (GEO Institute) that was established on the foundation of the BCE's long history of workshops operating in related fields, which were later expanded. The mission of the Institute is that in the field of teaching and research it provides regional scientific, future research-related and geostrategic knowledge resulting from spatial, territorial existence and operation, furthermore, knowledge of geography, regional science as well as spatial and settlement development necessary for learning and managing environmental science features.

The most important activity of the Institute is the re-launched Master in Regional and Environmental Economics, which started with a significant transformation, innovative content and methods in 2016. Opening with an initial headcount of 28, today a class with 78 students is operating in two training locations. Due to the development supported by the MNB and special student opportunities, the major quickly became a market leader in Hungary, moreover, in 2018/2019 the training could start in correspondence form in Székesfehérvár. **At the same time, deliberate construction has also gained international recognition:** according to the Eduniversal masters ranking in 2018, training at the Institute ranked 46th in the world among masters with a similar syllabus. Thanks to the organizational development supported by the bank, the Institute has also been involved in education with new training content in a number of other areas. These are geopolitical specialization, regional and settlement development specialization, and a geopolitical doctoral programme, but the Institute has also contributed to the development of university education with a number of new elective subjects. Educational activities are complemented and supported by the Institute's research and science-organization activities, which focus on three main subject areas: economic geography and geopolitics, planning-development and urbanism, as well as sustainability and environmental economics. Among other things, with the support of the MNB, research projects – such as New Silk Road research – have been carried out to discover the geographical, geostrategic and political context of the New Silk Road Economic Zone.

Geopolitics Doctoral Programme and Chinese–Hungarian MBA double qualification

In 2017, encouraged by the Magyar Nemzeti Bank, **an English-language geopolitical doctoral programme was launched at the Budapesti Corvinus Egyetem (BCE).** At present, two classes of training started in the academic year of 2017/2018 with 18 students, 5 of whom are foreigners. As a professional partner of the programme, the MNB provides intellectual capacity for the development of educational materials and provides opportunities to attend lectures. The students of the programme can receive a performance-based scholarship provided by the Pallas Athena Foundations.

In 2018, the cooperation was also extended to the field of international management science. In February 2019, based on the tripartite cooperation between the MNB, the BCE and the Shanghai Fudan University, Fudan University and the BCE started their double qualification degree MBA training. In the programme, the MNB and the professionals of the MNB Department and the GEO Institute supported by the MNB also play a decisive role, and with the support of the MNB, a new organizational unit was set up to coordinate the programme. And for excellent students of the training, the Pallas Athena Foundations provide scholarships.

Scholarships, mobility, curriculum development

Horizontal tools of cooperation are **student scholarships as well as grants that are awarded through applications to teachers and researchers in connection with participation in conferences, organizing conferences and book publishing activities.** Since 2015, due to the support provided by the MNB, a total of 61 teachers and researchers have been able to participate in foreign conferences, in addition, the central bank has made it possible to organize 49 conferences. Since the beginning of cooperation, the MNB has supported the publication of 13 (text)books within the subject areas of finance, economics, environmental economics and comparative history of civilizations.

Among the scholarships, the so-called fee payment scholarship is outstanding, whereby the MNB finances the tuition fees of students of certain specific majors for the duration of their training. Since the beginning of cooperation, the MNB has supported 122 students in this way. The MNB provides the **Outstanding MNB Scholarship** for students with outstanding performance, which can be awarded to the finest students in specific majors. Between 2015 and 2018, the MNB provided such scholarships to about 50 students annually. The scholarship of the Economic Analysis Master's students studying at the Specialization of the central bank is of particular importance. Its purpose is that, despite the increased requirements, more students choose the Specialization. Another, smaller group of student scholarships are the benefits provided to students and researchers participating in certain doctoral trainings. Recognizing the importance of networking and gaining experience in an international environment, the MNB, since 2015, has supported a total of 40 students to participate in Summer University programmes held by the Fudan University and the London School of Economics.

Supporting the economics training of higher education institutions

The Magyar Nemzeti Bank's Corporate Social Responsibility Strategy states that the primary task of the MNB is to support domestic economics and financial education, research, scientific activities and related financial literacy in order to promote development. To this end, **the MNB has entered into a framework agreement for cooperation with a number of universities providing economics and financial education,** through which the central bank supports a number of professional activities professionally and financially.

At the University of Pécs and the Szent István University in Győr, the MNB supports geopolitical and management doctoral programmes and schools. In the framework of further higher education cooperation, the Magyar Nemzeti Bank contributes financially to special student scholarships, the organization of professional conferences, scientific publications, research projects, international student and researcher mobility and the development of general economics knowledge and financial culture of universities. The individual support programmes are evaluated jointly by the parties at the end of each academic year to further develop them in the light of results, experience and needs.

Educational activities of the Budapest Institute of Banking (BIB)

In order to facilitate the efficient development of money and capital markets, it is a widespread international practice for stock exchanges to operate independent training institutes. The Budapesti Értéktőzsde (BÉT) – Budapest Stock Exchange – and its owners, including the Magyar Nemzeti Bank, in the summer of 2017 decided to **set up a new education centre as an exclusive subsidiary of the BÉT** in order to modernize the banking and financial adult education and exam system.

The foundation of the BIB is rooted in the matching of market requirements with the social objectives drafted by the Magyar Nemzeti Bank and the

Budapest Stock Exchange. Covering the entire operational range of the banking, financial, and insurance sector, the Budapest Institute of Banking grants the opportunity to participants, from experts to top managers, to gain cutting-edge knowledge and to discover professional development opportunities. Courses in banking and finance constitute the first pillar of the training programme which, connected to the banking sector and its related fields, encompass an extremely broad spectrum of education. Some of the financial trainings are also available now as an e-learning course. On the basis of the agreement between the BÉT and the Central European Brokerage Foundation, starting from autumn 2017, the Budapest Institute of Banking administers the preparatory courses and examinations required for the stock market certification exam, and the qualifying exams for futures, options and securities administrators. The second pillar of the BIB's training programme is stock-based education and further training, which aims to establish the knowledge of young brokers, to continuously raise the level of qualification, and to continuously update the knowledge of practicing brokers.

The third pillar involves official courses, which are designed to provide professional training to staff members who play a key role in the financial intermediary system and who meet clients face to face. The fourth pillar is the range of training granting nationally recognized professional qualifications, wherein the BIB provides the essential financial knowledge to obtain the qualifications listed in the National Qualifications Register (OKJ), and those required to fill positions designated in regulations. The fifth pillar includes external corporate training that is fully geared to the needs of institutional customers. In the first business year of the Budapest Institute of Banking, the seventy banking and financial courses were taken by more than 900 students. The BIB supported more than 1,200 banking/finance professionals with official and OKJ training courses and nearly 6,000 with the most cutting-edge e-learning courses, to promote their personal development and career.

The BIB's medium-term goal is to become a regional training centre of special courses. A fine example of this was the joint international conference of EBRD, BIB and Euromoney Learning Solutions where 25 financial professionals from ten countries learnt about the latest solutions of cleaning banks' balance sheets and managing and restructuring NPLs with the help of leading market experts. The modern, professional programme of the Budapest Institute of Banking is supported by an international board of advisors. Members meet at least twice a year to identify the most important directions that make the training programme for the financial sector up-to-date. In addition to the Hungarian members of the advisory board – Dr. György Matolcsy, Governor of the MNB; Márton Nagy and László Windisch, Deputy Governors of the MNB; Richárd Végh, President and Chief Executive Officer of the BÉT; and Gergely Fábián, Chief Executive Officer of the BIB –, Hans Lindberg, Managing Director of the Swedish Bankers' Association; Jai Arya, Head of Executive Education at National University of Singapore Business School; Michael Feeney, Chief Executive of the Institute of Banking, Ireland; and Philip Middleton, member of the board of directors of the Official Monetary and Financial Institutions Forum, former partner of the London Office of EY, assist the educational institution as advisors.

MNB Excellence Scholarship Programme

The Magyar Nemzeti Bank stated in its Statute that it considered a priority the development and support of the Hungarian economics expertise and Hungarian economics. In order to achieve this objective, **the Magyar Nemzeti Bank established the Scholarship for Excellence in 2016 for economics students.** Winning students with outstanding performance receive a scholarship of HUF 30,000 per month for 10 months. Twenty-five higher education institutions joined the programme, and in total nearly 1,500 students met the rigorous application conditions in successive years.

7.B PALLAS ATHENA FOUNDATIONS FOR THE RENEWAL OF PUBLIC THINKING

In accordance with its Corporate Social Responsibility Strategy set out in its Statute, the Magyar Nemzeti Bank announced the Pallas Athena Public Thinking Programme. In order to support the programme, in 2014, six foundations, independent of each other and the founder, started their activities in the field of education, science and culture. Their names are: Pallas Athena Domus Innovationis (PADI) Foundation, Pallas Athena Domus Mentis (PADMA) Foundation, Pallas Athena Domus Animae (PADA) Foundation, Pallas Athena Geopolitical (PAGEO) Foundation, Pallas Athena Domus Concordiae (PADOC) Foundation and Pallas Athena Domus Scientiae (PADS) Foundation. **All foundations defined it as a priority task to raise the level of Hungarian economic education and increase general economic intelligence by way of organizing educational programmes and arranging individual management of outstanding talents.**

In 2017, the Magyar Nemzeti Bank reviewed the foundation structure and decided to merge the PADS and PADOC and then the PADI and PAGEO foundations. The successor to PADS and PADOC became the Pallas Athena Domus Educationis (PADE) Foundation, whereas the PADI and PAGEO Foundations were merged to form the Pallas Athena Innovation and Geopolitical Foundation (PAIGEO). Subsequently, in the summer of 2018, the merging of PADA and PADMA took place, whereby the Pallas Athena Domus Sapientiae (PADS) Foundation was established. The newly established foundations combined the assets and goals of their predecessors.

Since their establishment, the foundations have announced a number of applications and launched several professional programmes. Since their establishment, PADA and its successor PADS have considered it a priority task **to provide support to young people living in one of the most disadvantaged areas of Hungary.** The PADA therefore launched its **Tiszaroff Scholarship Programme,** which aims to help young people in the region catch up, to eliminate their disadvantage and to support the studies of students at high schools or higher education institutions who live in Tiszaroff or in the surrounding settlements.

The Pallas Athena Foundations support the Young Talent Programme launched by Mathias Corvinus Collegium maintained by the Tihany Foundation, which offers talent development activities to hundreds of middle school children. The PADMA –predecessor of the PADS – set as one of its objectives to support the training of economists in Bács-Kiskun County. Due to its activity, by 2017, the Economy and Management major – founded in 2016 with its the support at the then-named Pallas Athena University – developed into the Faculty of Economics of the University now bearing the name of János Neumann (John von Neumann University). Continuing the work begun by its predecessor, the PADS Foundation supports the participation of several university teachers, researchers in foreign conferences and their PhD studies, and it has also contributed to the creation of the Megalux solar car.

The PAIGEO Foundation (and its predecessors) considered it a priority to create and operate a science, research and development, innovation and modernization knowledge centre and to share scientific knowledge and experience. To this end, **in 2017, it established the Pallas Athena Geopolitical (PAGEO) Research Institute and cooperates with it in conducting geopolitical research, organizing conferences and announcing its applications.** Together with the Research Institute, the Foundation has on several occasions organized the "New World Order" conference on global geopolitical changes, attracting great interest. Since its establishment, the Foundation has strived for international and scientific partnerships. It has created professional partnerships with the Chinese FUDAN University and Tsinghua University, the Chinese Academy of Sciences, the Chinese University of Hong Kong and the Lee Kuan Yew School in Singapore. **The quarterly HUG (Hungarian Geopolitics) magazine** is related to the Foundation, and as a result of the researchers' work, studies, analyses and book summaries are constantly being published, which publications are publicly available on the Research Institute's website.

The PADE Foundation and its predecessors (PADS and PADOC) have been dedicated to supporting the training and development of economics and financial professionals, as well as the operation of an educational, scientific centre that ensures broad dissemination of financial knowledge. In addition, the Foundation considers cross-border training of professionals in the Carpathian Basin as a priority. **In the framework of the Pallas Athena Public Thinking Programme launched by the Magyar Nemzeti Bank, the PADE and the PADS Foundations – following the MNB Excellence Scholarship model – established the Pallas Athena Scholarship of Excellence, providing support to students studying at the Faculty of Economics at John Selye University to the tune of HUF 15 million.** The Foundation also supported the Sapientia Hungarian University of Transylvania, contributing to the progress of higher education institutions across the border. Through the cooperation between the Doctoral School of Earth Sciences of the University of Pécs and the Pallas Athena Foundations, the doctoral programme entitled Geopolitics, Geoeconomics and Political Geography from Central European Perspective started its fourth semester in 2018.

As a result of the value-creating work of the Foundations, in 2018, **two major buildings defining the cityscape were revived and opened their doors.** First, the former Várkert Kioszk (Castle Garden Kiosk) was handed over, which is an open community space for contemporary art exhibitions and exhibitions presenting Eastern culture. In the second half of the year, the complete reconstruction of the nearly 800-year-old former City Hall building in the centre of the Castle District was completed with foundation support. **The Bölcs Vár, the building christened House of Wisdom,** primarily hosts academic and scientific works. The Pallas Athena Domus Sapientiae (PADS) Foundation, which maintains the building, created a scientific workshop with outstanding standards of modern education, providing advanced training to economics and finance professionals. In the English language training of the Doctoral School – which is unique in Hungary, prominent international professors and educators provide additional knowledge, along with the opportunity to acquire a doctorate, to professionals with proven professional and practical experience.

The assets provided to the Foundations at the time of their establishment amounted to HUF 266.4 billion. The Foundations are obliged to preserve the assets entrusted to them. They are not allowed to spend them. They can only invest them and use their yield in their activities. **Due to their successful investment policy, the Foundations have increased their assets by HUF 6.33 billion since their establishment.** The Foundations were able to achieve the asset growth by supporting more than 1,400 scientific applications in the amount of nearly HUF 8 billion between 2014 – when they were established – and 31 December 2018.

7.C STRENGTHENING THE CIRCULATION OF DOMESTIC ECONOMICS

In the past six years, the Magyar Nemzeti Bank has considered it an important task to support by subsidies the work of **the professional organization and various forums of domestic economics.** Already at the beginning of the now completed cycle, in early August 2013, the MNB provided an ad hoc grant of HUF 5 million to the **Magyar Közgazdasági Társaság** (MKT) – Hungarian Economic Association – to finance professional and scientific activities. From 2014 onwards, cooperation was continued on the basis of a strategic agreement, within which the central bank granted a HUF 149 million allowance to the MKT for knowledge dissemination, research and education in connection with quality economics. In addition, the Magyar Nemzeti Bank **has supported several Hungarian economics journals,** primarily in the framework of strategic cooperation agreements with the publishers. In 2014 to 2016, the MNB awarded the journal Külgazdaság (Foreign Economy) nearly HUF 44 million; the Köz-Gazdaság (Public Economics) received approximately HUF 8 million in 2014 to 2015; the Acta Oeconomica received HUF 15 million in 2014 to 2016; the Közgazdasági Szemle (Economic Review) received HUF 60 million from 2014 on; and the Új Magyar Közigazgatás (New Hungarian Public Administration) received 5 million, one hundred sixty thousand forints in 2016 to 2018 as support for the publication of its thematic special issues (Közpénzügyek) on public finances.

7.D THE MNB IN THE GLOBAL SPACE – FOCUS ON EASTERN OPENING

Developing and expanding the international network

Since the current management of the MNB took office in March 2013, in addition to significant changes in monetary policy and other policy frameworks, the international activities of the MNB have also expanded. Prior to 2013, the main focus was on cooperation with EU institutions and Member States, but the new management outlined a fresh vision in the field of international relations, with the primary objective of placing the MNB among the best and most respected central banks in the world.

To achieve this objective, a multi-pillar international strategy has been developed. Under the new approach, existing institutional and EU relations remain important, but in parallel with this the central bank has also opened toward the East, creating a balance between East and West in the area of international relations.

Increasing the MNB's recognition as regards its international engagement and channelling the Hungarian central bank further into international circulation have become an important objective. Thus, as the main pillar of western network building, foreign representation offices were established and the goal was set to have Budapest as the host of more and more international programmes and events related to the central bank. The organisational structure of the central bank was also adapted to the changed tasks.

Relations with international institutions

In accordance with earlier practice, the MNB continues to devote special attention to its multilateral, international professional relations and to active participation at the professional events of international economic organizations and financial institutions. This commitment is aptly demonstrated by the fact that the MNB has membership in nearly 250 international bodies (councils, committees, subcommittees, working groups, etc.), where the management and experts of the MNB successfully represent the interests of Hungary and its central bank. Though **bilateral cooperations with EU institutions and the central banks of EU Member States continue to be an important element of the MNB's international relationship network,**

the MNB actively strives to establish and maintain fruitful relations with globally active institutions, too. Following the integration of the former Hungarian Financial Supervisory Authority into the MNB as of 1 October 2013, the central bank's international activities have been further widened and since then include cooperations with the European Supervisory Authorities and also with global standard-setting institutions.

Strengthening bilateral relations with foreign central banks

Strengthening bilateral relations with foreign central banks has been in the focus of the Magyar Nemzeti Bank's international activities since 2013. In this context, the MNB pays special attention to monitoring economic developments and the activities of central banks in those countries that have achieved significant results and can serve as an important example for Hungary in terms of monetary policy, financial stability or supervision. Drawing on the results of this work, the MNB has established an international cooperation network composed of European as well as non-European central banks. As a result of extensive cooperation e.g., joint research projects are initiated, common publications are prepared, and the experts of the MNB and those of partner central banks are mutually involved and play an active role in each other's events.

In addition to maintaining intensive relations with the central banks of EU Member States, the MNB has placed strong emphasis on establishing cooperation with the central banks of emerging countries outside the EU as well. The organisation of bilateral technical assistance programmes is a further form of cooperation, during which the MNB regularly receives the delegations of central banks outside the EU for professional visits and exchange of best practices in selected topics. Likewise, the MNB also sends experts to these countries to help them with professional advice. These programmes, in addition to transferring expertise and experience, increase the professional prestige of the MNB, contribute to the widening of its international relations and facilitate the strengthening and deepening of cooperation with the partner institutions.

Foreign Representation Offices

In 2014, the appreciation of the importance of globalization and bilateral relations prompted the MNB management to return to its former practice

of establishing small, 3- to 4-person representation offices in some of the world's economic, financial and geopolitical centres. With the opening of the central bank representation offices, the primary objective of the MNB was to introduce the Hungarian central bank and its analytical work more and more into the circulation of international scientific life, and to strengthen the professional cooperation with co- and partner institutions. **As regards the MNB's foreign representation offices, the European venues – in Hamburg, Paris and Rome – were already opened in 2015 and 2016, and the New York office on the American continent was launched in September 2017.**

In addition to the core economic, financial and geopolitical processes, the representative offices also monitor the topicalities of the given region that are of particular relevance at home, innovations in the fields of finance, education, academics or culture, and they also prepare informational materials on their observations. In today's accelerated, digitalized world, personal relationships remain vital, thus as a result of building and strengthening the relationship network, there are also joint professional conferences, panel discussions, organized workshops, providing the opportunity for exchanging professional experience and presenting the MNB's research activities on an international platform. Personal contact and cooperation with local institutions, opinion leaders, public actors and the academic sphere represent an added value, which cannot be obtained at home.

The experience of the past years has proven that the representation offices have been very well integrated into the organizational structure of the MNB. With the help of the foreign offices, topics of high importance and actuality in the international financial and economic life, such as FinTech, green finance or developments related to the European economic and monetary integration, have been analysed. It is also of primary importance to strengthen cooperation with educational institutions and research institutes at the relevant foreign locations, as a result of which, in addition to the development of partnerships and the professor and student exchange projects, dual degree programmes can also be developed.

The Eastern opening of the MNB

While foreign representation offices are spearheading the building of MNB's Western relations, there is a special area of expertise at the central bank's headquarters in Budapest that has been focusing on developing Asian

relations since 2016. Within that framework, special attention is given to strengthening relations with central banks, higher education institutions and research institutes in Eastern countries as well as with renowned experts in the region. In order to support the development of Asian relations, the central bank's analytical work has also been extended to cover financial, economic, geopolitical, external and internal political topicalities in this context.

In recent years, the Magyar Nemzeti Bank has opened towards the Chinese market through a structured approach, thus now it has extensive relationships and results. In 2013, the MNB was the first in the Continental Europe to conclude a bilateral currency swap framework agreement with the People's Bank of China, the Chinese central bank, to support trade and investment relations. Foreign exchange swap agreements are now part of the central bank toolkits, as a means of ensuring stability of financial and real economy markets.

Through its Central Bank Renminbi Programme, the Magyar Nemzeti Bank also focuses on the development and deepening of Chinese-Hungarian relations, including the fields of economy, finance, academics, knowledge dissemination and education. In 2015, the Magyar Nemzeti Bank announced a comprehensive Renminbi Programme with the aim of facilitating the establishment of new Chinese-Hungarian relations and the development and deepening of existing relations with the means at its disposal. The programme includes objectives such as the construction of the renminbi foreign exchange reserve portfolio, the provision of a central bank renminbi liquidity facility in case of market disturbances, the development of the renminbi clearing and settlement infrastructure, the enforcement of financial stability and regulatory aspects, as well as research and academic cooperation.

In connection with the Central Bank Renminbi Programme, the Magyar Nemzeti Bank also launched the Budapest Renminbi Initiative in 2015. With this initiative, the MNB aims to provide a common platform for all market participants, corporate and bank decision makers and government representatives who are involved in the Hungarian-Chinese real economy and financial relations. The Central Bank Renminbi Programme defines the areas where the MNB can make progress on its own, while the Budapest Renminbi Initiative, with the involvement of stakeholders, allows for further results.

The MNB's Central Bank Renminbi Programme and the Budapest Renminbi Initiative have achieved many results since their announcement. The Magyar

Nemzeti Bank decided on the gradual construction of the Chinese bond portfolio, in accordance with international practices, inter alia, by assessing the internationalization of the renminbi, the structural features, yield and risk parameters of the Chinese government securities and foreign exchange market, as well as the diversification aspects of the FX reserves investment. The MNB's decision, however, took place even before the International Monetary Fund (IMF) decided in autumn 2015 to expand the SDR basket. In addition to the Chinese bond investment, several other agreements were concluded with the People's Bank of China, and then with the Bank of China regarding the domestic development of the renminbi clearing infrastructure. The support of these initiatives also contributed to the fact that in recent years widespread development has been reached in the capital, money and foreign exchange markets with respect to Hungarian-Chinese relations. In 2015, the Chinese central bank approved an allocation amount of 50 billion renminbi quota for Hungary within the framework of the *Renminbi Qualified Foreign Institutional Investors (RQFII)* programme, which is one of the main programmes enabling capital inflows, allowing investments of qualified foreign institutional investors in the onshore securities market. In the Chinese onshore foreign exchange market, a direct renminbi-forint trading is also available. The introduction of a direct RMB/HUF quote supports the development of bilateral trade and investment relations, the use of the two currencies in cross-border clearings, and in the long run it can reduce exchange costs. During the past period, considerable progress has been made regarding the development of the clearing and settlement infrastructure in Hungary, as the Bank of China opened an Central-Eastern European renminbi clearing center in Budapest with the aim of providing an adequate infrastructure for settling transactions in the renminbi outside China.

Over the past 6 years, the MNB has been gradually strengthening its relations with the People's Bank of China. The foreign exchange swap agreement of RMB 10 billion concluded by the two parties in 2013 was renewed in 2016. In addition, several other cooperation agreements were signed to develop financial relations. Another significant milestone was honouring Zhou Xiaochuan (the former Governor of the Chinese central bank) with the Lámfalussy Award in 2018. He received the prize in the presence of Prime Minister Viktor Orbán in Budapest in November 2017. With the Award, the Magyar Nemzeti Bank wished to acknowledge the excellent results achieved by the Governor of the Chinese central bank during his long professional career and his tireless efforts for the internationalization of the renminbi. The peak of relations so far was when on 9/10 November 2018, the two institutions co-organised the first meeting of the Central Bank Governors of China and the 16 Central and Eastern European countries in Hungary. For this occasion, Yi Gang, the new Governor of the PBOC, appointed in March 2018, visited to Hungary.

In the field of scientific and educational cooperation, the MNB actively cooperates with a number of Chinese institutions, and regularly presents the Hungarian central bank model in China, accepting several invitations each year. The MNB also maintains close and productive relationships with two Chinese universities (Tsinghua and Fudan) aimed, inter alia, at establishing a joint research network, creating student and professor exchange programmes, and launching specific financial and business programmes. For many years, the MNB has been attending the Shanghai Forum focusing on the development of Asia and has been involved in co-organizing international panel discussions. At the 2017 event, György Matolcsy as Governor of the Central Bank of Hungary gave a lecture as one of the keynote speakers of the opening ceremony. The Governor of the Magyar Nemzeti Bank was elected as a Honorary Member of the Fudan Development Institute of Fudan University in Shanghai and the FDDI International Advisory Board of the Shanghai Forum. Members of the Board include Joseph Stiglitz, Robert J. Shiller and Christopher A. Pissarides (Nobel Prize-winning economists), Robert Zoellick (former President of the World Bank) and Zhu Min (former Deputy Managing Director of the IMF). In recent years, invited guests from the Fudan University have also given exciting lectures at the Lámfalussy conferences. In addition, with the MNB's professional support, the Fudan-Corvinus Double Degree MBA Programme was created, and launched in Budapest in February 2019.

Regarding the development of the MNB's Chinese relations, another highlighted event was the Hungarian presentation of the book "The Governance of China" written by the Chinese President, Xi Jinping, for which the MNB Headquarter provided the venue on 24 April 2017.

Cooperation with international research centres

Cooperation with international research centres and think tanks is also intended to expand the MNB's international relationship network and to establish new channels for liaising with foreign partners. This is beneficial for the MNB from several aspects. Its management and experts are invited to events organized by the research centres where, in addition to deepening their professional expertise, they have an opportunity to develop personal relationships with the most recognized international experts, while also gaining access to the information and knowledge base accumulated by the think tanks and harness this intelligence to support the central bank's professional work. Moreover, the results of foreign intellectual workshops can also be channelled into the educational programmes of the MNB by inviting foreign experts and lecturers as well as by joint research, publications and events.

Cooperation with the Official Monetary and Financial Institutions Forum (OMFIF) is one of the priorities of the MNB. It has been member of the organization since May 2014. Based in London, the activities of the OMFIF focus on the areas of economic and monetary policy, state property and reserve management, financial supervision and regulation, as well as the role and governance of central banks.

Another important partner is the **European Association for Banking and Financial History (EABH)**, which is engaged in the complex, and at the same time, extremely useful task of processing the history of the banking, financial and insurance sectors and also organizes conferences and meetings to discuss related results. As a committed supporter of financial literacy and knowledge dissemination, the MNB actively participates in the EABH's professional events and annual conference. In 2014, the Governor of the MNB was elected to be a member of the EABH Board of Patrons.

In the spirit of the Eastern opening, the MNB maintains excellent relations with the Chinese Academy of Social Sciences (CASS). The results of the collaboration materialize in high-level meetings and joint lectures and conferences. In April 2017, the CASS opened its unique Research Centre (China-CEE Institute) in Budapest to support Sino-European knowledge-sharing. As a major milestone in MNB-CASS cooperation, a joint workshop was organized in Budapest, entitled "Workshop on Hungary and RMB Internationalization", as a result of which a joint study volume was presented. The volume that also includes the studies of the MNB authors was published both in English and in Chinese. Later, a joint workshop on financial risks and their management was held in Beijing.

As of 1 January 2018, the Magyar Nemzeti Bank joined the Centre for Latin American Monetary Studies (CEMLA) as a cooperating partner. The Centre currently consists of 53 institutions. From the European continent, the European Central Bank (ECB) and the central banks of France, Germany, Italy, Spain, Switzerland and Sweden participate in the operation of the organization. The CEMLA specializes mainly in the analysis of Latin American and Caribbean monetary and (central) banking affairs, as well as fiscal and exchange rate policies. To this end, CEMLA organizes various types of trainings and regularly publishes its surveys and research, providing support for a deeper understanding of certain central bank practices.

International professional conferences and events of recent years

Lámfalussy Lectures Conference

The Lámfalussy Lectures Conference has now become the most important international annual conference of the MNB, which, in line with the exemplary oeuvre of Sándor Lámfalussy, succeeded in launching a joint reflection that is in harmony with the new concept of roles of the world's central banks, while not moving away from our platform of solid values. The purpose of the series of conferences, launched in 2014, is to serve as a forum for conducting professional dialogues between analysts and researchers involved in global monetary and economic policy issues, as well as between decision-makers responsible for the practical implementation. The conference series deals with the analysis of current macroeconomic and financial processes as well as the discussion of trends expected in the future. In parallel with launching the international conference, the Governor of the MNB established the Lámfalussy Award to recognize outstanding international professional performance and lifetime achievements that influence the MNB's activity and have an impact on international monetary and financial policies. The award is presented annually in connection with the conference. The former winners are: Ewald Nowotny, Governor of the Austrian central bank (2014); Benoît Cœuré, member of the Executive Board of the ECB (2015); the BIS – Bank for International Settlements – (2016); Jacques de Larosière, former Managing Director of the IMF, former President of the European Bank for Reconstruction and Development (EBRD) and former Governor of the French central bank (2017); Zhou Xiaochuan, former Governor of the Chinese central bank (2018); and Yves Mersch, member of the Executive Board of the ECB (2019).

IAIS Annual Conference

On 13–15 June 2016, the annual conference of the International Association of Insurance Supervisors (IAIS) was held in Budapest, organized jointly by

the IAIS and the MNB. The International Association of Insurance Supervisors represents the insurance regulators and supervisors of 190 administrative districts in nearly 140 countries and includes more than 130 insurance experts, insurers and professional associations as observers. The IAIS publishes global insurance principles, requirements and methodological guidelines, provides training and support in insurance supervisory matters and organizes meetings and seminars for insurance supervisors. The Hungarian supervisory body is a founding member of the organization.

The 16th BIS Working Party On Monetary Policy In Central and Eastern Europe – Meeting

The annual meeting of the Regional Monetary Policy Working Group of the BIS (Bank for International Settlements) took place in February 2017 at the MNB. The meeting was attended by, in addition to the BIS and the ECB, the senior executives in charge of monetary policy of 18 central banks in the region. During the private professional discussions, the current issues of monetary policy were reviewed. Since 2001, the BIS Regional Monetary Policy Working Group has held its annual meeting organized by one of the central banks in the region.

AFCA conference

On 28 November 2017, the headquarters of the Magyar Nemzeti Bank, in cooperation with the Hungarian Banking Association and the Asian Financial Cooperation Association (AFCA), served as the venue for the AFCA CEE Financial Summit Forum.

The topic of the summit was: "New Chapter of Asia-Europe Financial Cooperation". The conference focused primarily on the creation of a collaborative platform where financial managers and participants in the financial sector are given the opportunity and support to build a better and more efficient, less risky financial world in the future. Prime Minister Viktor Orbán also spoke at the opening of the event.

IOSCO Annual Conference

Following a successful application, the MNB won the right to organize the annual professional conference of the International Organization of Securities

Commissions (IOSCO). The event was held in Budapest on 7–11 May 2018. The IOSCO, as a global cooperative of securities regulatory agencies, is an international professional organization, a key player in global capital market standardization. At the request of the G20 and the FSB, the IOSCO manages a number of outstandingly important topics in terms of international capital market regulation. The annual IOSCO conference held in Budapest was the organization's first event of this magnitude, hosted by a CEE country. **The main topics of the conference in 2018 were, inter alia, as follows:** the latest challenges of FinTech and digitization, passive and active management strategies from the viewpoint of investors, access to capital markets for small and medium-sized enterprises. The conference was attended by several world-renowned speakers, including leaders of financial organizations and regulatory institutions, as well as outstanding professors in research of the topics discussed.

The Pre-Forum Session of Shanghai Forum 2019

On 5 October 2018, the MNB, in cooperation with the Fudan Development Institute (FDDI), organized the pre-session event of the 2019 Shanghai Forum, the theme of which was Global Governance and Asia, primarily from the perspective of CEE countries. The topic of the panel discussion of the event was closely related to that of the professional conference in Shanghai in 2019, focusing on the CEE region (the role of the CEE region in the new world order). In addition, during the event, young researchers' presentations took place within the framework of a PhD section. **At the event, it was also announced that the Fudan–Corvinus Double Degree MBA Programme would be launched in February 2019** which can further strengthen relations between China and Hungary, and offers a great opportunity for young Hungarian researchers and students to continue their studies at the Fudan University, thereby also gaining international experience.

16+1 China-CEEC Central Bank Governors' Meeting

The first 16+1 Central Bank Governors' Meeting was held in Budapest on 9–10 November 2018 with the participation of China and Central and Eastern European Countries. The Magyar Nemzeti Bank organized the summit together with the Chinese central bank, and the event was hosted by the House of Wisdom (Bölcs Vár) cultural and training centre in the Buda Castle. The significance of the event is shown by the fact that never before were so many central bank governors and delegations consulting with each other

in Hungary. The event was a very important milestone in the relationship between the central banks of China and those of the CEE countries. Following the opening ceremony, central bank delegations took part in roundtable discussions, which included the development of economies in China and the CEE countries, the financial cooperation between central banks as well as exploring existing and potential future collaboration opportunities.

Participation in the work of international committees by organizing meetings in Budapest

The Magyar Nemzeti Bank pays special attention to strengthening its international engagement and network of relationships, and one way to do this is to organize meetings of international committees and working groups in Budapest. National Banks participating in the European System of Central Banks (ESCB) operate several thematic international committees and working groups, and the Magyar Nemzeti Bank is also an active member of these. In recent years, in addition to the extensive support for professional work, several Commission meetings have been held in Budapest.

In June 2015, the MNB organized a meeting of the Working Group on macroeconomic forecasting of the ESCB Monetary Policy Committee **(MPC WG on forecasting) in Budapest.** The task of the group is to produce EU-level macroeconomic forecasts, thematic analysis of macroeconomic processes and the development of forecasting methodology. The members of the group are leaders and senior experts engaged in the area of macroeconomic forecasts for EU central banks.

In November 2015, the annual meeting of the subgroup on central bank cooperation of the ESCB International Relations Committee (IRC TF on Central Bank Cooperation) was also held in our institution. The task of the group is to coordinate professional cooperation programmes and technical assistance projects between the central banks of the EU, the central banks of the EU candidate and potential candidate countries. as well as international financial institutions; its members are those who work in the field of international relations in the relevant institutions or, in the case of large central banks (e.g. German, French, Spanish), colleagues whose specific work is to coordinate technical assistance projects and programmes of cooperation with other central banks.

The ESCB Legal Committee (LEGCO) holds an offsite meeting annually, the organization of which was entrusted to the MNB in 2016. The LEGCO is a legal professional committee that functions through the joint participation of legal experts of the European Central Bank (ECB) and National Banks participating in the ESCB. The LEGCO provides legal support for the fulfilment of the ESCB's tasks, in particular the review of legal acts governing the ESCB, the review of the transposition of legal acts into national law, and the handling of institutional issues concerning the ESCB. In the context of the domestic meeting, leaders and experts in the legal areas of EU central banks visited Budapest.

In June 2016, the meeting of the Working Group on monitoring money and capital markets of the ESCB Market Operations Committee (MOC MWG) was held in Budapest. The working group prepares monthly reports on the most important asset classes, as well as current market developments and processes; its members are leaders and senior specialists of the areas of EU central banks responsible for operating monetary policy instruments, managing the foreign exchange reserves and preparing financial analyses.

In July 2017, the annual offsite meeting of the Working Group on macroprudential instruments of the European Systemic Risk Board (ESRB Instruments Working Group) and the Working Group on macroprudential policy of the European Central Bank (ECB Macroprudential Policy Group) **was organized at the MNB.** The three-day event was attended by, in addition to the ESRB, the ECB and the MNB, by the senior executives of 27 central banks and/or supervisory authorities in charge of macroprudential policy. Along with the private meetings, a researcher workshop was also organized, where the participants discussed – in addition to the costs and benefits of the macroprudential policy –challenges posed by the residential property market and the low interest environment.

On 13–15 June 2018, the long-standing annual professional event of the Human Resources Management Committee (HRMC) was also held in Budapest. The committee meeting was opened by Márton Nagy, Deputy Governor of the central bank, on behalf of the MNB. In his opening speech he pointed out that the MNB considers its employees a particularly valuable resource. At the meetings, current professional challenges, questionnaire results, ECB reports, as well as upcoming international and country-specific tasks are regularly discussed.

8 Social responsibility

8.A FOR THE COMMON GOOD – THE CORPORATE SOCIAL RESPONSIBILITY PROGRAMME OF THE MNB

The Fundamental Law and the MNB Act guarantee the central bank's organizational, operational and financial independence. At the same time, this independence, as well as the significance of the MNB, its social recognition and the public assets under its management also entail social responsibility. Published in May 2014, the **MNB's Statute** laid down the principles of the MNB's corporate social responsibility, and the **Corporate Social Responsibility Strategy** issued in June determined the central bank's key objectives and presented the details of the programme for their implementation.

The Magyar Nemzeti Bank regards it as its mission to serve the public good by utilizing its sustainable positive financial result, without jeopardizing its primary objective and basic tasks, and by supporting, as far as possible, the realization of professional and social goals that reflect credibility, create value and strengthen social cohesion. **The main pillars** of the MNB's Corporate Social Responsibility Programme – **i.e. the improvement of financial literacy, the development of economic education and research infrastructure, and the support for national cultural and contribution to charitable activities** – reflect these principles. The corporate social responsibility strategy of the central bank was developed with the practice of major foreign central banks in mind.

To the best of its capacity, the MNB participates in value creation, the preservation of national values, intellectual and cultural heritage, and supports the training of professionals and scientific activities 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.

8.B REPOSITORY FOR OUR NATIONAL TREASURES

In 2014, as part of its mid-term corporate social responsibility strategy, the Magyar Nemzeti Bank launched **the Repository Programme, whereby it undertook a major cultural mission.** We started to work seeking to recover major artworks for Hungary that went abroad or became foreign property, and to keep significant artworks in domestic legacies in the country by buying them locally.

During the four years of the programme, **we managed to save thirty-four pieces of art and collections** and to deposit them permanently in national public collections, making sure that the purchased art objects and collections illustrate the vividness of our national past. Thus, our purchases – without thematic and genre constraints – covered a wide range of fine arts, applied arts, folk art, historical objects and various documents. Through the realized purchases of the Repository Programme, we have made cultural values available to all, which without our activity may have become invisible – perhaps forever – in the possession of private collectors or, worse, scattered around the world. Since the launch of the Repository Programme, nearly six hundred thousand have viewed the artworks placed on permanent, extendable deposit, in public collections.

At the start of the programme, a total allocation of nearly 100 million euros – about 30 billion forints – was available until the end of 2018, from which the central bank has spent nearly 13 billion forints. Without the need for completeness and ranking, it is worth highlighting some of the significant works of art purchased under the programme. For example, the central bank purchased **the painting entitled *Maria with her Child and Saint Paul* by Tiziano Vecellio,** which for many years was owned by a family in Pécs, and was considered the work of an unknown 16th century Venetian master. Then in 2005, the painting came up at the auction of Nagyházi Gallery. Vilmos Tátrai, art historian at the Museum of Fine Arts, then drew attention to the fact that it might be a previously unknown work by Tiziano. Subsequent technical studies and proof that the painting had been preserved in the ducal collection in Modena for at least one and a half centuries as the work of the Renaissance prince of painting, confirmed Tiziano's authorship. In terms of its artistic value, this is the most significant work among the paintings that have been discovered in Hungary over more than half of a century.

With the help of the programme, **two major paintings of Mihály Munkácsy,** that are not of lesser value, also became part of public collections: the monumental work entitled *Christ before Pilate* can be seen in the Déri Museum in Debrecen, and the painting entitled *Dusty Road I* was placed in the Hungarian National Gallery. The painting *Christ before Pilate* is a remarkable piece of Munkácsy's *Trilogy of Christ*, an invaluable work of Hungarian cultural heritage But we can also mention Dezső Orbán's *Great Nude*, created around 1911, which occupies a prominent place both within the nude compositions of the artist group of "The Eight" and in Dezső Orbán's oeuvre. In addition to these, the paintings *The Mulatto and the Sculpturesque White Woman* by Lajos Gulácsy and *Christianity* by János Vaszary, were also purchased through the programme.

There is a special exhibition of István Pétervár y's **weapon collection** of almost three hundred pieces, mostly **consisting of early-modern and modern weapons,** which can be seen at the permanent exhibition of the István Dobó Castle Museum in Eger. We could also mention the legacy of István Kövesi located in Miskolc, which was presented at a periodical exhibition. The legacy contains **outstanding pieces of Hungarian paintings from the era of 1870 to 1970.** Under the Repository Programme, the *Still Life* by Dutch painter Abraham van Beijeren – owned by Marcell Nemes, patron and art collector at the beginning of the last century – came to the Hungarian National Gallery.

One of the most important and most valuable items of our purchases is the **220-piece Thaler collection** purchased in 2015, which consists of coins issued by Transylvanian princes between 1562 and 1686. The collection placed in the Coin Cabinet of the Magyar Nemzeti Múzeum was presented to the public under the title "Silver of the Fairy Garden". The collection that can be considered unique in Europe, has so far been presented in three major cities: Székesfehérvár, Nyíregyháza and Pécs. With the help of the Repository Programme, the granite negotiating table of the world-famous Hungarian architect, Marcell Breuer came to Hungary, and is now in the Museum of Applied Arts.

Thanks to the Repository programme, the Ferenc Kiss collection, with its outstanding feature, the portrait of Sándor Petőfi painted by Miklós Barabás, came to the Museum of Fine Arts. The portrait can be seen on permanent exhibition in the Petőfi Literary Museum. The eight-piece painting series *Szép Ilonka* by Soma Orlai Petrich, which was made by the painter for the poem of Mihály Vörösmarty, is also in the Petőfi Literary Museum. It is **a unique masterpiece of Hungarian Biedermeier painting.**

It is also worth mentioning the six works of the Kossuth and Munkácsy Prize-winning painter, Tibor Csernus. Three of the outstanding works became part of the collection of the Janus Pannonius Museum in Pécs and three came to the Hungarian National Gallery. An outstanding purchase was **the daguerreotype of Lajos Kossuth brought home from Boston.** It was presented at the Hungarian National Museum under special circumstances. Under the Repository Programme, we also purchased the Rakovszky document collection, which is currently in the Hungarian National Archives, but is also available on the Internet. The collection contains special pieces such as King Sigismund's charter from 1427.

One of the important stages of the *Transylvanian Landscape* to be created in the Szentendre Open Air Museum (Skanzen) has been completed recently. It is a warehouse where the thousands of household objects and clothes purchased and brought home from Transylvania are already arranged in shelves so that they can find their final place when creating the future landscape.

Currently, a number of collections are being processed, which hopefully will **soon be presented to the public**. Such is the Artpool collection of thousands of documents previously purchased under the Repository Programme, where research can be done on almost 7500 artists, artist groups, institutions; or the collection of Gábor Bachman's architectural models, drawings; as well as the documentary collection of László Moholy-Nagy, which covers many areas of Moholy-Nagy's diverse oeuvre (artist, photographer, filmmaker, scenist, designer, teacher, theoretician).

In the framework of the programme, the central bank made purchases solely on the basis of seller's inquiries, and the seller had to prove in all cases with authentic documents that he/she is the rightful owner of the object. The final word on all purchases was by the **Executive Board of the Magyar Nemzeti Bank, based on the Advisory Board's recommendation and valuation.** Members of the Advisory Board: László Baán, Ministerial Commissioner, Director General of the Museum of Fine Arts; László Csorba, Benedek Varga, Director Generals of the Hungarian National Museum; Zsuzsanna Mikó, Csaba Szabó, Director Generals of the National Archives of Hungary; Zoltán Cselovszki, Director General of the Museum of Applied Arts; Mihaly Nagy, Senior Adviser to the Minister of State for Culture, Ministry of Human Capacities; as well as Kitty Árvai-Józsa, art historian. The Chairman of the Advisory Board is Dr. Ferenc Gerhardt, Deputy Governor of the MNB.

In all cases, purchases made under the Repository Programme were preceded by a full valuation.

The MNB's cultural mission is in line with international practice. For example, the central banks of Austria, Belgium, Cyprus, the Czech Republic, England, Estonia, Finland, Germany, Greece, Italy, Luxembourg, the Netherlands, Spain and Turkey have art collections that are similar to the Repository Programme and in many cases significantly exceed it. The European Central Bank's collection consists of 320 works by 170 artists from 20 countries.

With the Repository Programme, the Magyar Nemzeti Bank has been added into the number of major central banks that **contribute to the protection of cultural heritage** with their artwork repurchase programmes and collections.

Purchases of the Repository Programme in 2014 to 2018 (in alphabetical order) with prices

Abraham van Beijeren: Still Life with Fruit, Sea Food and Precious Tableware – **380,000 euros**

Artpool documentary collection – **90 million forints**

Bachman, Gábor's architectural collection – **55 million forints**

Benczúr, Gyula: The Capture of Louis XVI and his Family – **400,000 Swiss francs**

Bourdon, (Sebastien): Holy Family with Washer Woman – **250,000 euros**

Breuer, Marcell's granite desk – **150,000 US dollars**

Csernus, Tibor's 6 paintings – **880,000 euros**

Csernus, Tibor's painting entitled Saint-Tropez – **110 million forints**

Gulácsy, Lajos: The Mulatto and the Sculpturesque White Woman – **42 million forints**

Heyden, Jan van der: A View of a Small Town Square with Figures Promenading – **400,000 euros**

Key, Willem: Portrait of a Man – **58,000 euros**

Kiss, Ferenc Collection (including the Portrait of Petőfi by Miklós Barabás) – **235 million forints**

Kossuth, Lajos's daguerreotype – **20,000 US dollars**

Kövesi, István's collection of paintings – **795 million forints**

Moholy-Nagy, László collection – **50 million forints**

Munkácsy, Mihály: Christ before Pilate – **5.75 million US dollars**

Munkácsy, Mihály: Dusty Road I – **500 million forints**

Objects of Szentendre Landscape – **300 million forints**

Orbán, Dezső: Great Nude – **65 million forints**

Orlai Petrich, Soma: Szép Ilonka painting series for the poem of Mihály Vörösmarty – **32 million forints**

Pétervány, István's weapon collection – **58.9 million forints**

Pittoni, Giovanni Battista: The Death of St. Joseph – **20 million forints**

Rakovszky document collection – **27 million forints**

Rippl Rónai, József: Ferenc Medgyessy with the Sculpture of Rippl-Rónai – **45 million forints**

Some of the art objects from the Rudolf Bedő collection (not the whole collection were purchased) – **52.3 million forints**

Tornai, Gyula's six-piece art deco drawing room suite – **225,000 euros**

Transylvanian Thaler collection (Silver of the Fairy Garden) – **1.1 billion forints**

Unknown painter: A series of Hungarian historical personalities (8 pieces) (around 1700) – **400,000 euros**

Unknown painter: Portrait of Louis II, King of Hungary – **30 million forints**

Unknown painter: Portrait of Rudolf II, German-Roman Emperor and King of Hungary – **4.5 million forints**

Vajda, Lajos's 14 paintings/graphics – **181.5 million forints**

Vaszary, János: Christianity – **40 million forints**

Vecellio, Tiziano: Maria with her Child and Saint Paul – **4.5 billion forints**

Viennese classic dish with a silver lid – **6 million forints**

8.C CHARITABLE SUPPORT FOR THE NEEDY

In line with the objectives set out in its Corporate Social Responsibility Strategy, the Magyar Nemzeti Bank has provided charitable support **primarily to help disadvantaged groups and to improve equal opportunities,** but it has also provided assistance that could be a solution in crisis situations. Charitable support for professional programmes and organizations **that help large families, people in state care and those with disabilities as well as to encourage childbearing** is of paramount importance, but the central bank also strives to improve the quality of life of groups with multiple disadvantages. The goal of the Magyar Nemzeti Bank is that charity activities should include not only donation but also voluntary activity.

As to charitable activities, in the context of ad hoc requests and strategic cooperation agreements covering several years the MNB helps through institutional support, whereas submissions from individuals and families in need who seek assistance directly from the central bank are decided by the board of trustees of the Foundation for the Public Good established by the MNB. In the period between 2013 and 2018, the central bank **provided financial support for the activities of nearly 200 charities, with a total value of HUF 3.6 billion.** Among the collaborative partnerships, the most significant supported institutions were:

Supported institution	Objective of supportive cooperation
International Child Safety Service	Supporting the medical treatment and development of children with disabilities, contributing to the provision of the necessary operational and technical conditions.
Hungarian Ecumenical Aid Organization	Supporting investments related to the further development of the charity-oriented national model program being implemented by the aid organization.
Hungarian Maltese Charity Service	Supporting the charity mission to embrace multiple disadvantaged microregions called Model Programs.
Hungarian Red Cross	Camping and organizing excursions for disadvantaged and sick children.
Városmajor Foundation for Cardiovascular Patients	Supporting educational and research activities in the field of vascular surgery and cardiac surgery.
Central European Neurosurgical Foundation	Implementation of the Hospital Humanization Program and purchase of medical instruments.
Foundation for Healing and Rehabilitation of Cancer Patients	Implementation of programs aimed at improving the quality of life of cancer patients, publication of patient leaflets.
Foundation for the Most Advanced Oncology Healing	Implementation of a knowledge dissemination program to help cancer patients heal, purchase of diagnostic equipment.

8.D FINANCE COMPASS – ACTIVITY OF THE MONEY COMPASS FOUNDATION

The Money Compass Foundation was set up at the initiative of the Magyar Nemzeti Bank with the objective to develop and implement programmes that enhance financial awareness. In addition to the MNB, co-founders are the Student Loan Centre and the Hungarian Banking Association. In the operation, a new era began with **an ambitious strategic plan adopted in 2014,** for the implementation of which the MNB provides significant founder funds and professional support. Intensive school textbook and content development as well as teacher further training programmes have formed the backbone of the activities of recent years, which serve to spread financial and economic knowledge within public education.

As a result of the innovative work of the last five years, **in 2018, 200,000 students in 1500 schools could learn financial knowledge** from the financial-economic textbooks and workbooks developed by the Foundation "Iránytű a pénzügyekhez" (Finance Compass) and "Küldetések a pénz világában" (Missions in the World of Money). These publications are qualified textbooks included in the official list of textbooks, which allows them to be more widely distributed. On the initiative of the Foundation and with its professional involvement, new mathematics workbooks were prepared for four grades (grades 5–8), in which there is a separate chapter with practical financial tasks related to daily life, entitled “Everyday Finances”. The publication for 9–12 grade students will be released in the spring of 2019, which includes mathematical tasks related to investments.

The Foundation’s financial training game, the **Pénzügyi Hősképző** (Financial Hero Training) – available on mobile devices since 2018 – offers digital financial literacy opportunities primarily for 7–8 grade students. The online game that can be played either individually or in the classroom is a modern, experience-based tool for financial training. Since February 2019, **the e-learning curriculum for secondary school students has been available,** which also supports the compulsory subject of Finance and Entrepreneurship taught in the 10th grade of the secondary vocational school.

Regarding the promotion of the use of textbooks in schools, the Foundation considers teacher preparation and further training important. The trainings are free and can be counted towards the required compulsory further training. Overall, by the end of 2018, **more than 2200 teachers attended the training sessions** where digital applications were also presented. The regularly organized Summer Digital Academy also serves to improve teachers’ digital literacy.

Linked to the Foundation, **two school networks have been set up** which provide a number of competitions, applications, project days and workshops for their members. The secondary school network has more than 220 members and the Pénziránytű-BankVelem (Money Compass-Bank-With Me) Programme, created for primary schools, includes environmental education in addition to finance. In children’s play-based financial education **Utazó Iskola (Traveling School) Programme** has been playing an important role for five years, **with about 30,000 students attending each year.**

Since 2015, the Foundation has been a cooperating partner and content developer of the **Pénz7 (Money Week) Programme** in schools. There is a growing interest in the event year after year: **In 2018, 200,000 students from 1200 schools participated in the Programme.** In 2017 and 2018, the Hungarian Money Week received significant international recognition, winning the Global Inclusion Award. Furthermore, in connection with its programmes, the Foundation regularly conducts surveys, measurements, participates in conferences, as well as appears in the media, and collaborates with several organizations.

9 Communication and main publications of the MNB

9.A THE MNB BOOK SERIES

In 2015, the Magyar Nemzeti Bank launched **its series of economics and monetary policy textbooks.** By publishing the volumes, the central bank simultaneously wanted to contribute to the renewal of financial literacy and economic thinking in Hungary as well as to the collective thinking on the priority areas of economic policy. The first volume of the textbook series, entitled **Egyensúly és növekedés (Economic Balance and Growth)** by György Matolcsy, the Governor of the Central Bank, was published in 2015. The publication presents the consolidation and stabilization of the Hungarian economy between 2010 and 2014, a period of high significance. The volume provides a detailed presentation of all new economic policy concepts, innovations and instruments that resulted in successes, which were significant from the aspect of economic history as well, achieving fiscal and financial stabilization, and thus creating the fundamental conditions for sustainable growth. The book provides a complex evaluation of the stabilization leading to a shift towards growth in a way that also examines the relevant developments observed in previous decades through the economic policy formula “balance or growth”.

The second volume of the textbook series was published in 2016 under the title **Versenyképesség és növekedés (Competitiveness and Growth).** The publication was edited by Dániel Palotai and Barnabás Virág, Executive Directors of the MNB. With the volume, the central bank aimed to contribute to the collective thinking on sustainable economic growth and competitiveness. The book provides an overview of domestic and international experience 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 in Hungary.

The third volume of the series was published in 2017, under the title **A magyar út – Célzott jegybanki politika (The Hungarian Way – Targeted Central Bank Policy)** edited by the central bank's experts, Kristóf Lehmann, the Head of the Monetary Strategy Department, as well as Dániel Palotai and Barnabás Virág, Executive Directors of the central bank. The book presents the central bank measures implemented by the Magyar Nemzeti Bank since 2013 and the impact thereof in detail, at the same time providing a comprehensive overview of the changes in the central banks' practice during the past decade. The importance of the book lies in the fact that it presents the significant and lasting economic results of the Hungarian central bank's innovative, properly targeted – at times regarded as unconventional – measures. These targeted instruments – considering the special features of the economy and the lessons of the crisis causing a paradigm shift, successfully supplementing the traditional central bank approaches – managed the severe challenges of the Hungarian economy and financial system efficiently.

At the end of 2017, the book **Modern jegybanki gyakorlat (Modern Central Bank Practice)** was published, edited by Balázs Vonnák, a leading education and research expert of the central bank and master teacher of the MNB Department at Corvinus University of Budapest. The authors include a number of Hungarian experts working in the central bank, as well as some international authorities. The volume is the first book in Hungarian that describes the theoretical and practical aspects of the operation of modern central banks. Its goal is that the basic knowledge about central banks which represent one of the most influential actors of economic policy should be available also in Hungarian for future central bankers, economic politicians and macroeconomists.

The volume **Bankok a történelemben: innovációk és válságok (Banks in History: Innovations and Crises**) was published in 2018 as the fifth book of the textbook series edited by Barnabás Virág and Gergely Fábián, Executive Directors of the central bank. In the book, the Magyar Nemzeti Bank presents in detail the main milestones of the evolution of today's banking systems, with a particular focus on financial innovations of different eras and key actors in economic history. The studies in the volume track the changes in the role of money and banks from the birth of the first written documents to the present day. It presents the innovations, which sped up the development of financial affairs, as well as those that failed. The book not only describes how banks were established and developed in their history, but also helps readers find their way amidst the current challenges the financial system is facing and the responses still evolving today.

9.B INCREASING REPORTS ON EXPANDED TOPICS

The professional and the general public can learn about the cross-section of the MNB's activities first and foremost from central bank reports. In recent years, the MNB has **made a wide range of reports available to professional analysts and the general public** to facilitate understanding of the various monetary policy, economic and other processes and to make the summaries of central bank analyses, research and audits public.

In its **Inflation Report,** the MNB reports four times a year on recent and prospective developments in inflation, and evaluates the macroeconomic developments determining inflation. The reports prepared in March, June, September and December of each year since 2011 – in accordance with best international practice – are published two days after the Monetary Council's interest rate-setting meeting, at 10 a.m.

The central bank publishes its **Financial Stability Report** twice a year, in May and November. Its primary objective is to inform stakeholders about the topical issues related to financial stability, and thereby raise the risk awareness of those concerned as well as maintain and strengthen confidence in the financial system. With the Report, the MNB – in line with its intention – contributes to ensuring that the relevant information needed for financial system decisions should be available to those concerned, thereby strengthening the stability of the financial system as a whole.

The annually published **Growth Report** is intended to present Hungary's longer-term growth path – occasionally encompassing an entire business cycle – and its determining factors directly, using both standard and alternative indicators.

The professional starting point for publishing the **Housing Market Report** is that 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 the national economy. Housing market developments are closely related not only to financial stability issues, but also fundamentally determine the short- and long-term conjunctural prospects in the economy.

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 in the sector and the general public.

The purpose of the **Competitiveness Report** is to provide a comprehensive and objective picture of those dimensions of Hungary's competitiveness that usually are given less attention in the Bank's traditional macroeconomic analyses, although they are determinants in terms of economic developments.

The MNB publishes its **Financial Consumer Protection Report** once a year. The purpose of the publication is to inform the institutions of the financial system and the public on the current financial consumer protection issues, thereby also enhancing the risk awareness of the stakeholders, at the same time maintaining and strengthening confidence in the financial system.

Since 2015, the central bank has also published the risk report on the non-banking financial markets once a year, at first under the title "Risk outlook for non-bank financial sectors", but from 2017 as the **Insurance, Funds and Capital Market Risk Report.** The publication is limited to the presentation of the risks of insurers, funds, non-banking group financial enterprises and intermediaries.

The objective of the publication **Trends in Lending**, published four times a year, is to present a detailed picture of the latest trends in lending and to facilitate the correct 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. The **Report on the Balance of Payments** is published quarterly by the MNB, after the release of Hungary's balance of payments statistics. The Report provides a comprehensive assessment of Hungary's external balance, analyses macroeconomic imbalances using a number of indicators and identifies factors and developments critical in terms of the country's vulnerability.

The **Payment Systems Report** (entitled "Report on Payment Systems" between 2012 and 2013) has been published by the central bank since 2014.

Once a year, the publication wants to provide a broad assessment of the latest trends in the domestic payments and functioning of the payment and securities settlement systems, as well as of the major risks. Furthermore, the Report provides information about the instruments the MNB uses, if necessary, in order to fulfil its core task of facilitating the smooth flow of domestic payments and the reliable and efficient functioning of the payment and securities settlement systems.

In the scope of its duty 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 money markets and on liquidity, and researches fiscal policy issues. 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 provides them to the FC. The general public can learn about the most important results of these expert analyses from the publication entitled **Public Finance Report.**

In addition to publishing professional reports, the central bank also provides periodic reviews: It publishes a **Semi-Annual Report,** and its **Annual Report** presents the central bank's business report on the previous year and its audited annual financial statements. The **Interim Report** is published twice a year, in April and November, in the period between the Annual and Semi-Annual Reports. The publication reports on the core statutory activities of the central bank specialties in the first and third quarters.

At the halfway mark of the Governor's six-year term, the **Central Bank Almanac** was released, which in a comprehensible format, provided 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 containing a comprehensive presentation and evaluation of decisions and results already published earlier, allowed the public interested in the subject to review and reassess the events since 2013.

9.C COMPLICATED ISSUES IN SHORT: PROFESSIONAL ARTICLES FOR COMPREHENSIBILITY

The MNB is committed to stimulating socio-economic thinking and orientating those interested in economic and financial issues. Therefore, **in the form of professional-based, yet easy-to-understand articles,** it regularly formulates messages that can be linked to the primary objectives and core tasks defined in the Central Bank Act.

Through articles that are shorter than studies but are of public interest from a professional point of view, readers can get acquainted with the work of the MNB, as well as details of the results and conclusions. This completes the publication spectrum of the MNB, since articles – from the easy-to-understand to scientific publications of international standards – are prepared for all who are interested. Professional articles mainly appear in the printed and online columns of the economic specialized press, whereas in the case of topics of wider public interest, the major news portals are also partners of the MNB in publishing articles. **Over the last six years, nearly 400 professional articles written by MNB executives and colleagues have been published.**

9.D EFFECTIVE RENEWAL OF THE FINANCIAL AND ECONOMIC REVIEW (HITELINTÉZETI SZEMLE)

The Financial and Economic Review (in Hungarian Hitelintézeti Szemle) edited and published by the Magyar Nemzeti Bank, following a significant content and formal renewal of recent years, has become one of the most widely read economic and financial scientific journals in Hungary, which also has a large readership abroad. In 2014, the management of the Magyar Nemzeti Bank in connection with its social responsibility activities and in the framework of broad support for education, financial literacy and scientific activities, decided to take over the Hitelintézeti Szemle, a scientific journal with decades of history, from the Banking Association and renew it.

The MNB set the objective that the journal – with its easy-to-understand but scientifically sound studies processing applied results, as well as its valuable essays, book reviews and conference reports – should effectively promote the examination and international presentation of the economy and financial system of the Hungarian economy and, where appropriate, that of the Central and Eastern European region, as well as the analysing evaluation

of the current issues of the economics and related disciplines, thereby also contributing to the successful renewal of economic thinking and economic policy activities. In this way, the Financial and Economic Review aims to create a unified platform for domestic and foreign researchers, educators and readers with a scientific interest, which can be used as a starting point for a deeper understanding and analysis of the region's economic and social processes. At the same time, the journal also helps the authors of academic papers become references at the international level. In pursuit of these goals, the Financial and Economic Review relies on an experienced and highly-skilled international editorial board, and in the course of peer review, the scientific knowledge and professionalism of renowned experts of higher education institutions and research institutes.

Since the Magyar Nemzeti Bank first published the Financial and Economic Review, more than 200 separate writings have been included in the regular issues of the scientific journal in the form of peer-reviewed studies, essay-type papers, book reviews, reports on conferences and other scientific activities.

The result of the renewal of the Hitelintézeti Szemle is also confirmed by its scientific qualification. In addition to a category B rating from the Doctoral Committee on Economics, of the Hungarian Academy of Sciences, the journal as of 2017, also has a category B rating from the Regional Scientific Committee and a category C rating from the Demography Committee as recognition of a professional work at the editorial office. Since 2017, besides the Hungarian MATARKA and the international IDEAS/RePEc systems, the articles published in the journal are also listed in the Digital Object Identifier (DOI) system, which also supports an ever-wider presence in the international scientific community.

The Hitelintézeti Szemle, in addition to having become one of the widely known and recognized journals in the economics profession in Hungary, is gaining more and more attention on the international level because of the contents available in English, as well as Chinese. This is partly due to the fact that the published studies contain not only scientific and practical conclusions for further thinking, but also, in many cases, examples and suggestions that are very useful for economic policy and economic life. The issues in the journal, published also in English, are available in some 70 countries around the world. In addition to quarterly publications, thematic special issues have also been published elaborating some topics of high public interest (such as the Structure and Evolution of Banking Systems, China). Since 2018, as a result of further development of the journal, a Chinese-language publication has also been published: a volume containing a selection of the most read articles of a given year. Writings of the Hitelintézeti Szemle are thus available in Hungarian, English and, where appropriate, in Chinese, and also electronically.

9.E INCREASING NUMBER OF APPEARANCES IN THE MEDIA

Changes and developments in the MNB's communication between 2013 and 2019 resulted in a renewed, more intense appearance. In addition to the previously detailed communication tools (publications, reports, professional articles), the central bank's communication, with the help of constantly developing and expanding press relations, has strived to present as widely as possible the measures and tasks serving the interests of the whole society, which promote more efficient central bank operation and economic growth in Hungary. **Over the past six years, the MNB has published nearly 1600 press releases.**

In 2013 and 2014, **information on the FGS** geared towards supporting SMEs came into the focus of communication, which was made available to the public in the form of press releases, news via internet, presentations and radio and television interviews. News updates were continuously released on the objectives, features, scheduling and product information material specifying the detailed terms of the FGS, changes in terms, the extension and fine-tuning of funding options, the specification of credit objectives, national professional consultations promoting the scheme and consultations held with the financial and business sectors.

Over the past six years, the key topics of communication have included the **base rate cuts** and the decisions related to their underlying reasons, as well as the **Self-financing Programme,** but the central bank has also put special emphasis on presenting, in a transparent manner, its activity and achievements within the framework of the **Pallas Athena Public Thinking Programme** and the Corporate Social Responsibility Programme and within that, the **Repository Programme.**

Following supervisory integration in October 2013, **news on supervisory controls and measures** was introduced into the mainstream of communication. The MNB also took decisive actions against unfair commercial practices and deficient, inaccurate or misleading information in the form of notices. Information on targeted inspections received positive feedback, as did the stricter market surveillance measures and fines implemented against infringing conduct.

The MNB's communication activities were of particular importance when **the problems arising from the foreign currency-based retail mortgage loans** and so-called broker scandals were at the forefront of interest. In relation to foreign currency loans, the MNB informed people about the risks and then about the settlement and the forint conversion process in a proactive way (including a series of information articles and video interviews), while with regard to the brokerage issues, it informed the public about the infringements detected in a factual manner.

The central bank has conducted a significant and **successful communication campaign on the banknote exchange programme.** It regularly reported on new banknote issues and also informed the public in the form of public announcements on when certain banknotes would be withdrawn. In addition to providing information through press relations, the MNB appeared 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 could be used during their daily shopping.

In order to increase financial awareness and consumer awareness, the central bank has continued communication. In addition to traditional communication channels, its information materials, educational films, information posters and leaflets under the name **Financial Navigator** appeared in bank branches, post offices and also in the shops of larger retail chains. In 2017 to 2019, central bank communication also contributed to the steadily increasing use of Qualified Consumer-Friendly Housing Loans, thereby increasing the share of fixed-interest housing loans, i.e. encouraging lower-risk borrowing.

The MNB also continuously developed **its new types of communication tools.** In August 2015, it launched its **new website** that is more polished and user-friendly than its predecessor so that users can find the necessary information more quickly and easily. The MNB also **upgraded its Facebook site,** in line with 21st century expectations. The number of users is increasing steadily; today the MNB keeps contact with more than 42,000 permanent followers on this site.

10 List of charts, References

LIST OF CHARTS AND TABLES

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