FUTURE STRATEGIC FRAMEWORK FOR THE SET OF UNCONVENTIONAL MONETARY POLICY INSTRUMENTS AFFECTING SHORT-TERM YIELDS

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SUMMARY

After reducing the base rate to 0.9 per cent, the Magyar Nemzeti Bank (MNB) introduced a number of unconventional monetary policy instruments affecting short-term yields. As a result of the Bank's measures, by autumn 2018 inflation stabilised close to the 3 per cent target, which – together with the change in the international monetary policy environment – means for the MNB that in formulating its monetary policy it needs to consider more prudently the factors that may influence the achievement and maintenance of the inflation target.

The primary objective of the MNB is to achieve price stability in a sustainable manner. To ensure this, the MNB is prepared to the cautious and gradual normalisation of monetary policy. The normalisation process will begin with the modification of unconventional instruments. This paper presents the role assigned by the MNB to certain monetary policy instruments affecting short-term yields during the formulation of monetary policy. Looking ahead, the unconventional instruments affecting short-term yields become simpler, and the Bank achieves its monetary policy objectives through two instruments, the forint liquidity providing swap instrument and the interest rate corridor, as well as through the optimal combination of these instruments.

The MNB continues to decide regularly on the crowding-out from instruments bearing interest at the base rate and on the volume of swap instruments, and considers the foreign exchange swap instrument as a strategic element of the set of unconventional monetary policy instruments affecting short-term yields. The Bank maintains part of the foreign exchange swap portfolio persistently and on a stable basis. In terms of the transmission of monetary policy, the MNB regards the deposit and loan instruments, and thus the width and symmetry of the interest rate corridor, equally important. In the course of the future formulation of monetary policy, the Bank will not change the required reserve ratio of 1 per cent, while it will prolong the preferential deposit facility with a view to ensuring the neutrality of the anticipated Funding for Growth Scheme Fix (FGS fix) in terms of liquidity. As part of the simplification of the central bank instruments, the MNB will phase out the 3-month deposit facility in 2018 Q4. After the reduction of the volume of the 3-month deposit to zero, the role of main policy instrument will be fulfilled by the required reserve.

1. ACHIEVEMENTS OF MONETARY POLICY, REFORMED FROM 2013, TO DATE

The primary objective of the Magyar Nemzeti Bank is to achieve and maintain price stability. In addition, without prejudice to the primary objective, it helps maintain the stability of the financial intermediary system, enhance its resilience, and – relying on the instruments available to it – supports the economic policy of the Government, thereby contributing to the sustainable growth of the economy.

The global financial and economic crisis represented a complex challenge in domestic economic policy. Responding to this challenge, the period after 2013 is characterised by a shift in the Hungarian monetary policy approach. In the past half decade, the Magyar Nemzeti Bank – preserving the priority of the inflation target – took, through its conventional and unconventional instruments, several measures to strengthen financial stability and stimulate the real economy.

From 2013, the Bank's management formulated its monetary policy using a new, innovative approach. The past five and a half years proved that the statutory goals can be achieved the most successfully by an independent central bank operating in a credible manner, since this is what enables it to provide targeted, proactive responses to the existing economic challenges, by freely selecting its instruments. In practice this meant that the Bank made efforts through its gradual, transparent monetary policy – treating stability as a priority – to create a predictable economic environment, and particularly price stability. The successful operation was greatly attributable to the innovative and targeted selection of instruments, as well as to active and clear communication. In addition to the foregoing, it was an important factor that in elaborating the Bank's programmes, there was a strategic cooperation with the Government, the financial institutions and other economic agents.

As a result of the rate cut cycle launched in the summer of 2012, by spring 2016 the key policy rate fell from 7 per cent to a historic low of 0.9 per cent. In the strong disinflationary environment, the interest rate cuts were justified by the need to meet the inflation target and the corresponding stimulation of economic growth, while the gradual improvement in perceptions about Hungary's risk also increased the Bank's room for manoeuvre. In its forward guidance, the Magyar Nemzeti Bank indicated the long-term maintenance of loose monetary conditions, and thereby it successfully guided the expectations of economic agents.

Since the conventional central bank instruments reached their limits, the MNB – similarly to other central banks – also used unconventional, targeted instruments for the formulation of the monetary conditions necessary for the attainment of its objectives. By the asymmetric narrowing of the interest rate corridor, diverting banks' liquidity and the related reforms of central bank instruments – in parallel with keeping the base rate at a steady level – the MNB further eased monetary conditions in all relevant sub-markets. With the unconventional measures the Bank influenced both the short and long sections of the yield curve, and contributed to the development of a sounder and sustainable debt profile of Hungary.

As a result of the implementation of the unconventional instruments affecting short-term yields, short-term money market yields sank persistently to the bottom of the interest rate corridor, thereby supporting the necessary easing of monetary conditions.[1] Upon closing the rate cut cycle and thus in line with the keeping of the base rate at a steady level, from the summer of 2016 unconventional monetary policy instruments gained increasing importance in the formulation of monetary policy. The MNB introduced a total of six unconventional monetary policy instruments affecting short-term yields.

(1) The interest rate corridor was made narrower and asymmetric in several steps, while the utilisation of the lower bound of the interest rate corridor has strengthened from the summer of 2016.

(2) The restriction of banks' access to the 3-month deposit facility commenced by organising the formerly weekly announced tenders less frequently from August 2016, and from October a quantitative restriction was introduced. In the course of this, the volume of outstanding

[1] The MNB regards the base rate and the forward guidance as conventional instruments.

deposits, which was as high as HUF 1,600 billion in autumn 2016, fell to HUF 75 billion by the end of 2017.

(3) The reform of the BUBOR market commenced in May 2016; a dealing obligation-based quotation system was introduced. This resulted in a BUBOR which is able to fulfil better the role of reference rate.

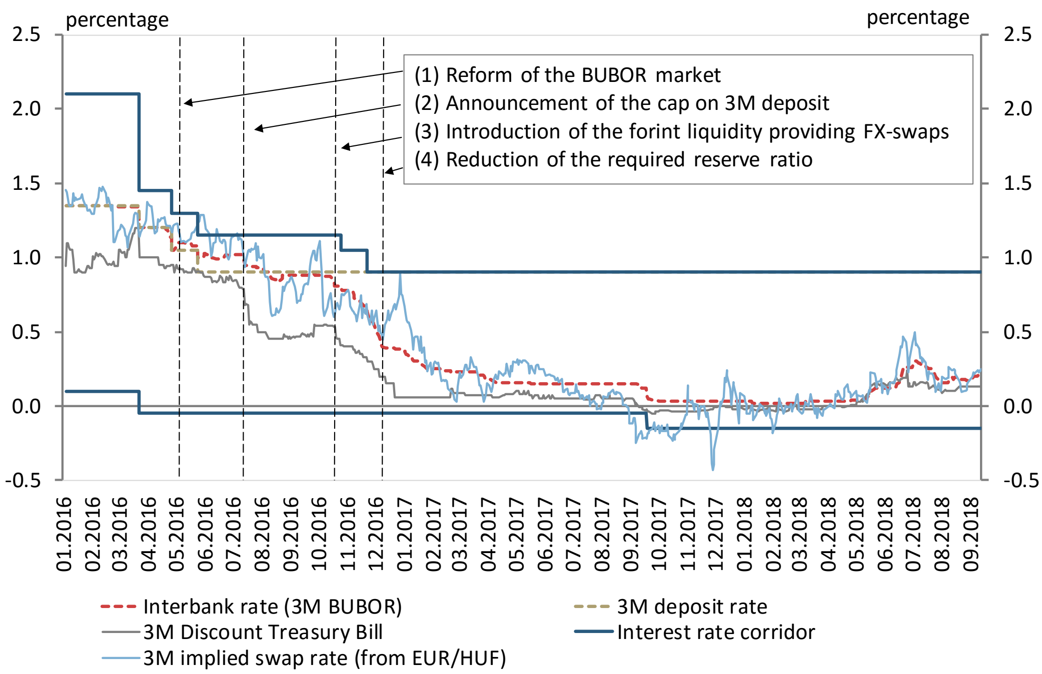
(4) Forint liquidity providing foreign exchange swaps were introduced in autumn 2016, simultaneously with the application of quantitative restriction. By shaping liquidity, the instrument contributes to reaching and maintaining loose monetary conditions.

(5) In December 2016 the required reserve ratio was reduced from 2 per cent to 1 per cent.

(6) The preferential deposit linked to the Market-based Lending Scheme (MLS) is available to the banks from the beginning of 2016, and banks use it more actively from autumn 2016.

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. From autumn 2017 to spring 2018 the 3-month discount Treasury bill, as well as the short-term implied swap rates 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 September 2018 they are once again close to the bottom of the interest rate corridor, in its lower third (Chart 1).

Chart 1: Developments in short-term money market yields within the interest rate corridor



The Bank's programmes successfully contributed to the reconstruction of the monetary policy transmission, damaged during the crisis, to the strengthening of financial stability and to the proper stimulation of the real economy. The MNB took into consideration financial stability and real economy aspects also during the development of its new programmes. Within the framework for the Funding for Growth Scheme, until the end of March 2017 almost 40,000 enterprises had access to financing on favourable terms in excess of HUF 2,800 billion, which resulted in a turnaround in lending to SMEs and also supported economic growth. In order to ensure that lending to the sector returns to market bases, at the beginning of 2016 the Bank launched the Market-based Lending Scheme. By the conversion of households' foreign currency loans into forint through the joint efforts of the Bank and the Government, one of the largest systemic risks of the economy ceased to exist. For this purpose, the MNB provided banks with foreign currency in the equivalent of EUR 9.7 billion, while the settlement reduced the households' debts by roughly HUF 1,000 billion. The ratio of household foreign currency loans fell to zero from 40 per cent registered at the end of 2014. The Self-financing Programme, launched in spring 2014, also meaning the phasing-out of the two-week bonds, encouraged credit institutions to purchase liquid securities of Hungarian issuers, thereby contributing to the development of a sounder debt profile and to the decrease in Hungary's external vulnerability. As a result of the programme, until the end of 2016, banks' eligible securities portfolio rose by almost 3,000 billion, while the ratio of the central budget's outstanding foreign currency debt fell from 42 per cent recorded at the end of 2013 below 20 per cent by mid-2018. In January 2018, the MNB introduced unconditional 5 and 10-year interest rate swap instruments, and launched its mortgage bond purchase programme to ensure that loose monetary conditions prevail also on the longer section of the yield curve.

With the proactive application of conventional and unconventional instruments, the Magyar Nemzeti Bank successfully stabilised inflation close to its 3 per cent target. In addition, it made a significant contribution to the turnaround in Hungary's economic growth and to the commencement of convergence. In addition to the foregoing, by eliminating the systemic risks in the economy and representing a new approach, it has successfully strengthened the stability of the Hungarian financial system and reduced the country's vulnerability.

2. PREPARING FOR NEW CHALLENGES

Having efficiently and successfully managed the challenges occurred to date, central banks also have to prepare for new challenges. The post-crisis, persistently low international inflation and interest rate environment is nearing its end. Partly due to the transient factors, during 2018 inflation rose close to the target in Hungary as well, while based on the MNB's current forecast, the inflation target is expected to be reached in a sustainable manner from mid-2019. The international monetary policy environment is about to change; emerging market capital flows have become more volatile. All this means to the MNB that in formulating its monetary policy it has to closely monitor the factors that may influence the fulfilment of its primary mandate, i.e. the achievement and maintenance of the inflation target. Taking into consideration the international experience as well, the MNB prepared a comprehensive evaluation of the future application of its unconventional instruments to ensure that it can adequately respond also to the challenges of the changing economic and financial environment.

According to the practice of major central banks, the phasing-out of unconventional instruments was prepared by the central banks relying on their communication tools and they usually communicated the anticipated changes in advance. With a view to enhancing predictability, several central banks published their strategy aimed at the set of unconventional instruments, while during the individual steps they paid special attention to gradualism. In the case of the Federal Reserve, the tapering of the quantitative easing programme was first mentioned by Ben Bernanke, the then

Governor in office, in May 2013, when he hinted at the possible forthcoming reduction of asset purchases pursued in the third phase of quantitative easing, depending on economic developments. Finally, the measure was announced by the central bank seven months later, in December 2013. Following the start of the tightening cycle in December 2015, the central bank published its balance sheet deleveraging strategy in June 2017. The central bank commenced the balance sheet deleveraging in October 2017, i.e. four months after the presentation of the strategy. Although the European Central Bank published no specific strategy, it communicated the anticipated steps gradually, several months in advance. In parallel with the termination of asset purchases, the central banks' forward guidance related to the key interest rates has also gradually changed, while the guidance related to reinvestment of the principal repayment from the expiring securities still suggests that reinvestments may continue after the termination of asset purchases for a longer period. In respect of the withdrawal of unconventional instruments, the Bank of England and the Riksbank of Sweden both published certain details of their future monetary policy strategy. The expected strategy of the Bank of England covers both interest rate moves and the central bank balance sheet. According to the strategy of the Swedish central bank, after the termination of the asset purchases, the tightening of monetary conditions may continue by slowly increasing the key interest rate, followed by the gradual cancellation of reinvestments.

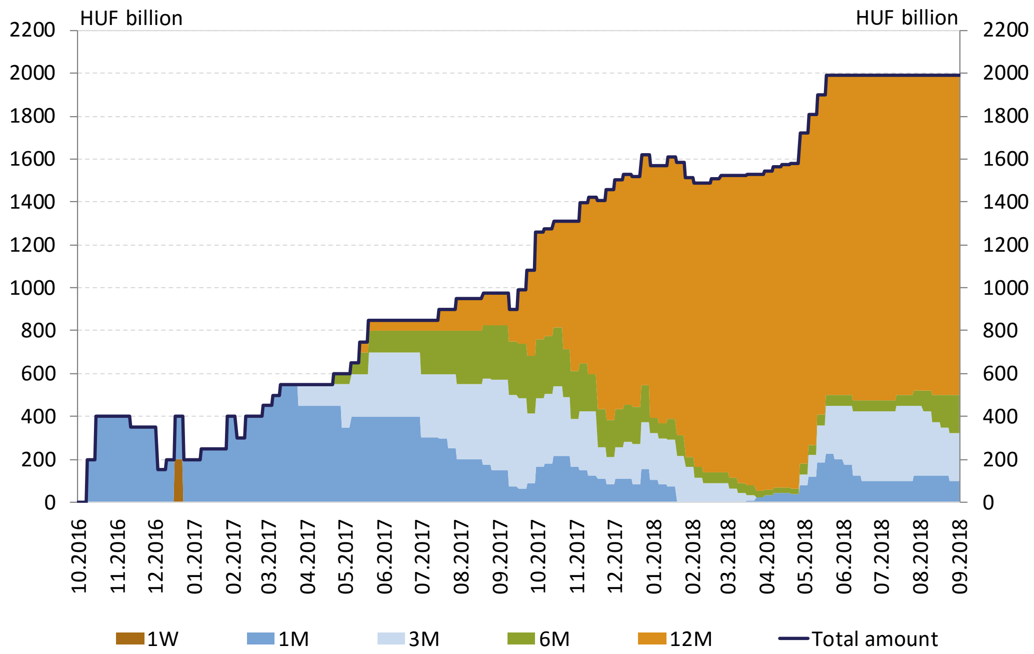
3. FUTURE STRATEGIC FRAMEWORK FOR UNCONVENTIONAL MONETARY POLICY INSTRUMENTS AFFECTING SHORT-TERM YIELDS

The primary objective of the MNB is to achieve price stability in a sustainable manner. To ensure this, the MNB is prepared to the cautious and gradual normalisation of monetary policy. The normalisation process will begin with the modification of unconventional instruments. The next parts of this paper briefly presents the role – contemplated by the MNB upon the future formulation of monetary policy – of individual unconventional monetary policy instruments affecting short-term yields. The remaining parts of the paper touch upon the changes that the MNB is likely to make in its set of unconventional monetary policy instruments, and the underlying principles. As regards the timing and degree of these measures, the regular, monthly interest rate press releases of the Monetary Council will continue to govern. The MNB regards the base rate and the forward guidance as conventional instruments. The decision on the phasing-out of unconventional instruments affecting long-term yields is discussed in the press release on the Monetary Council meeting of 18 September 2018, and thus we do not deal with it in this background paper. A separate background paper is published on the introduction of the Funding for Growth Scheme Fix.

During the future formulation of monetary policy, the MNB will first continue to apply the optimal combination of the measures related to the Bank's foreign exchange swap instrument and the interest rate corridor. In the course of the easing of its monetary policy stance, the MNB first reduced the base rate, and then – keeping the base rate at a steady level – introduced unconventional instruments. During the formulation of monetary policy, first certain elements of unconventional instruments affecting short-term yields (parameters of the foreign exchange swap portfolio and tenders, interest rate corridor) may be modified. In the past years, the Bank formulated its monetary policy by introducing and applying six unconventional instruments, in addition to the base rate. Looking ahead, the use of unconventional instruments affecting short-term yields will become simpler, and the central bank will essentially achieve its monetary policy goals by the active shaping of two instruments. At the same time, there is no definite sequence, i.e. the MNB does not define in advance which instrument it will use first.

The MNB regards the foreign exchange swap instrument as a strategic element of unconventional monetary policy instruments affecting short-term yields; the Bank persistently maintains its presence in the foreign exchange swap market, which bears outstanding importance in terms of the monetary policy transmission. In terms of the monetary policy transmission and the shaping of the market yields, the FX swap market is of outstanding importance. The Bank intends to maintain its presence on the FX swap market, which means that the FX swap instrument will be part of the actively used set of instruments even upon the modification or the potential reduction of the portfolio, and the MNB will continue the swap tenders. The Bank continues to regard the foreign exchange swap instrument as a strategic element of the set of unconventional monetary policy instruments, contrary to the required reserve ratio (Chart 2).

Chart 2: Developments in the volume of liquidity providing swaps and the structure thereof based on original maturity



The MNB maintains part of the foreign exchange swap portfolio persistently and on a stable basis. It follows from its strategic role in the monetary policy transmission and banks' liquidity management that the Bank intends to maintain part of the outstanding foreign exchange swap contracts in the future as well. The presence on the FX swap market and the ensuring of gradualism, stipulated as one of the monetary policy principles, also justifies the maintenance of a stable portfolio.

The MNB maintains its presence in the FX swap market on all presently existing maturities. Each of the presently applied maturities (1 week, 1, 3, 6 and 12 months) may be announced; however, the distribution of the portfolio by maturity may change. With the individual maturities the MNB does not wish to give any signal; the applied maturities may primarily be determined by market developments and potential changes in the market environment. The maintenance of a stable part of the portfolio may also influence the announced maturities.

FX swap market developments have a material effect on the shaping of banks' BUBOR quotations, which confirms that the Bank's presence in the foreign exchange swap market bears utmost importance in terms of the monetary policy transmission. According to the survey performed by the MNB among BUBOR panel banks, FX swap market developments influence a number of factors considered by banks in determining the individual quotes. The MNB's FX swap market instruments also directly affect the FX swap market yield level and the liquidity situation, and thereby – indirectly – they also have a great impact on the pricing of unsecured interbank transactions, FRA yields and the result of discount Treasury bill auctions.

The MNB continues to decide regularly on the crowding-out from instruments bearing interest at the base rate and on its swap instrument portfolio. The MNB decides on the minimum required degree of the crowding-out effect quarterly. Crowded-out liquidity will continue to play an important role in the shaping of monetary conditions. Looking ahead, the portfolio and the parameters of the swap tenders alone will be also of great importance.

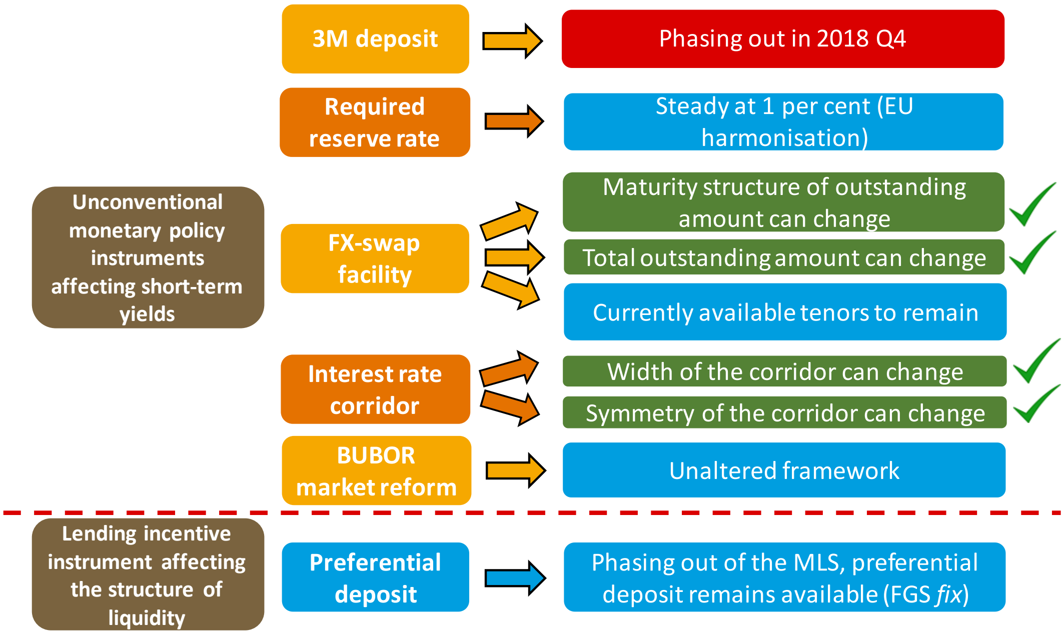
In terms of the transmission of monetary policy, the MNB regards the deposit and loan instruments, and thus the width and symmetry of the interest rate corridor, equally important. The two bounds of the interest rate corridor are determined by the O/N deposit and O/N loan interest rates. The MNB attaches special importance to the sound functioning of the interbank markets and bears this in mind in determining the optimal width of the interest rate corridor. The deposit and loan instruments used at the bounds of the interest rate corridor are not meant to take over the functioning of the market; the simultaneous use of the Bank's deposit and loan instruments in large volume could increase the segmentation of the banking sector. Upon determining the optimal width of the interest rate corridor, it makes sense to consider – in addition to the special features of the Hungarian money market – the relevant international experiences.

In the fourth quarter of 2018 the MNB will gradually phase out the 3-month deposit by the end of 2018, thereby making its set of monetary policy instruments simpler and more transparent, while the measure will not materially change monetary conditions. In September 2017, the Monetary Council decided that the HUF 75 billion limit set for the 3-month deposit to be reached by the end of 2017, would not be reduced further. One year later, in accordance with the Monetary Council's September 2018 decision, the instrument will be gradually phased out from October 2018. The MNB will announce the last tender on 19 September 2018, and thus the portfolio will be gradually phased out by the end of the year. The decision primarily serves the simplification of the set of instruments and the enhancement of transparency; the number of instruments affecting short-term yields will decrease. The volume of outstanding assets bearing interest at the base rate will not materially decline; the value of the preferential deposit portfolio will remain close to HUF 500 million, while the volume of required reserves will remain HUF 220 billion. After the phasing out of the 3-month deposit, the required reserve and the preferential deposit will continue to bear interest at the base rate. The MNB's instruments affecting short-term yields, i.e. the interest rate corridor and forint liquidity providing foreign exchange swaps, remain active parts of the Bank's monetary policy instruments, and thus the Bank will be able to shape short-term yields efficiently even after the phasing-out of the 3-month deposit. By applying the set of unconventional instruments, the MNB continues to aim at developing the monetary conditions necessary for achieving the inflation target in the Hungarian economy in a sustainable manner. After the reduction of the volume of the 3-month deposit to zero, the role of main policy instrument will be fulfilled by the required reserve.

In the formulation of the monetary policy, the Bank will not change the required reserve ratio of 1 per cent. From December 2016, domestic credit institutions subject to reserve requirements are obliged to place required reserve with the Bank equalling 1 per cent of their liabilities subject to reserve requirements. This rate corresponds to the European Central Bank's practice; in the spirit of the EU harmonisation, the MNB will maintain the 1 per cent required reserve ratio in the future as well.

The prolongation of the preferential deposit facility ensures the neutrality of FGS *fix* in terms of liquidity. The Market-based Lending Scheme (MLS), launched in 2016, will end in December 2018, in relation to which, the option of banks that made lending commitment under MLS to place preferential deposit will be terminated from March 2019. Simultaneously with this, from April 2019, the MNB will provide credit institutions participating the FGS *fix* programme, to be launched in January 2019, with the opportunity to place preferential deposits, to ensure the neutrality of the Scheme in terms of liquidity, by sterilising excess liquidity at the base rate. The newly opening deposit facility will be available to the participating banks in the amount corresponding to the funds disbursed under FGS *fix* (Chart 3).[2]

Chart 3: Potential future developments in the set of monetary policy instruments affecting short-term yields



[2] For the preferential deposit facility see the background paper on the introduction of the Funding for Growth Scheme Fix (FGS *fix*).

ANNEX: TARGETED, UNCONVENTIONAL MONETARY POLICY INSTRUMENTS OF THE MNB

Instruments, programmes	Period	Objectives	Results
First three phases of the Funding for Growth Scheme	June 2013 – March 2017	• Simulation of lending • Easing the persistent market disorders in SME lending • Stimulation of the economy	• 40,000 SMEs had access to financing on preferential terms, in an amount exceeding HUF 2,800 billion • Supporting the turn in lending
Central bank programmes linked to the phasing-out household foreign currency loans	October 2014 – December 2017	• Orderly phasing-out of the foreign currency loans • Preserving the stability of the financial system	• Providing the banks with the foreign currency equivalent of EUR 9.7 billion • The ratio of household foreign currency loans fell to zero from 40 per cent registered at the end of 2014
Self-financing Programme	June 2014 – July 2016	• Reducing external vulnerability • Supporting financial stability	• Until the end of 2016, the banks' eligible securities holding rose by almost HUF 3,000 billion • The ratio of the central budget's outstanding foreign currency debt fell from 42 per cent registered at the end of 2013 below 20 per cent by mid-2018
Market-Based Lending Scheme	January 2016 – December 2018	• Redirecting of lending to SMEs to market basis • Supporting sustainable economic growth through lending to SMEs	• The banking sector outstripped its SME lending commitment several times • Both in 2016 and 2017 the outstanding borrowing of the SME sector rose by 12 per cent
Unconventional instruments affecting short-term yields: **1. Quantitative restriction of the 3-month deposits** **2. Making the interest rate corridor asymmetric** **3. BUBOR market reform** **4. Forint liquidity providing foreign exchange swap** **5. Reducing the reserve requirement ratio** **6. Preferential deposit**	Summer 2016 –	• Crowding-out liquidity from the 3-month deposit • Supporting the easing of the monetary stance • Increasing the BUBOR market activity	• Improved monetary policy transmission • The liquidity crowded out to the O/N deposits remained persistently high • Since the announcement, short-term yields in the government securities, interbank and swap markets sank to the lower half of the interest rate corridor, by 80-90 basis points on average • BUBOR turnover has materially raised • Information flow between the domestic money markets strengthened
Unconventional instruments affecting long-term yields: **1. Monetary policy interest rate swap facility (MIRS)** **2. Mortgage bond purchase programme**	January 2018 – December 2018	• Influencing long-term yields • Reducing the banks' interest rate risk • Supporting fixed-rate mortgage lending • Supporting the issuance of mortgage bonds • Development of the stock exchange	• Contribution to the further spread of housing loans with long-term interest fixation • Decrease in the banks' interest rate risk • Increase in the issuance of mortgage bonds • Decrease in the spread of mortgage bonds compared to government securities • Decrease in the spread of fixed-rate mortgage loans

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