Level of interest rates in the light of the changing interest rate policy in Hungary between 1924 and 2015 – How did the central bank base rate get to its historic low levels?*

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This paper examines Hungary's interest rate policy between 1924 and 2015 with special regard to the role and effects of the central bank base rate. It introduces the changes in the economic environment – with special focus on inflation – characterising the period, and takes account of the main steps relating to the interest rate policy and central bank instruments used since the foundation of the Magyar Nemzeti Bank in 1924, within the framework of the monetary policy of the given period, differentiating three separate eras. The aim of the paper is to point out how central bank interest rates gained greater and greater importance in the anti-inflationary policy of the central bank on the basis of interest rate policy analysis in an adequate conceptual framework and to historically place the 1.35 per cent base rate level currently in effect since the end of the interest rate reduction cycle, which was commenced by the central bank in August 2012.

Journal of Economic Literature (JEL) Classification: E40, E42, E52

Keywords: monetary policy, interest rate policy, historic interest rate

1. Introduction

Since its establishment, the fundamental and primary duty of the central bank has been to achieve and maintain price stability, although there were periods in the past 90 years when the central bank did not treat curbing consumer prices as a primary objective, or tried to stabilise inflation by means other than central bank interest rate policy. Since the foundation of the MNB, Hungarian monetary policy, and interest rate policy in particular, has undergone a number of changes until the establishment of the current practices. In the initial years of the central bank's operation, the interest rate policy of the MNB primarily consisted of discounting trade bills, and thus the role of the key interest rate was fulfilled by the discount and lending rates. After the adjustment of the interest rate increases implemented due to the Great Depression, interest rates remained stable until World War II. In the era of the socialist controlled economy, there was no reference rate which could

* The views expressed in this paper are those of the author(s) and do not necessarily reflect the offical view of the Magyar Nemzeti Bank.

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have been referred to as the central bank base rate, nor was there an independent monetary policy. Until the introduction of the two-tier banking system, in the absence of the central bank base rate, Hungary was characterised by a wide range of reference rates. Although the central bank determined lending rates for enterprises on an ad-hoc basis, in addition to those the statutory interest rates fixed by the state also played a significant role. There has been a single central bank base rate since 1987, determined by the MNB, although since the introduction of the two-tier banking system the main policy instrument has changed several times.

In past years, domestic monetary policy has faced a low global inflation environment, decreasing inflation expectations and predominantly downside risks to inflation. Under such conditions, in order to meet the inflation target, the Magyar Nemzeti Bank has pursued an expansive monetary policy since 2012. In March 2015, the central bank restarted the two-year easing cycle commenced in 2012 and then ended this cycle in July. Consequently, the key policy rate – subject to the methodological constraints of comparability – reached a level of 1.35 per cent, the lowest rate recorded in the MNB's 90-year history.[1]

2. Central bank rates and inflation between 1924 and 1947

The Magyar Nemzeti Bank was legally established on 26 April 1924 with the entry into force of Act V of 1924 on its foundation and patent. The *establishment of the independent central bank* was a precondition for the League of Nations loan, disbursed for the post-war reconstruction and economic stabilisation; the MNB was entrusted with the management of this loan, together with the management of the state accounts and the outstanding government debt. As part of the measures aimed at stabilising the economy, the MNB tied the exchange rate of the national legal tender to the British pound, which was based on the gold standard in 1925, and thus the crown – and then from 1926 the pengő – was also based on the gold standard (*MNB 2002*). In addition to the *creation and maintenance of the stability of the national legal tender,* the duties of the central bank included the regulation of the money and credit supply, and in particular the interest charged by commercial banks, using monetary instruments. Within the framework of its credit policy the central bank primarily applied the discounting of trade bills[2] as a monetary policy instrument, and thus the *discount and the lombard lending rates*[3] served as key interest rates (*Botos 1999:41*). In the current terminology,

[1] This paper is based on the working paper of Annamária Madarász and Zsuzsanna Novák entitled "Hungarian base rate at its historic low".

[2] The central bank undertook the discounting of the non-trade bills, i.e. the so-called finance bills only in specific cases, but not only financial institutions were permitted to submit trade bills to the central bank for discounting (but also a certain circle of companies). From 1925 its lending activity was supplemented with the discounting of warehouse receipts and loans secured by lien.

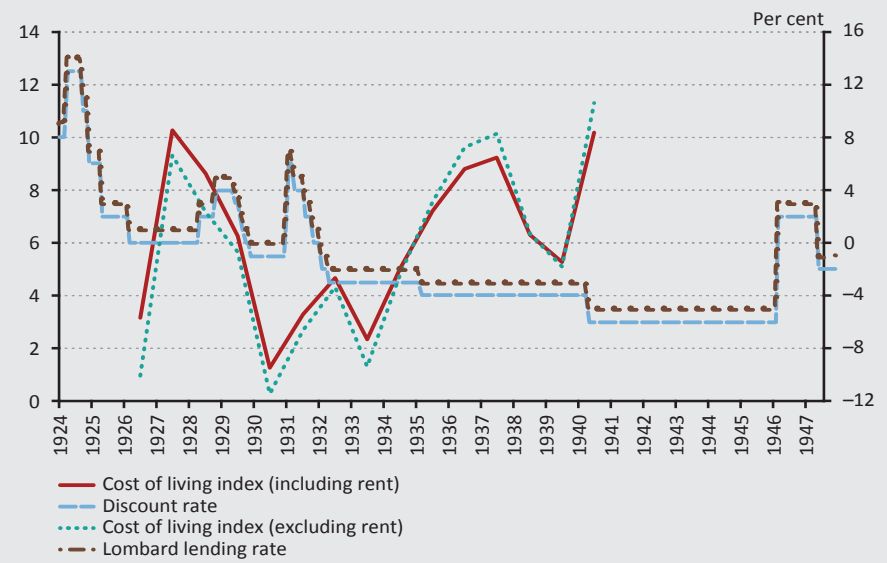
[3] The discount rate was applicable to bills, warehouse warrants and securities with maturities less than 92 days, while lombard lending rates were used for lombard loans secured by government funds, treasury bills and royal state savings certificates.

these interest rates are the equivalents of the interest rate on the central bank's collateralised loans. However, the interest rate policy of the commercial banks was delimited, in addition to the central bank's interest rate decisions, also by the so-called Interbank Agreements, in force since 1919 (which were preceded by a cartel-type agreement in 1908), concluded by highly capitalised banks and savings banks in order to control the business conditions, primarily the deposit rates and in general the benefits provided to customers.

From its establishment until the Great Depression of 1929–1933, starting from interest rate levels of 10–12 per cent[4] the MNB *continuously reduced the interest rate in order to stimulate lending* (*Figure 1*). The first years of economic stabilisation were characterised by enormous demand for money due to public charges increased as a result of the central bank regulation prohibiting the direct financing of the general government and the measures taken in order to balance the budget, and overall due to the financing requirement of the capital investments necessary for the reconstruction of the economy. Thus, in 1924, in view of the unrealistic market level of interest rates that developed in the economy, the central bank increased the discount rate. Within the framework of the interest rate control, which proved effectual only to a limited extent, with this signal the central bank wanted to warn the respective economic agents to reduce the credit applications. Finally, no quantity limit was introduced for lending, and thanks to the international recognition of the crown and the easing of the exchange controls, enterprises also had the opportunity to take foreign short-term loans. As a result of the strengthening of the confidence in the crown, the Magyar Nemzeti Bank increased its gold reserves several fold within one year, permitting a gradual reduction of interest rates. During the interest rate cuts, which commenced in 1925, the central bank took into consideration the fact that for some of the industries the interest rate of the foreign loans exceeded the level under which they could have pursued a profitable business, and thus it gradually reduced its own discount rate below the foreign level of interest rates available for Hungarian towns and counties. In 1926, the interest rate of the League of Nations loan was 7.5 per cent, while the towns and counties could borrow at 7 per cent from abroad, thus the central bank decided to reduce the interest rate level to 6 per cent (*MNB 1925–1947*). The central bank made efforts to ensure that the financial institutions extended the loans they received with the lowest possible spread. Accordingly in 1926 amongst other things, the credit department of the central bank prescribed that financial institutions dealing with it may lend at a maximum interest rate of 14 per cent. In autumn 1928 and in the middle of the Great Depression of 1929–1933, the central bank decided – similarly to most of the European countries – to raise the interest rate temporarily, in view of the soaring bill circulation and the

[4] The Magyar Nemzeti Bank essentially inherited the initial interest rate level from its predecessor institution, i.e. the Royal Hungarian State Bank. In July 1923, as a result of the almost 40 per cent depreciation of the crown and nearly 50 per cent price increase, the Royal Hungarian State Bank temporarily increased the discount rate from 12 per cent to 18 per cent before the economic stabilisation (*Royal Hungarian State Bank 1924*). For the sake of comparison it should be noted that between 1901 and 1918 the Austro-Hungarian Bank applied interest rates of 4-8 per cent (*Popovics 1926*).

Figure 1.
Key interest rates applied by the central bank between 1924 and 1947 (left axis) and the cost of living index between 1926 and 1940* (right axis)
(per cent)



Sources: Botos (1999), Marton (2012a)
**Apart from the indicated horizon no other data were available either with regard to the cost of living indices, or other indices that may capture the changes in the price level for this period*

demand for foreign currency resulting from the general disturbances of the money and capital markets and the flight of foreign capital, which interrupted the gradual decrease in interest rates (*MNB 1925–1947*).

During this period, the *change in the base rate* was primarily motivated by the volume of bill circulation and lombard loans drawn down in the domestic economy, while in view of the interest rate level relative to the foreign sector it was driven by the inflow of the foreign short-term speculative loans and the purpose of influencing gold reserves. Starting from the 1920s, both the discounted bill portfolio and the mortgage bond portfolio of the economy significantly expanded, but they were hampered – particularly the mortgage market – by the Great Depression of 1929–1933, followed by a financial crisis and credit crunch, which led to the temporary restriction of domestic payments and the suspension of stock exchange trading. After the crisis, until the end of World War II, the Hungarian economy was characterised by stable and relatively low interest rates – the lowest central bank interest rate was 3 per cent.

At the time when the central bank was established, the *exchange rate policy was characterised by centralised and controlled foreign currency management;*

however the control was gradually eased, and finally in 1925 the government – at the central bank's initiative – fully authorised the free payment turnover with foreign entities. However, the increasing indebtedness of the country represented a bigger and bigger problem, until the Great Depression posed the risk of state bankruptcy. In order to prevent this, the interest rate increase was accompanied by strict restrictions in the area of foreign currency management. In mid-1931, controlled foreign currency turnover was once again centralised in one hand, i.e. within the MNB's competence, and this regime survived several decades (*Botos 1999*).

The *change in the price level* was essentially determined by the underlying cover of the legal tender, as was usually the case in the gold standard-based monetary systems, and the central bank's interest rate policy only indirectly considered the change in the purchasing power of the domestic currency. The legal tender functioned as a currency covered by gold, for which the coverage ratio was initially determined in 20 per cent (applicable to the total gold reserve[5]), which at the end of 1924 already exceeded 50 per cent and did not fall below 40 per cent even at the end of 1930. Inflation was expressed by the cost of living index, which took the needs of a family of four (wage earners) as a basis and set out from the price change of the representative consumer basket calculated from the costs of food, clothing, heating and lighting, as well as accommodation (*Statistical Review 1925*).[6] This indicator, which is much narrower than the consumer price index, had never exceeded 10 per cent until 1939. The period of post-war hyperinflation, which lasted until 1924, was quickly followed by a six-year period of strong deflation, during which – especially from the start of the Great Depression – the decline in prices became significant.

The fact that the persistent increase in the price level that followed the Great Depression – which reached its peak in the hyperinflation from the start of World War II until the introduction of the forint – was not reflected in the level of the interest rates *suggests the absence of a material link between inflation processes and interest rate policy* (*Figure 1*). However, the increase in the price level, which appeared from 1936 after normalisation of money and credit conditions and was driven by the foreign currency mark-up system[7] and the increase in public charges, further intensified due to the increased emission to cover the costs of the war, resulting in unprecedented hyperinflation. In 1938, the restriction applicable to borrowing by the state, regional municipalities and local governments from the

[5] In addition to the gold coins and bullions, and the foreign commercial coins, a range of foreign currencies was also taken into account in the gold reserve (*Botos 1999*).

[6] The Hungarian Central Statistical Office introduced the new consumer price index from 1951.

[7] Although the currency was not depreciated in the export relations, exporters sold the currency they obtained at a premium to importers, and lenders usually also received the instalments at a premium (*Botos 1999*).

MNB was lifted, including the prohibition of direct financing of the budget deficit. As a result of the uncovered financing of the deficit – through the issue of short-term government securities – prices nearly doubled between 1940 and 1944 – the coverage ratio of the banknote stock gradually fell below 1.5 per cent –, and from 26 August 1939 until the financial stabilisation, i.e. 1 August 1946, they increased by 399,623 quadrillion times[8] (*Marton 2012a; Botos 1997*). In the period of hyperinflation the interest rate was not used for the control of private lending; instead the lending decisions were made by the government bodies and this practice continued in the post-war years as well. In 1946, the central bank nevertheless opted for an interest rate increase, which, in addition to restraining the increasing credit demands, was motivated by the efforts to recover the deposit portfolio withdrawn during the war and divert the banks' fund raising efforts to the collection of deposits (*MNB 1925–1947*). On 1 August 1946, the forint, as a new currency,[9] replaced the pengő, where 400,000 quadrillion pengő was exchanged for a single 1 forint coin (*Botos 1999*). The successful introduction was also assisted by the central bank by limiting the volume of the loans disbursed to the state (*MNB 2002*).

3. Period of the socialist planned economy

Within the framework of the socialist planned economy, the base rate could not be interpreted even in the form of the pre-1948 benchmark rate. Following nationalisation in 1948–1949,[10] with the establishment of the single-tier banking system and the termination of the stock exchange, and of securities trading in general, the interest level of the economy was not decided by the market demand and supply. The MNB, which acted under the supervision of the government through the Finance Minister, had payment, lending and foreign exchange monopoly, thus *it lent directly to the corporate sector and the state* – which at the start of the socialist planned economy essentially meant the same, as the enterprises were owned by the state – and *charged penalty interest if the loan or the interest was not repaid*. The central bank managed both the pre-war debts and the post-war reparations, reorganised the foreign exchange authority's duties, and then from 1950 the execution and authorisation of foreign exchange operations became the exclusive right of the MNB within the framework of controlled foreign exchange management[11] (*MNB 2002*). In the second half of 1948, the interest rate charged

[8] This is equivalent to 10^{24}.

[9] 1 forint represented a gold value of 0.0755 gram (under the Bretton Woods exchange rate of 1 oz gold = USD 35).

[10] Nationalisation of the banking sector and the transfer of the shares of the Magyar Nemzeti Bank and the other "large banks" owned by domestic shareholders to state ownership was prescribed by Act XXX of 1947 (*Meznerics 1972*).

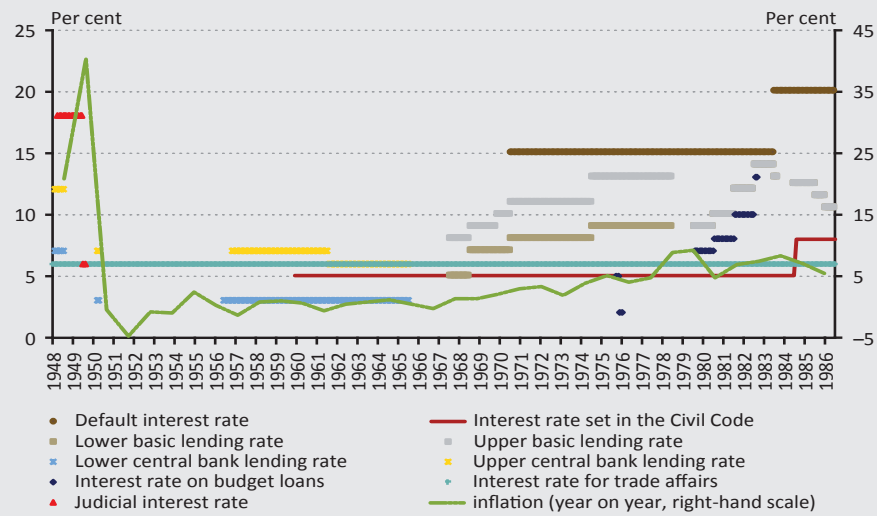
[11] An important statutory background of this was constituted by the so-called Foreign Exchange Code, which regulated – among other things – the mandatory delivery of foreign currency and in the case of foreign trade activity the foreign currency payments were subject to the MNB's licence.

by the central bank was between 7 and 12 per cent per annum, depending on the "situation and status of the borrower" (*Figure 2*). Interest rates lower than this occurred at companies that belonged to the single account system.[12] A resolution passed by the National Economic Council in 1950 outlined the development of a targeted loan system, where the activity of the given company designated the type of the disbursed loan, and the assessment by the bank's experts had less and less significance in the credit decision, while the political considerations of the public administration bodies were enforced to a large extent (*MNB 2002*). Companies managing their business in a planned or unplanned manner were also differentiated, and they received loans at an interest rate of 3 per cent and 7 per cent, respectively. Interest rates lower than that were applied to inventory financing loans after 1956, primarily for the targeted loans disbursed in the case of temporary needs (*Ligeti 1970*). In 1952, based on the Soviet model, the key lending principles were laid down in a decree – planned nature, targeted nature, collateral principle, maturity principle – and the decision on lending rates was a competence of the Ministry of Finance; thus, the central bank had a substantial role only in short-term lending and in particular in volume issues. Initially, the lending policy was determined by the concept that the justification of the loan is provided by the corporate current assets requirements, and it was an important means of state intervention and administrative management. During the years of the transition, this consideration was enforced primarily by the mandatory utilisation of the high-interest forced loans, which sanctioned the corporate liquidity shortage and the unplanned nature of operation. For a long time lending was not regarded as a factor that increases the money supply, but it was rather looked at as the transfer of free savings, assuming that voluntary saving equals financial capital formation. This approach in lending ran into increasing difficulties from the mid-1950s, when due to the decline in economic performance lending conditions were eased, because the companies spent their free funds in advance for capital formation purposes and then turned to the Magyar Nemzeti Bank for loans. Although the central bank had the opportunity to apply penalty interest on the surplus inventories and use higher interest rate on the loans that financed surplus inventories – and from 1962 over-the-norm inventories – in this period the central bank did not raise the base rate of central bank lending,[13] and the efficiency of the interest rate policy was questionable anyway due to the predictability of the interest rate and the dominance of the companies in monopolistic state ownership, which did not face any financing constraint. On the other hand, the expansion of companies' material capital formation over the market demands led to the accumulation of unsold inventories by the 1960s (*Riesz 1972*). As a result of this, the central bank gradually shifted to sales-based lending from production financing (*Ligeti 1970*).

[12] These privileged companies could only have a single current account opened at and managed by the MNB.

[13] Between 1958 and 1965 more than 50 per cent of the loans were disbursed at an interest rate of 3 per cent, which corresponded to the so-called turnover capital loan rate.

Figure 2.
Interest rates applied by the central bank and stipulated in the laws* (left axis) and annual inflation (right axis) between 1948 and 1986**
(per cent)



**The lower and upper bound of the basic loan rate essentially coincided from 1980.*
***Inflation in this period is based on officially fixed prices, therefore it cannot be compared with the present consumer price index.*
Sources: Ligeti (1970), Bank bulletins (1968-1985), HCSO, relevant laws

There was a boom in external trade in the 1960s, and as a result of the economic reforms, the role of the market strengthened in the economic relations, which broadened the central bank's domestic foreign exchange market activity and monetary policy instruments gained importance (*MNB 2002*). *In 1968, with the launch of the New Economic Mechanism, lending also took a new direction*, and macroeconomic balance and profitability – i.e. economic rationality considerations in general – were enforced more strongly in credit assessment (*MNB 2002).* In the new regime, the central bank did not have to play a public authority role in lending, but rather had to enforce the economical utilisation of the funds by economic instruments and contractual terms (*Meznerics 1972*). Companies not only had access to loans at higher interest rates than before, the other costs of borrowing also went up, and the central bank paid more attention to the assessment of creditworthiness and return. The *Credit Policy Directive* of 1969 was regarded as the fundamental document of the credit policy, which was modified annually in accordance with the prevailing economic policy considerations. The Directive stipulated a base rate band – which was 7–9 per cent in 1969, where the bottom of the band designated the interest rate for the working capital loans within 90 days, and the top of it that for over 270 days – compared to which the enterprises could borrow at a discount or premium, while overdue instalment entailed a penalty interest of 6 per cent. In addition, the central bank also permitted the enterprises

to place their surplus liquidity with the central bank as fixed deposit at an interest rate of 3–7 per cent per annum, depending on the maturity. The annual credit policy directive stipulated a base rate, as well as interest rates for working capital and investment loans of different maturities, and deposit rates[14] annually, which raised the importance of the interest rate, as well as of the collection of longer term funds and financing in monetary policy. In 1980, the base rate of short-term loans was 9, in the next year it was 10, and then was 12 per cent from 1982. In 1983, it further increased by 2 percentage points, and then from the following year it was reduced to 13 per cent.

In the socialist economy, statutory interest rates, other than the interest level defined by the central bank, were also in force. The interest rate stipulated in Act IV of 1959 (Civil Code) was an important reference value in the economic contracts – a rate used as transaction interest in civil transactions. The Civil Code entered into force in 1960, and during its several amendments the statutory interest rate was also modified.[15] The contracting parties had the opportunity to depart downward from the transaction interest rate stipulated in the Civil Code, and laws determining rules deviating from these also existed. Amongst others, a Council of Ministers decree was in force before 1 May 1960, which stipulated the highest rate of the interests that could be enforced in court – namely, it set the rate in 18 per cent until the decree's entry into force, and 6 per cent per annum from the effective date. In addition, the Commercial Code of 1875 – which was in force until 1 January 1989 – stated that the statutory and default interest in commercial transactions is 6 per cent of the payable principal per annum.[16]

In the controlled price and wage regime there was no real connection between the development of interest rates and consumer prices; however, during the changeover to a more flexible price system the level of the lending rates stipulated by the central bank gradually adjusted to the increasing rate of devaluation. Prices and wages were fixed by the authorities within the framework of the economic stabilisation of 1946, while the volume of the money issued and the wages were determined depending on the commodity stocks. However, due to the general shortage of commodity and the high budget deficit, prices increased by more than two and a half times by 1951, therefore at the end of 1951 a general price and wage reform was implemented. The retail price system was introduced, in the framework of which the price[17] and tax rate[18] of all products, with a few exceptions, were fixed individually in accordance with social and economic policy

[14] Prior to this the MNB paid interest on deposits only in exceptional cases.

[15] The act was finally repealed by Act CLXXVII of 2013 and replaced by Act V of 2013 (New Civil Code).

[16] The default interest rates related to the transactions of enterprises were regulated by additional Ministry of Finance and Council of Ministers decrees.

[17] With the exception of seasonal price products.

[18] By the 1960s the turnover tax system was significantly simplified.

considerations (*Marton 2012a*). The consumer price index essentially stagnated between 1952 and 1967, as efforts were made to ensure that it did not exceed 3-3.5 per cent (*Marton 2012b*). Thus during this period only rare and negligible "hidden" price and price ratio changes were implemented,[19] and *then inflation appeared again in the economy with the launch of the New Economic Mechanism in 1968.* From the mid-1970s, as a result of the economic policy that increasingly adjusted to market conditions, inflation gradually rose over 5 per cent, which was also attributable to the adjustment of the administrative prices[20] and the growth in the price level of freely priced goods. While the forint was appreciated between 1968 and 1979 following the exchange rate fluctuation of the US dollar, the depreciation of the forint commenced in the 1980s in order to meet the conditions of the IMF loans taken to manage the international debt crisis and foster the balance of the external economy, which also contributed to inflation becoming an ordinary phenomenon. The central bank made efforts to curb the acceleration of inflation by restricting the money supply (*Madár 2008*). Apart from the US dollar, the rouble also played a key role in the setting of the forint exchange rate. A commercial and non-commercial exchange rate existed simultaneously for both currencies, which gradually approximated each other until 1981, followed by the introduction of a uniform exchange rate. The exchange rate, which more and more became a market rate, helped monetary policy place stronger emphasis also on the internal purchasing power of the forint (*Baka et al. 1997*).

4. From the establishment of the two-tier banking system until today

4.1. Start of the two-tier banking system

Following the restrictive monetary policy that characterised the first half of the 1980s, the government announced a demand stimulation programme in 1985–1986, which resulted partly in the strong expansion of the government budget and partly in growth in corporate and retail lending. The credit expansion was based to a lesser extent on domestic funds, and the larger part of it was financed by foreign borrowing and MNB bond issue[21] (*Várhegyi 1988*). Under these circumstances after the changeover to the *two-tier banking system on 1 January 1987,* the MNB's lending activity was once again characterised by monetary tightness. The main macroeconomic challenges were represented by the elimination of the external imbalance of the economy arising from interest payment obligations on government debt, which exceeded the trade surplus, as well as curbing inflation,

[19] The change in quality was not reflected in the consumer price index.

[20] Due to the oil price rise, amongst other things, administrative adjustment of fuel prices also became necessary.

[21] Due to the debt crisis of the 1980s, the MNB tried to manage the external imbalance by foreign borrowing and bond issue, which was not a general practice in the Central and Eastern European countries (*MNB 2002*).

which started to increase as a result of the price and wage liberalisation and the tax reform. In accordance with this, *the MNB regarded fostering an improvement in external balance and reducing inflation as its ultimate targets,* while it specified the regulation of bank liquidity, in addition to the exchange rate, as interim objective (*Szalkai 1989*). The quantity theory of money served as the economic philosophy justification for monetary restriction, which prevailed in the first years of the transition to the market economy. In light of this, efforts were made to push the annual growth rate of money supply below the growth rate of the nominal income. In these efforts, the central bank primarily relied on its direct means; it restricted its refinancing loans and the volume of bill discount on normative basis – by credit quotas allocated in proportion to equity – and also maximised the deposit and loan interest rates by applying interest rate ceilings. The transition between the direct and indirect central bank regulation[22] was represented by the introduction of the minimum reserve requirement system, which initially was based on differentiated rates.

Until the early 1990s, the MNB's main monetary control instrument was the disbursement of one-year refinancing loans. Monetary policy treated the rediscount rate as the base rate, which the central bank raised to 22 per cent by the end of 1990 (*Figure 3*),[23] and adjusted the interest rates of short-term and long-term refinancing loans[24] and deposit rates to this. Initially, monetary policy was dominated by volume control, the main reason for which was said to be the low interest sensitivity of companies,[25] the underdevelopment of the interbank market and generally of the securities market, as well as the pegged exchange rate system and the foreign currency restrictions. *The interest rate increases by the central bank were driven by anti-inflationary efforts, but different opinions were formulated as regards the macroeconomic effect of those*, as due to the almost unlimited credit demand the high interest rates did not curb the appetite to borrow, while they contributed to the increase in the price level due to integration into companies' costs (*Erdős 1989*).

The central bank moved gradually to the market-conform solutions in terms of its interest rate policy and instruments; its market-building role was particularly important in the distribution of the government securities after the development of the two-tier banking system. In this respect, the most important measures

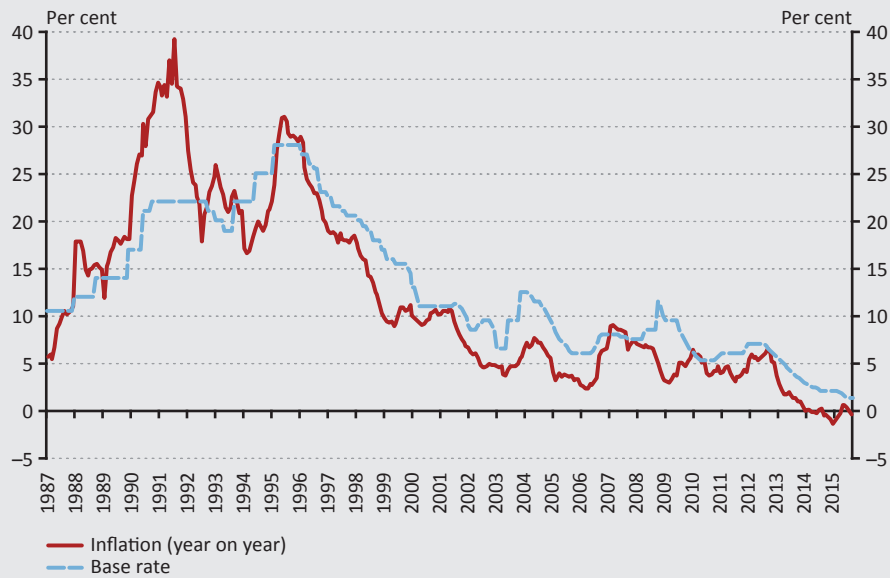
[22] Direct tools: the central bank issues mandatory rules for commercial banks (e.g. credit limits, interest ceilings). Indirect tools: the central bank influences money supply indirectly (e.g. open market operations, foreign exchange swap) (*Tarafás 1995*).

[23] The central bank base rate declared since 15 October 1990 is determined by the MNB.

[24] Directly in the case of the overdraft facilities and the long-term investment loans, and by some fixed multiplier in the case of other loans (*Tarafás 2002*).

[25] The low cost sensitivity of the companies was attributable to the "soft budget constraint" arising from the state ownership, which still persisted.

Figure 3.
Monthly development of the central bank base rate and inflation from 1987 until today



Sources: MNB, Financial Gazette, HCSO

of the central bank included the issue of treasury bills and discount treasury bills,[26] the organisation of secondary market trading and unlimited discounting of treasury bills already in circulation within the framework of open market operations, applied since 1988, with which it helped other players gradually appear in the financing of the government debt, in addition to the central bank. Later on, with the appearance of government bonds issued for the purpose of bank consolidation, the market also expanded in the long end of the maturity spectrum. In 1988–1989, the central bank organised the centralised interbank market, reduced the utilisation of the targeted loans and tied the interest rates of certain preferential credit facilities to the base rate.

From 1992, credit institutions were already permitted to take and place foreign currency in the market, and the limited interbank foreign exchange market also started to operate.[27] Thereafter, short-term foreign exchange swaps became part of the monetary instrument toolbox. *With these measures, the MNB contributed*

[26] At that time, the securities market already started to function partially due to the distribution of the corporate bonds.

[27] It was permitted, to a limited extent, already in 1989 to collect foreign currency deposits, grant foreign currency loans and perform swap operations.

to strengthening the role of interest rate policy, and thereby the base rate, in the monetary control, and gradually abandoned quantitative controls.

In the *pegged, but adjustable exchange rate regime, which was characterised by random and one-off devaluations*, the MNB devalued the forint often and to a considerable degree – on 23 occasions between 1990 and 1995 by 87 per cent in total – the rate of which was defined based on the prevailing inflation difference compared to the foreign countries, in order to avoid the devaluation and appreciation of the currency in real terms. In addition, the MNB made efforts to determine the base rate in accordance with market conditions, that is, the central bank base rate had to generate cover not only for the anticipated exchange rate devaluation, but also for the country risk, which materialised in the interest premium that existed vis-á-vis the interest rate level of the trading partners.

Due to banks' insensitivity to risks and the companies' indifference to costs – and as a result of this also to the interest rates – the level of interest rates became high by the early 1990s. However, after the political transition, the behaviour of both the banks and the companies changed during the development of the market economy, and thus the banks' averseness to risk increased, while the companies became more cost sensitive. The Central Bank Act of 1991 defined the protection of the internal and external value of the domestic currency as its key objective, but the reinstatement of the dual balance, the growth stimulation and the expansion of employment overshadowed the decrease in inflation, *thus monetary policy targeted a general reduction of loan interest rates, as the high interest rates hindered lending due to the changed behaviour of the agents* (*Tarafás 1995*). Accordingly, between 1992 and the summer of 1993 the central bank reduced the base rate by 300 basis points, which was also facilitated, among others, by the balance of payments' surplus. However, the expansive monetary policy generated by the decrease of the interest rates failed, which was reflected by the financial imbalances, the break in the formerly stronger propensity to save and investment recovering to a much lesser degree than expected (*Várhegyi 1995*).

At the end of 1993, monetary policy abandoned its objectives to decrease the interest rate directly and in the period that lasted until 1995 it increased the central bank base rate to 28 per cent due to the unexpectedly high current account and budget deficit, and the unexpected acceleration of inflation (*Tarafás 2002*). Simultaneously, *the set of monetary policy instruments also underwent a significant transformation*. The role of refinancing loans decreased, while the further increase in the already high required reserve ratio would have yielded no result, and thus the question arose as to what kind of indirect instruments the central bank should develop. By abandoning control by refinancing loans, the central bank gradually switched to indirect monetary control, and thus in 1993 the already available government securities enabled it to introduce the repo and

reverse repo transactions with government securities, and thereby provide the banks with an additional liquidity-absorbing instrument in addition to the treasury bills. The *main policy instrument* in 1994 and the first half of 1995 was represented by the *repurchase agreement*[28] which may be interpreted as central bank lending to the commercial banks with securities collateral. The purpose of the instrument was to resolve the financing constraints of banks with poor liquidity (*MNB 2000*). Due to neutralisation of the excess domestic liquidity, from the second half of 1995 the MNB switched over – with regard to the main policy instrument – to the use of the one-month *reverse repo,* as an instrument for sterilisation purposes. On the other hand, in October 1997 the reverse repo transactions had to be suspended, because due to the sterilisation of the excess liquidity the government securities stock available in the central bank decreased considerably, and thus in the case of a high-volume transaction the collateral provided by government securities of the same type could be at risk, which would have complicated the settlement of the transaction in technical terms (*MNB 2000*). Accordingly, the reverse repo was replaced by the *one-month deposit,* and then in the spring of 1999, in order to improve transmission efficiency, the *two-week MNB deposit* became the main policy instrument – through to 2006 – with the central bank base rate later becoming the interest rate thereof.[29] Transmission was supported by the fact that from the mid-1990s the central bank maintained an interest rate corridor around the interest rate of the main policy instrument, that is, it provided overnight loan – or repurchase agreement – at an interest premium within the overnight facility and accepted liquidity from the banks at an interest level lower than the interest rate of the key policy instrument. This interest rate corridor gradually narrowed. *In the second half of the 1990s, the key interest rate set on a downward path, while the current account and the budget deficit both remained at a sustainable level and inflation decreased.*

In parallel with the change in the instruments, *the crawling devaluation exchange rate regime with a narrow intervention band* was introduced in 1995 as part of a large, harmonised stability programme, the key objective of which was to curb the twin deficit. However, stabilisation of the exchange rate still remained an interim goal of the monetary policy framework, in addition to the operative target based on the base rate. Simultaneously with the introduction of the new exchange rate regime, a one-off devaluation of 9 per cent was also implemented, and then during its existence the MNB and the government jointly decided on the monthly rates of devaluation, which was also announced well before the effective date thereof (*Szapár–Jakab 1998*). The crawling peg exchange rate regime restricted the role of

[28] Initially with one-week and then with one-month maturity.

[29] Previously, the base rate was fixed by administrative methods, it was not linked to any central bank instrument, and then from 2001 the interest rate of the key policy instrument and the base rate coincided (*MNB 2002*).

interest rate policy in the sense that – as the devaluation was always announced in advance – economic agents integrated the expected inflationary effects of the exchange rate devaluation in their decisions already upon the announcement, and thus it lowered the chances of curbing inflation (*Tarafás 1995*).

The role of interest rate policy was strengthened by the fact that with the amendment of the Central Bank Act in 1996 the prohibition of monetary financing of budget deficits entered into force in 1997. After that, the central bank was not allowed to grant loans directly to the budget, with the exception of the liquidity loan.[30] From then on, the central bank could participate in the government securities market only as a secondary market actor. The development of yields in accordance with market demand and supply conditions promoted the functioning of monetary policy transmission, which was supported by liberalisation of the foreign exchange market. In 1996, the forint became convertible on maturities over one year, and thus a wider funding base was available through the foreign savings for the financing of the government debt. The financing cost of government debt was in line with market conditions, and for the forint component the base rate represented the main reference yield – as opposed to the earlier financing based on the MNB's foreign borrowing, when the central bank transferred the foreign funds to the budget at a forint interest rate that corresponded to the foreign currency borrowing rate – which improved the effectiveness of the anti-inflationary policy. Simultaneously with this, the MNB also had the opportunity to execute open market operations with the securities purchased in the secondary market – which were already in its portfolio – and with that it supported the meeting of the monetary policy targets (*MNB 2000*).

In the past, the external debt that financed the government's borrowing was stated in the MNB's balance sheet, the gradual repayment of which could be realised through debt swap, that is, instead of the MNB's external debt, the external debt accumulated in part at the general government and in part at the domestic agents. In addition to the debt-type financing, as a result of the increased trust in the forint and the difference between the forint and foreign exchange interest rates, the central bank had to deal with increasing capital inflows, a large part of which was attributable to privatisation incomes (*Neményi 2006*). Between 1995 and 2000, the exchange rate was typically at the strong end of the intervention band, which compelled the central bank to intervene on a continuous basis. The sterilisation of the forint that was put in circulation during the refinancing of the

[30] Until the early 1990s the central bank essentially could provide unlimited financing for the general government through its foreign borrowing, but then with the establishment of the Government Debt Management Agency (GDMA) in 1995 the central bank gradually withdrew from public debt management; GDMA initially took over only the tasks related to domestic debt, and later on the organisation of the domestic and foreign issuance was also transferred to the competence of the institution, which operated under the supervision of the Hungarian State Treasury.

central bank's external debt in forint and the intervention forced the central bank in respect of its main policy instrument to change over to liquidity-absorbing operations and to introduce sterilisation instruments – MNB bonds, amongst other things – announced for different maturities. The sterilisation burdened the central bank with huge costs, but intervention prevented the undesired appreciation of the forint, while the sterilisation of the resulting forint liquidity prevented the development of negative real interest rates, which could have undermined the accumulation of domestic savings (*Tarafás 2002*).

4.2. In the framework of inflation targeting

At the time of the millennium, the disinflationary processes that commenced in the second half of the 1990s appeared to be wearing off, while there was speculative pressure on the strong end of the exchange rate band. Thus, in 2001 the central bank cancelled the crawling peg exchange rate depreciation and defined a wider exchange rate band of ±15 per cent, while full convertibility was implemented in foreign exchange management.[31] In parallel with this, in order to strengthen the disinflationary processes, *the MNB introduced its inflation targeting system (IT)* (*MNB 2006*). Within the IT framework, the primary objective of monetary policy was to achieve and maintain price stability. However, upon introduction of IT, the MNB temporarily had to focus on achieving price stability, and as such it did not specify a constant quantified target, but rather declared the inflation target to be achieved with regard to each year-end. When inflation was reduced to a moderate level, it became possible to define *a medium-term inflation target,* which the MNB has set as 3 per cent since 2007 (*MNB 2006*). As a result of the foregoing, in addition to the inflation projection, as an interim objective, the operational objective role of interest rate policy and the base rate strengthened, but the band-based pegging of the exchange rates still had restrictive power. The central bank defined maintaining three-month and six-month yields close to the base rate as its operational objective.

In January 2003, appreciation speculation commenced against the forint exchange rate, which thus reached the strong end of the band. Hence the MNB decreased the key interest rate in the same month in two steps by 100 basis points on each occasion, and widened the interest rate corridor to protect the exchange rate. These measures fended off the speculative attack, which increased the credibility of the exchange rate regime, and thus in February the width of the interest rate corridor was reinstated (*Barabás 2003*). *However, in the second half of 2003 the central bank faced a different problem, as the process of disinflation faltered* due to the loosening of fiscal discipline, which entailed a deterioration in the assessment of the economy's risk and the depreciation of the forint exchange

[31] In addition, the new Central Bank Act of 2011 ultimately terminated any form of central bank lending to the budget.

rate. In order to protect the exchange rate, and due to the continuation of the disinflationary processes resulting therefrom, the MNB *increased the key interest rate* within a short period in two steps *by 600 basis points in total during 2003*. After this, the forint exchange rate was relatively stable and in mid-2004 a distinct disinflation started, which once again permitted the implementation of an easing cycle. As of January 2007 the two-week MNB deposit was replaced by the *two-week MNB bond as the main policy instrument* (*MNB 2012*). The introduction of the new instrument did not represent a change in monetary policy terms, thus neither the maturity, nor the key interest rate changed. With the change, the main policy instrument was listed as an eligible security, which thus was available for a wider range of institutions than the MNB deposit.

As apart from the tax changes – attributable to the continuous fiscal spending overruns – that impacted the inflation rate, the edges of the exchange rate band also hindered the attainment of the inflation target and did not contribute to the anchoring of the long-term inflation expectations, *in February 2008 the central bank abandoned the intervention band* and introduced the floating exchange rate regime. With this measure, the Hungarian monetary policy framework changed over to the application of the classic IT, and shifted toward the international patterns, where in accordance with the *principle of "one target – one instrument", the central bank uses its main instrument, i.e. the key interest rate, for the attainment of the inflation target.* That is, the key role of the interest rate policy – which is the case also today – developed at that time, as in the framework of that the exchange rate, as an additional target, no longer restricts the monetary policy in meeting the inflation target (*MNB 2008*).

In the second half of the 2000s, Hungary was one of the most vulnerable countries of the region due to the significant budget deficit, the high government debt and the perceptions about risk, and thus the global financial crisis that unfolded in mid-September 2008 brought severe *financial stability risks*. While in this period the developed-country central banks started an unprecedented easing of the monetary stance, in October the MNB decided to *increase the base rate by 300 basis points, citing the need to maintain the functioning of the banking system and to curb speculation against the forint.*

With the pass-through of the global financial crisis, the central bank's task related to the support of the financial stabilisation, as stipulated in the Central Bank Act, gained renewed importance. Hence, as of 2008 the central bank helped the credit institutions ease their forint and foreign currency liquidity tensions, by providing foreign currency liquidity by foreign exchange swaps or announcing collateralised loan tenders tied to the base rate.[32] At the end of 2008, when the operation of

[32] Later on these instruments were also defined as unconventional tools.

the government securities market practically froze up, the MNB appeared in the secondary government securities market with direct purchases to stabilise the situation. In order to ease the liquidity tensions that appeared in the market in autumn 2008, it purchased government securities, and based on the agreement concluded with them the credit institutions increased their government securities portfolio to a degree that exceeded the portfolio purchased from them. The intervention was justified by the freezing of the government securities market, which temporarily deteriorated the liquidity indicators as a result of the rapid economic policy responses, but the central bank was not in the position to take a massive role in the government securities market, aimed at the easing of the burdens of budget financing, as it would have raised the issue of violating the prohibition of monetary financing – see Article 123 of the Treaty on European Union – and the loss of the central bank's credibility finally could have entailed a significant withdrawal of capital (*Krekó et al. 2012*).

After the extraordinary interest rate increase, in view of the improvement in sentiment and the recovery in investor confidence, and following the assessment of the inflation outlooks in November, the *central bank gradually started to reduce the key interest rate*, which reached 5.25 per cent in April 2010.[33] With reference to the increasing inflation outlooks the interest rate cut was followed by three interest rate increases of 25 basis points on each occasion at the end of 2010 and in the beginning of 2011, and then, at the end of 2011, due to the risk of increasing inflation, the global aversion to risk and the increasing perceptions of risk, the MNB increased the base rate to 7 per cent in further two steps.

The MNB *started an easing cycle in 2012.* In summer 2012, as a result of achieving the inflation target, the decreasing vulnerability of the Hungarian economy, the disciplined budget and the decreasing external exposure, the gradually improving perceptions about Hungary's risk and the developed-country central banks' secularly accommodating monetary policy permitted *the launch of the easing cycle,* and the turnaround in fiscal policy further increased the room for monetary policy manoeuvre (*Matolcsy 2015; MNB 2014*). In July 2014, based on the available information, the inflation and real economic outlooks justified the maintenance of the secular low interest environment, thus the central bank closed its two-year easing cycle.

As a result of the changed environment and the strengthening of the risks pointing to low inflation in the long run, in March 2015 the central bank once again reduced the key interest rate and in order to prevent persistent deflation, it restarted the easing cycle, *which was finished in July 2015 – after implementing a total decrease*

[33] Based on the abridged minutes of the Monetary Council's rate-setting meetings. https://www.mnb.hu/en/monetary-policy/the-monetary-council/minutes

of 565 basis points – with the key interest rate reaching its historic low of 1.35 per cent. The easing cycles together may have increased annual average inflation by 1.1 percentage points last year, while this year it may raise inflation by 1.6 percentage point in total (*Felcser et al. 2015*).

Apart from the fact that the price stability objective has been preserved – with interest rate policy still the primary instrument for achieving this –, *the additional mandates of the central bank gained higher importance as a result of the crisis and the management thereof.* In 2013 inflation, which fell below 3 per cent, permitted the central bank to stimulate the macroeconomic performance and treat the improvement of the economy's financing structure – by its interest rate policy and the transformation of its set of monetary instruments – as a priority objective, without jeopardising price stability. In addition to the easing cycles implemented in the inflation targeting framework, in order to restore financial stability and increase the efficiency of transmission, from 2013 the central bank introduced additional unconventional central bank instruments and measures aimed at increasing the central bank transparency. This includes, for example, the forward guidance in the communication, applied actively since the closing of the two-year easing cycle, which facilitates the anchoring of the interest rate expectations and through that achievement of the inflation target. The Funding for Growth Scheme, launched in 2013, and the extensions thereof, may also be regarded as country-specific instruments, which improved the efficiency of the monetary policy transmission through the stimulation of lending to the SME sector (*Ábel et al. 2014*). In 2014, the MNB announced the self-financing programme, through which it contributed to reducing Hungary's external vulnerability, by supporting the financing of the government debt from internal funds. The central bank's interest rate swap transaction introduced for the purpose of self-financing supports banks' risk management, and by mitigating the expectations with regard to the anticipated future path of the short-term interest rates it reduces the long-term yields. The change in the main policy instrument introduced on two occasions during recent years also formed part of the programme. As of August 2014, the MNB bond was once again replaced by the MNB deposit as the main policy instrument, and then in 2015 the central bank extended the maturity of the main policy instrument from two weeks to three months, with the purpose of channelling banks' forint liquidity into government securities. The course of monetary policy was not affected by the change of the main policy instrument in either case.

5. Conclusion

This paper presented the changing role of the central bank interest rates since the establishment of the Magyar Nemzeti Bank up to the present. An interest rate policy similar to the modern version which is aimed at directly influencing inflation was

not characteristic of the monetary policy of the socialist planned economy, which was based on the controlled price and wage system and interest rates fixed by the public authorities, nor of the monetary regulation implemented by the central bank between the two World Wars under capitalist market conditions. Although monetary policy always attached special importance to price stability, the role of the interest rate policy in anti-inflationary policy was restricted by, among others, the inflexibility of the exchange rate policy and the financing of the government budget by emissions. On the other hand, despite the different monetary policy regimes of the various periods, it can be established – also bearing in mind the limits of comparability – that the continuous easing cycle started by the MNB in 2012 and closed two years later was unprecedented in Hungary both in terms of its degree and length. In 2014, continuing this monetary easing cycle, the central bank finally reduced the nominal key interest rate level to 1.35 per cent, marking its historic low. The historically low interest rate level is in harmony with the achievement of the inflation target, stimulates the macroeconomic performance and facilitates the strengthening and maintenance of the financial stability.

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