



THE CENTRAL BANK OF HUNGARY

Improving Hungary's debt profile

Banks can contribute to Hungary's self-financing through government security purchases

(Background material)

1. ALIGNMENT OF THE NEW MEASURES WITH THE CENTRAL BANK'S OBJECTIVES

The Central Bank Act defines achieving and maintaining price stability as the primary objective of the MNB. The Hungarian economy is currently characterised by a low inflation environment, moderate inflationary pressure in the medium term and a negative output gap. The consumer price index fell substantially over the past year and a half and has showed historically low dynamics in recent months, hovering near zero per cent. Underlying inflation indicators have also been indicative of a moderate inflation environment for an extended period. The Monetary Council predicts that inflation could remain below the 3 per cent target in 2014 and hit the medium-term inflation target from 2015. Overall, based on the available information, inflation will be in line with price stability looking forward, allowing the Monetary Council to follow its further objectives defined in the Central Bank Act.

Without prejudice to its primary objective, the MNB supports the maintenance and reinforcement of financial stability and the economic policy of the Government using its disposable instruments. The concept of financing government debt from internal funds aims to reduce Hungary's vulnerability, which is aligned with the MNB's objectives. With this new measure, the MNB intends to decrease gross external debt, reduce the dependence of government debt on external funding and to scale back foreign currency debt. A shift towards self-financing will not only make the funding of government debt safer, but the reduction of external and foreign currency debt will reduce the Hungarian economy's vulnerability, which benefits all economic agents, including the banking system. Lower external indebtedness can contribute to reducing debt-service costs by improving a country's risk perception and decreasing the risk premium, thus also indirectly fostering more sustainable economic growth. Ideally, a credible programme could even help improve Hungary's credit rating in the long run. All this increases budgetary leeway and fosters the Government's economic policy.

2. THE CONCEPT OF INTERNAL FINANCING OF GOVERNMENT DEBT

2.1. Baseline: the balance of payments position of the Hungarian economy

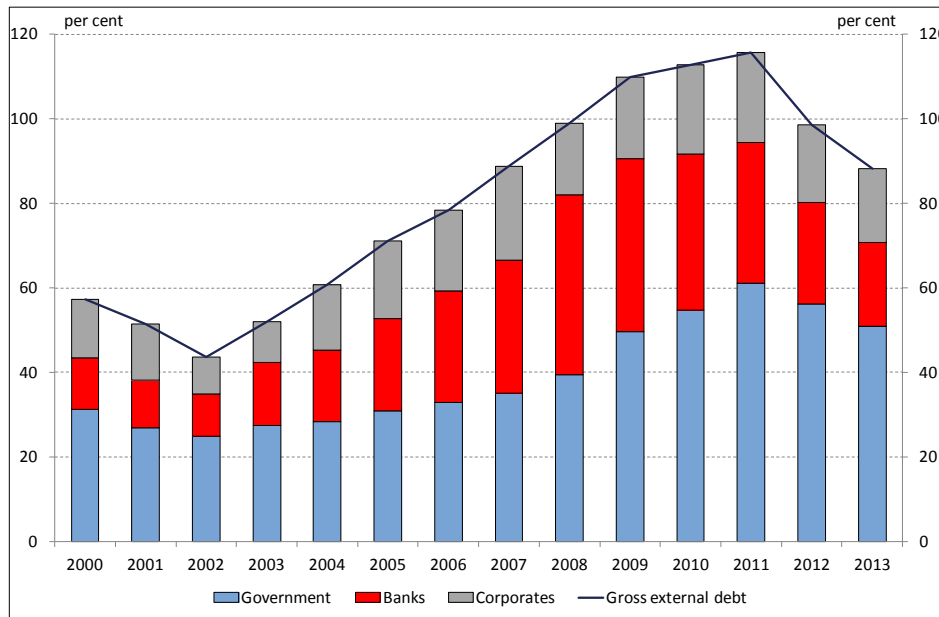
Reinforcing the financing of government debt from internal funds, thereby mitigating dependence on external funding is an economic policy priority. Hungarian economic agents and specifically, the Hungarian state have substantial external and foreign currency debt. The recent

turmoils on emerging markets has highlighted high external and foreign currency debt as a major source of external vulnerability. Therefore when looking at Hungary, stock indicator trends are pivotal alongside the substantial improvements in flow-type balance indices, the elevated level of debt is loaded with rollover risk due to the high refinancing requirement. On account of the nature of stock indicators, the dynamics of change are slower in this area. Nevertheless, economic policy can support the financing of government debt using internal funds and the reduction of dependence on external funds with additional measures, while maintaining low deficit ratios.

High external debt and dependence on external funds are major sources of Hungary's vulnerability and a recurrent theme in the analyses of international organisations and credit rating agencies. Since the onset of the financial crisis, investors have been careful to examine and assess the external vulnerability of economies. Hungary's external debt has come under analyst scrutiny in the wake of its trend of indebtedness in the years leading up to the crisis. Although most analyses acknowledge that Hungary has made great progress in terms of external vulnerability based on flow-type indicators (such as the current account surplus and low government deficit), most of them still warn of the high external debt, the elevated ratio of foreign currency debt, the risks of debt renewal and strong dependence on foreign investment.

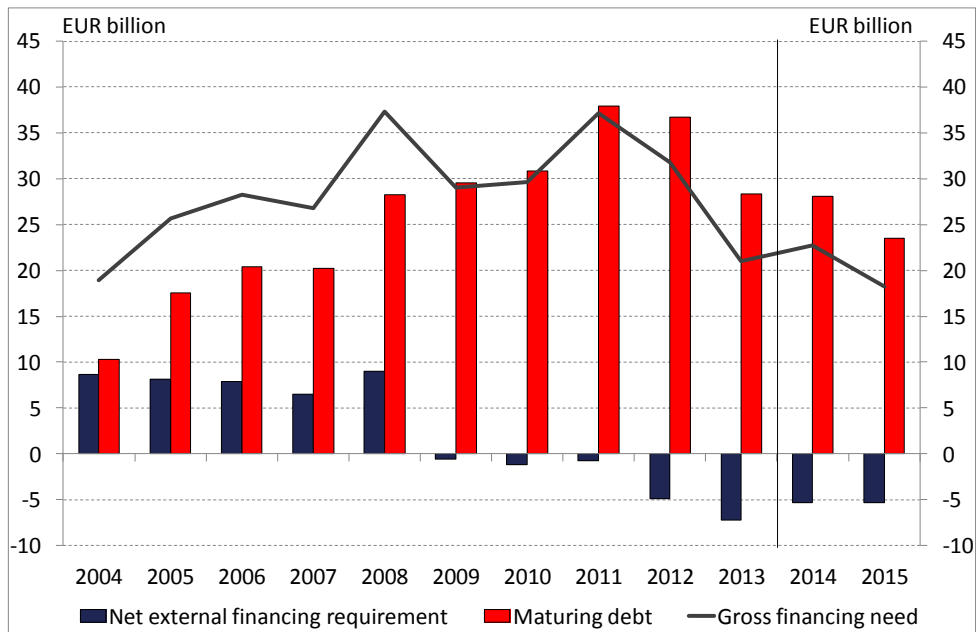
Gross external debt rose sharply leading up to 2009, but changed behaviour and strong deleveraging by economic agents due to the crisis resulted in greater loan repayment, resulting in a faster reduction of external debt from 2011. Between 2002 and 2011 Hungary's gross external debt rose sharply by nearly 70 per cent of GDP, before starting a gradual decline to below 90 per cent of GDP. The rise in external debt during the pre-crisis era reflected several factors. Household borrowing linked to consumption in excess of income between 2002 and 2008 was fuelled by external financing by banks, reflected in their rising external debt. However, at the end of 2013 in line with continuous loan repayment by households, banks' external debt fell way below the pre-crisis level. Similarly, rising government debt due to the continuously elevated budget deficit gradually increased external state debt between 2002 and 2008. Additionally, the loan packages taken out from international institutions in response to the financial crisis significantly increased the general government's gross external debt. Significant adjustment has also been carried out by the state since then, with the state reducing its gross external debt to 50 per cent of GDP by late 2013 by lowering the general government deficit and with greater domestic private sector funding.

Chart 1: Developments in gross external debt by sector (exclusive of inter-company loans, as a per cent of GDP)



Hungary's balance of payments position has thus significantly improved over the past years, but the positive picture suggested by the current account surplus that has prevailed for years calls for some nuancing. Although the external surplus in excess of 6 per cent of GDP in 2013 was also reflected in decreasing external debt, dependence on external funds remains high on account of the significant redemptions resulting from elevated gross external debt.

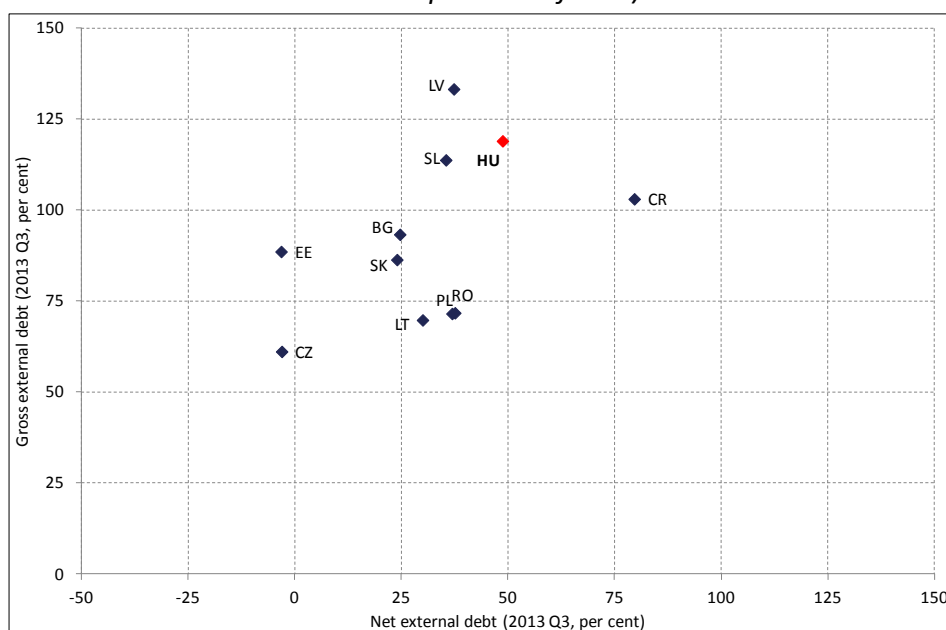
Chart 2: Developments in the net and gross borrowing requirement



Hungary has relatively high outstanding external debt compared to similarly developed countries. Several clearly distinct groups can be identified within the European Union in terms of gross and net external debt. Countries of similar development as Hungary — most of which joined the

European Union in 2004 or 2007 — are clearly distinct from the other countries. Their gross external debt is usually around 60-140 per cent of GDP, while their net external debt does not exceed 50 per cent of GDP. Compared to these countries, both Hungary's gross and net external debt exceeds the average of the group and is one of the countries in the region with the highest external debt.

Chart 3: External debt indicators in international comparison (including inter-company loans, as a per cent of GDP)



2.2. A prospect for reducing external vulnerability: reducing gross external debt

The rate of reduction of net external debt is essentially defined by the current account balance and the degree of FDI. Viewed from the funding side, the current account reveals that net external debt fundamentally stems from the savings trends prevailing in domestic sectors: if the amount of net saving of residents (households, corporations, general government) remains the same, changing only in structure, net external debt also remains unchanged. Net external debt can be decreased if a resident agent saves more, for instance households consume less, corporations invest less or the state scales back the government deficit. At the same time, all of these scenarios go hand-in-hand with more sluggish economic growth.

In other words, the different sectors can only reduce their net external debt to each other's detriment; if the current account balance is considered as given, outflow of funds from one sector prompts adjustment from the other sectors. For this reason, in the short run net external debt can only be reduced alongside greater financial saving by the various sectors, i.e. with additional real economic adjustment. Taking this into account, there is leeway primarily for reducing gross external debt, as curbing net external debt would entail additional real economic sacrifices, placing an unwarrantedly heavy burden on economic agents, already facing growth falling short of the economy's long-term performance, i.e. potential output. Alongside unchanged net external debt, gross flows — gross external debt and external assets — can be scaled back in

parallel. Overall, gross external debt must be further reduced in order to decrease Hungary's vulnerability.

Economic policy can achieve a reduction in gross external debt by prioritising the financing of government debt from internal funds; the most adequate means for this is shifting towards HUF government bond issuance. The shift in the financing of government debt from foreign exchange bond issuance to HUF funding, i.e. the increase in net HUF issuance and the reduction in foreign currency financing yields other benefits over and above the reduction of external debt. One benefit for the state is the improvement in the foreign currency composition of government debt, falling exchange rate sensitivity and forint exchange rate volatility are less reflected in general government gross debt ratios. This aspect should not be ignored in the current turbulent international money market setting.

Foreign currency debt could gradually be scaled back from the current 40 per cent to the level defined by the Government Debt Management Agency. As the lion's share of foreign currency debt is held by foreign investors, the process would also entail a reduction in gross external debt. Although a portion of HUF-denominated bonds are also purchased by foreign investors, this phenomenon is far less prevalent compared to foreign currency bonds.

If the concept of self-financing is implemented, the ratio of foreign currency in public debt could return to pre-crisis levels faster, greatly benefiting Hungary's vulnerability perception. Before the crisis, nearly 30 per cent of central budget debt was denominated in foreign currency, but this ratio rose during the crisis to reach nearly 50 per cent by 2011. The ratio has now dipped to around 40 per cent in the wake of restricted foreign currency bond issuance, but this still materially exceeds pre-crisis levels. The partial financing of maturing foreign currency debt in forint could further contribute to gradually scaling back foreign currency debt. The foreign currency renewal rate determines the pace of return to the pre-crisis foreign currency ratio level.

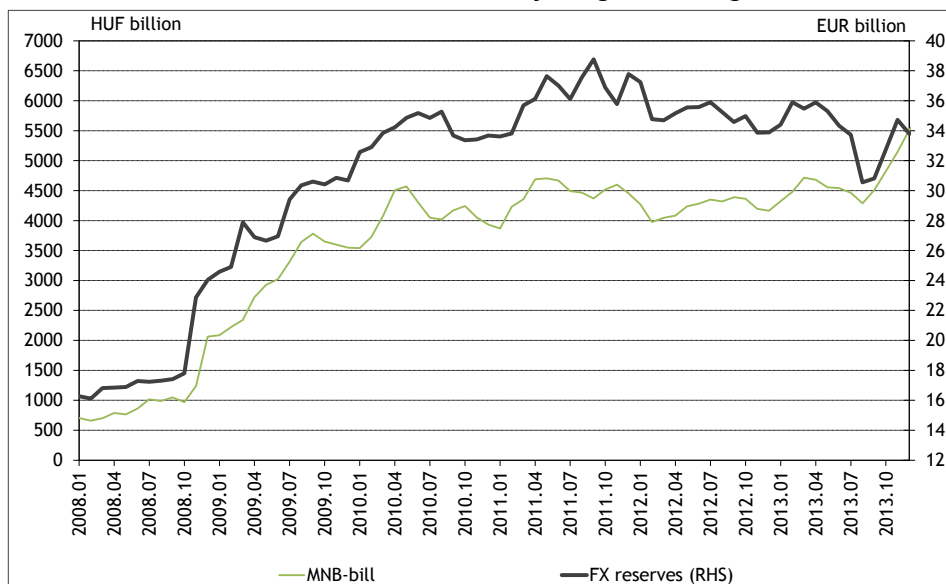
2.3. The relationship between short-term external debt, foreign exchange reserves and the stock of two-week MNB bills

If net external debt is considered as given, gross external debt can only be scaled back by decreasing gross receivables from the rest of the world in parallel, i.e. it entails a reduction in foreign exchange reserves in every case. Current reserve trends ensure ample leeway for supporting the self-financing concept through foreign exchange reserves: the process allows a parallel reduction of external debt, foreign exchange reserves and the stock of main two-week central bank instruments. Foreign exchange reserve adequacy is also an essential element in the assessment of a country's vulnerability. This warrants an examination of recent and expected developments in foreign exchange reserves and short-term external debt.

Following the onset of the US subprime crisis in the summer of 2007, short-term external debt began rising rapidly, necessitating an increase in foreign exchange reserves. Hungary's short-term external debt shot up from around EUR 20 billion in early 2007 to EUR 30 billion by late 2008, peaking around EUR 35-40 billion in 2010-2011. The default of Lehman Brothers in fall of 2008 prompted greater prudence from foreign actors, long-term funds became more expensive and

banking system actors shortened the maturity of their external funds, which sped up the increase in short-term debt within the banking system. In addition, the depreciation of the forint and the euro at the time also fuelled the rise in short-term external debt.¹

Chart 4: Sterilisation stock and foreign exchange reserves



Based on the balance sheet equation that applies to the MNB, the increase in foreign exchange reserves was reflected in a rise in the stock of the main sterilisation instrument, i.e. two-week MNB bills in 2008-2009. After this, the reduction of short-term external debt was inhibited by the acceleration in the general government's short-term external debt from late 2009, when the maturities on the loans taken out in the context of loan packages from international organisations started shortening, the state having swapped — out of necessity — 5 to 10-year maturity foreign currency bonds for foreign loans with shorter terms.

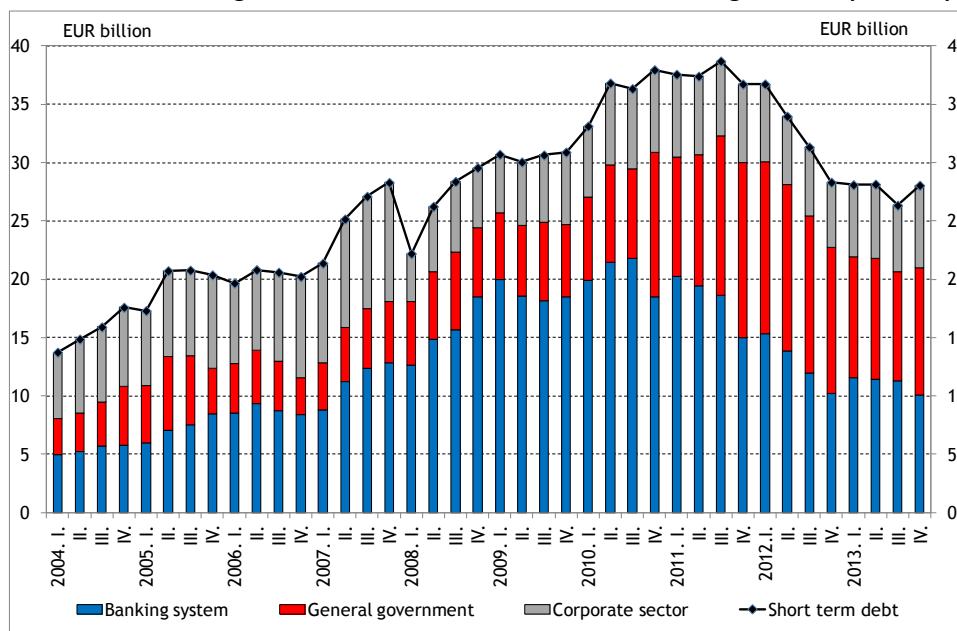
Short-term external debt decreased materially from its peak in mid-2011, which enabled a reduction in foreign exchange reserves. Hungary's total short-term external debt assumed a downward trajectory from early 2012, simultaneously to the scaling back of gross external debt. Short-term debt in the banking system started decreasing from the second half of 2010, at which point the state's short-term debt was still rising. The decreasing trend accelerated within the banking system from late-2011. The first boost towards the reduction of banks' short-term external debt was given by the decline in foreign currency lending in Hungary, reducing banks' dependency on external funds, in turn allowing maturing debt to be only partially renewed in the form of short-term debt. Banks' debt has now returned to near pre-crisis levels.

The general government's short-term external debt started dynamically declining from late-2011, and now accounts for less than two thirds of the levels prevailing at that time. This reduction was partially driven by the gradual repayment of the IMF and EU loan package, with instalments

¹ Banks fulfilled margin calls stemming from depreciating exchange rates using short-term loans, and the Government Debt Management Agency's margin account also increased in the wake of the weakening euro.

removed from short-term debt upon redemption. Hungary's prepayment of the full outstanding loan amount to the IMF in August 2013 further reinforced this process. The decreasing short-term external debt enabled a reduction in foreign exchange reserves, which had also reached a peak in mid-2011.

Chart 5: Short-term gross external debt based on remaining maturity and by sector



In terms of reserve adequacy, foreign exchange reserves exceeded the amount of short-term debt at the end of 2013, in line with the so-called traditional Greenspan-Guidotti rule commonly used to assess foreign exchange reserve adequacy. Hungary's short-term external debt in late 2013 stood at EUR 28 billion and its foreign exchange reserves amounted to a materially higher figure of nearly EUR 34 billion. Based on end-2013 data the level of foreign exchange reserves also satisfied the reserve requirement defined based on the more conservative, so-called Guidotti-Greenspan-IMF rule, which consists of adding a certain proportion of inter-company loans to Hungarian corporations to short-term debt. The new combined indicator proposed by the IMF in 2011 not only reflects short-term external debt, but also takes other common indicators into account such as money supply and the size of external trade. Our own calculations for end-2013 show that the MNB's reserve holdings reached the upper edge of the optimal band defined based on the new combined metric.²

Looking ahead, the MNB's foreign reserve holdings may increase somewhat this year, primarily driven by the inflow of European Union transfers. Based on the latest MNB statistics, if the maturity structure of foreign debt remains unchanged, shortening-maturity debt may decrease throughout the year, predominantly in the second half. Additionally, external debt, specifically short-term external debt could also continue declining alongside the sustained current account

² http://www.mnb.hu/Saitoszoba/mnbhu_pressnews/mnb_szakmai_cikkek_20140422

surplus. If this materialises, it could also be beneficial for reserve requirements and allow a limited, gradual and prudent reduction of reserves.

As the reserve requirement decreases in parallel with falling short-term external debt, shrinking reserve holdings also entail a reduction in sterilisation stock. This process also holds benefits for the central bank in addition to the ones outlined above. Assuming that the objective of bolstering internal financing is achieved and the marginal investors of rising HUF issues are residents, decreasing external debt could also reduce the foreign exchange reserve holding requirement. In addition, based on the current level of reserves, expected developments in reserves and the debt-related trends outlined above, there is leeway for scaling back foreign exchange reserves if trends remain unchanged, potentially fostered by further decreasing external debt. The decline in foreign exchange reserves would materialise in parallel to a reduction in two-week MNB bills.

2.4. The supply side of self-financing

The Government Debt Management Agency has stated its commitment to increasing forint issuance in its latest financing plan. In 2014, foreign currency bonds of GBP 0.5 billion will reach maturity in May, EUR 1 billion in July, and EU loans in the amount of EUR 2 billion will reach maturity in October. Substantial purchases of HUF bond issues by economic agents would be required in 2014 to achieve the current financing plan if no further foreign currency bonds are issued. The Hungarian banking system therefore needs to contribute materially to the achievement of the self-financing concept. In practical terms, this means that if non-resident demand is in line with the historical average in 2014, the banking system will have to absorb the “surplus” HUF bond issues and the supply arising from the HUF renewal of foreign currency bonds. Longer-maturity government securities would ideally have to be issued in order to mitigate rollover risk.

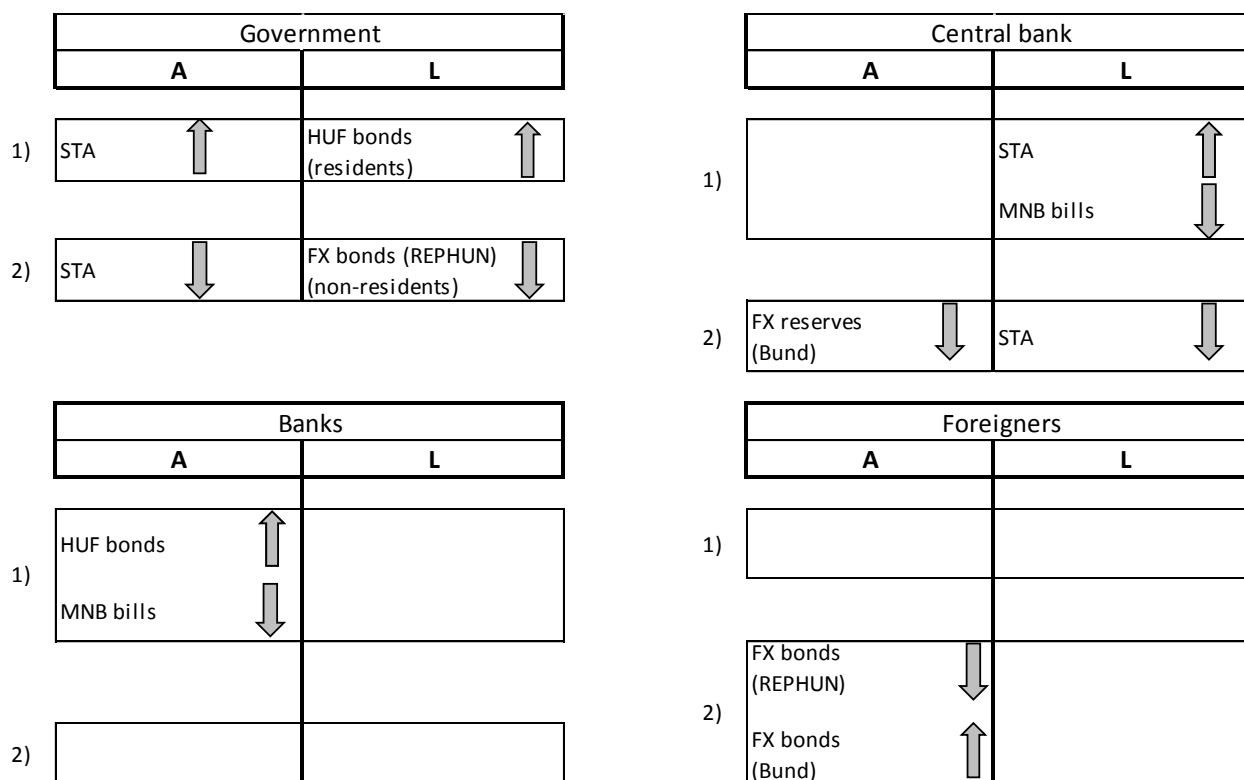
If the effort to increase HUF issues is successful, it would yield a gradual increase of the Single Treasury Account (STA) and excess reserves could already be used to refinance foreign exchange maturities falling due throughout the year. If the effort is only partially successful, the March issue and the state’s currency deposit could be used to fund redemption and the HUF funds accumulated on the STA could be used to fund EU loan redemption falling due in autumn. This calls for non-residents meeting their historical average level of purchases and banks assuming a greater role in the funding of government debt. The purchase of government securities by the banking system could be fostered by more flexible issuance by the Government Debt Management Agency, or by the MNB using its own instruments.

2.5. Impact of internal financing on economic agents’ balance sheets

If the shift towards HUF financing proves successful, it would entail asset-side restructuring among banks: the stock of two-week MNB bills would shrink, while that of government securities held in parallel would rise. This process would consist of an increase in the STA in the wake of higher HUF issuance, while government security purchases by banks would decrease the stock of two-week bills held by banks at the central bank (1). Then, as foreign currency debt matures, foreign exchange conversion would be carried out on the STA, which the Government Debt

Management Agency would use to finance the redemption of foreign currency bonds using the higher STA balance, while the MNB's foreign exchange reserves would shrink by the conversion amount, and the central bank's balance sheet would contract (2).

Chart 6: Balance sheet impact of increasing forint issuance and government security purchases by Hungarian banks



This process would result in the substitution of a portion of main central bank instruments among the assets of Hungarian banks by HUF government securities. This would allow banks to finance the Hungarian State instead of the central bank, replacing the two-week maturity with a much longer one, which holds lower rollover risk and represents lower interest rate risk on the level of the consolidated general government. On the consolidated general government level, interest expenses would also fall: while the Government Debt Management Agency would incur an extra cost by financing itself from higher HUF yields instead of lower foreign exchange bond yields, this would be offset by lower interest expenses for the MNB in the wake of its balance sheet contraction and lower stock of MNB bills.

The state's debt profile would be sounder, featuring HUF debt instead of foreign currency debt on its balance sheet, and replacing foreign exposure with Hungarian exposure. Bank balance sheets would also undergo restructuring: receivables from the central bank (two-week bills) would be replaced by receivables from the budget (HUF bonds). The position vis-à-vis non-

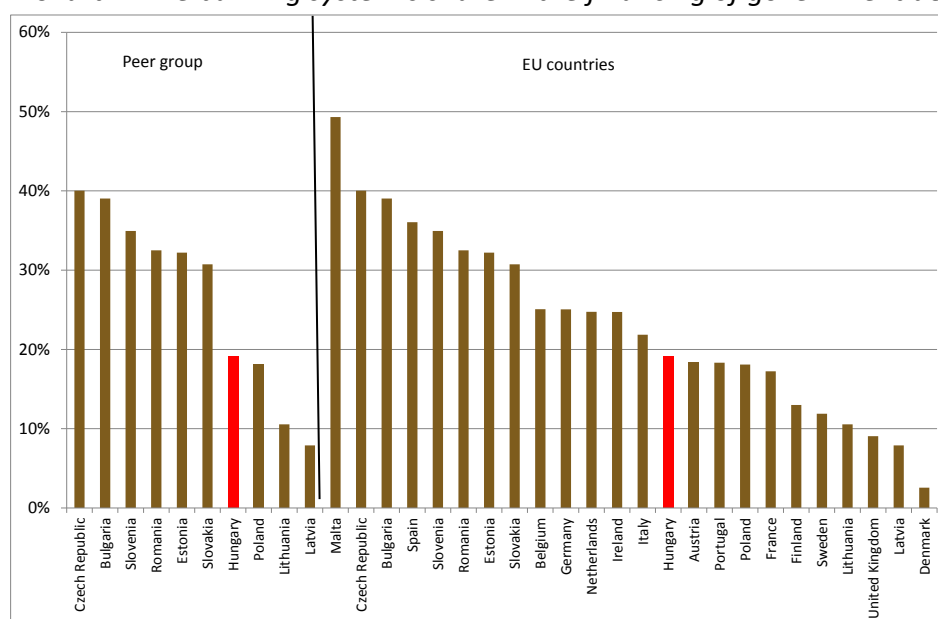
residents would improve in gross terms, as gross external debt would diminish, while net external debt would remain unchanged as foreign exchange reserves would also decrease.

2.6. Creating demand for a higher volume of HUF government securities: incentivising the banking system

Based on banks' asset structure and their share in the financing of total government debt, there is leeway for increasing their holdings of government securities through the restructuring of receivables from the central bank by replacing them with government bonds. A comparison with certain CEE countries shows that within the exposure of Hungarian banks towards the state, receivables from the central bank account for the largest chunk, compared to other countries where receivables from the budget tend to account for the largest portion. In other words, there is a shift towards MNB bills from government securities among Hungarian banks. This means that if banks would invest a portion of their sterilisation stock into government securities, the internal ratio would shift towards government securities while overall exposure towards the state would remain unchanged.

Meanwhile, banks represent a relatively small proportion in the funding of government debt, especially relative to the CEE region acting as the reference group. Banks' holdings of government securities within total government debt is also below average by European Union standards, and leeway in this regard is especially striking compared with the more relevant emerging new member states.

Chart 7: The banking system's share in the financing of government debt



Source: ECB, Eurostat

3. CENTRAL BANK INSTRUMENTS TO FOSTER GOVERNMENT SECURITY PURCHASES BY BANKS

Increasing banks' HUF government security purchases is therefore a key element of self-financing, shifting from channelling HUF liquidity within the banking system from two-week MNB bills to government securities. Measures aimed at reinforcing the demand side of the

government securities market are also called for to mitigate the yield impact stemming from extra issuance. The higher ratio of HUF-denominated financing of government debt and the higher level of foreign exchange reserves held by the central bank would allow the substitution of foreign currency debt, allowing a shift towards a more self-financing state. Recasting the central bank's set of instruments could contribute to implementing self-financing.

The recasting or expansion of the central bank's set of instruments would feature two phases aimed at spurring banks to purchase long-term government securities instead of two-week instruments. The first phase would be channelling HUF liquidity out of two-week central bank instruments, while the second phase would consist of channelling banks' HUF liquidity into long-term government securities.

Four instruments introduced simultaneously would support the successful implementation of the programme. The first one would be to "phase out" banks' HUF liquidity from two-week MNB bills through their conversion into deposits and dispersing it among various investments along the entire yield curve. The bank can choose among maturities based on its liquidity, yield and risk preference. In this context, interest rate swaps are the second instrument, repo transactions the third and asset swaps the fourth available as "diversion instruments" towards the long end of the yield curve.

Interest rate swap transactions allow banks to significantly reduce their interest rate risk, which encourages them to hold funds in long-term government securities, that is, government bonds. Repo transactions and asset swaps could come in handy in the event of turmoil. To avoid banks from accessing HUF liquidity by selling government securities and/or using swaps to access foreign currency liquidity during periods of turmoil — which would further exacerbate turmoil —, the central bank can use these instruments quickly and cheaply to provide HUF or foreign currency liquidity in exchange for government securities. By adding central bank instruments to the available set of instruments and by incorporating them into bank liquidity plans, banks could see their "cost of preparedness" decrease.