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Financial Stability and Macroprudential Policy Department

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**Minimum requirements on changes in loans relative to changes in deposits (GLTDF)  
as the Bank of Slovenia macroprudential instrument**

By amending the Regulation on the minimum requirements for ensuring the adequate liquidity position of banks and savings banks (hereinafter: Regulation) Bank of Slovenia introduced minimum requirements on changes in loans to the non-banking sector relative to changes in non-banking sector deposits, where the ratio is calculated on changes in stocks before considering impairments (hereinafter: GLTDF - gross loans to deposits flows) as a macroprudential instrument.

The GLTDF instrument aims at slowing down the decline in the banking system loan-to-deposit (hereinafter: LTD) ratio, stabilizing the banking system funding structure and mitigating systemic risk. There is no intention to prevent further reduction in LTD as it is important for banks to reduce their dependence on wholesale funding. However LTD should reduce at slower pace based on increasing deposits rather than further credit contraction. In case of further reduction in LTD with credit deleveraging it is necessary to prevent and mitigate the systemic risk that can hamper the stability of the banking system and its contribution to economic growth.

The instrument is introduced on a solo basis and is valid only for banks in Slovenia; no significant cross-border effects are therefore expected in other Member States or on the single market. The instrument is being introduced as a temporary measure until the stabilization of the banks LTD and funding structure is achieved.

The Regulation, was published in the Official Gazette of the RS on 30<sup>th</sup> May and became effective on 30<sup>th</sup> June 2014.

**Explanatory note**

There were different drivers upon which the adoption was decided. Firstly, the reduction in the banking system loan-to-deposit ratio from the peak at the end of 2008 at 162% to 130% at the end of 2012 was swift, but further accelerated in 2013 across the whole banking system to reach 108% at the end of the year. The banks decreased their LTD ratio by simultaneously increasing the volume of deposits from the non-banking sector (hereinafter: NBS) and contracting their lending to the NBS. The main counterpart to this development was a sharp decline in commercial wholesale funding and the contraction of the banking system's total assets.

Another effect was a substantial fall in the banking system second class liquidity ratio (KL2), which is defined as the ratio of financial assets over liabilities, both with a residual maturity of up to 180 days and measures the funding liquidity risk in six-month horizon. From the peak at the end of August 2009 at 126%, the KL2 ratio fell by 50 percentage points to 76% as of mid-December 2013<sup>1</sup>. This development pointed to a rise in system-wide funding liquidity risk. A large fall in mostly medium to long-term wholesale funding was partly replaced with a rise in sight deposits and deposits with an original maturity of over one year. The level of liabilities with residual maturities of up to 180 days therefore decreased during the aforementioned period (the end of August 2009 until mid-December 2013) by 10%. This is less than the fall in the banking system total assets, which decreased by 19% and far less than the stock of financial assets with residual maturities of up to 180 days, which decreased during the same period by 46% largely due to severe credit deleveraging.

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<sup>1</sup> when the transfer of bad assets to BAMC and their replacement with BAMC securities took place

Furthermore, by increasing NBS deposits and simultaneously contracting their lending activities, the banks restricted the intermediation of financing to the NBS, which can feed back into non-performing loans and hamper bank liquidity.

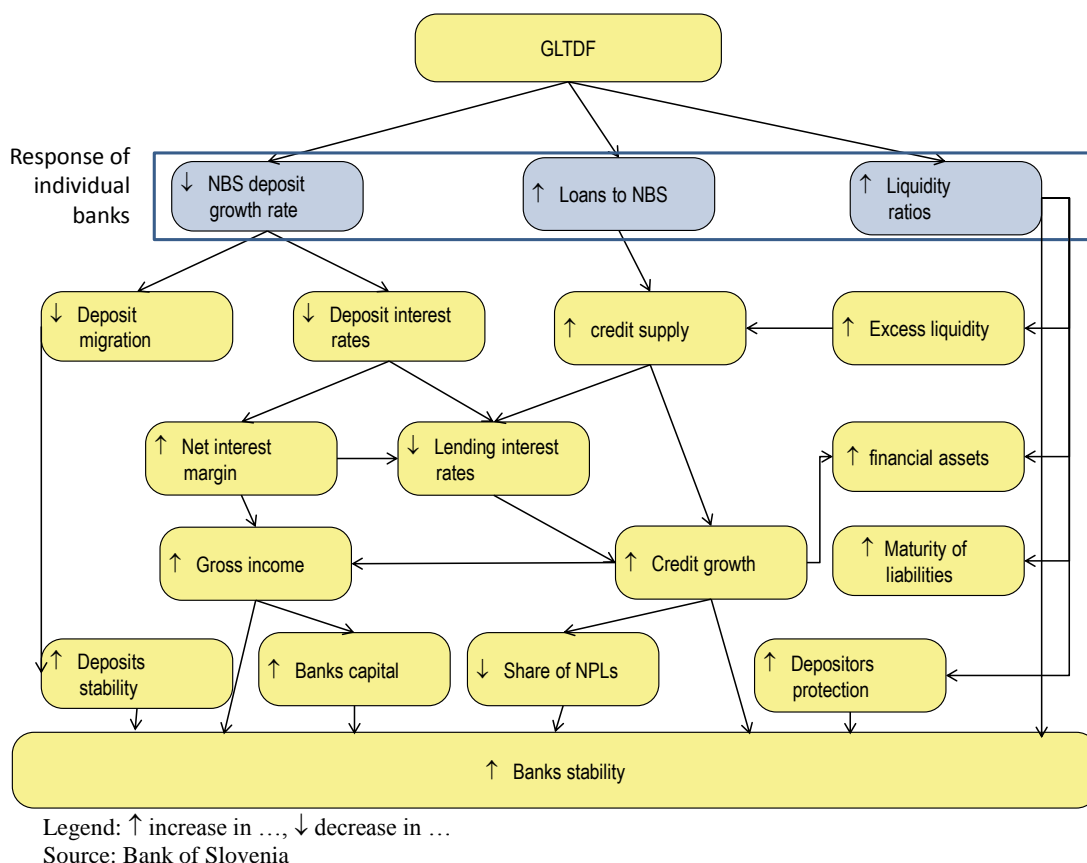
Lastly, a business model which is based on increasing the amount of deposits but contracting the volume of loans restricts the bank's ability to generate profits and capital.

### Expected transmission mechanism of the GLTDF instrument

The intention of the instrument is to encourage banks to limit the contraction of the LTD ratio or to reinforce the volume of liquid investments and the liquidity ratios.

Higher liquidity ratios increase the stability of the banking system. The measure would reduce deposits migration and contribute to deposits stability, strengthen interest margins or allow for lower lending rates. While enhancing banks financing and lowering lending rates it could ultimately lead to a turnaround in credit growth and result in a lower share of non-performing loans. Together with a higher net interest margin, it would allow banks to generate more capital internally through retained earnings, re-establishing the long-term sustainability of their business models and further improving banking system stability.

Figure: Expected transmission mechanism of the GLTDF instrument



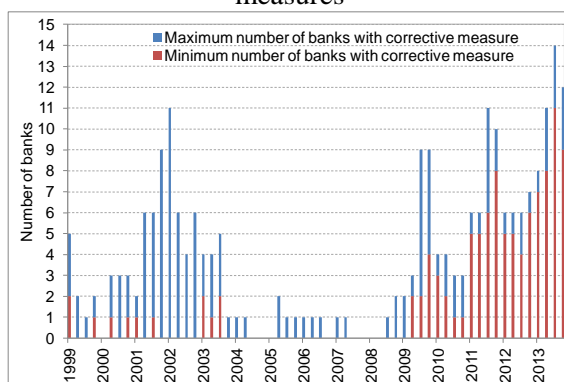
The instrument does not encourage banks to take additional credit risk. Each bank has full responsibility to properly assess and manage the credit risk. In case a bank estimates the credit risk being too high or the credit demand too low and insufficient, it can fulfil the regulation through higher liquidity ratios. There is a risk that a bank with a large increase in deposits would adopt lower credit standards. This risk is considered as less significant in the current circumstances where banks are facing difficult conditions, intensified market discipline, and reinforced supervisory attention (*inter alia* in the context of the comprehensive assessment). Additionally, an indicative target range is defined for the banking system LTD with the upper bound being a more binding constraint. A strict oversight of credit risk is also a high priority for the on-going prudential supervision of banks.

The instrument is designed to work on the margin, i.e. on the increments of loans and deposits, considering the gross NBS loans before impairments. It will not impose a burden on a bank due to an inherited portfolio structure, or owing to mandated restructuring measures. It supports further diversification of banks funding structure. Furthermore, the enforcement mechanism for non-compliance is designed to be effective without weakening a non-compliant bank.

The calibration of the GLTDF instrument was based on historical experience and simulations. Based on the long-term average LTD to GDP growth rates ratio, the target range for the LTD ratio at the system level was defined at between 105% and 125%. In March 2014, the system level LTD stood at 103.2%, and was thus below the lower bound of the target range. This situation contributed to the decision to activate the instrument, with no intention to redirect the LTD back into the target range but rather as the argument for introducing the minimum requirements for GLTDF to slow down the decline in LTD. The minimum requirements set the floor for the GLTDF but with a carefully planned phase-in. In the first year the minimum requirements for GLTDF is at 0%, and in the second year at 40%, which is the historical lower threshold for the GLTDF at the system level over a ten year period, i.e. from 1999 until the end of 2008.

The GLTDF instrument was evaluated through simulation by being tested on historical data for individual banks. The figure below shows, for each quarter since the beginning of 1999 until the end of 2013, the maximum and minimum number of banks that would have been subject to corrective measures based on failing to meet the GLTDF minimum requirements. The simulated estimate depends on the date of the introduction of the instrument. However, the simulation cannot take into account the banks response to the measure itself.

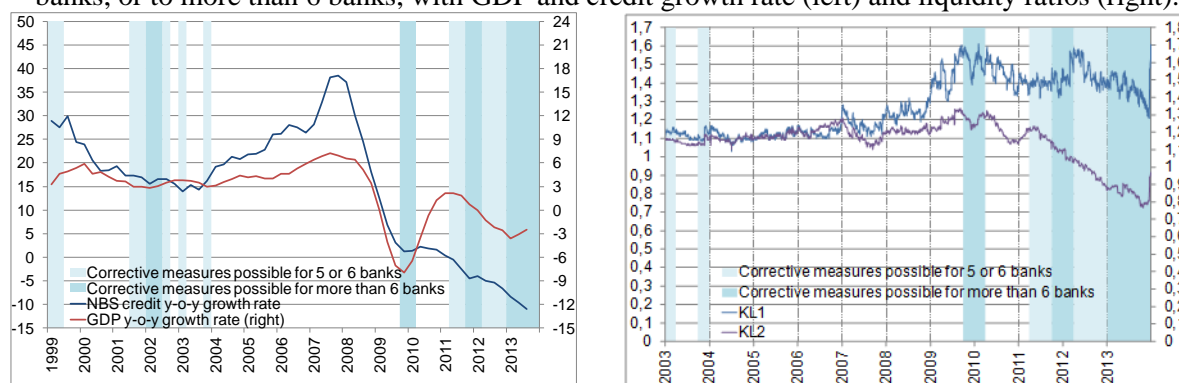
Figure: The maximum and the minimum number of banks hypothetically subject to corrective measures



Source: Bank of Slovenia

Simulation shows that the proposed GLTDF instrument is highly counter-cyclical. As can be seen in the figure below, it would operate primarily during harsh economic conditions with low or negative economic and credit growth, in particular in 2001-2002, the end of 2009 and the 2011-2013 periods.

Figure: Comparison of periods when corrective measures would be applied to a maximum of 5 or 6 banks, or to more than 6 banks, with GDP and credit growth rate (left) and liquidity ratios (right).



Note: Liquidity ratios are defined as financial assets over liabilities, where the KL1 is calculated based on financial assets and liabilities with residual maturities of up to 30 days and KL2 with residual maturities of up to 180 days.

Source: Bank of Slovenia

## Summary of the amendments

The amendments to the Regulation introduce minimum requirements for GLTDF, impose corrective measures on those banks that do not meet the minimum requirements, and define the exemptions from the calculation of GLTDF. The following explains the key points of the instrument in more detail:

### a) Minimum requirements

The banks are obliged to comply with the following requirements at the end of each quarter:

- 1) From 30 June 2014 up to 31 March 2015 a bank shall, in the case of a positive annual increase in deposits, achieve a positive GLTDF ( $GLTDF \geq 0\%$ ), meaning that a bank does not reduce the gross volume of NBS loans.
- 2) From 1 April 2015 onwards a bank shall, in the case of a positive annual increase in deposits, achieve a GLTDF of at least 40% ( $GLTDF \geq 40\%$ ). This means that in the event of a positive annual increase in deposits, the annual increase in gross NBS loans would reach at least 40% of the increase in deposits.

### b) Corrective measures

A bank which is unable to comply with the minimum requirements for GLTDF shall fulfil the following corrective measures.

- 1) The fulfilment of stricter GLTDF requirements calculated on quarterly changes in stocks before considering impairments (hereinafter: GLTDFq).
  1. from 30 June 2014 up to 31 March 2015, in the case of a positive quarterly increase in NBS deposits, the GLTDFq shall reach at least 40% ( $GLTDFq \geq 40\%$ ).
  2. from 1 April 2015 onwards, in the case of a positive quarterly increase in NBS deposits, the GLTDFq shall reach at least 60% ( $GLTDFq \geq 60\%$ ).
- 2) Should a bank fail to meet the GLTDFq and GLTDF requirements, its liquidity requirements increase and shall, within two months after not fulfilling the GLTDFq requirements at the end of the quarter, reach an additional liquidity ratio with a value above 1, in the following order:
  1. the first class liquidity ratio<sup>2</sup> excluding the pledged amount of the pool of eligible collateral at the Bank of Slovenia,
  2. the second class liquidity ratio<sup>3</sup>, whereby the pledged amount of the pool of eligible collateral at the Bank of Slovenia may be included on the asset side,
  3. the second class liquidity ratio<sup>4</sup>.

All corrective measures expire when the bank meets the minimum requirements for GLTDF.

### c) Exemptions from the calculation of GLTDF

In meeting the GLTDF and GLTDFq requirements, the bank is not required to take the following into account:

- (a) an increase in deposits by the non-banking sector deriving from the transfer of the liabilities of another bank on the basis of the Bank of Slovenia Decision;
- (b) a reduction in gross NBS loans deriving from:
  - the transfer of claims to another bank on the basis of the Bank of Slovenia Decision;
  - the transfer of claims to the Bank Asset Management Company pursuant to the Government Measures to Strengthen the Stability of Banks Act;
  - the de-recognition of claims owing to
    - irrecoverability,
    - securitisation,
    - debt to equity swap.

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<sup>2</sup> ratio of financial assets to liabilities both with residual maturity up to 30 days

<sup>3</sup> ratio of financial assets to liabilities both with residual maturity up to 180 days

<sup>4</sup> ratio of financial assets to liabilities both with residual maturity up to 180 days