Macroprudential Policy Index for Uzbekistan

Abstract

This methodological framework was developed to provide a comprehensive assessment of changes in macroprudential policy instruments and to develop a tool for identifying periods of macroprudential policy tightening and easing in Uzbekistan. It describes the methodology for calculating the Macroprudential Policy Index (MPI) for Uzbekistan. The MPI incorporates the risk intensity of instruments and assets related to borrowers, liquidity-related instruments, and capital requirements.

Keywords: index, capital, liquidity, macroprudential policy, debtor-oriented instruments, sub-index, risk level.

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The MPP Index is used to aggregate all MPP measures implemented by the CBU into the single index and to assess whether the macroprudential condition has tightened or eased. It is also employed to analyze the impact of MPP measures on loan growth and house prices[1].

The MPP Index was developed to comprehensively assess changes in MPP tools and to identify the tightening and easing phases of MPP. The index includes borrower-based and liquidity tools, minimum capital requirements, and risk weights of assets. In particular, although minimum capital requirements are mainly set within the scope of banking supervision, changes in these requirements affect the level of systemic risk. Also, taking into account that the CCoB is part of Tier 1 capital requirements, minimum capital requirements have been included in Uzbekistan's MPP Index.

In calculating the MPP Index, historical changes in the regulatory requirements for banks were taken into account, using the dates of these requirements' entry into force and repeal. In addition, changes in the indicators were considered in the calculation of the index.

As borrower-based tools, the index includes DSTI cap for loans to individuals, as well as changes in requirements for issuing loans to individuals in FX.

Changes in minimum requirements for Tier 1 and CAR are included in the MPP Index as capital requirements.

Liquidity tools included in the index cover changes in the requirements for LCR, NSFR, instant and current liquidity ratios, the share of HQLA in total assets, concentration limit on car loans, and the maximum exposure limit for borrowers.

Changes in the risk weights of mortgage and car loans are incorporated in the MPP Index as assets risk measures.

In calculating the MPP Index, regulatory requirements for MPP tools are first defined, and changes in these requirements are calculated based on quarterly data.

[1] Eller, M., Martin, R., Schuberth, H., & Vashold, L. (2020). Focus on European Economic Integration Q2/20. Macroprudential policies in CESEE – an intensity-adjusted approach. Oesterreichische Nationalbank.

Table 1. Impact of Changes in MPP Tools on Index

Subindex	MPP tool	Impact on MPPI
Borrower-based tools	DSTI cap for loans to individuals	A 1 p.p. tightening (or easing) of the requirement increases (or decreases) the index value by 0.2 units
	Restriction on issuing FX loans to individuals	The imposition (or removal) of the restriction elevates (or demotes) the index value by 6 units
Capital tools	Tier 1	A 1 p.p. increase (or decrease) in the minimum requirement raises (or lowers) the index value by 0.5 units
	CAR	A 1 p.p. rise (or fall) in the minimum requirement expands (or decreases) the index value by 1 unit
Liquidity tools	LCR	Tightening (or easing) of the ratio increases (or decreases) the index value by 0.5 units
	NSFR	Tightening (or easing) of the ratio increases (or decreases) the index value by 0.5 units
	LCR in national and foreign currencies	Tightening (or easing) of the ratio in national and foreign currencies raises (or lowers) the index value by 0.5 units
	NSFR in national and foreign currencies	Tightening (or easing) of the ratio in national and foreign currencies increases (or decreases) the index value by 0.5 units
	Instant liquidity ratio	Tightening (or easing) of the ratio rises (or shortens) the index value by 0.5 units
	Current liquidity ratio	Tightening (or easing) of the ratio grows (or reduces) the index value by 0.5 units
	Share of HQLA in total assets	Tightening (or easing) of the limit increases (or decreases) the index value by 0.5 units
	Concentration limit on car loans	The imposition (or removal) of the concentration limit accelerates (or decelerates) the index value by 0.5 units
	The requirement established for identifying large exposure	A 1 p.p. decline (or growth) in the limit increases (or decreases) the index value by 0.1 units
	Bank's maximum exposure limit for one borrower or a group of interconnected borrowers	A 1 p.p. contraction (or expansion) in the limit raises (or lowers) the index value by 0.1 units
	The maximum amount of unsecured credit risk of a bank attributable to a single borrower or a group of related borrowers	Tightening (or easing) in the quantity limit increases (or decreases) the index value by 0.25 units
	A limit on the total amount of all major risks of the bank	A 40 p.p. drop (or surge) in the limit expands (or shrinks) the index value by 0.1 units
	A limit on the maximum amount of risk per affiliated person	A 1 p.p. reduction (or growth) in the limit increases (or decreases) the index value by 0.1 units
	Maximum exposure limit for all affiliated persons	Tightening (or easing) in the quantity limit raises (or reduces) the index value by 0.25 units

RWA	Risk weight requirements for mortgage loans	Tightening (or easing) in requirements expands (or lowers) the index value by 0.5 units
	Risk weight requirements for car loans	Tightening (or easing) in requirements increases (or decreases) the index value by 0.5 units

Source: CBU.

The impact of changes on the final index is determined based on the relative significance of the tools. In this context, increase or decrease in the implemented requirements are directly reflected in the index through changes in the nominal values of the measures, indicating the tightening or easing of MPP. In addition, the index also incorporates changes arising from the difference between the established requirements and the upper limits. Moreover, tools without quantitative indicators, such as the imposition of limits on issuing FX loans to individuals, are directly reflected in the tightening of the index value.

The value of each tool within the subindices is calculated cumulatively based on its changes and level of significance. The value of the subindices is determined as the sum of the values of their constituent tools. The MPP Index consists of subindices for borrower-based tools, capital requirements, liquidity tools, requirements, and RWA, and the final index value is calculated as the sum of all identified subindices[2].

An increase in the MPP Index indicates a tightening of MPP conditions in the country, while a decrease reflects an easing of these conditions.

[2] The MPP Index is determined by the following formula:

$$MPP\ Index = BB + CB + LB + RW$$

Where,

MPP Index – macroprudential policy index;
BB – borrower-based tools subindex;
CB – capital requirements subindex;
LB – liquidity tools subindex;
RW – risk weights of assets subindex.