National Bank of Romania

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Liquidity instruments for macroprudential purposes

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Basel III liquidity framework

- Standards
  - Liquidity coverage ratio (LCR)
  - Net stable funding ratio (NSFR)
- Additional Liquidity Monitoring Metrics (ALMM)
  - Contractual maturity mismatch
  - Concentration of funding
  - Available unencumbered assets
  - LCR by significant currency
  - Market-related monitoring tools

Basel III liquidity standards

$$LCR = \frac{\text{Stock of high quality liquid assets}}{\text{Total net cash outflows over } next\ 30\ days} \geq 100\%$$

Objective: banks maintain an adequate level of unencumbered high quality liquid assets that can meet its liquidity needs for up to 30 days

0

1M

1Y

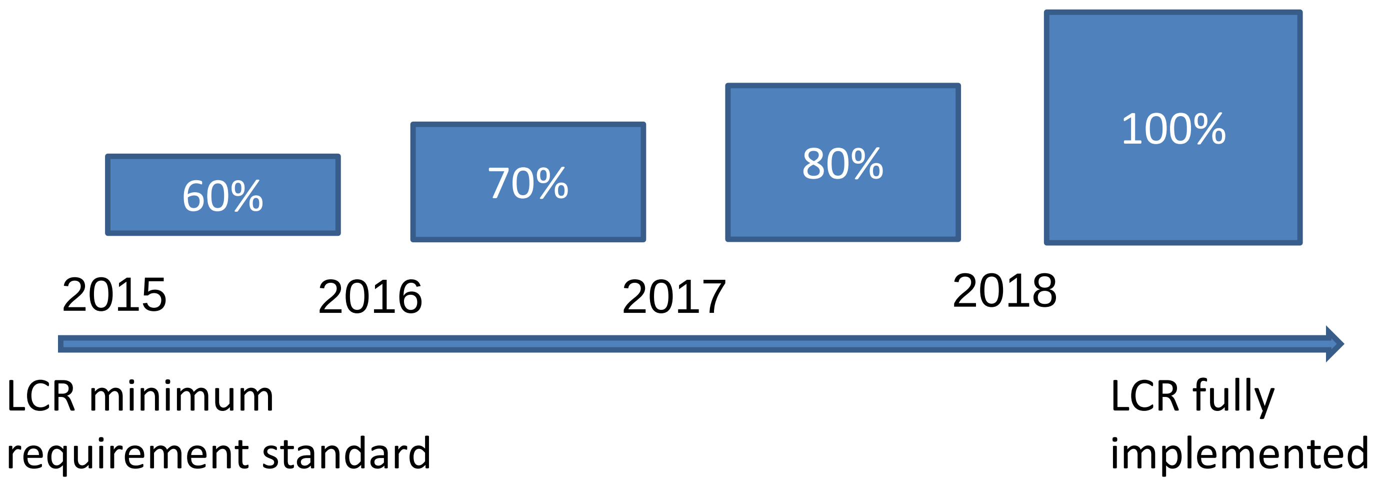
Time horizon

$$NSFR = \frac{Available\ amount\ of\ stable\ funding}{Required\ amount\ of\ stable\ funding} \geq 100\%$$

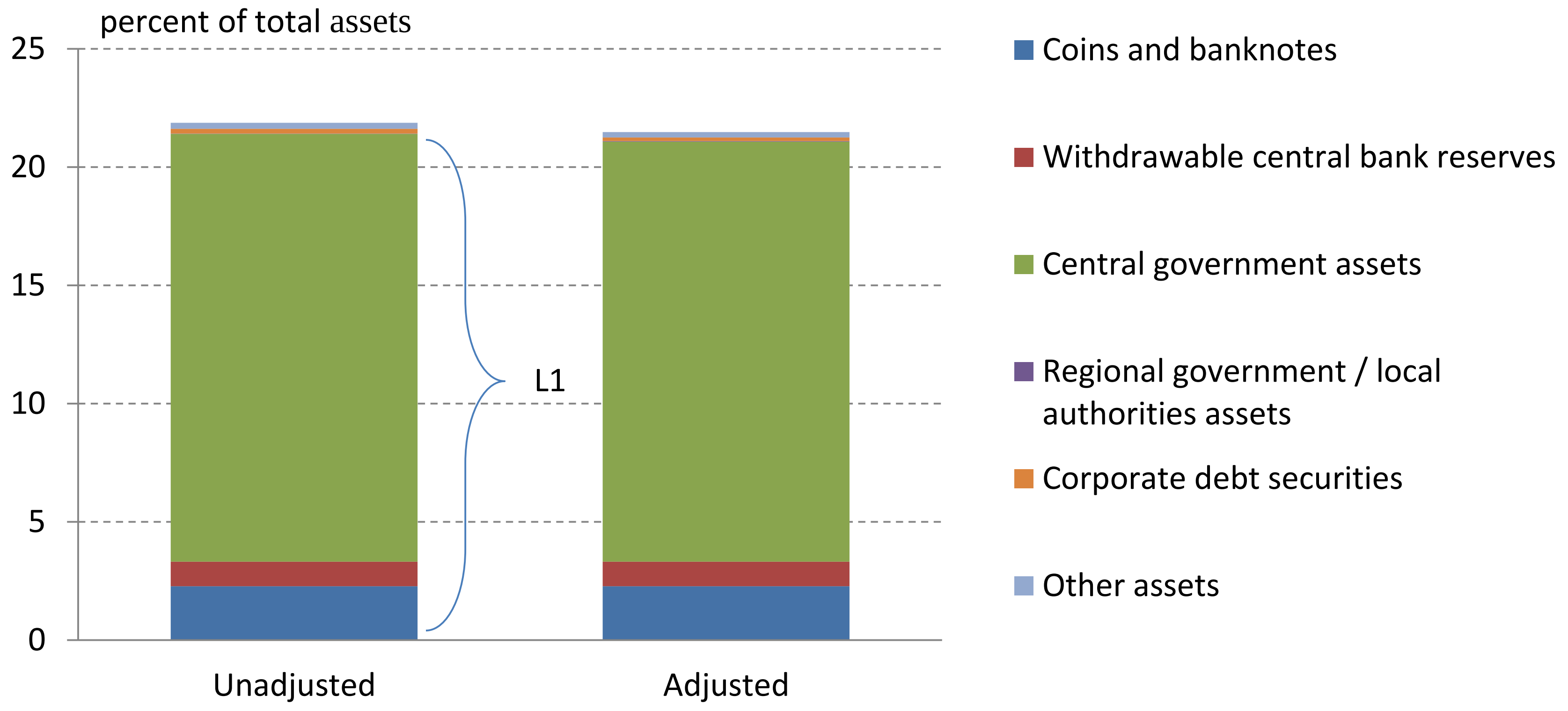
Objective: reduce maturity mismatches between assets and liabilities over a one year time horizon

Liquidity Coverage Requirement

- In January 2013 BCBS issued the final definition of the LCR
- LCR delegated act adopted by EC on 10 October 2014
- Less restrictive HQLA definition
- Relaxed assumptions for cash flows
- Possibility to use the liquidity buffer under stress conditions
- Phase-in of the LCR minimum requirement

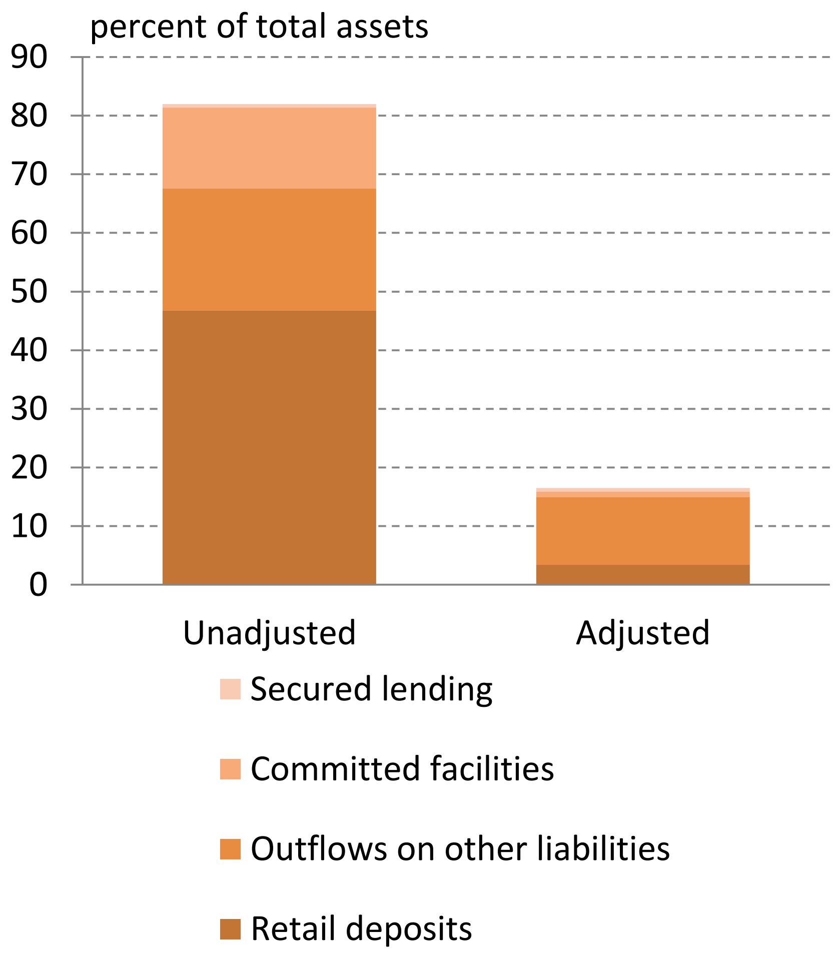


LCR liquid assets (numerator)

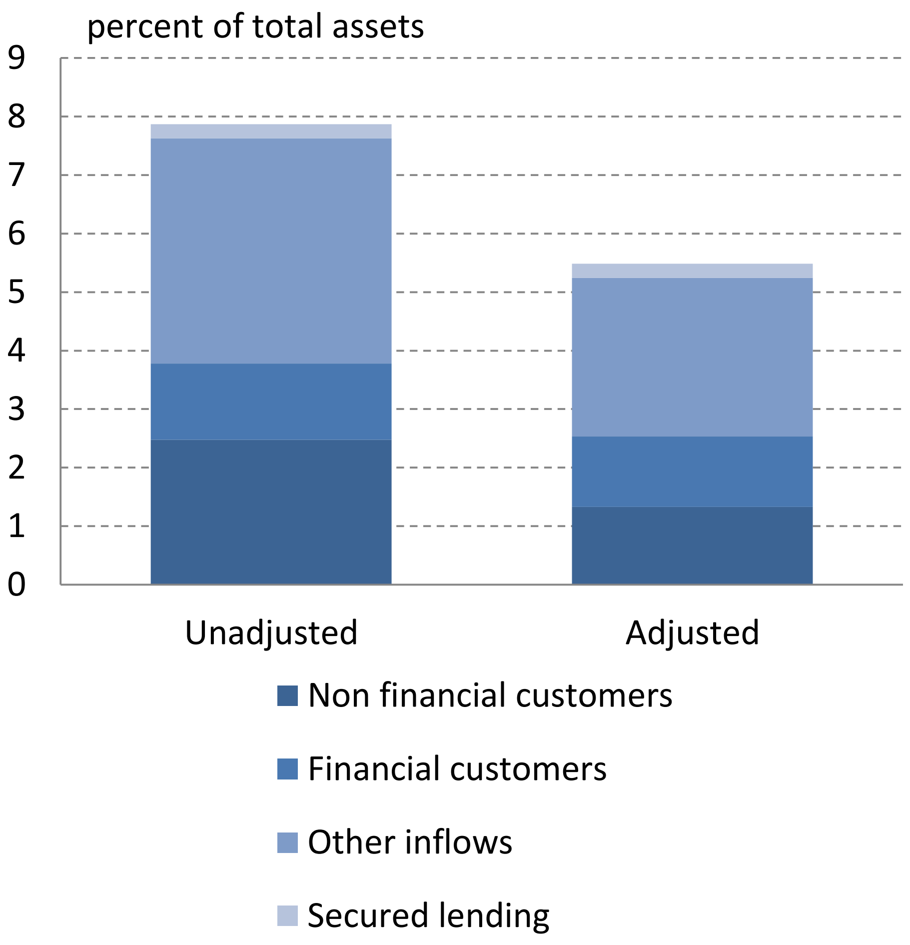


LCR Net outflows (denominator)

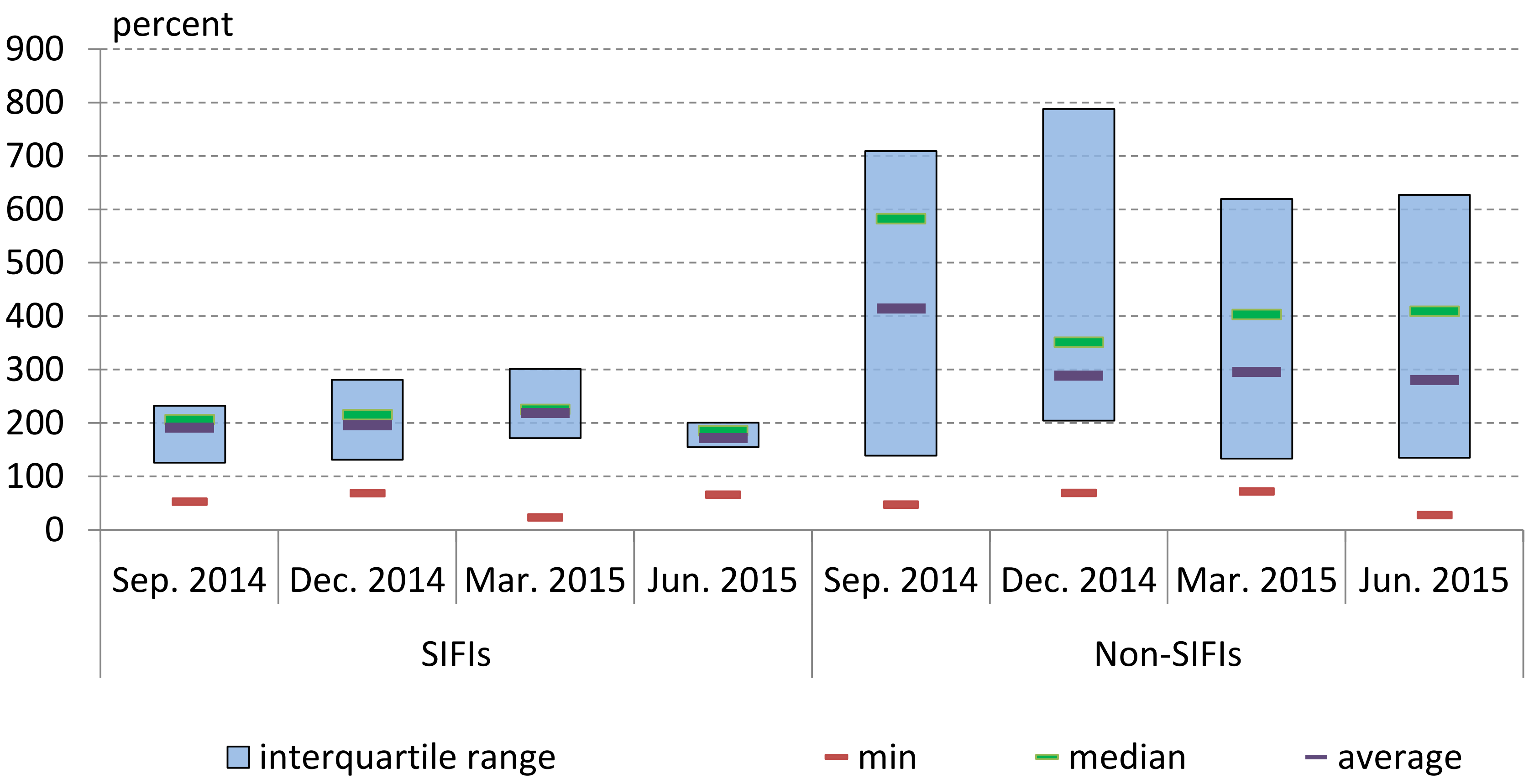
Outflows



Inflows



LCR bank distribution



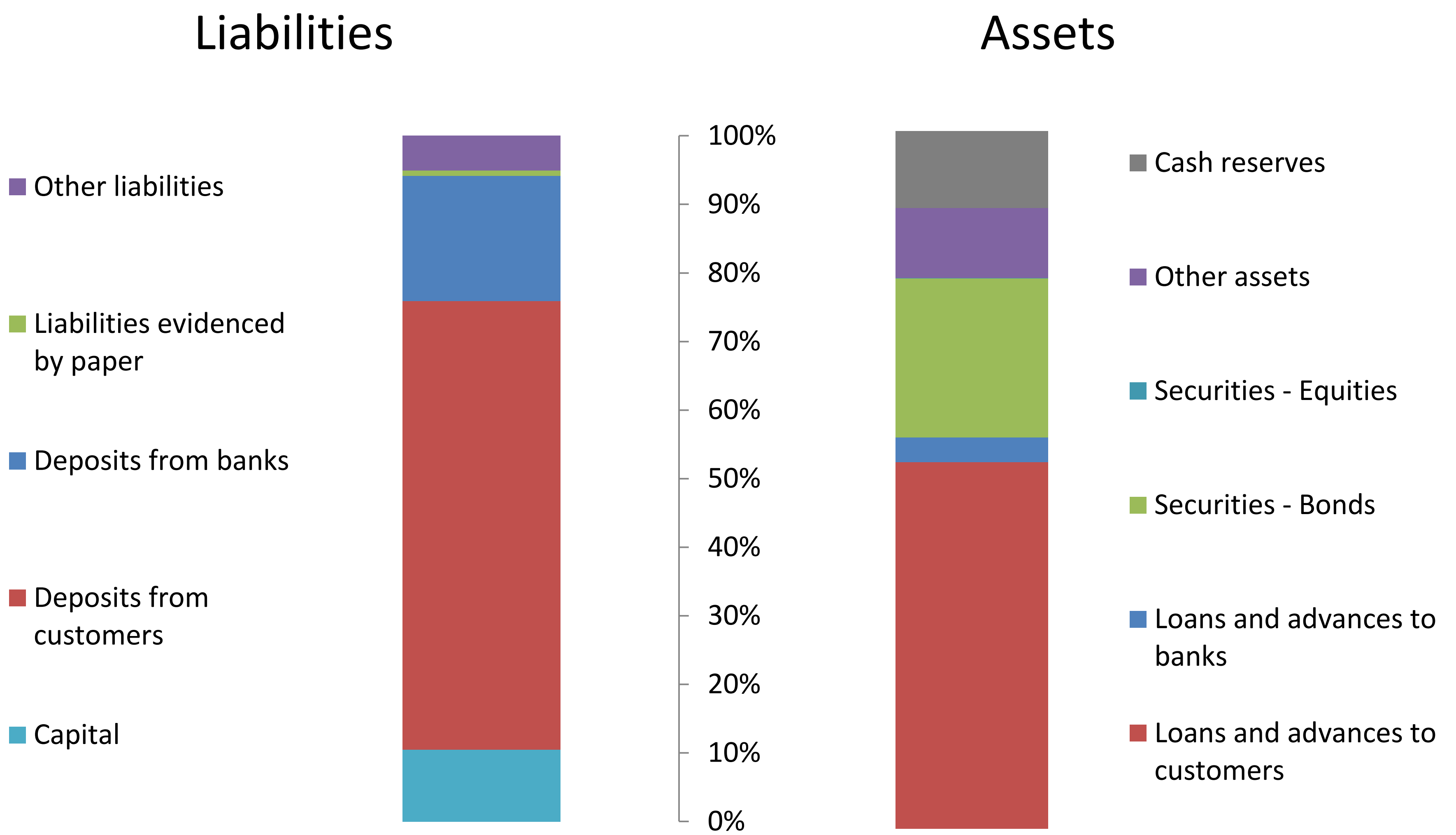
NSFR – structural liquidity metric

- BCBS concluded the on-going revision and adaptation of NSFR in October 2014
- Definition of NSFR under CRD will probably be finalized and implemented in 2018
- NSFR requires banks to maintain a stable funding profile in relation to the composition of their assets
- Promotes long term financing of assets with stable resources
- Gives a full balance sheet measure of maturity transformation
- Criticized by the financial industry mainly because it affects the maturity transformation function

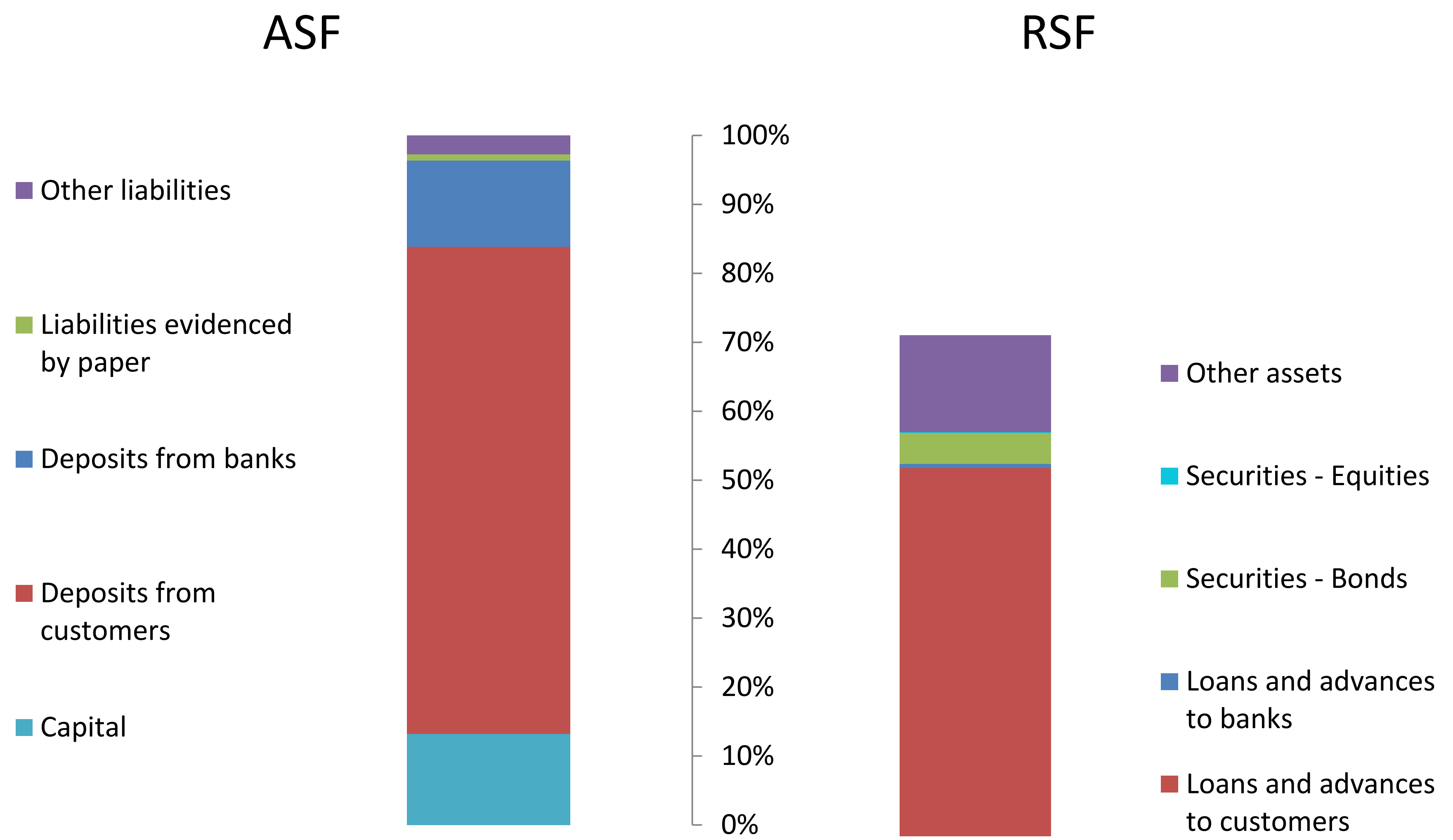
Key changes in NSFR calculation

	Change	Dec 2010	Oct 2014	Effect
ASF	Recognition of operational deposits	0%	50%	↑
	Higher ASF factors for stable non-maturity and term deposits	90%	95%	↑
	ASF factor for some funding between 6-12 months.	0%	50%	↑
	Clarification for less stable deposits	80%	90%	↑
RSF	Lower RSF factors for unencumbered retail & small biz loans	85%	50%	↑
	Higher RSF factors for non-HQLA or loans to non-bank financial institutions	0%	50%	↓
	Additional granularity, lower RSF factors for some non-HQLA	100%	85%	↑
	Higher RSF factor for HQLA encumbered for 6-12 months	0%	50%	↓
	Higher RSF factor for interbank lending for 6-12 months (symmetrical with 50% ASF)	0%	50%	↓

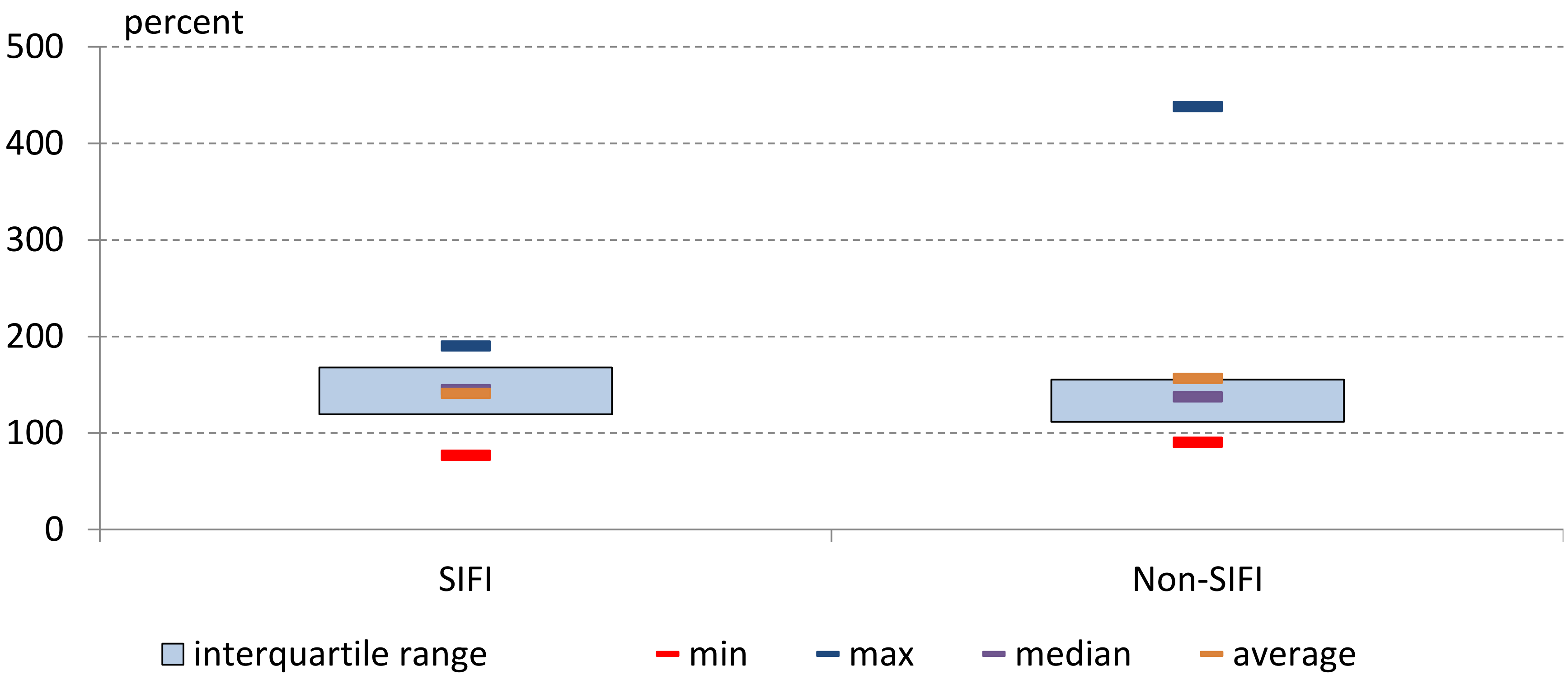
System balance sheet – absolute values



System balance sheet – NSFR weighted values



NSFR bank distribution as of June 2015

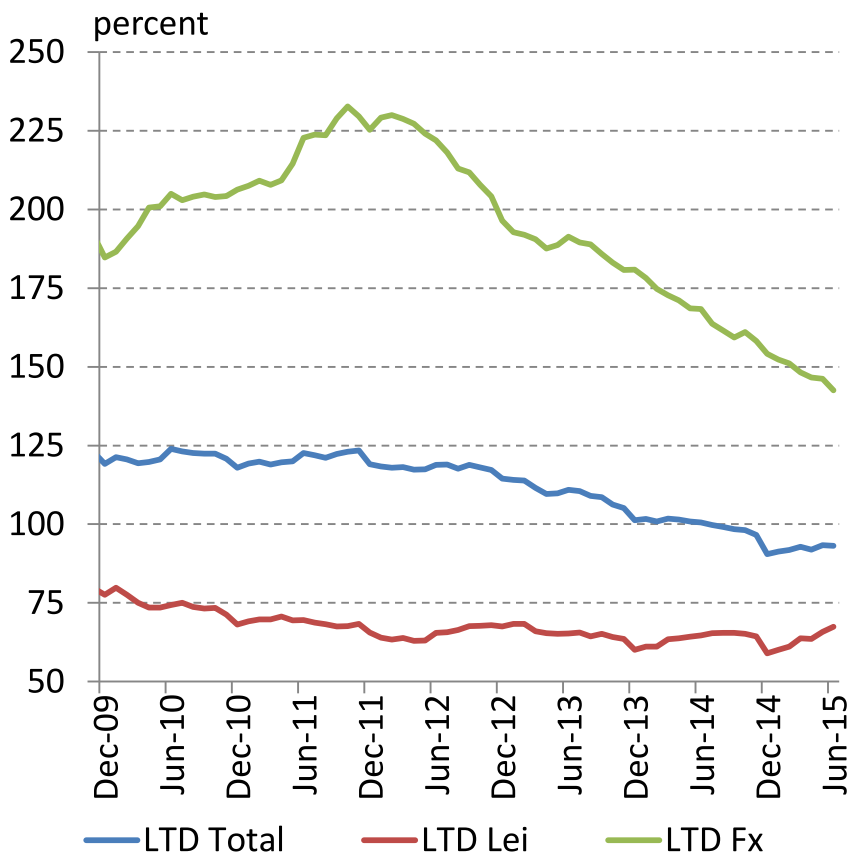


LTD – key considerations

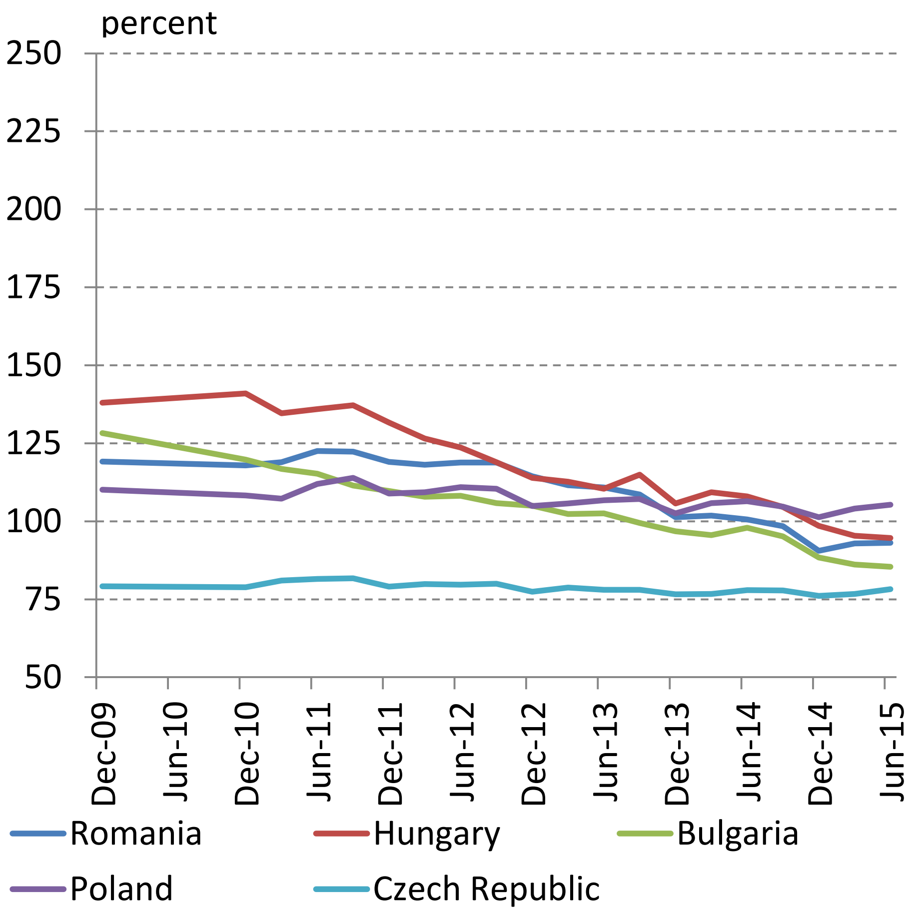
- Acts as a cap on customer loans over customer deposits
- Simple, easy to communicate, available data
- Can be used as a cyclical instrument as it incorporates credit growth in the upturn
- Can be applied on individual as well as consolidated basis (sets incentives for subsidiaries to strengthen deposit base)
- Can complement LCR and NSFR
- Does not consider all elements of the balance sheet
- National discretion (outside the CRD/CRR)

LTD

LTD by currency



LTD regional comparison



Implementation issues for business models

- Banking book portfolio
  - Raise correlation with sovereign risk
  - Differences between bond categories
  - Transfer of less liquid assets to central banks
  - Quantitative inadequacy of HQLA
- Funding structure
  - Incentives to reduce reliance on short-term funding
  - Take actions to increase stable retail deposits
  - Difficulties in placing institutional bonds
- Profitability
  - Negative impact on profitability
  - Competition for retail deposits may make them more expensive

Key instruments to address excessive maturity mismatch and market illiquidity

Instrument	Transmission channel
LCR article 458 of the CRR or Pillar 2	increase resilience to liquidity shocks by increasing the stock of liquid assets available to cover sudden outflows
Other liquidity buffer implemented under National Law	
NSFR Article 458 of the CRR or Pillar 2	increasing the stability of banks' funding bases with possible dampening effect on financial cycle (if requirements are binding)
Other stable funding requirements implemented under National Law (e.g. LTSF or LTD)	
Liquidity charges under Pillar 2	complement quantity-based ratios to reflect banks' contributions to systemic liquidity risk

LCR / NSFR for macro-prudential purposes

- LCR as a time-varying macro-prudential buffer over the minimum LCR

$$LCR\ macro = \alpha * LCR$$
$$LCR\ total = LCR + LCR\ macro$$

- adjustment of haircuts and regulatory factors (e.g. run-off and rollover rates) in the numerator and denominator of the LCR (to focus on particular assets, funding sources or sectors)
- a time-varying NSFR for macro-prudential purposes could be implemented as a buffer over minimum NSFR
- Given that $NSFR = f(LTD^{-1}, \theta)$ such a buffer could be calibrated based on LDT;
- CFR could also be used as a backstop to time-varying NSFR

Operationalization issues

- Data scarcity
- How to define the liquidity cycle? What are the indicators/triggers to activate/deactivate a macroprudential liquidity buffer and the proper level?
- Need to consider the interaction with monetary policy and other macroprudential objectives/instruments
- The scarcity of other domestic HQLA and the (already) high amount of government debt security in the balance sheet -> trade-off concentration risk vs. liquidity risk
- Empirical evidence/literature on liquidity tools is limited
- B III/CRD IV microprudential instruments are not (fully) implemented: LCR - Q1 2016 first reporting,
  NSFR probably in 2018.