



SPI Albania Project: Enhancing banks' liquidity risk management

Main Findings on banks' experience in liquidity risk management

1. Summary findings

1.1. Respondent banks represent a large share of the banking market, therefore the aggregated responses are a good evidence of the practices and experience of banks in managing liquidity risk.

1.2. Almost all respondent banks have in act a policy for liquidity risk management, approved by the bank's management and revised continuously, which cover for normal course of business and crisis situations. In most of the banks, the policy includes daily monitoring and monthly reporting for liquidity.

1.3. 7 out of 12 respondent banks (G1, G2 and G3¹ groups) use stress tests for liquidity, using different scenarios for type of deposits and currencies.

1.4. 6 out of 12 respondent banks, (G1 and G3 banks) representing have set warning signals for possible liquidity crises.

1.5. All respondent banks use internal liquidity indicators, and have set internal limits for most of these indicators. The largest number of indicators used is reported by G2 banks.

1.6. 6 out of 11 banks, (G1, G2 and G3) use risk factors to build their indicators on liquidity.

¹ G1 banks are small banks with market share less than 2%; G2 banks have a market share higher than 2% and lower than 7%; and G3 banks have a market share higher than 7%

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2. Detailed presentation of the survey findings

2.1. Characteristics of the surveyed sample

Total members of AAB (no.):	16 banks
Market Share (100%):	100%
Total respondent banks (no.):	12 banks
Respondent ratio:	75.0%
Market share of the respondent banks: (reference indicator: total assets)	67.6%
Size of the respondent banks:	small, medium, large

Most of the commercial banks operating in Albania answered to the questionnaire on banks experiences in managing liquidity risk.

The composition of the group of respondent by banks of different size is important, since they deal with different situations of liquidity as well as use different policies and strategies to manage liquidity risk.

2.2. Qualitative aspects of liquidity risk management

Conclusions:
- Almost all (11 out of 12) respondent banks have in act a policy for liquidity risk management, approved by the bank's management and revised continuously.
- In 9 out of 12 banks, this policy covers both for normal course of business and crisis situations.
- In most of the banks, the policy includes daily monitoring and monthly reporting for liquidity.
- 7 out of 12 respondent banks use stress tests for liquidity and they are G1 (1) G2 (2) banks and G3 (4) banks. The scenarios used are different by type of deposits and currencies.
- 6 out of 12 respondent banks, (G1 and G3 banks) representing 32.1% of market share, have set warning signals for possible liquidity crises.

11 out of 12 respondent banks representing 54.7% of the market have in act a policy or strategy for liquidity risk management, which is approved by the bank's management or supervisory council.

Table 1. Use of Liquidity Policy / Strategy

	Yes	No
No. of banks	11	1
% of market share	54.7	12.9

Except for one case, all other banks that have a strategy / policy for liquidity risk management revise it continuously.

Table 2. Continuous revision of Liquidity Policy / Strategy

	Yes	No
Nr. of banks	10	1
% of market share	48.1	6.6

4 banks, G1, G2 and G3 sizes, and representing 23.6 of the market, have responded to revise their policies at least once a year. Other 2 banks, respectively G2 and G3, apply the revision once in two years, while 4 other banks from groups G1, G2 and G3 have different frequencies of revisions. Their decision for revision is taken when deemed necessary, depending on market conditions changes, or Board of Directors and Group banks instructions and decisions.

Table 3. Frequency of revision of Liquidity Policy / Strategy

	6 months	1 year	2 years	Other
Nr. of banks	1	4	2	4
% of market share	0.5	23.6	16.6	15.9
Size	G1	G1, G2, G3	G2, G3	G1, G2, G3

In all banks that have a strategy / policy, there is a set of guidelines that addresses liquidity management in a normal course of business. For 9 of them from all 3 groups, with a total market share of 50.4%, it also covers crisis situations.

Table 4. Coverage of Liquidity Policy / Strategy

	Normal course of business	Crisis situations
No. of banks	11	9
% of market share	54.7	50.4
Size	G1, G2, G3	G1, G2, G3

All the banks (including the one having no specified liquidity strategy), do monitor liquidity regularly with the aim to better manage it.

9 banks monitor liquidity daily: one of them does also weekly monitoring, and 6 of them also monthly monitoring. Meanwhile most of the banks provide monthly reports on liquidity. There is one responding bank (G2) which does also quarterly monitoring and reporting of liquidity management.

Table 5. Frequency of Monitoring and Reporting Liquidity

Periodicity	Monitoring			Reporting		
	No. of banks	%	Size	No. of banks	%	Size
Daily	9	55.5	G1, G2, G3	3	15.2	G1, G2, G3
Weekly	2	16.4	G2, G3	1	9.8	G3
Monthly	8	52.6	mainly G3	11	54.7	G1, G2, G3

Only 7 out of the 12 respondent banks use stress tests on liquidity as part of their liquidity management strategy. These are one G1 bank, two G2 banks and four G3 banks representing 55.5% of the market share. For the G1 bank the stress tests are run at a group level only.

Table 6. Use of stress tests on liquidity

	Yes	No
No. of banks	7	5
% of market share	55.5	12.1
Size	G1, G2, G3	G1, G2

The types of scenarios these banks use are different, and may be market crisis scenarios and bank specific crisis scenario. Scenarios include asset liabilities mismatches and are usually divided by currencies.

The table below presents the types of scenarios that are mostly used in G2 and G3 banks.

Table 7. Types of scenarios used for stress tests on liquidity

Type of Scenario	Frequency of running stress tests
Static scenarios using the percentages of decrease of the crisis situations:	Monthly
Interest Rate Shock of 250 bp* for local currency	Monitored weekly reported monthly
Interest Rate Shock of 50 bp for G20 countries' currencies	Monitored weekly reported monthly
Decrease / Increase of 100 bp; 200 bp, 400 bp (EUR)	Quarterly
Increase of 50 bp in treasury bills interest rate change	Quarterly
0 change in short run, 100 bp medium-term, 200 bp long-term	Quarterly
Change in FX rate of 30%	Quarterly
Change of FX rate (historical) of EUR/USD, and EUR/GBP BY 20%	Quarterly
Withdrawals of deposits	Monthly
Delays of loan repayments	Monthly
Liquidation of trading portfolio	Monthly
Market Crisis Scenario	Monthly

*bp – basis point (1/100 of 1%)

6 of the banks that use stress tests for liquidity have different scenarios by types of deposits, currency and type of depositors.

Half of the respondent banks, with a market share of 32.2%, continuously monitor *bid-ask spreads* for financial instruments. They follow mainly their Group bank policies in doing so.

Table 8. Monitoring of bid-ask spreads for financial instruments

	Yes	No
No. of banks	6	6
% of market share	32.2	35.4

Size	G1, G2, G3	G1, G2, G3
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6 out of 12 respondent banks, G1 and G3 banks, representing 32.1% of the market share have set *warning signals* for possible liquidity crises.

Table 9. Use of warning signals

	Yes	No
No. of banks	6	6
% of market share	32.1	35.5
Size	G1, G3	mainly G2

The events listed by these banks as warning signals of possible liquidity crises are the following:

1. Increase in withdrawals request
2. Unforeseen, sudden and heavy deposits withdrawals
3. Counterparty's defaults, sudden bankruptcies, and loss of contingency back up facilities.
4. Shrinkage and volatility of Deposits
5. Shortage of Foreign Currency
6. Sudden increase in Nonperforming Loans (short-run)
7. Domestic currency (ALL) devaluation
8. Significant Decrease of Liquid Accounts / Deposits
9. Deterioration of Loans Repayments
10. Volatility of interbank credit lines and rates

2.3. Quantitative aspects of liquidity risk management

<p>Conclusions:</p> <ul style="list-style-type: none"> - All respondent banks use internal liquidity indicators, and have set internal limits for most of these indicators. - The largest number of indicators used is reported by G2 banks - 6 out of 12 banks, (G1, G2 and G3) use risk factors to build their indicators on liquidity. - G2 banks have reported a set of such risk factors used.
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All respondent banks use internal liquidity indicators. Not all of them and not for all types of ratios set up limits. However they are regularly monitored and reported. In the following tables the reported indicators used by banks are described broken down by size of banks.

Table 10. Indicators and liquidity ratios used by G1 banks

Description of the liquidity indicator	Definitions of the factors used to calculate the indicator	Internal Limit of the bank	Frequency of monitoring
Ratio of liquid assets against total assets	Liquid assets/total assets	15%; 20%	Monthly
Ratio of liquid assets against short-term liabilities	Liquid Assets/Short-Term Liabilities Fixed Deposits up to 7 days, cash, t-bills / time deposits, borrowing, current& savings accounts	50%	Monthly
Liquidity ratio by maturity time bands	GAP	25%	Monthly
Ratios of maturity transformation of short term sources in long term placements	Spread(Interest Rate Risk) and GAP		
Maturity Mismatches (related to the size of the maturity gaps; cash inflows / cash outflows including off-balance sheet items)	Spread(Interest Rate Risk) and GAP; 3 months cumulative GAP in total; 3 months cumulative GAP for each currency	+/-40% of total assets; +/-55% of total assets	Weekly; Monthly

Table 11. Indicators and liquidity ratios used by G2 banks

Description of the liquidity indicator	Definitions of the factors used to calculate the indicator	Internal Limit of the bank	Frequency of monitoring
Ratio of liquid assets against total assets	Liquid assets/total assets (Liquid Assets are all assets with remaining maturity of 30 days)	15%; For ALL min 10%; for FC min 20%	Weekly monitoring monthly reporting
Ratio of highly liquid assets against total assets		>+20%; >15%	Weekly; Monthly
Ratio of liquid assets against short-term liabilities	Short-term liabilities are liabilities with remaining maturity of 30 days	>+25%; >30%; For ALL min 20%; for FC min 40%	Monthly; (Weekly Monitoring)
Ratio of liquid assets against short-term liabilities	Cash, nostro accounts, securities, etc (1 month) Assets/Liabilities up to 1 month & as Total	80% 100%	Monthly Weekly
Liquidity ratio by maturity time bands	Net funding up to 30days / total liabilities; net funding up to 90days / total liabilities	Min -30% (-50%) for ALL; min -25% (-35%)	Weekly; Monthly

Description of the liquidity indicator	Definitions of the factors used to calculate the indicator	Internal Limit of the bank	Frequency of monitoring
		for FC	
Description of the liquidity indicator	Definitions of the factors used to calculate the indicator	Internal Limit of the bank	Frequency of monitoring
Indicators of deposit concentration (individually and as group of related parties), volatility and sensitivity	Ratio of 10 largest depositors	No limit defined	Daily; Weekly; Monthly
Maturity Mismatches (related to the size of the maturity gaps; cash inflows / cash outflows including off-balance sheet items)	Net funding up to 30days / total liabilities; net funding up to 90days / total liabilities	Min -30% (-50%) for ALL; min -25% (-35%) for FC	Monthly
Short term liquidity GAP	Net funding up to 30days / total liabilities;	Min -30% (-50%) for ALL;	
Ratio of Cumulative Gap 3 months against total assets		>- 25%	Monthly
Total Equity against total assets		NA	Monthly
Risk Assets against total assets		NA	Monthly
Reserves for loan losses against net loans		NA	Monthly
Total deposits against total liabilities		NA	Monthly
Core deposits against total assets		NA	Monthly
Short term borrowing against total liabilities		NA	Monthly
Cummulative Balance of Overnight Time Bucket Assets up to 30 Days/ Borrowed Funds		> 20%	Monthly
Cummulative Balance of ASSETS-BALANCE of the Overnight Time Bucket up to 30 Days/ Borrowed Funds		> - 20%	Monthly
Loans to Assets	Total loans to total assets	<40% Lek; <55% USD, <65% EUR	Monthly

Description of the liquidity indicator	Definitions of the factors used to calculate the indicator	Internal Limit of the bank	Frequency of monitoring
Loans to (Deposits + Current Accounts)	Total amounts	80%	Weekly; Monthly
Forecasting of net liquidity needs to total available liquidity	Cash nostro, vostro accounts, current accounts, interbanks securities, loans partially	>30%	Monthly

Table 12. Indicators and liquidity ratios used by G3 banks

Description of the liquidity indicator	Definitions of the factors used to calculate the indicator	Internal Limit of the bank	Frequency of monitoring
Ratio of liquid assets against total assets	Liquid Assets / Total Amount of Liabilities (without including the Capital) (both on & off balance sheet)	15%	Monthly
Ratio of liquid assets against short-term liabilities	Liquidity Position (Assets – Liabilities less than 30 days) / Total Amount of Liabilities (without including the Capital) (both on & off balance sheet) (Cumulative assets /cumulative liabilities)	100%	Daily
Liquidity ratio by maturity time bands	Cumulative liquidity gap up to 3 months/total assets	-40%	Monthly
Ratios of maturity transformation of short term sources in long term placements			Monthly
Indicators of deposit concentration (individually and as group of related parties), volatility and sensitivity	Top 10 and Top 20 Depositors concentration and trend; - Concentration by main deposits categories; - Concentration of Wholesale Funding; - Concentration of Retail Funding	NA	Daily; Monthly
Maturity Mismatches (related to the size of the maturity gaps; cash inflows / cash outflows including off-balance sheet items)	Distribute items with undefined maturity and Off Balance Sheet items on time buckets for monthly reporting purposes. The ratio used is cumulated GAP for cash flow Out and In for each time bucket up to 1 Year	GAP > 0 for the first year than slightly negative but next to 0 for the other periods.	

Short term liquidity GAP	The ratio of cumulated cash flow In to Cash Flow Out for each time bucket up to 1 Year; Short Term (<30 days) Liquidity GAP (on & off balance sheet)	The ratio ≥ 1	Daily, Weekly
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In order to have a sense of the indicators most used by banks as part of their liquidity management, in the following table are collected the indicators used by more than one bank, and for which banks have reported to set internal limits.

Table 13. Indicators on liquidity most used by banks

Liquidity indicators	No. of banks	% of market share	Size
Ratio of liquid assets against short-term liabilities	11	54.7	G1, G2, G3
Ratio of liquid assets against total assets	8	49.8	G1, G2, G3
Total negative mismatches between assets and liabilities in respect of maturities	6	45.3	G1, G2, G3
Liquidity ratio by maturity time bands	5	30.5	G1, G2, G3
Indicators of deposit concentration (individually and as group of related parties), volatility and sensitivity	5	38	G2, G3
Maturity Mismatches (related to the size of the maturity gaps; cash inflows / cash outflows including off-balance sheet items)	5	20.6	G1, G2, G3
Short term liquidity GAP	5	38	G2, G3
Ratio of liquid assets against total deposits	2	14.7	G2, G3
Ratios of maturity transformation of short term sources in long term placements	2	10.2	G1, G3

When building up indicators on liquidity, 6 out of 12 banks, representative of all three groups of banks by size, with a market share of 40.7% use risk factors for assets and liabilities according to their degree of liquidity. In one of the G2 banks work is in progress for implementing risk factors.

Table 14. Use of risk factors

	Yes	No
No. of banks	6	6
% of market share	40.7	26.9
Size	G1, G2, G3	G1, G2, G3

Some types of risk factors used as reported by G2 banks are shown in the following table:

Table 15. Risk and probability factors used by G2 banks

Loans	
Loans to banks repayable on Demand	100%
Interbank loans to Group Entities & Central Bank Obligatory Reserves	0%
Demand Loans due within 1 month (maturity <2 yr)	75%
Demand Loans due within 1 month (maturity> 2 yr)	100%
Loans and Advances to Customers	0%-30%
Treasury Bills	60%-100%
T-Bills due within 1 Month	100%

T- Bills and Bonds Due more than 1 Months	95%
Deposits	
Due to Customers (Demand + Saving + Term Deposit)	10%-50%
Deposits due within 1 Month	70%
Deposits due within more than 1 Month	25%
Debt Issues & Cheques and Orders Payable	100%
Off Balance Sheet (both Assets & Liabilities side)	20%
Liabilities due within one month	25%
Capital	100%
Cash	100%
Statutory Deposits with BOA	100%
Repos & Loans due within 1 month	100%