

LIQUID ASSETS ADMINISTRATION – AN ESSENTIAL ELEMENT OF BALANCE SHEET EQUILIBRIUM

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ABSTRACT: One of the most important tasks of the management of a bank is to estimate and properly cover the bank's need of liquid assets. On long term, the profitableness of a bank may be negatively affected in case the bank detains in its portfolio too many liquid financial assets as compared with its needs; yet, on the other hand, fewer liquid assets may determine severe financial problems, especially for small banks, and may generate even bankruptcy.

KEYWORDS: asset, banking system, investments, liabilities.

One of the most important tasks of the management of a bank is to estimate and properly cover the bank's need of liquid assets. On long term, the profitableness of a bank may be negatively affected in case the bank detains in its portfolio too many liquid financial assets as compared with its needs; yet, on the other hand, fewer liquid assets may determine severe financial problems, especially for small banks, and may generate even bankruptcy.

Bank liquids represent the object of administrating banking liquid assets and liabilities having various degrees of liquidity. They represent banks' ability of assuming their financial obligations and express the assets capacity of being rapidly changed into money, with minimum expenditures.

An improper level of liquids may determine, in case of certain unforeseen diminishing of cash money, the necessity of contracting supplemental resources implying higher costs, a fact that diminishes profitableness and affecting solvability.

At the same time, a excessive liquids diminish the assets' profitableness determining the getting of poor performance.

One of the main tasks of bank management is to estimate and completely cover the needs of bank liquid assets.

The need of liquid assets and the capacity of the bank to foresee such needs is hard to be measured as the deponents' perception and trust (both of the present and of the potential ones) in the bank and the monetary market are quite important as well as hard to be estimated.

The risk of liquids may result in the credit institution's impossibility of making payments towards its clients as a result of changing the ratio between the long term credits and the short term credits and of non-correlating with the structure of liabilities.

Long term investments are generally higher than the credit institution's long term resources; as a result of such circumstances banks have to face two situations:

- They may be not able to assume their short term contracts;
- They may have short terms of payment while their investments might have long term payments.

In order to avoid liquids risk banks should do a proper correlation of their liquid assets and their liabilities regarding the duration of mobilization and use of resources.

The problems that may determine a liquid crisis are both external and internal. Accordingly, the external causes that determined the two important liquid crises during the time are the following: the economic crisis of the 30s, unexpected stock exchange crashes such as the "black month" of October 1987, the

macro-economic policies promoted by the government that either reduce liquid assets in economy or diminishes the trust in the banking system and national currency.

The internal causes that determine the starting of a liquids crisis are due to the credits' losses and other non-performing investments that may cause a lack of balance in banks' cash flows, the diminution of the business potential of the banks and, as a consequence, of their incomes, as well as the diminishing of the trust in the banking institutions materialized in an increased rhythm of funds withdrawal.

The diminishing of the bank's rating may, as well, determine the decrease of the clients' trust in that banking institution having as a result the diminution of the incomes coming from commissions and interests, the improper diversification of funds resources (of the financing sources).

On the other hand, liquid risk may result out of two reasons: one of them is connected with the assets of the bank's balance sheet, the other one is connected with liabilities. The risk connected with the bank's liabilities appears each time the deponent clients want to immediately and suddenly operate the withdrawal of their money; under such circumstances the bank have to borrow supplemental funds or to sell certain liquid assets.

The most liquid asset of a bank is cash money, the bank primarily resorting to it in order to meet its clients' demands of withdrawal. Nevertheless, banks exhibit a tendency of minimizing cash money detaining as they practically bring them no profit. In order to get incomes out of interests, the majority of the banks invest fewer cash money in liquid assets and/or with longer term maturity.

The majority of the assets may be changed into cash money at a certain moment; yet the immediate change into cash money may sometimes be done at extremely high costs. The price the owner of such assets has to accept in case of an urgent sell may be much lower than in case he/she would have at hand a larger time interval during which the price might be negotiated. Accordingly, certain assets may be liquidated only at lower prices, called "fire-sales prices", subsequently threatening the bank's solvability.

The administration of liquid risk implies a distinct approach of short term administration, of treasury administration, and of long term administration.

Short term administration implies the precise measurement of the bank's liquids risk.

Treasury administration implies the determining of an optimum structure of the bank's assets in order not to register losses whenever assuming the liquids risk.

Long term administration of liquid risk helps the bank elaborate its crediting policy as it is well-known the fact that liquids are a constraining factor of crediting activity.

A useful tool employed by the management in predicting the net income out of short term interest is GAP analysis done with a view of profiling the difference between the investments and the term ressource at certain time intervals. Such gaps specific to each interval of maturity may determine the elucidation of certain aspects connected with short term liquids as well as with long term liquids.

The goal of such an analysis consists in the identification of the potential problems that might appear within the liquid assets of a financial and banking institution. The gaps accordingly determined should be diminished in order to reduce liquids risk.

A gap represents the difference between the assets and the liabilities due during the same interval of maturity. This value is also known as liquid's position.

A liquid's position is defined as follows: for a class of terms of payment it is the difference between the assets and the liabilities. It is accordingly calculated for each class, being a sum, duration and term index of the changes operated by the bank. The level of this index emphasizes the discrepancies between the term of payment and the types of maximum funds with which the bank is going to deal with, time after time.

$$Lp_i = ASSETS_i - LIABILITIES_i$$

ASSETS_i = assets of i class term of payment

LIABILITIES_i = liabilities of i class term of payment

- *The gap is positive* when the due assets > than the liabilities due during the same interval of maturity; accordingly, during this interval there are enough resources to make the payments demanded by the clients. One should assume that only those clients whose resources are due during this interval of maturity are supposed to withdraw their sums and the afferent interests.

- *The negative gap* may be a problem especially in case it is registered during close maturity intervals. The resources due during this interval cannot be covered out of investments due during this interval; the banking institution is forced to use before the term of payment other liquid assets with a view of creating the needed liquids.
- *The cumulated gap* during several maturity periods represents the algebraic sum of the gaps during those intervals. The significance of this index: it gives the banking institution the possibility of correlating the resources and the due investments until a certain date in order to face the payments demanded by the clients.
- *The gap index* synthesizes the size in a relative value of the difference between the investments and the resources due during the maturity interval, namely compared with the total assets. Important levels (over 10%), especially the negative ones, should be quickly improved with a view of diminishing the risk of liquids. The gap positive indices having significant values may point a lack of balance of correlating the investments maturity with the resources employed, a gap that might grow (towards negative values) during those maturity intervals.

In order to illustrate by examples the gap analysis in a bank we have chosen the structure of the assets and liabilities on December 31st 2007, classified according to residual maturity (the time interval calculated beginning with the analysis date – that can be quarterly, monthly, weekly or daily – and the date of the effective term of payment of the assets/liabilities element) – Table 1

The level of the assets and liabilities on December 31st 2007
Gap, cumulated gap, gap index (%)

(Lei)Table 1

	Up to 3 months	Between 3 months and 1 year	Between 1 year and 5 years	Over 5 years	Total
Assets					
Cash money and short term funds	18680.9	-	-	-	18680.9
Sums received from Central Banks	106336.4	4147.9	98,5	-	110582.8
Treasury certificates	57879.	76608.7	8296.1	438.2	143222.4
Sums to be received from other banks	102177.4	15193.7			117371.1
Credits and advance payments given to the clients	27649.0	73596.6	32214.4	5742.0	139202.0
Participations	-	-	-	7687.4	7687.4
Fixed assets	-	-	40000	45440.1	85440.1
Other assets	37622.3	-	1320.8	860.3	39803.4
Total assets	350345.4	169546.9	81929.8	60168	661990.1
Liabilities					
Deposits from other banks (drawn)	63841.6	9113.9	17769.9	27959.1	118684.5
Clients	319251.4	121783.7	52019.1	-	493054.2

deposits					
Other obligations and provisions	10018.6	5830.6	4101.7	30300.5	50251.4
Total liabilities	393111.6	136728.2	73890.7	58259.6	661990.1
Liquidity net gap	(42766.2)	32818.7	8039.1	1908.4	
Cumulated gap	(42766.2)	(9947.5)	(1908.4)		
Gap index (%)	(12.2%)	19.35%	9.81%	3.17%	

The following conclusions may be drawn out of the analysis of the above GAP Table:

- On a up to 3 months term (remaining maturity) resources attain their term of payment more quickly than investments ; this fact may be a potential problem for the credit institution when all resources attaining their term of payment are not prolonged anymore;
- The negative gap up to 3 months shows the fact that the liabilities due during the period 31.12.2006 – 31.03.2007 overpass the assets due during this period; in case due resources are not renewed, the credit institution should sell assets that do not attain their payment term in order to face withdrawals; within the internal market, the large majority of the assets' sales are done through State titles (REPO operations or sales on secondary market);

Among the measures banks should pay attention to we can notice the following ones:

- Drawing of supplemental resources on at least 3 months term;
- The investment of supplemental resources in liquid investments having a up to 3 months payment term;
- The re-modeling of the longer terms investments policy with a view of diminishing the share of more than 5 years payment term investments.

The methodology of liquids management should deploy according to three co-ordinates: the establishing of the profile of the bank's liquids, the establishment of the desired level of liquids of the assets and the analysis of the cash flow during various periods of time.

The getting of the desired level of liquids has in view the noticing of certain minimum demands regarding reserves; accordingly:

- -Monetary authorities require banks to keep a certain part of the total sum of their deposits at the Central Bank;
- -Compulsory reserves are required in order to discourage banks to extend their investments;
- -In a lot of countries the level of the reserves varies according to the type of the deposit (transit deposits require higher liquid demands than term deposits).

The main strategies of liquids management that improve the structure of the assets are the following:

- The extension of credits and overnight investments;
- The extension of inter-banking credits;
- The acquiring of short and medium term negotiable titles;
- The repayment of due credits;
- The securing, namely the change of credits into titles;
- Few investments into fixed assets.

The following strategies improve liquids due to the change of the structure of accounting liabilities:

- The diminishing of inter-banking deposits;
- The emission of long term negotiable titles and deposits;
- The prolongation of the medium duration of liabilities portfolios;
- The emission of capital as subordinated debt or the emission of ordinary or preferential stocks;

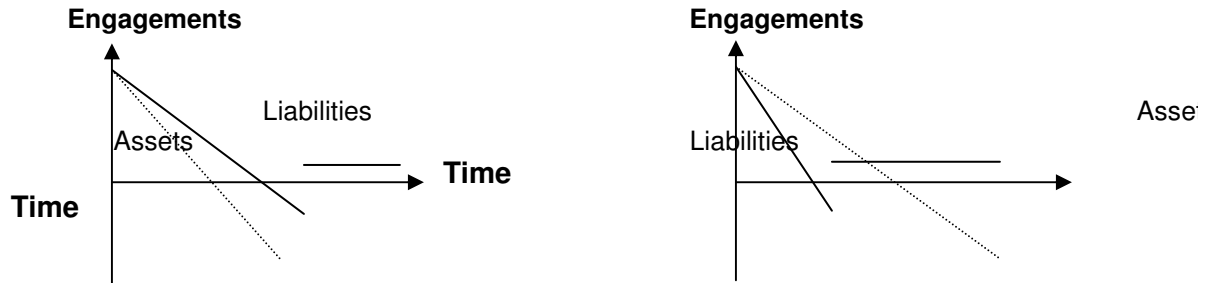
- The obtainment and maintaining of a high credit rating.

Whenever immunization lacks the size of the gap between the payment term of the engagements and the resources determines, for a certain period, a global perspective of liquids, namely of its "consolidation" degree.

Accordingly:

- The balance sheet is over-consolidated (Fig.1), in case the existent assets are more rapidly paid off than the existent resources. The exceeding resources resulting with the lapse of time are available in order to finance new operations.
- The balance sheet is under-consolidated (Fig.2), in case the assets are more slowly paid off than the resources. New financing is necessary in order to cover the gap.

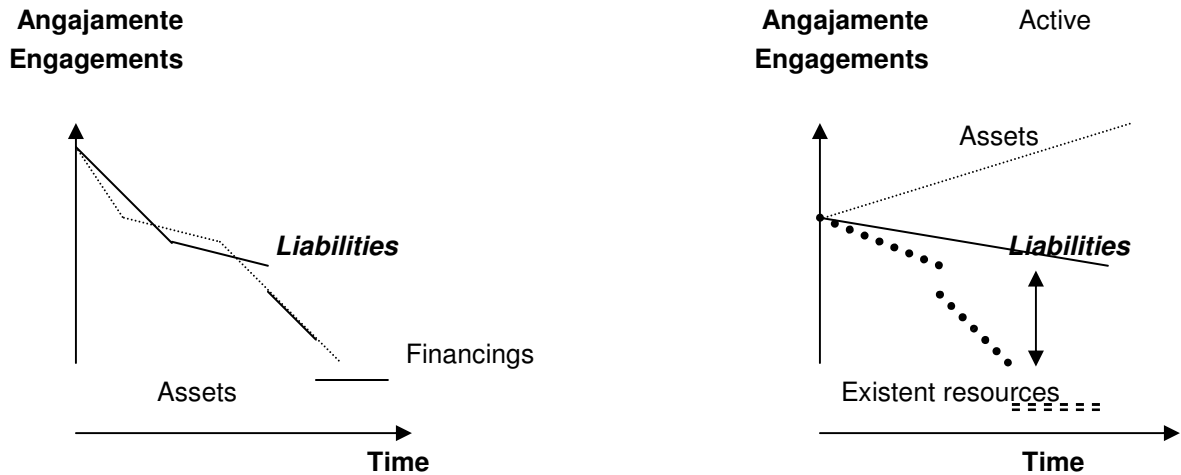
Fig. 1 – Over-consolidated balance sheet Fig. 2 – Under-consolidated balance sheet



- The balance sheet is perfectly consolidated (Fig.3) when future financing needs are equal with the new resources.

In case the profile of the resources includes both the existent resources and the new financings the bank employed, the graph is quite different (Fig. 4)

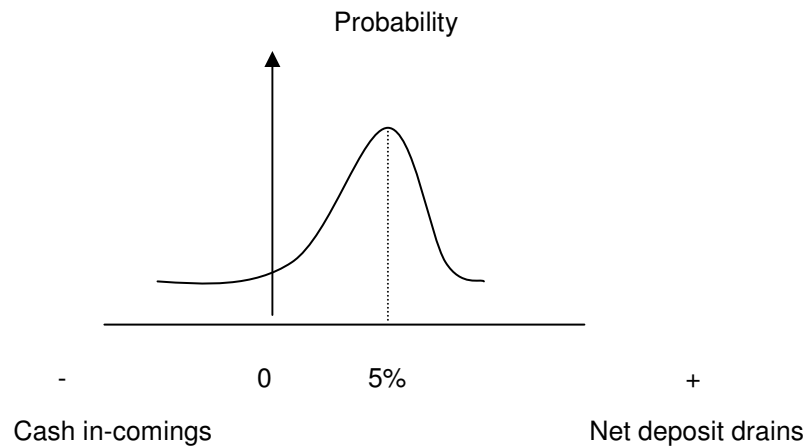
Fig. 3 – Perfectly consolidated balance sheet Fig. 4 – Profile of new financings



In time, the management of a bank may predict the distribution probability of the net deposit drains every normal banking day.

Net deposit drains = Cash deposit withdrawals – Cash deposit in-comings

Let's take into consideration the following possible distributions:



Distribution has its higher level at 5% net cash drains, a fact that implies that the bank expects that about 5% of its funds represented by deposits might be withdrawn every banking day having the highest probability. The bank is going to receive accordingly new deposits in order to counteract the effect of cash withdrawal. In order to determine a growth of the banking field, net medium deposit drains of the majority of the banks should reflect higher funds in-comings than the clients' accounts withdrawals.

This optimum level might be possible when the maximum level of distribution probabilities is placed on the left to 0.

At such a level, for example of -2%, the bank has net cash in-comings.

In practice, the administration of liquids risk mainly consists in the following:

- The giving in, mortgage or pledge of due titles of the bank's portfolio without excessive losses;
- The identification of new resources with marginal costs inferior to the medium profitableness of the bank's investments.

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