

LIQUIDITY ANALYSIS FOR COMPLIANCE WITH DEPOSITORS OF CREDIT UNIONS IN COMPULSORY LIQUIDATION IN ECUADOR FOR THE PERIOD 2020 - 2021

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Abstract: *In a financial institution that has been declared unviable, liquidity is vital for making decisions to the conglomerate of depositors, especially those involving how much to repay, in how many phases to repay and, most importantly, how many people will not have their deposits covered at 100%. In Ecuador, according to the Superintendency of Popular and Solidarity Economy, only upon concluding the supervision of a Credit Union and evaluating its financial and administrative management can it rule that it is unviable. The methodology applied in this research is quantitative, of secondary information and cross-sectional. The main finding is that the Organic, Monetary and Financial Code is protectionist, unlike the banking holiday experienced in Ecuador at the end of the nineties; this one safeguards depositors with the application of norms and processes of the different public administration institutions, leaving aside state protectionism. One of the conclusions is that it is important to reduce social ignorance to clear doubts and inform people that a liquidation process is a guarantee and that it is nothing more than selling assets to return liabilities; in this process, a financial, legal and accounting analysis must be carried out to make decisions that protect the rights of partners and clients.*

Keywords: *Forced liquidation, Liquidity, Financial Audit, Popular and Solidarity Economy.*

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1. INTRODUCTION

In Ecuador, with the Constitution of 2008 and the Organic and Financial Code of 2017 (COMYF), the State, through the regulatory and control entities, guarantees the deposits delivered to financial institutions (IFIS), unlike the banking holiday experienced in the late nineties, this safeguard limitedly to depositors, with the application of rules and processes of the different institutions of public administration, and leaving aside state protectionism (Lascano-Pérez et al., 2023).

The liquidation process contributes to cleaning up the popular and solidarity financial system constituted by the National Directorate of Cooperatives and its respective Law of Cooperatives that, until 2012, extended operating permits without an appropriate feasibility study. For liquidation to exist, the following actors and scenarios must coincide; the active subject, passive subject, material object, nuclear action, malice, the statute of limitations and judgment in absentia (Jaramillo&Cárdenas-Pérez, 2018).

According to the Superintendencia de Economía Popular y Solidaria (SEPS), upon concluding the supervision of the cooperative and evaluating the financial and administrative management of the institution, it ruled that the Cooperativa de Ahorro y Crédito (COAC) is unviable, as the similarity of the mismanagement of resources is considerable and wasteful, generating a social shock to the cooperators. In this regard, Carrillo (2016) states that the verticality of the protection and compliance of the collection (obligations to the public) starts from the Constitution, along with the legal provisions of the COMYF and the resolutions of the control entity (SEPS).

The Deposit Insurance Corporation, Liquidity Fund and Private Insurance Fund (COSEDE) are transcendental. This institution, by regulation, guarantees and protects the depositors of the national financial system according to their level of contribution, according to Garabiza (2014). This paper will help to reduce social ignorance using analysis to clear up doubts and inform people that a liquidation process is a guarantee and that it is nothing more than selling assets to repay liabilities to the extent necessary.

Control (SEPS) and self-management (COAC) are intended to be administered and managed with standards according to Basel and on-site and off-site inspections. Whether a financial entity or a member-customer of a cooperative, liquidity is nothing more than the speed and ease of converting assets into cash (Cárdenas-Pérez et al., 2022). Whether the cooperative is viable or in the process of liquidation.

All financial analysis is centralized, studied and compared to liquidity with important ratios such as solvency and profitability; these financial research decisions are made in the short and medium term concerning cash flow. According to the bulletin published by the International Monetary Fund (2015), the level of liquidity globally has not shown greater weakness in the different assets. Investors have run with more risk, obviously generating an appreciable return for their investment, but this has a long-term impact, with a scenario of rising interest rates and the contraction of liquidity. This could generate again what happened in 2008 with the famous Black Monday, which resulted in a domino effect worldwide; the illiquidity and bankruptcy of the Lehman Brothers Investment Bank, the collapse of the Wall Street stock market through the suppressed mortgages, and the sovereign debt of the PIGS.

The Superintendency of Banks of Ecuador (2015) states that the decrease in liquidity in the financial sector is related to the drop in the price of oil, and the main measure is the contraction of deposits in banks, and therefore the placement is affected, which generates a chain effect towards the beneficiaries of corporate loans.

According to the Superintendency of Popular and Solidarity Economy (2015), liquidity is the capacity of financial institutions to maintain sufficient resources to meet their obligations on time. When talking about capacity, it is important to say that this must be guided and managed by the Board of Directors, and they must possess sufficient resources measured subject to risk, which is the direct responsibility of the General Manager.



2. OBJECTIVES

2.1 General Objective

To analyze the liquidity and compliance with payments to depositors of the Savings and Credit Cooperatives declared unviable in segment 5 of zone 3 controlled by the Superintendency of Popular and Solidarity Economy.

2.2 Specific Objective

- Calculate the structural liquidity, liquidity gap, and liquidity coverage in segment 5 credit unions declared non-viable to determine their risk in 2020 and 2021.
- Analyze the mismatches between fundraising and placement at the time of declaring an entity of the popular and solidarity financial sector unviable.
- Explain the real situation of a compulsory liquidation process and its effect on the injured partners.

3. METHODOLOGY

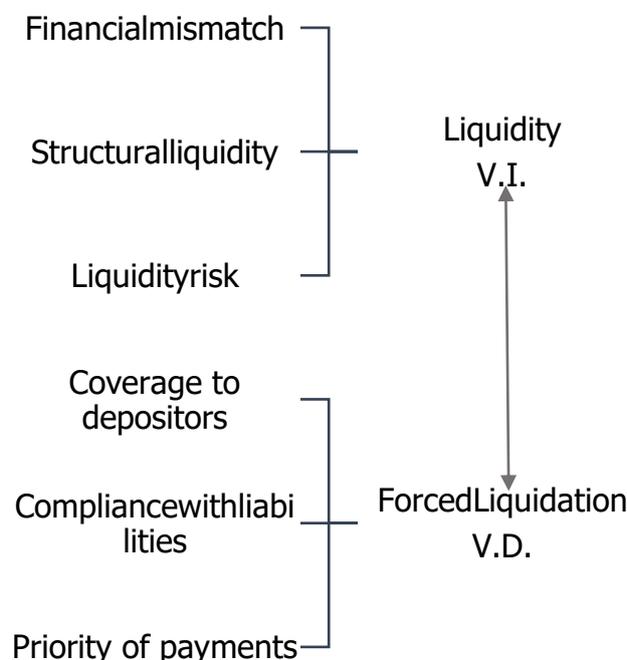
This research is based on a quantitative approach, allowing the orientation to the discovery of the hypothesis of incidence in the compliance or non-compliance with the priority of payments, obtained from the application of liquidity risk analysis of the Popular and Solidarity Financial Sector (2015).

This is a process that, through applying the scientific method, seeks to obtain appreciable and reliable information to conceive, verify, correct or use knowledge using statistics as a measurement and analysis technique.

In addition, it is a process that allows obtaining new knowledge in the field of social reality or studying a situation to diagnose needs and problems to apply the knowledge for practical purposes. Figure 1 shows the relationship between the independent variable liquidity and its relationship with forced liquidation as a dependent variable.

Figure 1

Relationship between independent variable and dependent variable



Source: Own elaboration, 2022.

4. RESULTS

Calculating the correlation coefficient allows for finding the relationship between the risk-weighted assets and the obligation of the depositors. The result is 0.86, which implies that the data to be analyzed are mutually dependent.

Table 1

Correlation between variables (Liquidity - Obligations to the public)

	Variable Independiente	Variable Dependiente
COAC	Activos ponderados por riesgo	Obligaciones con el público
COFIPAB	\$ 982,560.42	\$ 784,442.54
INTERCULTURAL BOLIVARIANA LTDA	\$ 39,603.34	\$ 17,802.35
LOS ANDES DEL COTOPAXI LTDA	\$ 33,851.35	\$ 17,485.05
EXITO LTDA	\$ 219,417.48	\$ 159,966.88
ACHUPALLAS	\$ 66,959.02	\$ 71,162.70
21 DE NOVIEMBRE LTDA	\$ 732,804.78	\$ 173,503.10

Coefficiente de correlación de pearson	0.86
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Note: The table shows the correlation of the study variables.

Source: Own elaboration, 2022.

Risk-weighted assets refer to the capacity of a financial institution to absorb losses and commitments to the public when asset prices fluctuate in the market (Salazar, 2023). According to the Superintendency of Banks of Ecuador (2021) in Resolution No. SB-2021-0403 dated February 22, 2021, in which the CUC (Single Accounts Catalog) is updated, obligations to the public are the records of the public's savings (money collection), with the responsibility of the IFI through authorized mechanisms.

Table 2

Independent research variable

Independent Variables	Ratio	Calculation	Description
Financial mismatch	Liquidity ratio	Obligations to the public - Loan Portfolio	Immediate liquidity from portfolio sales
Financial mismatch %	Liquidity ratio	Change in liquidity ratio / Loan Portfolio	Percentage of immediate liquidity from portfolio sales
Structural Liquidity	Primary Technical Equity (PTP)	According to SEPS data sheet	Equity value to support financial intermediation operations plus provisions
Structural Liquidity	Secondary Technical Equity (PTS)	According to SEPS data sheet	Equity value to support financial intermediation operations plus provisions
Structural Liquidity	Constituted Technical Equity (PTC)	According to SEPS data sheet	Sum of PTP and
Liquidity Risk	General liquidity indicator	Available funds / Obligations to the public	Ratio of available funds to deposits

Note: The table shows the independent variable with its indicators, ratio and method of calculation.

Source: Own elaboration, 2022.

The liquidity gap, or a financial mismatch, is a diagnosis of the difference between account 14 Credit Portfolio and account 21 Obligations with the public. It generates an alert when the Credit Portfolio < obligations with the public. In short, it immediately analyzes whether the placement covers the Financial Capture.

The amount of immediate cash to support financial intermediation operations is known as Structural Liquidity. Therefore, what is indicated in table 2 is the amount of money that the financial entity has available for the obligations due to financial intermediation in an immediate manner.

Table 3
Dependent variable of the research

Dependet Variables	Ratio	Calculation	Description
Coverage to depositors	Deposits to be covered	Obligations to the public - Deposits covered	Value of deposits to be covered in liquidation
Customers without coverage	Customers without coverage%	Change in liquidity ratio / obligations to the public	Percentage of deposits to be covered in settlement
Cientes sin cobertura	Customers without coverage	Depositantes - Depositantes con cobertura	Number of depositors to be covered in the liquidation process
Compliance with liabilities	Obligations to the public	Account 21	Total value to be covered in liquidation
Priority of payments	Liquidity matching	Obligations to the public - Loan portfolio	Variation to be covered with the sale of risk-
Priority of payments	Risk Weighted Assets (APPR)	According to SEPS data sheet	Nominal value without discounts, to settle the liquidation.

Note: The table shows the dependent variable with its indicators, ratio and method of calculation.

Source: Own elaboration, 2022.

Customers, savers and depositors are those directly affected by a forced liquidation. The table above shows the absolute and relative ratio maintained after activating COSEDE's deposit insurance, which for segment 5 is up to USD 1,000 per depositor.

The liquidation process, explained most simply, is to sell assets to honor (liquidate) liabilities. The order in which they must be paid (priority) is the obligation that the administrator of the liquidation of the financial institution must comply with following Art. 315 of the COMYF.

Table 4
Primary technical assets

Account code	Description
31	Social capital
3301	Irreparable legal reserve fund
3302	General
3303	Special and optional
34	Other equity contributions
35	Valuation surplus
3601	Retained earnings or surplus
3602	(accumulated losses)
3603	Profit or surplus for the year
3604	(Loss for the year)

Note. Solvency form technical manual.

Source: SEPS 2021.

Table 5
Secondary technical assets

Account code	Description
3305	Revaluation of assets
3310	For non-operating results
149980	(Provisión genérica por tecnología crediticia) // (note 1)
149989	(General allowance for credit

Note: Technical manual of the solvency form.

Source: SEPS, 2021.

The results show the liquidity for the fulfillment of the financial obligations with the depositors of the segment 5 cooperatives, in the process of forced liquidation.

In the years 2020 and 2021, the SEPS Z3 declares 6 COAC'S segment 5 unviable. As of December 2019, the control entity publishes balance sheets and presents the following information: apply liquidity risk analysis.

Table 6
Liquidity Analysis, December 2019

Company name	COFIPAB	INTERCULTURAL BOLIVARIANA LTDA	LOS ANDES DEL COTOPAXI LTDA	EXITO LTDA	ACHUPALLAS	21 DE NOVIEMBRE LTDA	Total
Customers / Depositors	190	208	238	216	290	1,738	2,880
Loan portfolio (a)	\$ 797,626.83	\$ 8,445.85	\$ 15,313.03	\$ 42,049.27	\$ 60,065.77	\$ 84,693.15	\$ 1,008,193.90
Obligations to the public (b)	\$ 784,442.54	\$ 17,802.35	\$ 17,485.05	\$ 159,966.88	\$ 71,162.70	\$ 173,503.10	\$ 1,224,362.62
Liquidity Ratio - Intermed.	\$ 13,184.29	\$ -9,356.50	\$ -2,172.02	\$ -117,917.61	\$ -11,096.93	\$ -88,809.95	\$ -216,168.72
Liquidity Ratio - Intermed.	2%	-111%	-14%	-280%	-18%	-105%	-21%
General Liquidity	10.43%	0.71%	49.65%	0.78%	0.72%	8.38%	11.78%
PTP *	\$ 215,906.71	\$ 11,927.91	\$ 18,531.34	\$ 31,189.86	\$ 12,848.60	\$ 533,550.03	\$ 823,954.45
PTS **	\$ 77,762.45	\$ -	\$ -	\$ -	\$ -	\$ 152.50	\$ 77,914.95
PTC ***	\$ 293,669.16	\$ 11,927.91	\$ 18,531.34	\$ 31,189.86	\$ 12,848.60	\$ 533,702.53	\$ 901,869.40
Risk Weighted Assets	\$ 982,560.42	\$ 39,603.34	\$ 33,851.35	\$ 219,417.48	\$ 66,959.02	\$ 732,804.78	\$ 2,075,196.39

Note: SEPS S4 - S5 statistics.

Source: SEPS December, 2019.

The six cooperatives declared unviable in 2020 and 2021 belong to segment 5, affecting 2,880 depositors to comply with Art. 315 numeral 4 of the COMYF, a portfolio without write-offs must be valued, rated, negotiated and disposed of for the value of 1,008.1,008,193.90 USD, and the sale must be made to Entities of the popular and solidarity financial sector (SFPS); to the depositors of the cooperatives in the liquidation process, the administrator must respond for the value of 1,224,362.62 USD; there is an immediate financial mismatch (illiquidity) of - 216,168.72 USD (-21%). In the liquidation process, the deposit coverage process administered by COSEDE is activated following Art. 328 of the COMYF.



Table 7
COSEDE Coverage, December 2019

Razones	COFIPAB	INTERCULTURAL AL BOLIVARIANA LTDA	LOS ANDES DEL COTOPAXI LTDA	EXITO LTDA	ACHUPALLAS	21 DE NOVIEMBRE LTDA	Total
Cientes / Depositantes	190	208	238	216	290	1738	2880
Obligaciones con el público	\$ 784,442.54	\$ 17,802.35	\$ 17,485.05	\$ 159,966.88	\$ 71,162.70	\$ 173,503.10	\$ 1,224,362.62
Dépositos cubiertos	\$ 150,344.00	\$ 15,157.00	\$ 4,078.17	\$ 22,827.11	\$ 54,040.24	\$ 54,097.48	\$ 300,544.00
Depositos por cubrir	\$ 634,098.54	\$ 2,645.35	\$ 13,406.88	\$ 137,139.77	\$ 17,122.46	\$ 119,405.62	\$ 923,818.62
Cientes cobertura total %	16%	99%	98%	94%	95%	98%	83%
Cientes cobertura total	30	205	232	203	276	1706	2652
Cientes sin cobertura %	84%	1%	3%	6%	5%	2%	17%
Cientes sin cobertura	160	3	6	13	14	32	228

Note. Monthly statistical publication.

Source: COSEDE, 2022.

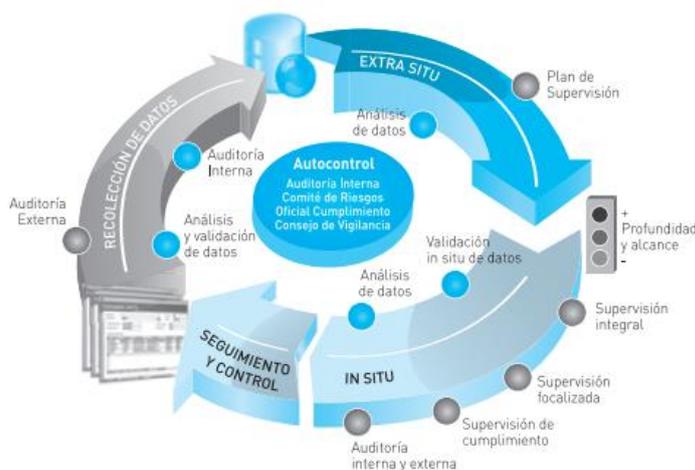
Deposit insurance covered 2,653 (83%) depositors of the COACS that went into liquidation, amounting to USD 300,544, leaving USD 923,818.62 to be paid to cooperative creditors.

The number of members that are not covered and with a concentration of approximately 923 thousand dollars is 227 (17%) among individuals or legal entities.

5. DISCUSSION

For a cooperative to be declared non-viable, it must comply with the intensive supervision process described in Art. 283 and 284 of the COMYF, the control management is carried out on-site and off-site as required by the SEPS.

Figure 2
Supervision cycle



Note: The figure shows the intensive supervision cycle. Source: The popular and solidarity economic sector in Ecuador.

Source: Diagnosis and supervision model. October 2013

The control of the intensive supervision program, which is planned, managed, evaluated and verified by each of the SEPS zones at the national level, should not last more than 2 years from the time of notification, during which time the control entity can review and adjust the intensive plan and, if necessary, take precautionary measures and sanctions, whether administrative, civil or criminal.

The plan is completed when one hundred percent of the objectives communicated at the time of initiating intensive supervision are met; failure to meet these objectives will lead to applying Article 303 of the COMYF.



With the technical supervision reports recommending the liquidation, the process of non-viability of the cooperative begins, and the internal control entity must go through the review, evaluation and approval of the technical, risk, legal and strengthening departments.

Table 8
Enforced liquidation resolutions COAC S5 Zone 3 - SEPS

Company name	Resolution	Date	Segment	Activation Insurance COSEDE
COAC COFIPAB	SEPS-IGT-IGJ-INFMR-2021-0124	7/24/2021	5	Si
COAC INTERCULTURAL BOLIVARIANA LTDA.	SEPS-IGT-IGJ-INFMR-2021-0267	5/20/2021	5	Si
COAC LOS ANDES DEL COTOPAXI LTDA.	SEPS-IGT-IGJ-INFMR-2021-0047	3/11/2021	5	Si
COAC ÉXITO LTDA.	SEPS-IGT-IGJ-INFMR-2021-0373	7/8/2021	5	Si
COAC ACHUPALLAS LTDA.	SEPS-IGT-IGJ-INFMR-DNLESF-2020-0647	9/3/2020	5	Si
COAC 21 DE NOVIEMBRE LTDA.	SEPS-IGT-IGJ-INFMR-DNLESF-2020-0396	7/1/2020	5	Si

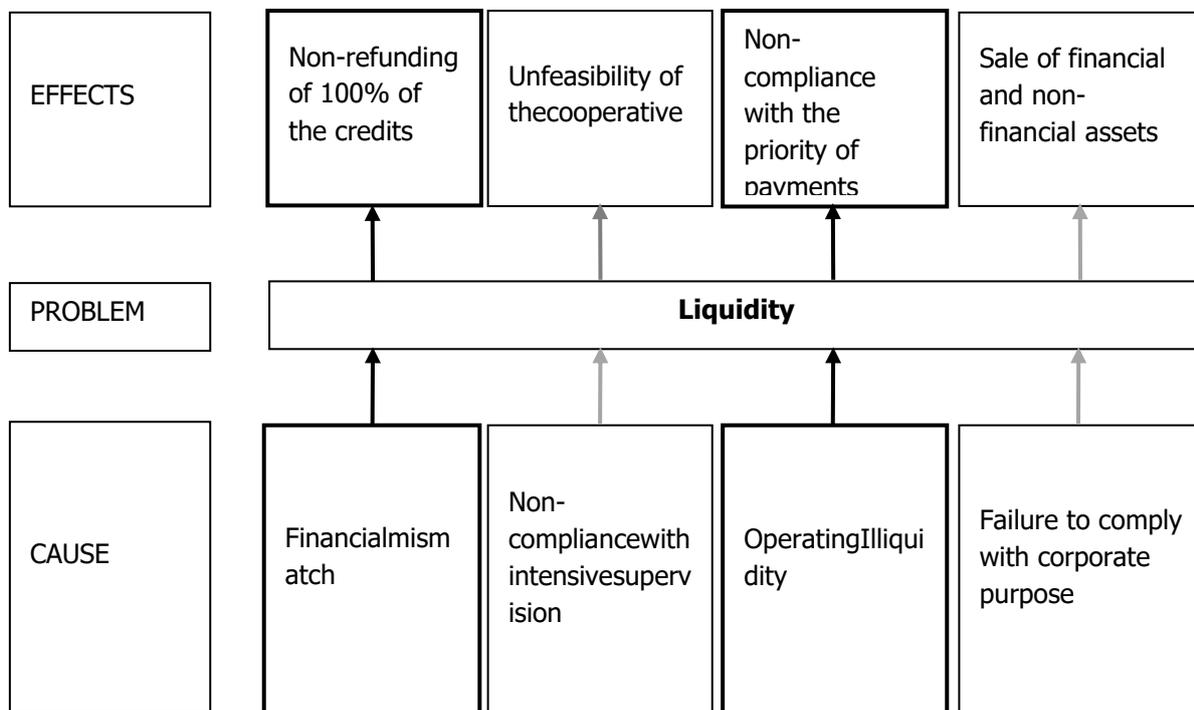
Note. Monthly statistical publication. Taken from COSEDE, 2022.

The six cooperatives legally authorized to begin the process of compulsory liquidation are notified, and the members-depositors of the cooperatives are unaware of the fact and, at the same time, speculation about the future of the funds delivered to the cooperatives begins.

The grounds for compulsory liquidation established in Art. 303 of the COMYF are:

- For manifest impossibility to comply with the corporate purpose;
- For losses of 50% or more of the capital stock or subscribed and paid-in capital, which the entity's reserves could not cover;
- Failure to pay any of its obligations;
- When the directors of the entity leave their positions, it is impossible to appoint replacements within a period of no more than thirty days.
- For non-compliance with the intensive supervision program.

Figure 3
Cause - Effect, Forced Liquidation



Source: Own elaboration, 2022.

The liquidity problem is mainly due to the financial mismatch and operating illiquidity, which result

in the non-reimbursement of all claims (deposits) to members and non-compliance with the priority of payments.

Table 9

Correlation of liquidity matching percentages - unhedged depositors

COAC	Calce de Liquidez - Intermed %	Cientes sin cobertura %
COFIPAB	2%	84%
INTERCULTURAL BOLIVARIANA LTDA	-111%	1%
LOS ANDES DEL COTOPAXI LTDA	-14%	3%
EXITO LTDA	-280%	6%
ACHUPALLAS	-18%	5%
21 DE NOVIEMBRE LTDA	-105%	2%

Coefficiente de correlación de pearson	0.39
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Note: The table shows the correlation of percentages in liquidity. Source: Own elaboration, 2022. Although deposit coverage is activated, which for segment 5 is up to USD 1,000 per member, it is important to settle immediately, as shown in Table 5, where a ratio close to zero of 0.39 is obtained.

According to Art, the risk-weighted assets must be evaluated and valued by an expert for the realization of the same, the liquidator. 312, numeral 6 "to dispose of the social assets", will proceed with selling non-financial assets by auction according to resolution No. SEPS-IFMR-IGJ-2016-208, dated September 16, 2016, issued by the Superintendence of Popular and Solidarity Economy, which details the procedure for the disposal of cooperatives' assets in liquidation.

6. CONCLUSIONS

The Constitution, the COMYF, the resolutions of the Monetary Regulation Policy Board and the SEPS, in a compulsory liquidation process, guarantee a good percentage (83%) of the coverage level for depositors affected by the closing of the cooperatives, while 17% must wait up to two years to collect in total, due to the realization of the assets of the cooperative in liquidation.

The liquidator's responsibility is to qualify, negotiate and sell the financial assets in the shortest possible time (90 days) so as not to cause ill-feeling among the clients of the cooperatives in the process of liquidation, and his authority as such is outlined in Art. 312 of the COMYF.

At the same time, the liquidation administrator must dispose of the non-financial assets through a call and auction; the realization of these assets will serve to sustain the liquidation process (expenses) during the two years it lasts, as established in the COMYF.

As shown in the results and the correlation, the liquidity risk is mitigated by SEPS so that, at the time of the forced liquidation resolution and activation of the deposit insurance, it covers its obligations to the public as soon as possible.

Finally, applying the precepts, rules and resolutions must constitute the whole in a liquidation process since they guarantee a low liquidity risk and prompt recovery of the claims deposited in the entities declared non-viable.

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