UNCARSR

Uniunea Naţională a Caselor de Ajutor Reciproc ale Salariaţilor din România

INNOVATIVE ECONOMETRIC TOOLS FOR RISK MANAGEMENT – ROMANIAN CREDIT UNION PERSPECTIVE

UNCARSR

Objective of the Good Practice:

The model was designed to be an effective tool for risk management (when measuring performance), taking into consideration that the overall objective of each single credit union is to serve its members/clients, who mostly represent the social and semi-social economy, while also preserving or increasing performance.

Year of Inception of Good Practice:

2018 and ongoing

Keywords:

Credit Risk Management, Assessment Tool

Overview of Good Practice

In the daily activity of Credit Unions (CUs) it is important to see what risks they are facing and also what main factors are affecting their performance, specifically from the credit risk management perspective. The Credit Unions play an important role in contributing towards Romania's economic development. They also play an important role in sharing risk in the economy by diversifying and smoothing fluctuations over time.

Over the years, the credit union industry has undergone a significant change, both in terms of the number of credit unions as well as the asset mix of their portfolios. This has brought about both threats and opportunities. The future destiny of this industry depends upon its ability to generate enough income to support growth while maintaining adequate capital in the context of increasingly tighter requirements. CUs and microfinance institutions in general implement multiple mechanisms that overcome the screening and enforcement problems, which reduce the default risk and improve repayment rates. The greatest challenge the microfinance institutions will face globally in pursuance of their role as financial intermediaries is how best to manage their credit and risk exposures in comparison to the rising competition in a more and more sophisticated and turbulent economic and social environment.

In light of these considerations, Iulia Pasa Director of Supervisory Division of UNCARSR, designed and developed a tailored tool for risk management adapted to the challenges of CUs. This development was strongly influenced by the conviction that the quality of the credit portfolio and the level of delinquent loans depend on the economic, political, legal and social environment as well as on the CU's prudence in lending and loan allocating. It also takes into consideration the fact that in their decision-making process, CUs should rely on traditional credit risk management models, but they should also integrate other areas of science and new methodologies, such as psychometrics, risk scoring matrix, etc.

All credit unions affiliated to UNCARSR are monitored and analysed based on the risk methodology decided by the Supervisory Division. Accordingly, the credit risk management model is incorporated into the process, as a main tool. CUs are classified in 5 risk categories based on the individual scoring of:

• Market risk
• Operational risk
• Liquidity, solvency and fraud risk
• IT risk

The classes are from A (most performant) to E (least performant).

Innovativeness

The innovativeness of the model arises from its unicity, the fact that macroeconomic realities (indicators) from the regions / counties where credit unions are operating are incorporated. The model is a function of performance for each credit union.

The model architecture includes 3 levels:

Level 0 – data (internally collected data from 1337 CUs grouped into 40 Territorial Units and external data – statistics);
Level 1 – the model;
Level 2 – calibration of risk measure

Type of Organisation

Other

Country

Romania

Products & Services provided by associated Credit Unions

- Financial: Personal microloans (not for business)
- Non-financial: Debt counselling, entrepreneurship training, financial education, mentoring.

Gross Loan Portfolio

€ 720,608,935
(as of June 2018)

Number of clients

1,058,542
(as of June 2018)

Target Audience of associated Credit Unions

Rural population, Urban Population, Unemployed people or people on welfare, Women, Youth (18-25 years old), Disabled people, People excluded from mainstream financial services.

Organisation Website

www.uncar.ro

$$PERF = f\left({}^n_i Y + LIQ_I + CRI_I + OPER_i + GDP^t_i, + INFRATE_t\,\beta + \alpha_i RI + \beta_i Ri_i + \beta_i SIZE\right)$$

${}^n_i Y$ = dummy variables

LIQ_I = liquidity risk

CRI_I = credit risk (non-performance)

$OPER_i$ = operational risk

GDP^t_i = gross domestic product / development region

$INFRATE_t\,\beta$ = annual inflation rate / development region

$\alpha_i RI$ = IT risk

$\beta_i Ri_i$ = capital risk (overall capitalisation)

$\beta_i SIZE$ = size of CU measured by log of total assets

Efficiency and Sustainability

Credit unions as financial intermediaries provide both financial and social functions, therefore, credit risk management becomes a complex and complicated process. Credit risk management is unique, balancing the needs of the credit union members with minimum possible risk.

In the model designed by U.N.C.A.R.S.R, indicators are grouped into 4 categories of incidence, which together give an insight into the effectiveness of current activity and potential slippage (short and medium time perspective) so that pro-active measures can be set for recovery / growth.

- Efficiency (main indicators: Solvency Ratio, Reserves, Current Liquidity, Operational Efficiency)
- Funds (main indicators: Degree of coverage of social fund with own funds, Delinquency)
- Loans (main indicators: Loan Growth, Rotation Rate, PAR (portfolio at risk) for 30 and 90 days)
- X Factors (main indicators: ROA, Interest Rate, Liquidity Fund, ROE).

Outcomes

As the Romanian Credit Union Industry continues to develop and increase its importance within the financial sector, it is safe to predict that over the next few years, they will have a set of useful methods for modelling the volatilities and correlations of large systems of assets.

The Supervisory Division will continue to develop the business model along an evolutionary path towards greater professionalism and maturity. The requirements for applying risk management principles and enhanced governance in the lending process will continue to be more and more important.

The model could be easily transferred to other credit unions / MFIs upon identifying the real needs of analysis. Further developments could be made based on specificity of the recipient and also existing requirements.

Future development of the tool envisage the possibility to:
- Get individualised charts and tables for each CU;
- Compare individual CU performance to regional and asset class peer average;
- Identify area of improvement (increase performance) for each analysed CU;
- Determine quarterly and annual growth trends;
- Educate staff and Board members about CU`s quarterly performance and take adequate measures (when appropriate);
- Assessment of the effect of Board members initiatives on overall performance.

Lessons Learned

The analysis of theoretical and empirical literature seeking to reveal the peculiarities of credit risk management allows to draw the following conclusions: Firstly, the level of the credit risk depends on the single credit union policy guidelines (lending policy and priorities, composition of the credit portfolio, amounts of the operating income etc); Secondly, credit unions making investment decisions should include an estimation of the concentration of credit risk in order to avoid high delinquencies and foreclosure of loans; Thirdly, the processes of allocating funds are very sophisticated and risk management systems should take into consideration a wide range of features related to liquidity needs, geographic concentration, unemployment trends and business infrastructure in the region etc. All these aspects should be stated in the corporate risk management strategies.

Larger CUs tend to be better managed and have better organisational and financial structures in place. They are generally less vulnerable to normal business hazards and to macroeconomic deviations / turbulence.

Leverage has a negative effect on performance: As a CU increases its debt ratio, the risk of default increases.

A lower capital ratio means a riskier position.

Product design, creativity and innovation differentiate CUs. The most performant ones are those that create new products or adapt the existing ones to match the financial needs of the target group.

Macroeconomic factors are directly and positively linked to CUs performance.

The real interest rate has a positive relationship with profitability.

The main problem is DATA QUALITY. The effectiveness of the model depends upon inputs.

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Further Readings

To see the risk matrix in more detail, click here (RO).