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Interest Rate Risk and the Role of Interest Rate Management: The Case of Kosovo

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ABSTRACT

The aim at this study was to analyse bank management policies to determine the level of interest rate risk. Since the main source of income in the banking system is loan interest revenue, for banks but also supervisory authorities, it is important that this risk is much lower because it would cause instability in the capital of banks, which would also be reflected in the tightening of new lending.A case study has been applied for the analysis of interest rate management. A questionnaire was developed for data collection which was addressed to commercial banks. According to conducted research, it resulted that the most important factors which influence the interest rate risk of at the banks are the harmonization of the flow of funds, the duration and distance management.

KEYWORDS :

Introduction

As financial intermediaries, banks face interest rate risk of several ways. The main and often discussed form of the interest rate risk to arise from differences in the time of maturity (for fixed rate) and re-pricing (for floating rate) of bank assets, liabilities and off-balance sheet positions.Another important source of interest rate risked stems from imperfect correlation between the adjustment of the rates earned and paid on different instruments with similar characteristics despite revaluation. An additional source, and increasingly important to interest rate risk, arises from the options embedded in many bank assets, liabilities and off-balance sheet portfolio operations (OBS).Formally, an option gives the holder the right, but not the obligation, to buy, sell, or in any way change the cash flows of a financial instrument or contract (BCBS, 1997).

Basel Committee (BCBS 1977 and 2004) has announced the guidelines on the management of this type of risk. These principles, revised in 2004 after the introduction of Basel II Agreement (BCBS, 2006), do not include any specific capital requirements regarding risk that should be held in banking books.Instead, they emphasize the importance of transparency in the provision of information and they recommend that the supervisory authorities, in single countries that adhere to the BIS, establish an additional capital for banks holding a substantial interest rate on their banking books. Literature has amply debated various types of interest rate risk to which banks are exposed (BCBS, 2004). Main contributions, published over the years, focus on analysing the different approaches to assess exposure to risks, generally distinct based on "current perspective of income" or "economic value perspective". Scholars and operators in the same sector consider these approaches to be complementary and non-alternative (as quoted in, Baldun, Zen, Rebonato, 2012).

Model that take these approaches are based on the finding of non-cohesiveness between periods of maturity or repricing periods for lending and borrowing positions of a certain period of analysis. Most used analytical methods consist of so-called "gap management" models in which the main variable is represented by operating interest difference (Resti and Sironi 2007, as quoted in, Baldan, Zen, Rebonato, 2012).This study is organized as follows: The first section presents the introduction to the research. The second section presents a review of literature on interest rate risk management. The third section presents the data and methodology used in the study, the fourth section presents the results of the analysis. The fifth section presents the conclusions of the paper.

1. Literature Review

Studies that empirically investigate the determinants of bank interest rate risk (IRR) have traditionally used asset-liability maturity or duration gap as the key factor explaining interest rate exposure. However, this approach presents serious drawbacks given the well-known limitations of static gap indicators, together with the difficulties to obtain precise year-by-year gap measures for most of the banks. For this reason, an interesting alternative, which however has received little attention on the literature, was to examine the association between estimated interest rate exposure and a set of readily observable specific characteristics that might have a potentially relevant role in explaining the exposures such as bank size, capital, balance sheet composition and off-balance sheet activities (Ballester, Ferrer, González, Soto, 2009).

Interest rate transmission can be broken down into two phases: first how changes in monetary policy rates are transmitted at the rate of short-term and long-term market, while the second phase describes how changes in market rate affect the rate of deposits and bank loans.The first phase is greatly influenced by yield stability curves or the interest curve: if the term structure, whatever its form may be (positive or negative slope), remains stabled over time and transmission from policy rates to market rates is said to be proportionate. However, a twist in the yield curve can change the size of transmission. Approach to funding costs (DeBondt, 2005) is the best way to describe the second phase of interest rate transmission, the link between the market rates on the one hand and the deposit rate and bank loans of comparable maturity on the other hand. In general, several factors make sure that market rate is approved by the retail. The link to market rate for the interest rates is provided by the fact that banks rely on money market for borrowing short-term funds. This is the same as for the deposit rateswhich represent the cost of loans and should be reflected in loan rates. At the same time, yields of government securities can be seen as opportunity cost for banks. This helps keep the connection between, for example yield to government bonds and the rate on loans with longer maturity (Ėgert, Crespo-Cuaresma, Reininger, 2006).

(Ėgert, Crespo-Cuaresma, Reininger, 2006) have analysed the size of the transmission of interest rate for five CEE countries. Their results confirm previous findings in the literature that overall transmission is low in deposit rates at night (overnight), but becomes much higher from the short-term deposit rates to long-term ones and corporate lending rates are much more responsive to the monetary policy interest rate changes than deposit or household loan rates. Their findings also support the view that the transmission is on average higher in the CEE-5 than in euro zone countries such as Austria and Germany. Moreover, the authors have found little empirical support for the function of long-term market rate transmission apparently because of the instability of the yield curve at the long end of the maturity spectrum.Interest rate transmission improved significantly since the beginning of transition to around the beginning of 2000, mainly due to the impressive financial development and banking sector in these countries. However, the results of the authors show a reversal of this trend. Elements of an explanation for the weakening of the transmission can be considerable slowdowns in inflation rates for the macro and less competition between banks and more support in foreign funds for lending activity in the micro side.

Ballester, Ferrer, González, Soto (2009) in their paper aimed to investigate empirically the main determinants of the interest rate exposure in twenty-three Spanish commercial banks, during the period from 1994 to 2006, using a data table. Firstly, Spanish banks with overall show a considerable

degree of exposure to interest rate risks during the study period, although the exposure model is not stable in the banks and in the time. In fact, the traditional profile of negative exposure to interest rate, consistent with the view of the short-term borrowing and long-term lending banks, does not seem to fully comply with the Spanish banking system, especially in recent years. Moreover, as expected, interest rate risk plays a secondary role compared to market risk. Second, the results show that interest rate exposure is related systematically to some specific bank features. The size of the banks and the proportion of loans to total assets appeared as the most important determinants of bank interest rate. On the other hand, banks that hold a large part of the assets in the form of loans present a higher exposure to interest rate risk due to the impact of enlargement on the maturity mismatch between their assets and liabilities caused by the relatively large weight of loans.Furthermore, off-balance sheet activities are also positively and significantly related to interest rate risk, suggesting that the use of financial derivatives by Spanish banks are mainly driven by speculative purposes. In addition, banks that finance a large part of their assets with deposits have low exposure related to interest rate risk.

Scannella, Bennardo (2013), conducted an empirical research on the exposure to interest rate risks in banking. The authors assessed the variation on net interested income for each bank if interest rate increases (+ 100 basis points) and if the interest rate decreases (- 100 basis points). Three different scenarios were identified: parallel to shift, slope to shift, and bump to shift of interest rate curves. Results show a significant exposure to interest rate risk in the first time (less than three months). According to the authors, it is a normal situation for banking because banksraise funds in short-term with low bank interest rates. The gap, however, constantly grows on long term (more than five years). This situation may be common to banking because banks to invest in the long term in higher interest rates, then they have short term investments. This research has also compared the maturity and duration models to assess, manage and control interest rate risk of banking. Maturity models are based on actual income approaches. It is the traditional approach from assessing the interest rate risk that is taken by many banks. Duration models are based on on view of economic assessment. According to the authors, they are complementary views of interest rate risk in the banking operations.

3. Methodology

Quantitative data onto this study were collected using a questionnaire designed to analyse the management of interest rate risk, which will help in the identification and explanation of possible changes in the banking system in the country. Also, their comparisonwill be important in order to present future trends of improvements.

The conducted questionnaire was addressed to directors and managers of departments of risk. The questionnaire was carried out in seven of ten banks operating in the country. In one bank we have not been able to accomplish the questionnaire, while two other banks were licensed in the past two years, and their function is in the early stages. During the design of the questionnaire, a series of quantitative and qualitative issues were taken into consideration. The questions are designed based on various types of literature. Organize the section of the questionnaire summarizes issues relating to the strategy that a bank applies to the protection against interest rate risk. Data collected from the questionnaire will be processed using the SPSS program.

4. Results of the Analysis

The data in this section are based on the survey conducted with seven banks in Kosovo. It should be noted that in general banks have responded to all questions included in the questionnaire. Based on this, the indicators discussed in this section may be taken as descriptive of banks active in Kosovo in 2013, when the survey was conducted.

4.1 Interest Rate Risk Management

Since the main source of financing of the economy in Kosovo is the banking sector, for the private and household sector, interest rates on loans are of exceptional importance because on this rate will depend how much the demand for loans will be. But, interest rate management is also important in banks because the level of profitability of banks depends on the difference between active and passive rate.

In Kosovo, euro currencyisa definitive legal tender of payment. The use of just one currency in the country has made the banking sector less exposed to interest rate risk compared with other regional countries where the local currency and foreign currencies are used in parallel. According to survey results, with the exception of a bank that has 1% of loans in the currency of the dollar, all loans are in euro currency.

If banks operate more in variable interest rates, then the interest rate risk is higher. Regarding the type of interest rates in Kosovo, on average 96% of bank loans are based on fixed rates while on average only 9% of them on floating interest rates.

Determining the interest rate on deposits and the interest rate on loans is a factor that can affect the interest rate risk. The difference between interest rates on loans and deposits is high.When asked about the minimum and maximum rates on loans, results show that minimum rates range mainly at 10-12%, but rates are also reported 4.5% at one bank. The maximum interest rates range mainly between 14-16%, but at some banks the maximum rate is reported to amount to 24%. While interest rates on deposits by the CBK in 2014 fell to 1.1% against 2.4% in 2013.

Based on the responses provided by the banks the most important factors in determining interest rates are calculated rate risk and cost in funds, while the least important factor is operating costs in processing loans (Table 1).

Table 1: Structure of loans for individuals and businesses by purpose (number of responses)

	Very important factor (1)	Moderately important factor (2)	Less important factor (3)	Average
Cost of funds	5	1	1	1.4
Calculated rate risk	5	2	3	1.3
Operating expenses in the processing of loans	1	3	3	2.4
Market conditions	4	1	2	1.7
Total	7	7	7	

Source: Author's Questionnaire(2013)

Table 2 shows the average interest rates for personal, business and housing loans. Average interest rate for personal loans ranges of 10.7% to 12.3%; business loan interest rate decreases with increasing the loan amount and ranges from 12.3% for loans in the amount of 100,000 Euros to 14.3% for those in the amount of 5,000 Euros. Interest rate for housing loans is almost uniform to the loan value; it is 9.8% for loans in the amount of 100,000 Euros and 10.6% for loans in the amount of 5,000 Euros.

Table 2: Interest rates on personal, business and housing loans, the average

Personal Loan	Average Interest Rate
1,000 Euro	10.7
2,000 Euro	12.3
3,000 Euro	12.1
Business Loan	
5,000 Euro	14.3
10,000 Euro	13.3
50,000 Euro	12.7
100,000 Euro	12.3
Housing Loan	
5,000 Euro	10.6
10,000 Euro	10.6
25,000 Euro	10.2
50,000 Euro	10.1
100,000 Euro	9.84

Source: Author's Questionnaire(2013)

4.2 Strategies for Protection from the Risk of Interest

In this survey bank were asked which strategy they apply for protecting the bank from interest rate risk, respectively, they were asked to indicate the importance of the factors listed in Table 3. From the results shown in Table 3, it is noted that the harmonization of the flow of assets is the most important factor because it is marked as a strategy by 6 out of 7 banks involved in the study. The exchange of interest rates is found to be a very important factor of only 3 banks.

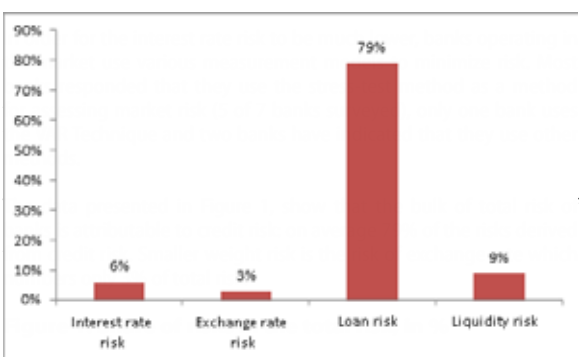
Table 3: Strategies for protection from the risk of interest rates, number of banks

	Very important factor	Moderately important factor	Less important factor
Harmonization of the flow of assets		6	
Management of the distance (maturity)	5		1
Duration of time	5	1	
Exchange of interest rates	3	1	

Source: Author's Questionnaire(2013).

In the banking sector, sources of funds consist mainly of short-term deposits, and banks to place these sources of funds of long-term loans, then for banks another important factor is the interest rate risk management. Foreign-owned banks to use all the strategies for protection for interest rate risk.

Since interest rates on loans are high, important source of interest rate risk for banksare the investment risk and income risk. All banks have responded that the investment risk is the most important element of interest rate and three banks have identified as more significant revenue risk.



Source: Author's Questionnaire, quoted in credit risk management and credit management role (2013)

Based on survey results, the risk of interest rate is 6%, which does not present a very high risk of the economic value of investments and the income level of the banking sector.

5. Conclusion

Results of the questionnaire showed that commercial banks do not face the risk of interest rates at a high level. Since 96% of loans were placed with fixed interest rate, the banks are more based on the minimization of interest rate risk by just doing the harmonization of the flow of funds. Furthermore, the most important factors that banks take into account when determining the interest rate are the cost of funds and calculated risk rate. Regarding the cost of funds of banks, it also does not pose many risks because most of the sources of funds consist of deposits that also have fixed interest rate and deposit interest rate is much lower than that of the loans. This indicates that banks are not exposed to market risk because only 9% of loans are placed with variable interest rates. According to CBK reports, 90.5% of banking sector capital consists of foreign capital. This shows the structure of the banking sector in Kosovo and considering this, some banks use sall the strategies of the interest rate management used in the banking sector in developed countries. Whereas, at the calculated rate risk, banks take into account mostly the inflation rate which based on reports of the CBK in 2014 was 0.4% compared to 1.8% in 2013. Furthermore, for banks, it was also more important investment risk rather than revenue risk.

Since there is a lack of empirical studies on the interest rate management in the CEE region,it is recommended that future researches studies focus this area. In addition, different models used to minimize interest rate risk should be explored.

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