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## **SHIFT TOWARD NON-INTEREST INCOME AND ITS IMPACT ON BANKING PROFITABILITY**

### **Abstract**

Growing competition in the banking industry, innovation trends, shrinking in the interest margin, growing regulations and costs have realigning the role of the Non-interest interest to bank's long –term goals. The paper addresses the shift of banking industry toward Non-interest income. The focus is put on the trend of Non-interest income in the last few decades as well as the trend in Republic of Macedonia. Furthermore, the paper address the outstanding dilemma for the influence of Non-interest income on the bank income, since most of the recent studies shows mix results for the impact of this shift on the bank performances. The empirical findings indicate that banking sector in RM shows steady upward trend toward increase of Non-interest income, unlike the general trend of rapid shift toward Non-interest income by the developed banking industries. Yet, regression analysis pointed Non-interest income as significant variable in Net income of the banking sector of Republic of Macedonia which generate solid base for further development of Net interest income in Total Bank Income. Other significant variables influencing Net Income of the banks are Interest costs and Total assets, indicating that bank should pay more efficiency on interest costs as well as pointing out that higher performance can be align by bigger banks.

**Key words:** Noninterest income; Interest income, Net income; Fee Income; Banking.

**JEL classification:** G21

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## **1. Introduction**

The increased awareness by the bank for revenue origination has been always the main challenges for bank managers. This question is of particular importance at the moment when banks compete in previously inaccessible domestic and foreign markets, with products offered by other nonfinancial companies, and particularly after the experience with the latest financial crises which put additional pace for discussing the justification of each Non-interest income. Such stance adds additional pressure for the banking industry to search for the real measurement of the Non-interest income at the total Net income of the bank and for attaining better performances.

Enlarged pressure forces banks to seek for the new sources for profit origination. Consequently in the practice of many countries, particularly developed ones, decreasing trend of interest income activities was offset by severely growth in the Non-interest income bank activities and searching for the new banking innovative banking products which would offset the decreasing role of the traditional banking activities as key element in bank profit. In the USA, banking industry decrease the reliance on the interest income activities and increase its Non-interest income, whilst the greater reliance on Noninterest income, particularly the trading revenue resulted in lower risk-adjusted profits (Stiroh, Kevin J., 2002).

Non-interest income has been treated in the last two decades, mainly in the connection with the bank profits, whereas recently, after the financial crises the raised question is whether the Non-interest income urges for volatility of the banking profit or the secure steady bank income and risk diversification. These questions have been discussed by many researchers, hence there are no common understanding for the role of Non-interest income in profit origination.

According to our knowledge, Non-interest income and its influence on the bank income in the Republic of Macedonia as well as on the stability of the income has not been treated in a single study. The focus of the research is confirming or rejecting the widely accepted recent trend of rapid shift<sup>1)</sup> toward Non-interest income by the banking sector of Republic of Macedonia by identifying the participation of the Non-interest income into Net Operating Revenue. Furthermore, the regression analyze should identify if Noninterest income has significant influence in net bank income. The impact of Non-interest income on the diversification of the risk in banking and providing stable income as well as quantifying its influence would be a topic of further research.

The paper will contribute in enriching the existing literature with the newest data with focus on the Non-interest income. Obtained results confirm some of the previ-

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<sup>1)</sup> The rapid trend has been converted into steady trend after the latest financial crises since year 2007.

ous findings in other countries or regions, whereas several findings are different than the literature before and supported only by few papers. The study itself seeks to enlighten the role of Non-interest income in banking industry in scope of new technological and innovation trends from one side, as well as the financial crises and its negative implication on the Non-interest income from another side.

The paper is organized in the following manner: Section two represent literature review, section three analyses the trend of Non-interest income in the contemporary banking industry, section four illuminates the the role and recent trends of Non-interest income in banking sector of Republic of Macedonia and demonstrates the empirical results of the regression analysis and section five provides the main conclusions, policy recommendations and suggestions for further research.

## **2. LITERATURE REVIEW**

The literature on banking has provided mixed evidence about whether Non-interest income influence on increasing or decreasing the Net income of the bank, or have impact on the its volatility via diversification the bank income. Interest income/ Non-interest income is not very often tested variable as determinate for bank profitability.

Non-interest income is becoming increasingly important because of pricing pressure of the Net interest income and its decreasing trend in the last years (MacDonald and Koch, 2006:64). There are not any expectation that the banks with higher Interest income/lower Non-interest income (traditional oriented) are more profitable than the banks with less interest income/higher non-interest income (complex banks).<sup>2)</sup>

Demirguc-Kunt and Huizinga (1999) indicate that banks with a relatively high share of Non-interest earning assets are less profitable. Opposite of this findings, the common view of banks managers and analysts is that bank will rely more on Non-interest income to improve profitability; hence the highest earning banks will be those that generate the increased share of Non-interest income in the Operating Revenue (MacDonald and Koch, 2006:120). Furthermore, the banks that are more reliant on activities that generate Non-interest income do not earn higher average equity returns, but are much more risky as measured by return volatility and market betas, which imposes the conclusion that shift toward Non-interest income has not improved the risk/return outcomes of US banks in recent years (Stiroh. J. Kevn, 2006: 1351).

In the literature, even in the case of the same type of the banks (such as Islamic banks) the findings differ. For some countries, in which the bulk of the earnings of Islamic banks come from Non-interest activities, it is expected that non-interest in-

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<sup>2)</sup> For possible classification of the traditional/complex banks consider Poposka K. et al. (2004: 10-11).

come will impact banks profitability positively. However, in the case of Islamic banks in Malaysia, the Non-interest activities did not play an important role to generate the bank return. Therefore, it is expected to affect the profitability negatively (Nur Azura Sanusi and Abd. Ghafar b. Ismail 2005). Thus there are mix results if Non-interest activities influence positive or negative on the bank profitability and it can not be generalized if Non-interest activities contribute for a higher profitability to the bank compared to others basic activities. Such mixture of finding imposes essential need of further research of this significant bank activity which increase its relevance in the last two decades.

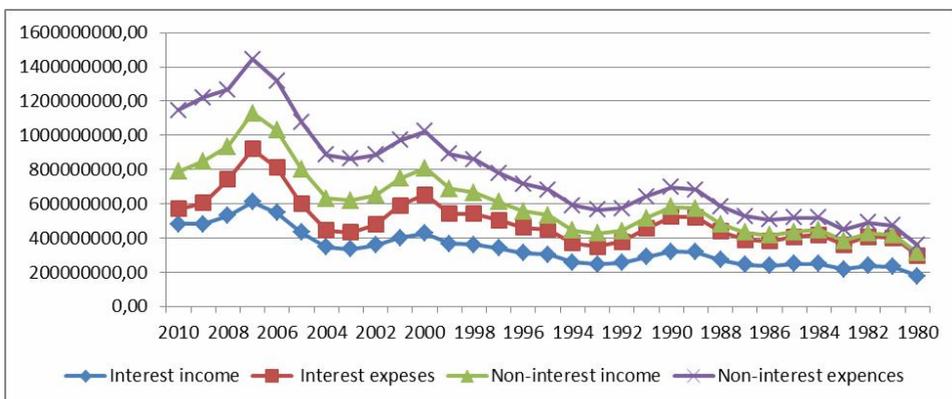
### 3. TREND OF NON-INTEREST INCOME IN THE CONTEMPORARY BANKING INDUSTRY

Highly regulated banking industry and increased competition in banking sector forced the banks to shift steadily toward Noninterest income. Moreover the technological and financial innovations created the opportunity for banks to utilize the synergies between complementary financial activities which might provide the diversified benefits for the banks. Albeit empirical research do not always support the positive effect of the increased Noninterest income, most articles indicate that further increase of the Noninterest income would increase the exposure to the volatile activity without offsetting diversification gains (Stiroh K. Kevin, P:136).

The trends of the Interest and Fee income and cost in USA Commercial Banking in the last three decades is presented on the Graph 1.

*Graph 1*

**TRENDS ON INTEREST INCOME AND EXPENSES AND NON-INTEREST INCOME AND EXPENSES IN USA COMMERCIAL BANKS IN THE PERIOD 1980-2010**



Source: Calculated upon data from <http://www2.fdic.gov/hsob/HSOBRpt.asp> Accessed on 24.02.2012

As shown in the Graph 1, Non-interest income and expenses have steadily upward trend in the period 1980-2007, whereas Interest income and expenses shows more stable trend. However, financial crises in 2007 clearly shift the Non-interest income and expenses downward rapidly, indicating that those variables are more under the pressure of the crises.

The question which is quite important for understanding the such trend of Non-interest income is why banks moved significantly into those activities, whilst the financial crises turn them in declining trend. One explanation for rapid shift toward Non-interest income is the fact that managers overestimated their role in diversification. However, "cross selling" multiple products to the same core customer do not diminish the risk such as industry slowdown or changing customer preference. Second explanation is that the bank managers put focus on the effect on the profitability and place little weight on the volatility of the income. Third explanation would be that the managers are driven by non-profit maximization motives (Stiroh K. Kevin, P:137). Nonetheless, no matter what kind of motivation had manager when shifting toward Non-interest income, the Graph 1 clearly indicates that the banks are pulling back from Non-interest income activities.

#### **4. TREND IN NON-INTEREST INCOME IN BANKING SECTOR IN REPUBLIC OF MACEDONIA AND ITS IMPACT ON NET INCOME**

Banking sector in Republic of Macedonia holds the attribute of traditional banking industry with dominance of the credit activities, hence the major input in the Net income of the banks is represented by Interest income. Having in mind the recent trend of increasing role of the Non-interest income in the Operating Revenue of the banks in USA,<sup>3)</sup> we would like to test if this ratio influences on the bank profitability in the Commercial banks in Republic of Macedonia. Graph 2 indicate the Non-interest income as share of Net Operating Revenue in Banking industry in the Republic of Macedonia.

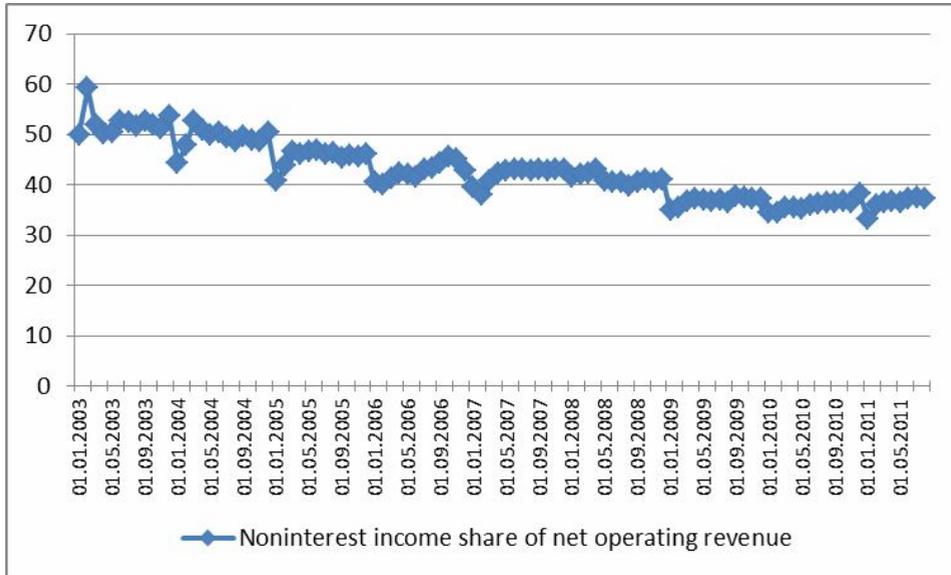
Graph 2 point to the steady line of Non-interest income with minor downgrade trend of Non-interest income in Net operating revenue in Banking sector. Having in mind major trend of banking sector of Republic of Macedonia toward increasing the total income, this trend has been offset by the fact that in absolute amount, the Non-interest income increase. Unlike this trend, in the developed economies, for instance,

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<sup>3)</sup> The ratio of noninterest income as fraction of operating revenue (sum of net interest income and noninterest income) is increased dramatically in USA in the last 3 decades. Namely, this ration equalled 24% in 1980 for all insured banks and it sharply increased to 42.5% in 2004. (MacDonald and Koch, 2006:122).

Graph 2

**NON-INTEREST INCOME SHARE OF NET OPERATING REVENUE IN THE BANKING SECTOR OF RM IN THE PERIOD 2003-2011**



Source: Database created upon data from NBRM <http://www.nbrm.mk/?ItemID=A55FFC32FC478E4A89444507A6C02C45>

USA, the banking industry represent trend of steady shift toward activities that generate fee services charges, trading revenue and other type of non-interest income. In the period of 1952-1977, noninterest income was stable source of revenue and accounted for about 20% of Net operating revenue. Since late 1970s, Non-interest income accounted for more than 40% of Net operating revenue (Stiroh, 2004:133-134).

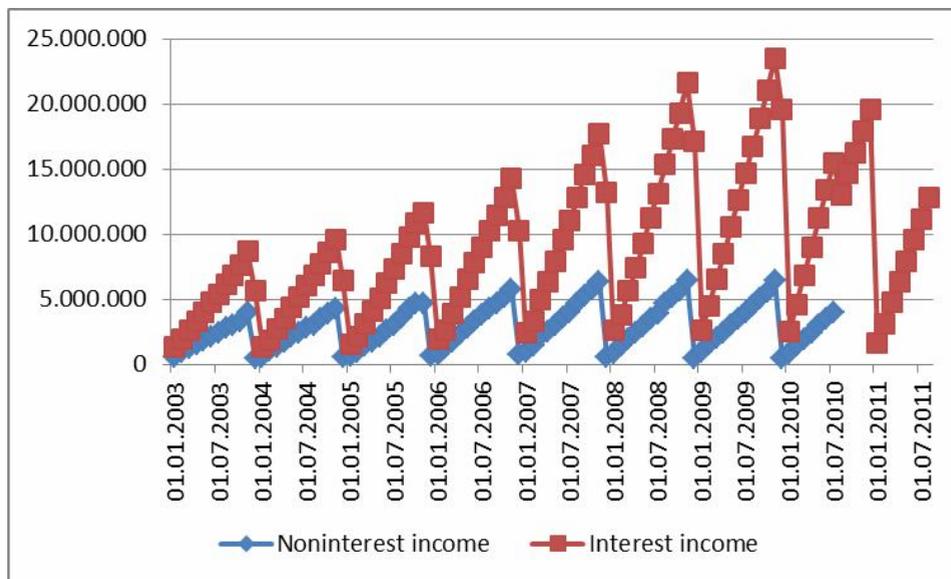
Traditional characteristics of Banking sector in the Republic of Macedonia, can be perceived by observed trend of Interest and Non-interest income. Graph 3 indicate the dominance of the Interest income relative to Non-interest income in the banking sector in the period of 2003-2011.

Graph 3 point out the prevailing role of the interest income relative to Noninterest income in the Banking sector of RM in the last decade, ascertaining the traditional orientation of the banking sector of Republic of Macedonia.

Only few systematic studies for the influence of the Non-Interest Income on the financial performance have been completed, yet those studies tend to contradict the conventional belief of the Non interest income (Young de Robert and Rice Tara, 2004: 34). The mixture of empirical results indicating positive and negative influence of the Non-interest income on the total income of the banks, forces further research in observing the purpose of Fee generating income position on the total bank income in the banks of Republic of Macedonia.

Graph 3

INTEREST AND NON-INTEREST INCOME OF BANKING SECTOR OF REPUBLIC OF MACEDONIA IN THE PERIOD 2003-2011\*



\* Calculations for Interest and Non-interest income from beginning of each year starts from zero.

Source: Database created upon data from NBRM <http://www.nbrm.mk/?ItemID=A55FFC32FC478E4A89444507A6C02C45>

In order to understand the role of Non-interest income in Net Interest income of the banks of RM, the study further continues with regression analysis in order to identify if Non-interest income has significant variable in the bank performance. Dependent variable is Net interest income whereas independent variables are: Interest income, Interest Costs, Non-interest income, Non-interest costs, Employee costs and Total assets. The period range from January 2003 until September 2011. Exploited method is least Squares, whereas included observation are 75 (after adjustment).

The results of the regression analysis indicates that in the period of 2003-2011, three variables are identified as significant for the Net income of the banks: Income costs, Non-interest income and Total assets. Such findings indicate that Non-interest income has significance in financial performances of the banks, namely higher Non-interest income increase Net income. Furthermore, Income costs are also significant which points out that bank managers should make efficient utilization of the Income costs. Finally, the empirical research prove that “size of the bank matters”, by result that variable Total Assets influence on higher Net interest income. The quality of the results can be justified by figure  $R^2$  which clearly indicate that indicated variables explain nearly 81% of the variables influencing Net income of the banks. The results

**Table 1****REGRESSION ANALYSIS OF NET INCOME FOR BANKING SECTOR IN  
REPUBLIC OF MACEDONIA IN THE PERIOD 2003-2011**

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
D(INTEREST INCOME)	-0.000143	0.000218	-0.654776	0.5148
D(INTEREST COSTS_1)	0.000567	0.000429	1.321599	0.1907
D(NONINTEREST INCOME_1)	0.001501	0.000268	5.601931	0.0000
D(NONINTEREST COSTS_1)	-0.000513	0.000515	-0.996903	0.3223
D(EMPLOYEE COSTS_1)	-0.001408	0.000571	-2.465304	0.0162
D(TOTAL ASSETS)	0.022587	0.008257	2.735502	0.0079
C	-94.64837	42.67522	-2.217876	0.0299
R-squared	0.812223	Mean dependent var		-2.629120
Adjusted R-squared	0.795655	S.D. dependent var		606.8839
S.E. of regression	274.3392	Akaike info criterion		14.15529
Sum squared resid	5117815.	Schwarz criterion		14.37159
Log likelihood	-523.8235	F-statistic		49.02206
Durbin-Watson stat	2.104508	Prob(F-statistic)		0.000000

of the empirical research support the hypotheses that banks in the Republic of Macedonia have steadily shift toward Non-interest income and it has positive impact on the total income of the bank, which might be beginning of the trend from traditional toward complex banking.

## 5. CONCLUSIONS

### *Main conclusion and Policy recommendations*

The banking industry is moving further away from stylized version of intermediation between depositors and borrowing. The most indicative symptom of this process is shifting toward Non-interest income. The study indicate that developed countries have rapidly shifted toward Non-interest income, albeit such trend has been diminished with the last financial crises from 2007. The evidence in many research papers do not support the hypotheses that such shift means higher bank performances as empirical findings show mix effects regarding the influence of the Non-interest income on the bank performances.

In the banking sector of Republic of Macedonia, Non-interest income show downgrade trend relative to Interest income, even though in absolute amount the trend is increasing. The empirical analysis pointed that Non-interest income is significant for Net income of the bank which support the notion that steady shift toward Fee income activities has positive impact on bank performances.

Results of the empirical findings imply policy recommendations for major player in the banking sectors. Namely stockholders are interested if the bank is subject to

overexposure to Non-interest income, which is of considerable importance for the risk profile of the bank. The shift toward Non-interest income appear to be of high concern for the borrowers, bondholders and equity holders, particularly if shifting toward Non-interest income appear not to increase bank profitability. Finally, the bank regulation and supervision have profound interest in risk level, since providing a sound and healthy banking sector represent the major concern of each national financial authority.

### **Further research**

The finding of empirical analyses of the banking sector of Macedonia indicated that Non-interest income has significant influence on the net Income, yet the further research should focus of separating the Non-interest income on traditional and non-traditional and searching which part has positive influence on the bank performances. Namely, traditional non-interest income comprise Deposit account services (safe-keeping, checking, on-line bill pay, ATMs, etc.), Lending (letter of credits, securitizations, servicing, etc.), Cash Management (payroll processing, traditional lock box, etc.), Trust Accounts Services (wealth management, etc.), whereas non-traditional Non-interest generating activities comprise investment banking, security brokerage, insurance activities, etc. Such diversification and estimation of influence of each Non-interest activity on Net interest income would be guide for the bank managers for change in their policy and focus on operation.

Further research in enlightening this topic should encompasses the influence of Non-interest income on diversification of bank income, and reducing the risk. The dilemma is whether the Non-interest income is stable and imposes less volatility on the total income of the bank, as well as increase diversification and reducing the risk in bank operation.

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