ISSN 1644-0757
eISSN 2450-4602
http://acta_oeconomia.sggw.pl

ACTA SCIENTIARUM POLONORUM *Oeconomia 15 (1) 2016, 41–49*

DO LOW INTEREST RATES MEAN LOW EARNINGS FOR BANKS?

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Abstract. The banking sector in developed economies for nearly a decade operates in an environment of low interest rates. This phenomenon is gradually transferring to the Polish banking sector. The article analyzes the mechanism which forces central banks to maintain low interest rates, and the effects of their impact on the banks' earnings in 2008–2014. The study is based on the data published by the central banks in selected countries and Poland. The results show that globalization, outsourcing of significant share of jobs, collecting savings and a lower inflationary pressure are major causes of environmental persistence of low interest rates in developed economies. Low interest rates in these countries have not lowered significantly banks' net interest margin, as well as their overall profitability. Similar behavior of banks can be observed in Poland during the period of cutting interest rates starting from the fourth quarter of 2012.

Key words: banks, interest rates, profitability of banks

INTRODUCTION

Nominal interest rates in the global economy have a downward trend in recent years. In many countries they turned to negative values[1]. Such a situation results, among others, from relatively weak economic growth, rising household savings, increased level of economic risk and low capital expenditures. In Poland, after a series of cuts that started in the fourth quarter of 2012 interest rates became the lowest in the history. This is so far a new experience for the Polish economy and in different ways impacts creditors and debtors. Beside positive effects, mainly related to the decrease in financing costs for enterprises

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[1] Negative central bank main or deposit rates are set, among others, in the euro zone countries and in Denmark, Sweden, Switzerland; for more information see websites of central banks of forementioned countries.

and households lending from credit institutions, low interest rates could, however, produce significant adverse effects, among others, in the structure and the value of earnings of the banking industry.

GOAL AND METHODOLOGY

The impact assessment of the effects for the enterprises, households and the banking sector arising coming from the operation in the low interest rate environment is a significant, although relatively rarely analyzed, issue. Due to the short-term occurrence of this phenomenon, the assessment for the Polish economy has to partly rely on the experience recorded in some developed economies, where central banks persisted for many years low interest rates and led relaxed monetary policy. The goal of the paper is to shed some light on the mechanism responsible for creation of the low interest rate environment and its impact on the earnings of banks in some developed countries and in Poland. Analysis covers the period 2008-2014 and is based on data from the central banks of Sweden, the Czech Republic, the European Central Bank, the Federal Reserve System and the National Bank of Poland and the economic literature.

The remainder of the paper is structured as follows. The next chapter presents the conclusions from analysis of the literature on the idea of low interest rate environment and its implications for the financial performance of the real and banking sectors. The following chapter presents the impact of low interest rates on banks' earnings in selected developed countries and in Poland. The whole discussion is summarized in conclusions.

CONDITIONS FOR CONDUCTING THE LOW INTEREST RATE POLICY

In the majority of developed economies interest rates are reduced to values close to zero or even negative. Such trend could be noticed especially since the outbreak of the financial crisis of 2007–2009 when central banks of countries affected by the crisis implemented the strategy of easing of the monetary policy. The purpose of such action was to boost the growth of economy weakened by the financial crisis (Fig. 1). Maintaining low interest rates in these countries is not a new phenomenon. Relaxed monetary policy was conducted in countries forming the euro area since the 1980s and in the most developed countries of the G7 group since the 1990s. In the case of Japan the ultra-low interest rates are effective since the early 1990s.

The economic literature considers interest rates in nominal and real terms. Real interest rates are the price of money and are the balance point between supply of savings and investment demand. Nominal interest rates are the price of money adjusted by the value of inflation expectations [Danthine 2013]. Based on these theories it can be said that the level of interest rates depends on the following factors:

- supply of savings;
- investment demand;
- inflation expectations.

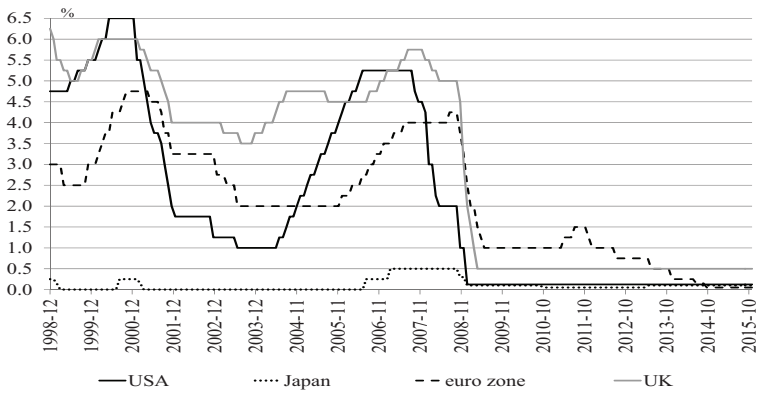

Fig. 1. Central bank interest rates in selected countries
Source: Websites of the central banks.

The growing supply of savings contributes to lower interest rates. In the opposite direction impacts the increasing investment demand, as well as the inflationary pressure. It can be concluded that low interest rates in the most developed countries are the result of, among others, significant increase in savings and low inflation. Globalization, outsourcing and lower wage pressure reduce inflation premium and lead to a decline in nominal interest rates [Orr et al. 1995, Ahrend et al. 2006].

Another model of shaping interest rates assumes that savings do not have to be entirely converted to domestic investment and should not be their only source of funding. Interest rates determined in such a manner in a given country are the sum of the international interest rates, expected rate of depreciation of the domestic currency and the exchange rate risk premium [Fuentes and Gredig 2007]. Such a model indicates that the decline in interest rates on the global markets leads to a decrease in interest rates in the respective country. In countries with economic cycles harmonized with the global economic cycle and stable exchange rate of the domestic currency, domestic interest rates are similar to the average global interest rates [Bosworth in 2014]. In the case of lowering interest rates on international markets one could expect the same direction of interest rate changes in a such group of countries.

According to both models of shaping interest rates, a low economic growth of the highly developed economies is one of the main causes of the low interest rate environment. Such situation results, inter alia from: adverse demographic processes, including aging problem, transfer of significant portion of production to less developed economies, over-indebtedness of enterprises and households and the public sector [Thwaites 2015]. In recent years, high supply of savings has met with limited investment demand resulting from uncertainty about the long-term growth rate of the global economy. As a result, a balance between demand and supply of money is fixed at a low level and sets low market interest rates.

The impact of low interest rates on the whole economy can be multidirectional, and because of the important position of banks, the effects of this interaction are essential to banks financial results. The impact of changes in market interest rates on the value of the net interest margin (NIM) is usually asymmetric, i.e. different in the case of an increase,

and another in the event of a fall in interest rates. There are also differences in these effects in the short- and long-term perspective. One of the regularities noticed by economists is the existence of a positive correlation between NIM and the value of short-term interest rates [Alessandri and Nelson 2012]. Another important rule which appears in the case of very low interest rates is the barrier of zero interest rates of deposits on current accounts. In such case, further lowering of the central bank interest rates may contribute only to fall in interest rates on loans, which leads to reduction of the net interest margin.

The decrease in NIM forces banks to seek new sources of non-interest income. Banks often engage in more risky activities which might provide higher returns. Such behavior indicates that banks switch their strategies to "search for yield" [Maddaloni and Peydro 2010, Borio and Zhu 2012, Paligorova and Jimenez 2012]. Aggressive investment strategies of banks are usually accompanied by the relaxation of the credit requirements. Dell' Ariccia et al. [2013] argue that in the low interest rate environment, interest rates on loans are negatively correlated with the level of tightening of banks' credit policies. Another method of compensation for declines in interest earnings is the reduction of certain operating costs, primarily costs of labor and maintenance of the branch network. This strategy is conducive to the consolidation of banks and improvement of profitability by exploiting positive features of economies of scale.

The low cost of financing promotes the growth of bank lending. However, maintaining such a strategy banks may contribute to an increase in prices of some assets in the long term. It is possible to produce a positive feedback, i.e. an increase in the value of loans due to rising prices of assets, which in turn increases the demand for these assets and further contributes to their price increases [Adrian and Shin 2010]. This mechanism may result in the formation of speculative bubbles in the markets for these assets. The rise in prices on financial markets in an environment of low interest rates may increase competition among banks for deposits. For investors, the purchase of assets with quickly rising prices becomes a more attractive investment vehicle than investment in bank deposits. As a result banks often raise interest rates on deposits what shrinks their net interest margin [Gerdesmeier et al. 2009, Forbes 2015].

An important result of long-term presence of low interest rates is the artificial improvement of the quality of the loan portfolio. This particularly applies to corporate loans and consists in rolling in their existing loan commitments. In a view of the persistence of low interest rates, banks often allow their borrowers to pay off the existing, often irregular or non-performing loans by means of newly granted funding. In this way, companies can avoid bankruptcy, and banks the need to register higher provisions for nonperforming loans. Such transitions improve the financial results and capital ratios. This mechanism, known as the phenomenon of "zombie" occurs for instance in the Japanese economy, where the close to zero-percent interest rates exist from the beginning of the 1990s [Caballero et al. 2005].

The positive effects of the low interest rate environment can include an increase in the creditworthiness of some enterprises and households. Improving the ability of these entities to service existing loans as well as expanding borrowing ability to new entities provides banks the possibility to transfer to the market new funds for consumption and business development. Furthermore, a reduction in interest costs can increase the capacity of borrowers to service their debt and may contribute to a decline in the value of nonperforming loans and their share in the banks' loan portfolio [Boeckx et al. 2013].

IMPACT OF LOW INTEREST RATES ON BANKS' EARNINGS

Swedish central bank pegs the level of interest rates to interest rates of the European Central Bank. The policy of low interest rates was implemented in 2009, after appearance of the severe effects of the financial crisis (Fig. 2). With a break for 2011–2013, interest rates are kept at a rate close to zero. According to data from the Swedish National Bank low interest rates on loans and deposits and downward pressure on the interest margin motivate banks to invest more funds in more risky instruments and to raise funds on the financial markets for financing their activities.

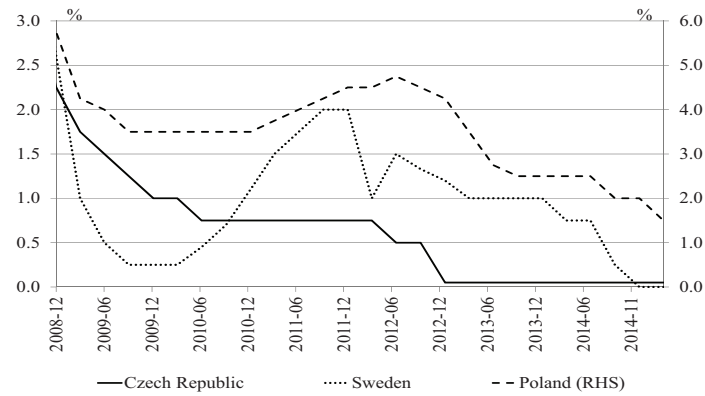

Fig. 2. Central bank interest rates in selected EU countries

Source: Own calculations based on data from the websites of central banks.

Between 2009 and 2014 the average interest rates on the non-financial sector deposits in Sweden fell by 4 p.p. and lending rates by 5.5 p.p. However, despite the long-term persistence of low interest rates, the value of NIM was relatively stable during this period (Fig. 3). The slight reduction in the NIM value after 2013 could result from the fact that deposit rates were already close to 0% in this period and the reduction in the central bank interest rates by 2 p.p. could force banks to lower interest rates on loans only.

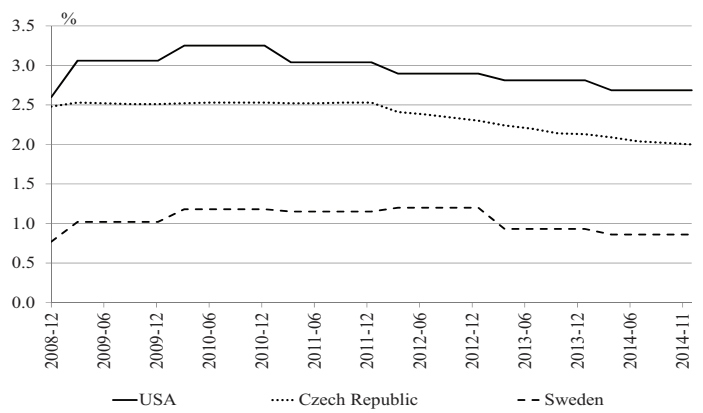

Fig. 3. Net interest margin in the baking sectors of selected countries

Source: Own calculations based on data from the websites of central banks.

Lowering interest rates in Sweden did not bring negative effects to the earnings of the banking sector. Starting from 2009 net profits of the banking sector and the return on assets ROA are in a mild uptrend. Net profits in 2014 was about 50%, and ROA nearly three times higher than in 2014 (Fig. 4).

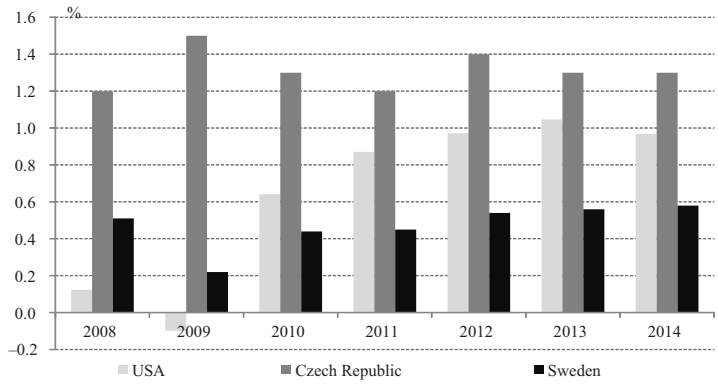

Fig. 4. Return on assets ROA in banking sectors of selected countries

Source: Own calculations based on data from the websites of central banks.

In a similar way banks in the United States reacted to a radical reduction of interest rates. Holding since 2009 the Federal Reserve's main interest rate at the level of 0.13% did not worsen the financial performance of the banking sector in this country. Net interest margin did not fall below 2.5% during the entire period and ROA increased from –0.1% in 2009 to 1% in 2014. Higher profitability of the banking sector was mainly due to better performance of the largest US banks [Genay 2014]. The growth of lending activity and increasing volume of lending contributed to the positive trend in profitability of banks, as well as the improvement in the quality of banks' loan portfolio and lower cost of provisions for non-performing loans [Morris and Regehr 2014]. Such situation was associated with the improvement of the economic situation of the United States [Genay 2014].

In the Czech Republic a significant reduction of central bank interest rates which started in 2010 did not bring significant changes in the banking sector operation. While interest rates in the years 2008–2014 decreased by approximately 2.5 p.p. the net interest margin decreased only by 0.5 p.p. and at the end of 2014 amounted to 2%. The high net income enables banks to increase assets profitability. In 2014 ROA was equal to 1.3% and was higher by 0.1 p.p. than in 2008. The positive results were possible, among others, due to the increasing volume of bank lending.

In Poland, the process of lowering the NBP interest rates was initiated in the fourth quarter of 2012 as the response to the deteriorating economic situation in the country. Stimulation of the economy by loosening monetary policy was one of the factors enabling the growth of lending to enterprises and households. At the beginning of the process of lowering interest rates, the interest margin on loans and deposits decreased to a similar extent (Fig. 5). However, starting from 2014 the average interest rates on deposits decreased much slower than lending interest rates due to the fact that the interest rates on deposits were close to zero. This prevented banks from the even decreasing interest rates on assets and liabilities.

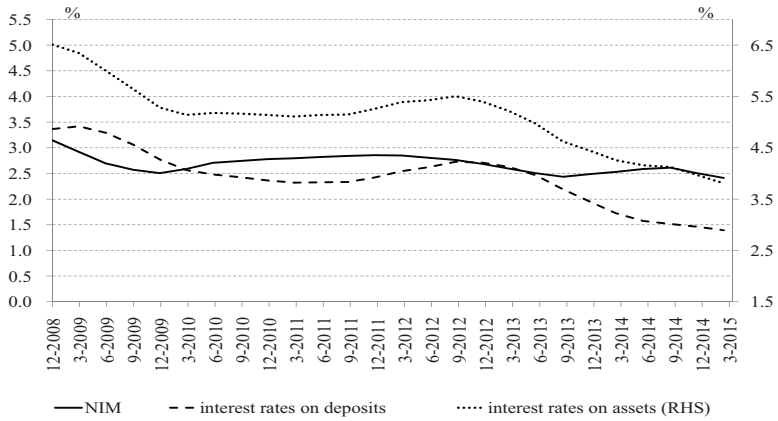

Fig. 5. Net interest margin in the Polish banking sector
Source: Own calculations based on data from the NBP.

Environment of low, and even historically the lowest interest rates did not negatively affect the banks' earnings. For 2013 and 2014, the banking sector achieved the highest ever net profits. Return on assets and return on equity remained in those years at the stable high levels (Fig. 6). The high profitability of banks was indirectly influenced by the improving situation of the Polish economy. The increase in business activity and improving economic and employment prospects increased enterprises and households' demand for loans. It helped banks to generate higher interest and non-interest earnings. During this time the quality of the loan portfolio significantly improved, what reduced cost of provisions for non-performing loans.

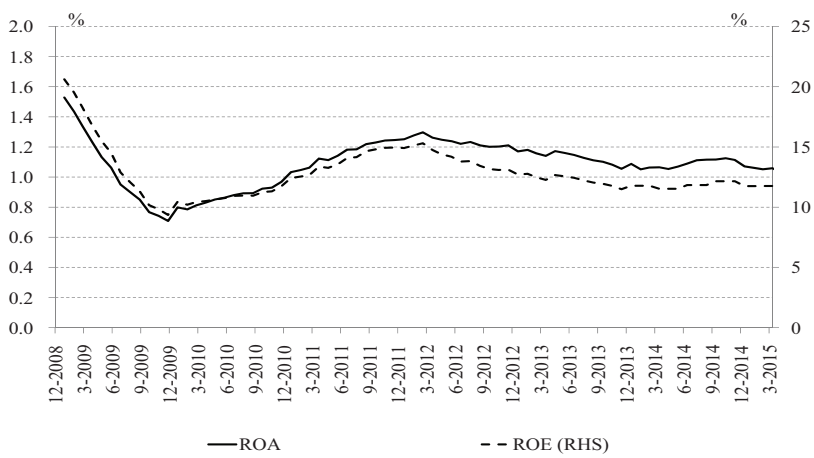

Fig. 6. Return on assets and return on equity in the Polish banking sector
Source: Own calculations based on data from the NBP.

CONCLUSIONS

The environment of low interest rates is present in highly developed economies since the outbreak of the financial crisis. It is a result of the declining economic potential of these countries, an aging population, growth of savings, globalization and outsourcing a significant portion of jobs to developing countries, and decline in the wage growth and inflationary pressure.

Central banks exploit loosened monetary policy and, among others, lower interest rates to stimulate the economic growth. Low interest rates affect banks' performance in direct and indirect way. In the early periods of the interest rate reduction, the central bank action reduces interest margins on loans and deposits in the same way.

When interest rates get closer to the zero level, banks mostly lower lending interest rates. Deposit interest rates are lowered only slightly as they are already close to 0%. This process of adapting banks to the rates' cuts was noticeable in most developed countries, as well as in Poland in 2014.

The improving economic conditions in developed countries indirectly enhanced banks' performance. Banks achieve higher results thanks to increasing the volume of lending, improvements in the quality of the loan portfolio and reduction of losses on irregular loans. Such a relationship between the situation of the real and the banking sectors was observed over the period 2013–2014 in Poland.

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CZY NISKIE POZIOMY STÓP PROCENTOWYCH OZNACZAJĄ MAŁE DOCHODY BANKÓW?

Streszczenie. Sektor bankowy w krajach o wysokorozwiniętych gospodarkach od blisko dekady funkcjonuje w środowisku stóp procentowych na niskich poziomach. Zjawisko to stopniowo przenosi się do polskiego sektora bankowego. Artykuł analizuje mechanizm ustalanie się stóp procentowych na niskich poziomach, a także efekty wpływu tego zjawiska na dochody banków w latach 2008–2014. W badaniach posłużono się danymi z banków centralnych wybranych krajów i Polski. Wyniki badań wskazują, że globalizacja, outsourcing znacznej części prac, wysoka stopa oszczędności i słaba presja inflacyjna stanowią ważniejsze przyczyny utrzymywania się środowiska stóp procentowych na niskich poziomach w wysokorozwiniętych gospodarkach. Niskie poziomy stóp oprocentowanych w tych krajach nie obniżyły jednak znacząco marży odsetkowej, a także ogólnej dochodowości banków. Podobne zachowania banków można zaobserwować w Polsce w okresie obniżania stóp procentowych zapoczątkowanego w IV kwartale 2012 roku.

Słowa kluczowe: banki, stopy procentowe, dochodowość banków

Accepted for print: 04.02.2016

For citation: Kozak S. (2016). Do low interest rates mean low earnings for banks? Acta Sci. Pol., Oeconomia, 15 (1), 41–49.