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Contents

Streszczenia

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Financial Investment and Insurance – Global Trends and the Polish Market
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FOREIGN INVESTORS ON THE POLISH TREASURY BOND MARKET IN THE YEARS 2007–2013

Summary: In the article the involvement of non-residents in the domestic market for Polish Treasury bonds in the years 2007–2013 was examined. The structure of this involvement was analysed from the sectorial and instrumental points of view. The causes of changes in this involvement and the risk associated with the possible withdrawal of capital by foreign investors were also discussed. The author used descriptive analysis and descriptive statistics methods. The study shows that in the years 2009–2013 there was – as a result of both internal and external factors – a significant increase in the involvement of non-residents in the domestic government bond market. The largest share in the group of foreign investors had non-bank financial institutions (sectorial approach), while capital was primarily invested in fixed rate bonds (instrumental approach). The risk of sudden outflow of non-residents was mitigated by cash reserves kept by the Ministry of Finance and the structural liquidity surplus of the Polish banking sector.

Keywords: Treasury debt, Treasury securities, emerging markets.

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1. Introduction

Research on the causes, determinants and implications of foreign capital inflows to emerging markets (and outflows of this capital) is important both from the cognitive and application points of view. In the context of the recent global crisis, the attention has been turned to the involvement of foreign investors in the markets for Treasury securities denominated in national currency [Peiris 2010; Miyajima, Mohanty, Chan 2012]. This issue is of high significance for emerging economies like Poland. Therefore, the article discusses the involvement of non-residents in the domestic market for Polish Treasury bonds, also in comparison to the situation in several emerging countries (European as well as non-European ones). The author uses descriptive analysis and descriptive statistics methods (correlation analysis).

2. Involvement of foreign investors in the domestic marketable Treasury bond market – levels and flows

Domestic marketable Treasury bonds[1] are by far the largest component of the Treasury debt in Poland.[2] As can be seen from Figure 1, in the period from 2007 to 2013 this share ranged from 61.4% (February 2009) to 72.3% (March 2008). The involvement of different groups of investors on the market of these instruments and their changes are therefore crucial for the Treasury debt management, including covering state budget borrowing needs.

Figure 1. Share of domestic marketable Treasury bonds in the total Treasury debt in Poland in the years 2007–2013 (in %)

Source: own calculations on the basis of [Ministerstwo Finansów, *Zadłużenie Skarbu Państwa*].

Overall, in the years 2007–20013 in Poland there was a downward and then an upward trend in the involvement of foreign investors in the domestic Treasury bond market (see Figure 2).[3] The turning point for the non-residents outflow tendency was the first quarter of 2009. Participation of non-residents in the domestic bond market reached a minimum in absolute value in December 2008 (PLN 55.2 bln) and in relative value – in March 2009 (15.2%) (see Figure 2). In contrast, the highest share of foreign investors – both in absolute and relative terms – occurred in April 2013.

[1] The terms “domestic marketable Treasury bonds,” “domestic marketable bonds” and “domestic Treasury bonds” will be used interchangeably throughout this article.

[2] In addition to the marketable bonds (that may be subject to secondary trading on a regulated secondary market) the domestic Treasury debt in Poland consists of: savings bonds (addressed to individual investors and traded only on an unregulated secondary market) and non-market bonds (issued outside the financial market).

[3] There were similar changes in many other emerging markets [Turner 2012, p. 18].

(PLN 207.1 bln; 37.9%). A temporary – as it turned out – outflow of non-residents from emerging markets was triggered by B. Bernanke's statement that the Fed might reduce quantitative easing programme at the end of 2013. The financial markets stabilised thanks to the improvement in the global economic circumstances and investors' belief that the reduction in the Fed's asset purchase would not be associated with an immediate rise in central bank interest rates [Institute of International Finance 2014, p. 1, 2].

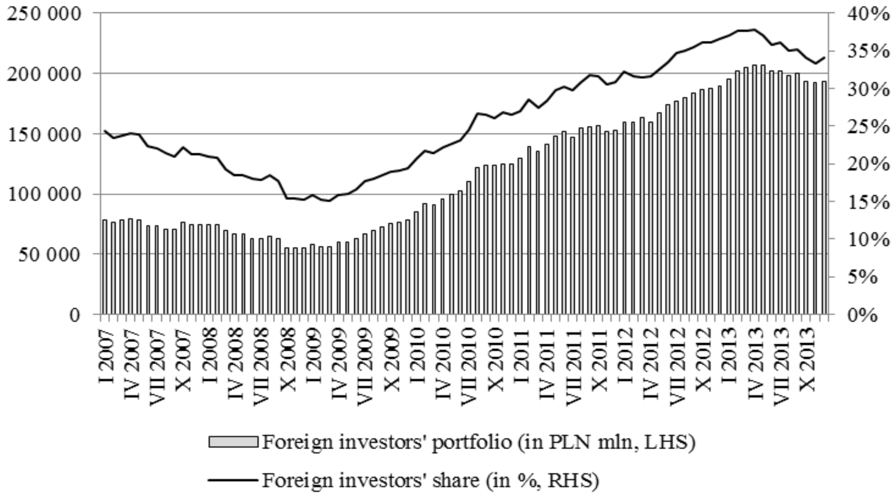

Figure 2. Absolute and relative share of foreign investors on the domestic marketable Treasury bonds market in Poland in the years 2007–2013 (in %)

Source: own calculations on the basis of [Ministerstwo Finansów, *Portfele po seriach*].

The reasons for a substantial increase in the involvement of non-residents in the Polish market for domestic Treasury bonds, starting from the second quarter of 2009, include [Ministerstwo Finansów 2012b, p. 28; NBP 2010, p. 23; NBP 2011, p. 23, 24]:

- disparity in interest rates between developed markets and Poland – particularly eager to invest in emerging markets are insurance companies and pension funds offering defined benefit plans which are required to achieve rates of return not lower than technical rates of return or benchmarks, set before the financial crisis;
- relatively high profitability of Polish bonds in comparison with credit risk;
- stable credit rating for Poland;
- satisfying budget and macroeconomic situation, against the background of other countries in the region and some euro area countries;
- sufficiently large, liquid and well-organized financial market, especially the Treasury securities market.

In most cases (54 months, 64.3% of the total) non-residents' portfolio changed in the same direction as debt in domestic marketable bonds (see Table 1). The Pearson correlation coefficient between these two variables in the years 2007–2013 equals 0.344 and is statistically significant at α = 0,05 (df = 82; p-value = 0,001). The demand of foreign investors was therefore an important factor determining the choice of timing and size of their issuance.

Table 1. Flows of foreign investors' funds and changes in debt in domestic marketable Treasury bonds in the years 2007–2013

Change in non-residents' portfolio	Change in debt	Number of months							
		2007	2008	2009	2010	2011	2012	2013	Total
+	+	4	3	9	8	7	8	5	44
–	–	3	2	1	1	1	1	1	10
+	–	0	1	1	1	2	3	2	10
–	+	5	6	1	2	2	0	4	20
Total		12	12	12	12	12	12	12	84

Source: own calculations on the basis of [Ministerstwo Finansów, *Portfele po seriach*].

It is also worth noting that in the years 2007 and 2008, the most common variant was a combination of a decline in foreign investors' involvement (in absolute terms) and an increase in the relevant part of Treasury debt. Under the conditions of foreign investors' outflow, financing growing state budget borrowing needs was then assured by the increase in the involvement of domestic investors, predominantly banking sector.

3. Instrumental and sectorial structure of foreign investors' involvement in the domestic marketable Treasury bond market

Over the period 2007–2013 non-residents invested their funds primarily in domestic fixed rate Treasury bonds. The total share of investment in floating rate and inflation indexed bonds did not exceed 11%. It is also worth examining what amount of particular types of domestic Treasury bonds was held by foreign investors (in relative terms). Firstly, the share of non-residents in fixed rate Treasury bond market and its changes were similar to overall changes in their involvement in the market for domestic government bonds. The share of non-residents in floating rate Treasury bond market, by contrast, was negligible. In 66 out of 84 examined months, this share did not exceed 5%. Finally, in early 2007 approximately 80% of inflation linked Treasury bonds was held by non-residents (see Figure 3). Such a high share

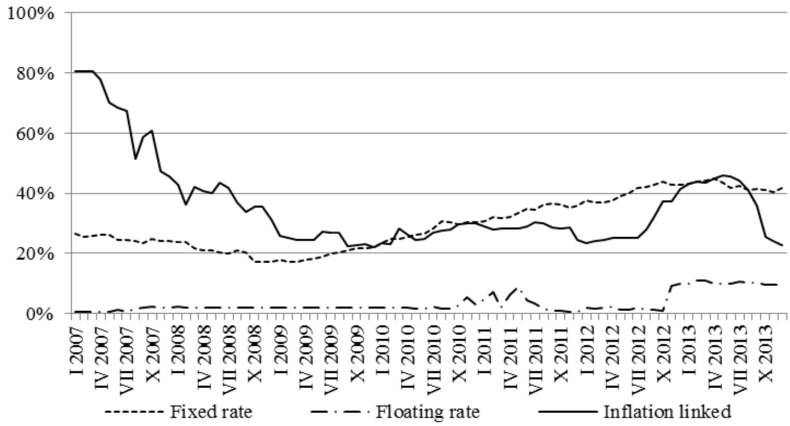

Figure 3. Share of foreign investors in particular types of domestic Treasury bond markets in the years 2007–2013 (in %)
Source: own calculations on the basis of [Ministerstwo Finansów, *Portfele po seriach*].

resulted from a relatively low supply of these instruments. Then, this share fell significantly, stabilizing in 2009–2012 at the level of ca. 20–30%. In 2013 foreign investors increased temporarily their share in indexed bond market to over 40%.

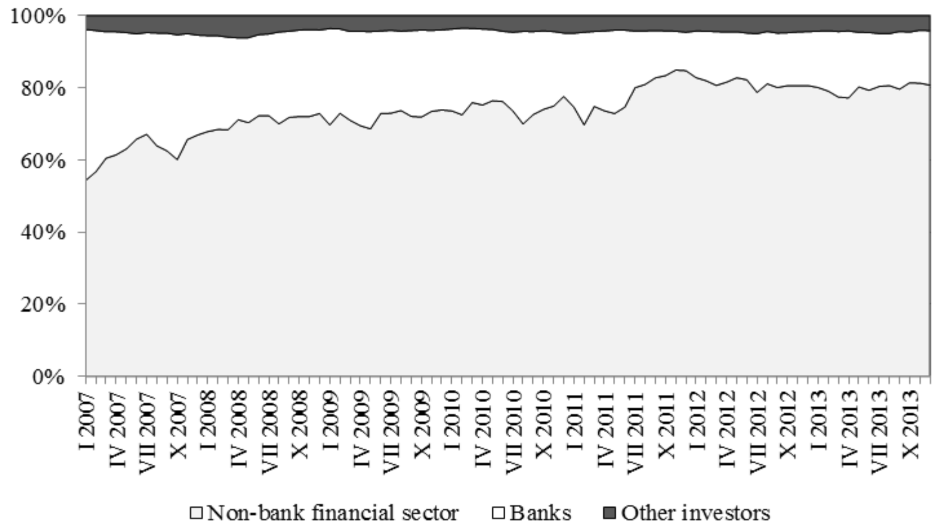

Figure 4. The structure of foreign investors on the domestic marketable Treasury bond market in the years 2007–2013

Source: own calculations on the basis of [Ministerstwo Finansów, *Portfele nierezydentów po seriach*].

The analysis of sectorial structure of non-residents' involvement in the domestic Treasury bond market indicates that in the period from 2007 to 2013 the share of non-bank financial institutions (including investment funds, pension funds and insurance companies) was by far the largest one (see Figure 4).

What is more, this share increased by an average of 0.24 percentage points per month[4] with a corresponding decrease in banks' share. This trend should be considered as positive because non-bank financial institutions – in particular pension funds and life insurance companies – typically have longer investment horizons than banks. Their involvement in the market for domestic bonds is therefore more stable. The importance of other investors (individuals, non-financial entities, others) in the analysed market was the marginal since in the years 2007–2013 their share did not exceed 7%.

4. The risk associated with the potential withdrawal of funds by foreign investors

Foreign investors, in comparison with domestic ones, attach greater importance to credit ratings (and their changes) and are more likely to be subject to herd mentality [Lojsch, Rodriguez-Vives, Slavik 2011, p. 33]. Outflows of non-residents' funds may therefore pose a threat to the stability of domestic Treasury bond market.

In the discussion paper [McKinsey Global Institute, 2013] Poland[5] was included in the group of emerging economies threatened by foreign investors' capital outflow. There were indicated two main sources of risk for Poland: the highly dynamic inflow of non-residents' funds on domestic bond market and the persistent current account deficit. In 2007–2013, the current account deficit (in relation to GDP, in %) amounted to, respectively: 6.2; 6.6; 3.9; 5.1; 5.0; 3.7 and 1.3 [GUS, *Roczne wskaźniki makroekonomiczne*].

Figure 5 presents three features of non-residents' involvement in the domestic State Treasury debt market in Poland and other 17 emerging countries in the years 2007–2013. They can assist the evaluation of risk of non-residents' outflow from the Polish market. On the one hand, the share of non-residents at the end of 2013 as well as amplitude of this share in 2007–2013 categorize Poland as an emerging market relatively prone to non-resident's outflow. On the other hand, the coefficient of variation of this share suggests that the appropriate changes tended to be rather smooth.

[4] Linear trend: $y = 0.24t + 63.89$ ($t = 0, 1, \ldots, 83$; $t = 0$ for January 2007; $R^2 = 0.78$).

[5] As well as: Chile, Columbia, India, Indonesia, Republic of South Africa, Turkey and Ukraine.

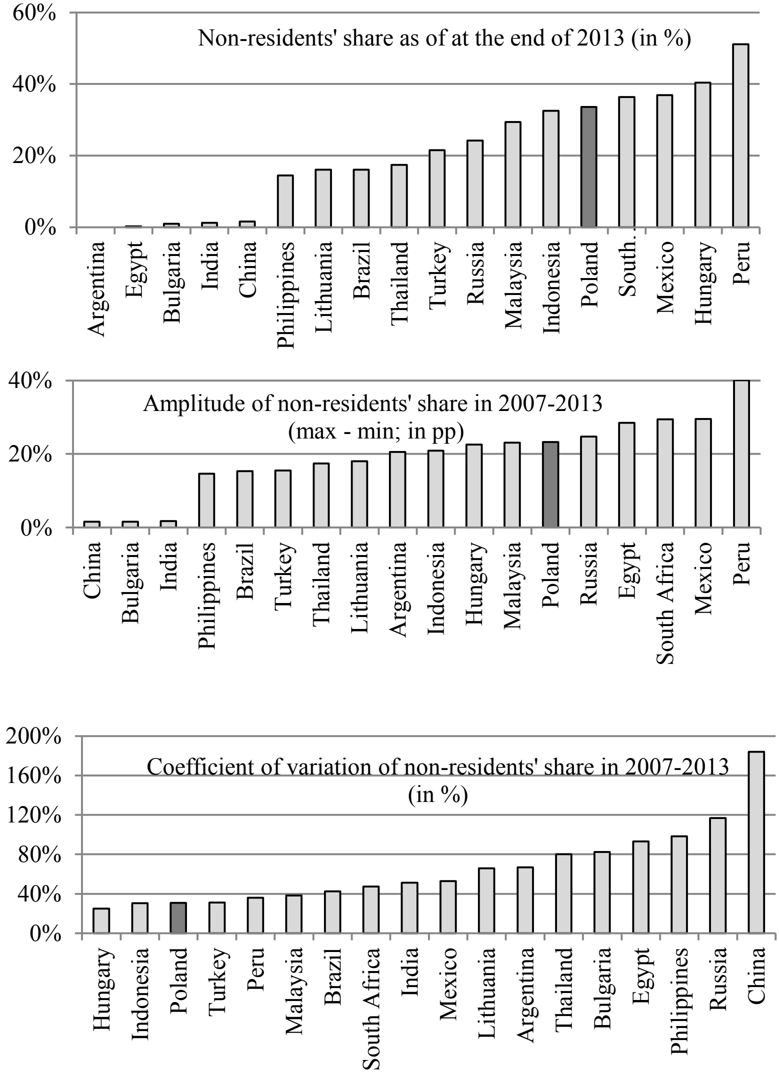

Figure 5. Foreign investors in selected emerging countries local-currency government securities market

Source: own calculations on the basis of [IMF, *Sovereign Investor*…].

In order to mitigate negative consequences of the sudden outflow of foreign investors from the domestic Treasury bond market, the Ministry of Finance kept a significant liquidity reserve in 2007–2013 (see Figure 6).

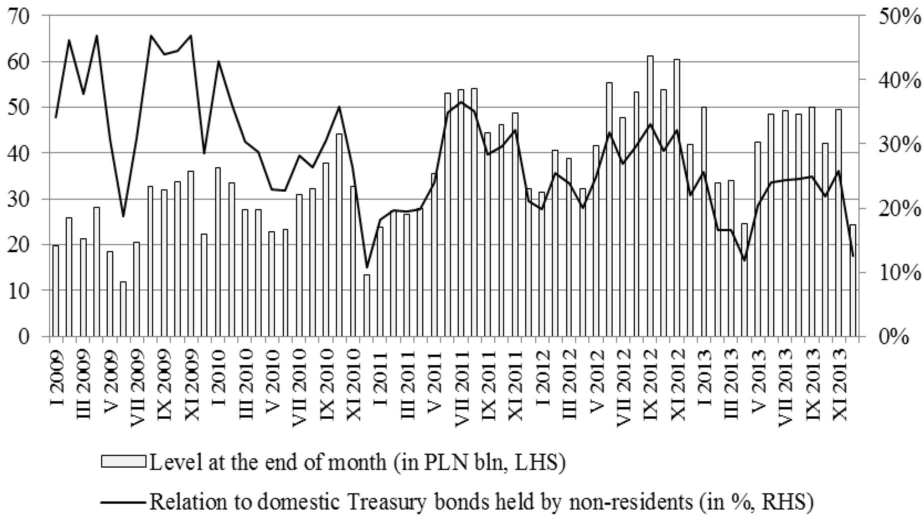

Figure 6. Local and foreign currency funds in disposal of the Ministry of Finance

Source: own calculations on the basis of [Ministerstwo Finansów 2010, 2011, 2012a, 2013, 2014].

Poland has also obtained an access to the Flexible Credit Line from the International Monetary Fund [Jędrzejowicz, Koziński 2012, p. 292]. The structural excess liquidity in the Polish banking sector is a factor which also stabilises bond market.[6] The share of domestic banks in the Treasury securities market falls in good times, and increases in emergency situations (such as in 2008) [Ministerstwo Finansów 2012b, p. 26, 27].

5. Conclusions

After the stabilisation in global financial markets – starting from 2009 – a coincidence of domestic and international circumstances resulted in an unprecedented increase in the involvement of non-residents in the Polish domestic Treasury bond market. However, the experience of mid-2013 showed that one should still take into consideration the volatility of foreign investors' sentiment.

In the short term liquidity reserves (kept by both government entities and domestic investors) are of critical importance. In the medium and long term the

[6] In 2013 the average excess liquidity in the Polish banking sector amounted to PLN 126.5 bln and was over six times higher than in 2007 [NBP 2008; NBP 2014].

safety of covering state budget borrowing needs is dependent on the development of domestic non-bank financial sector.

The comprehensive analysis of the involvement of foreign investors and monitoring its associated risks requires an access to detailed data on the structure of this commitment. In response to these information needs since April 2014, under [Rozporządzenie MF z 6 marca 2014], data on institutional (more specified) and geographical distribution of foreign investors on the domestic marketable Treasury securities market have been collected and published.

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INWESTORZY ZAGRANICZNI NA POLSKIM RYNKU OBLIGACJI SKARBOWYCH W LATACH 2007–2013

Streszczenie: W artykule zbadano zaangażowanie nierezydentów na polskim rynku obligacji skarbowych w latach 2007–2013. Przeprowadzono analizę tego zaangażowania z instrumentalnego i sektorowego punktu widzenia. Zbadano również przyczyny jego zmian oraz ryzyko związane z potencjalnym wycofywaniem kapitałów nierezydentów. W artykule wykorzystano analizę opisową i metody statystyki opisowej. Z przeprowadzonego badania wynika, że w latach 2009–2013 wystąpił – w rezultacie wpływu czynników zarówno wewnętrznych, jak i zewnętrznych – wyraźny wzrost zaangażowania nierezydentów na krajowym rynku obligacji skarbowych rynkowych. W grupie inwestorów zagranicznych największy udział miały pozabankowe instytucje finansowe (ujęcie sektorowe), zaś środki lokowane były przede wszystkim w obligacjach o stałym oprocentowaniu (ujęcie instrumentalne). Ryzyko nagłego odpływu kapitałów nierezydentów było łagodzone rezerwami płynności utrzymywanymi przez Ministerstwo Finansów oraz strukturalną nadpłynnością polskiego sektora bankowego.

Słowa kluczowe: dług Skarbu Państwa, skarbowe papiery wartościowe, rynki wschodzące.