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CENTRAL BANK CURRENCY EXCHANGE SWAP TRANSACTIONS IN THE FOREIGN EXCHANGE MARKET OF LATVIA

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Abstract. Intervention by central banks, in terms of buying and selling foreign currency, has been a major activity in recent years. The intervention operations provide an opportunity for the commercial banks of Latvia to use foreign exchange reserves for the internal exchange market regulation, to reduce speculative interests and create confidence on the euro exchange rate stability in the future. In addition, which is very important in the research authors' opinion, these operations contribute to the further development of interbank market. The present research is aimed to explore the Bank of Latvia currency intervention transactions during the period from 2008 to September 2016, using data research and data processing methods. The results of the study reveal that the political situation in Latvia and throughout the world significantly impacts the intervention transactions implemented by the Bank of Latvia. Any currency intervention, which is related to another EU currency, shall be performed with the main objective – to maintain the price stability. The Eurosystem applies the currency intervention in close cooperation with the relevant non-euro area national banks. The currency exchange transactions allow stabilising prices, since a lower currency valuation may help improve exports and drive economic growth, while a higher currency valuation cause exports to be less competitive.

Key words: central bank, intervention, exchange market, swap.
JEL code: E58, F31, G15

Introduction

The Bank of Latvia is the central bank of Latvia – it is an independent institution and a member of the Eurosystem. The primary objective of the Bank of Latvia is that of the central banks of other euro area countries and the ECB – price stability (or a moderate increase in consumer prices). This is an essential precondition for a strong and growth–oriented economy, and to achieve this aim, the Bank of Latvia participates in the formulation of the Eurosystem monetary policy, related decision-making and implementation (Bank of Latvia, s.a).

Over the years, there have been radical changes in the conduct of foreign exchange interventions and the way it is viewed by economists. In the past ten years, many researchers have studied the role of intervention in the monetary policy of central banks, for example, Baillie (2000); Baillie, Osterberg (1997), Edison (1993), Scalia (2006), Twarowska (2014) etc. have analysed and discussed the role of the exchange rate policy in their home countries, the essence of the currency exchange intervention; though, there are very few studies (Ajevskis et al., 2004; 2012) on the foreign exchange intervention or swap transactions and exchange rates in Latvia.

A foreign exchange intervention is a monetary policy tool in which a central bank takes an active participatory role in influencing the monetary funds transfer rate of the national currency. Central banks, especially those in developing countries, intervene in the foreign exchange market in order to build reserves, stabilise the exchange rate and to correct misalignments. The success of foreign exchange intervention depends on how the central bank sterilises the impact of its interventions as well as general macroeconomic policies set by the government (Foreign Exchange Intervention, s.a.).

The following hypothesis is advanced in the research: intervention transactions in the foreign exchange market of Latvia help maintain exchange rate stability. The research aim is to examine the Bank of Latvia foreign exchange currency intervention transactions. The following tasks are to be carried out to reach the aim:

1) to characterise theoretical aspects of currency interventions;
2) to determine the necessity of invention transactions in the foreign exchange market of Latvia;

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3) to study the role of expanded asset purchase programme in foreign exchange intervention operations of the Bank of Latvia.

The information compiled by the central bank of Latvia, publicly available statistical information, scientific and other publications are used for the research purpose. The following methods were employed: the monographic or descriptive method of literature studies, comparative method, factor detection and analysis, graphics, and logically-constructive method.

Research results and discussion
1. Characteristics of currency interventions

Currency intervention is a significant one-time, targeted-driven influence of the national central bank or the state treasury on the currency market and exchange rates. It is carried out either by selling or buying up the currency (Ko nozime ..., 2001).

The academic term database defines currency intervention as measures of the national bank to increase or decrease the national exchange rate. For the purpose of stabilising the exchange rate, the central bank either buys or sells foreign currencies, for example, the central bank buys the national currency and sells a foreign currency to lower the exchange rate and conducts the opposite operation to increase the value of the national currency (Akademiska terminu…, s.a.).

The reasons why central banks intervene in the foreign exchange market and conduct currency interventions may be different but the objective is the same – to artificially influence the national exchange rate against other currencies in general or against a specific national or foreign currency to stabilise the exchange rate.

One of the main reasons for central banks to conduct foreign exchange intervention is the deterioration of international trade conditions due to unfavourable exchange rate fluctuations. For example, if a country's national currency excessively strengthens against national currencies of the major trading partners, the external competitiveness of exporters worsens abroad and the competitiveness of domestic producers declines within the country. This can lead to a significant deterioration of the current account and the country's overall economy. To prevent this, the central bank may decide to sell large quantities of the national currency in order to stop the excessive growth. The research authors believe that the central bank intervention in the foreign exchange market to stabilise the national currency is a major monetary policy instrument of the Bank of Latvia, mainly for stabilisation of the euro exchange rate now and stabilisation of the Latvian lat exchange rate till 2014 and not for earning profit from the exchange rate differences.

A long-term devaluation of the national currency may also affect the economic development of a country. In this case, the value of the assets in the respective currency declines and foreign investors lose interest for these assets, which leads to a decrease in the flow of foreign investment. In addition, a long-term weakening of the national currency promotes occurrence of the so-called "imported inflation" (import goods become more expensive). In this situation, the intervention would aim to raise the value of the national currency, or at least stop it from further decline (Ko nozime ..., 2001).

Central banks may conduct a coordinated intervention if significant changes in the exchange rate of any world reserve currency lead to global destabilisation.

Foreign exchange interventions of central banks to a greater or lesser extent affect the amount of national currencies in circulation. In order to compensate for the impact of the interventions on the money supply, central banks use such a monetary action instrument as sterilisation. Hence, a central bank seeks to limit the effect of inflows and outflows of capital on the money supply. Sterilisation most frequently involves the purchase or sale of financial assets by a central bank, and it is designed to

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offset the effect of foreign exchange intervention. Frequently, this sterilisation process is used to manipulate the value of one domestic currency relative to another (Ko nozime ..., 2001).

Usually the aim of currency interventions is to give a signal to the market that a central bank is ready to act in order to control exchange rates to the desired direction. This type of action has more psychological impact on the market: investors, fearing possible interventions, avoid active playing on the exchange rate rise or fall. Intervention described above can be used, if the currency is not pegged to any other currency. If it is pegged to a currency basket or another currency, the central bank undertakes the so-called "passive intervention" aimed at keeping fluctuations of the national exchange rate within the admissible corridor ((Ko nozime ..., 2001).

The Bank of Latvia has used passive intervention till the introduction of euro, since the Latvian lat was pegged to euro and before to the SDR currency basket.

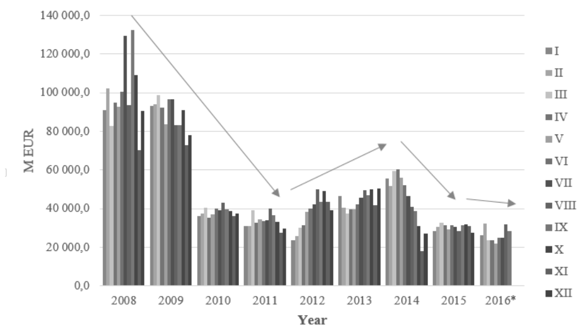
2. Analysis of the intervention transactions in the foreign exchange market of Latvia

Roberts L. Grava, the ex-head of Market Operations Department of the Bank of Latvia, has described the intervention mechanism performed by the central bank of Latvia, namely, the Bank determines the foreign exchange rates using the SDR formula and global exchange rates. The Bank offers to buy and sell any of the SDR basket currencies to banks at a rate which is by one percent higher and lower than the exchange rate set by the Bank of Latvia. These transactions are offered at any time of the day and in any amount. This means that the Bank of Latvia is the largest market operator and the market complies with certain levels or barriers, since otherwise there would be an arbitration situation, namely, it would always be possible to buy or sell at a more profitable price at the Bank of Latvia. The fact that the Bank of Latvia operates in the foreign exchange market, buying or selling foreign exchange, is an automatic mechanism. The Bank of Latvia automatically intervenes if the foreign exchange rate impinges the upper or lower margin set by the Bank of Latvia (Latvijas Bankas ..., s.a.).

In order to stabilise the national exchange rate, the Bank of Latvia performs FX swap transactions (foreign exchange swap) or swaps. The Regulation No 101 "Regulation for Compiling Reports on Foreign Currency Purchases and Sales" of the Bank of Latvia prescribes that foreign exchange swap is a transaction in which the counterparties agree on an exchange of two currencies for a specified period of time (Regulation for ..., 2013).

Swap is an OTC currency derivative contract, which provides for the exchange with cash flows between two contracting parties within a specified period and the size of which depends on the exchange rate.

The analysis of currency interventions requires the research authors to evaluate the exchange transactions performed by the Bank of Latvia. The analysed period from September 2008 to September 2016 depicts the largest swap transactions until 2009, followed by the increase in 2014 (Figure 1).



Source: authors' construction based on Arvalstu valutas darijumi..., s.a.

Fig. 1. **The dynamics of swap transactions performed by the Bank of Latvia in the period 2008-2016, EUR mln**

In September-October 2008, Latvia started to experience a severe financial crisis. Therefore, the Bank of Latvia from July to December 2008 intervened in the foreign exchange market to prevent the possible devaluation of Latvian lat – the national currency. The decrease in the lat value in Quarter 4 of 2008 was primarily caused

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by the world financial crisis and rumours on the possible currency devaluation as well as the government decision to take over 51 % of Parex bank shares. The exchange rate of Latvian lat fell dramatically due to the rumours, so the president of the Bank of Latvia declared that only the Bank of Latvia may take a decision on the currency devaluation (Istie baumu ...., 2008).

Nevertheless, rumours on devaluation led to a high demand for euros and a low demand for lats, as a result the exchange rate of lat fell, approaching a critical margin. In September-December 2008, the Bank of Latvia performed foreign exchange transactions trading LVL and EUR to stabilise the exchange rate of the national currency. Hence, the Bank of Latvia artificially attained demand for LVL and increased the national currency exchange rate (Istie baumu ...., 2008).

In 2009, the outflow of Latvian lats continued; however, the situation started to improve compared with the previous year (Figure 1). The stability of lat was again threatened due to the canard in May 2009, when the Swedish newspapers published information that the Swedish banks were preparing for the lat devaluation.

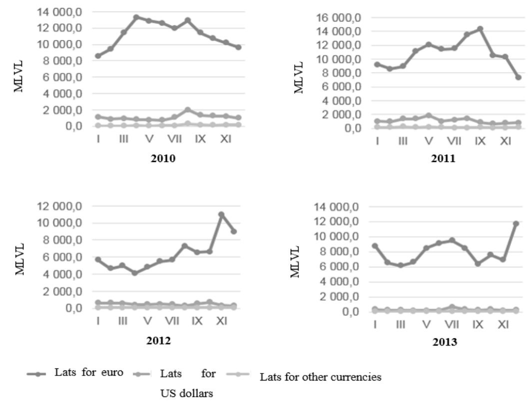
In 2010, contrary to the trend that was characteristic in 2008 and 2009, the Bank of Latvia increased the supply of lats in the market. This may be explained by the fact that Latvia slowly began to recover from the financial crisis.

In general, the amounts of foreign exchange swaps slightly fell from 2010 to 2011, significantly increasing until 2014.

In April 2014, foreign exchange swap transactions amounted to EUR 60 245.6 million; according to the research authors the introduction of euro as an official currency in Latvia from 2014 and that fact that the population increasingly began to exchange their savings to euro may explain the growth of swap transactions. Further on, the amounts of swaps gradually decreased until January 2016. Currently, the foreign exchange swap volumes demonstrate a slight increase; however these amounts are approximately twice smaller than in 2014.

The research analyses the main foreign currency trading transactions for the period 2010-2016, especially considering two periods, namely, the years 2010-2013, when Latvian lat (LVL) was the national currency of the Republic of Latvia and the years 2014-2016, when euro (EUR) is the official currency of the Republic of Latvia.

Between 2010 and 2013, as shown in Figure 2, the Bank of Latvia has mainly sold EUR to buy LVL, the amounts of these transactions being about seven times smaller than the respective transactions related with the sales of USD.



Source: authors' construction based on Arvalstu valutas darijumi..., s.a.

Fig. 2. **Foreign currency swap *transactions in the period* 2010-2013 by months, LVL mln**

According to Martins Gravitis, the head of the Public Relations Department of the Bank of Latvia (Kapec Latvijas ..., 2007), the Bank of Latvia ensured the exchange rate stability of lat against euro, if necessary, carrying out passive currency interventions. Namely, if the demand of commercial banks for euro exceeded the supply, the Bank of Latvia offered to cover the difference by selling foreign currency for Latvian lats.

In the first week of 2010, the Bank of Latvia made the first major intervention, buying up EUR 55 million from the State Treasury and

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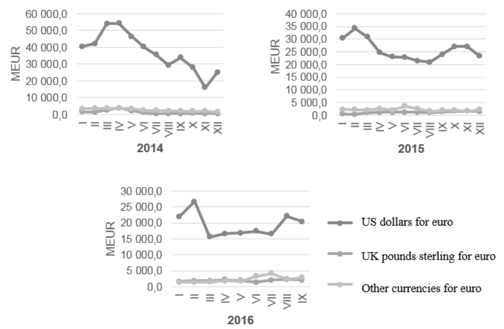
selling LVL 38.6 million accordingly (Latvijas Bankas ..., 2010).

In 2010, the demand for euros increased due to the rumours on the possible devaluation of lat triggering in mid-February by the population of Latvia, and shortly afterwards by the Scandinavian and some other foreign banks; thus, the lat fluctuations approached the upper limit – EUR/LVL 0.7098. At this limit, the Bank of Latvia automatically sold euros and bought lats.

As shown in Figure 2, the smallest amounts of money clearings (swaps) between Latvian lats and euros were observed at the beginning of 2012. In the research author's opinion, this may be explained by the fact that in 2012, the president of the Bank of Latvia pointed out that Latvia had successfully overcome the economic crisis in the previous three years. As a result, Latvia regained trust from investors.



Source: authors' construction based on Arvalstu valutas darijumi..., s.a.

Fig. 3. **Foreign exchange swap transactions in the period 2014-2016, by months, EUR mln**

As shown in Figure 3, the Bank of Latvia has mainly bought USD for EUR in the period from September 2014 to 2016. Until September 2016, the total amount of purchased USD has dropped to EUR 20 000 million, since the exchange rate of EUR against USD and other major currencies had decreased from April 2014.

In 2015, the Eurosystem implemented an expansionary monetary policy due to the slow economic growth of the euro area and under the influence of falling inflation, while the US monetary policy had become more limited already in 2014 due to higher inflation expectations and faster recovery of the economy. Accordingly, interest rates in the USA were higher than in the euro area. Consequently, it was logical that the exchange rate of EUR fell against USD. Freely floating currencies such as EUR and USD float against each other in the longer term depending on the economic cycles – the currency of the country the national economy of which is beginning to relatively outperform the economy of the other country, strengthens. However, exchange rates in the short term are affected by the currency supply and demand (Eiro vertibas ..., 2015).

In January 2015, the annual growth rate of inflation was negative (-0.6 %) in the euro area; hence, leading to a deflation. Negative consequences of deflation usually become expressive through postponed decisions on new investments and purchases, expectations for lower prices, reduction of investment and consumption; thus, the economy is stagnating and the central banks have little opportunities to change the economic trends with traditional instruments of monetary policy.

Depreciation of EUR against USD improves the competitiveness of exporters from the euro area. Lija Strasuna, a senior economist of the JSC Swedbank assumes that "it relates not only to exports to the United States but to other countries as well, where USD is the currency used for settlements – these countries include China, Arab countries and the CIS countries. This affects Latvia, both – directly, namely, Latvian exporters who sell their products in these markets, and indirectly, namely, it enhances the growth prospects of the euro area thus increasing the demand for Latvian exports in Europe. Therefore, a lower euro exchange rate is beneficial for Latvia" (Eiro vertibas ..., 2015).

At the same time, it is noted that lower EUR exchange rate against USD raises the import prices for goods, such as energy, electronics, tea and coffee, which are paid for in USD.

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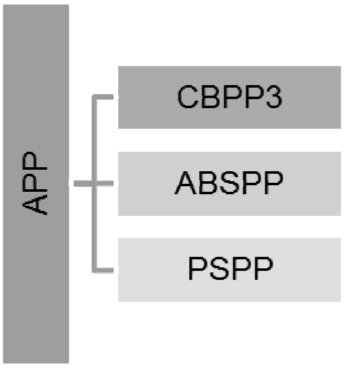
3. The expanded asset purchase programme (EAPP) in Latvia

In January 2015, the ECB Governing Council members were informed that the inflation rate in the euro area in December turned negative (-0.2 %), which was mainly determined by the fall in oil prices. As the possible secondary effects on wages and prices threatened to adversely affect price developments over the medium term, this situation required for an effective monetary policy response. Therefore, the Governing Council adopted a decision on the launch of the expanded asset purchase programme (APP), which includes a new programme PSPP (public securities purchase programme) as well as the existing – CBPP3 (third covered bond purchase programme) and ABSPP (asset-backed securities purchase programme) programmes (Figure 4) (Eirosistemas monetara..., 2015).



Source: authors' construction based on Eirosistemas monetara ..., 2015

Fig. 4. **Components of the Eurosystem's APP**

The EAPP programme is intended to last from March 2015 to the end of March 2017, or until the ECB sees a sustained adjustment in the path of inflation that is consistent with its aim of price stability. The EAPP monthly purchases will amount to EUR 60 billion but from April 2016 – to EUR 80 billion (PSPP programma..., 2016).

It is expected that thanks to the EAPP, the Eurosystem would be able to replace less liquid assets (securities) with highly liquid funds. It is expected that this intervention will affect the euro area economy through three channels of monetary transmission mechanism:

- direct impact – bond and loan interest rate cuts; this channel may be more active in the case of CBPP3 and ABSPP, since the issuers of securities and lenders purchase under these programmes;
- restructuring of the investment portfolio - cash inflow in the financial system will also reduce the rates of other financial instruments, as banks and other investors may want to invest funds received from the Eurosystem through the EAPP in other, not less profitable investments;
- signal effect - bond interest rates and the euro exchange rate are affected downside (Eirosistemas monetara..., 2015).

In 2014, the central government debt of Latvia to GDP was 40.6 % (initial assessment), which was one of the smallest in the euro area and it also means a relatively smaller amount of securities issued by the government Latvia than other countries. Moreover, the central government debt of Latvia consists of the loans issued by the European Commission (EUR 700 million) and the World Bank (EUR 380 million) as well bond issues in USD in international financial markets (EUR 2.75 billion), which substantially reduced the amount of securities available by the EAPP programme.

Estimates show that the Bank of Latvia should monthly purchase PSSP securities of more than EUR 100 million within the EAPP programme and the total intervention would exceed EUR 2 billion. In case of new issues, the government of Latvia would make securities purchase within the EAPP (taking into account 25 % of the emission limits) up to EUR 1 billion, which means that the Bank of Latvia has to buy the securities of international institutions for more than EUR 1 billion (Eirosistemas monetara..., 2015).

The direct effect of the of APP intervention may not be as much as estimated, since the amount of Latvian government securities (similar to the national debt) is small and foreign investors are the majority interest holders. So

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the money paid for the purchase of securities will flow more directly to other euro area countries.

In October 2016, the Bank of Latvia purchased securities of the Republic of Latvia and international organisations of the euro area countries for EUR 257 million. The purchase was done within the public sector securities purchase programme (PSSP) (PSSP programa..., 2016).

Currently, the APP implementation has affected the financial markets as follows:

- ower interest rates;
- increased value of financial assets;
- decreased credit risk;
- increased demand for loans.

However, as financial specialists have recognised the positive development process is slower than the central bank would like (Kur palikusi..., 2016).

Conclusions, proposals, recommendations

1) Any currency intervention, which is related to another EU currency is performed with a main objective – to maintain the price stability. The Eurosystem applies the currency intervention in close cooperation with the relevant non-euro area national banks.
2) The Bank of Latvia determines the foreign exchange rates using the SDR formula and global currency rates. The Bank offers to buy and sell any of the SDR basket currencies to banks at a rate which is by one percent higher and lower than the exchange rate set by the Bank of Latvia.
3) In early 2008, Latvia was experiencing economic recovery, better living standards and high confidence in Latvian lat; though, from July, the Bank of Latvia had to perform significant intervention in the foreign exchange market to sustain exchange rate stability. The situation was worsened by the economic decline, lost confidence in LVL due to the rumours on the devaluation of the national currency.
4) In 2010, the demand for euros increased due to the rumours on the possible devaluation of lat triggering in mid-February by the population of Latvia, and shortly afterwards by the Scandinavian and some other foreign banks; thus, the lat fluctuations approached the upper limit – EUR/LVL 0.7098. At this limit, the Bank of Latvia automatically sold euros and bought lats.
5) During the period from September 2014 to 2016, the Bank of Latvia mainly purchased USD for EUR; such action was notably driven by the US monetary policy that had become more limited already in 2014 due to higher inflation expectations and faster recovery of the economy. Accordingly, interest rates in the USA were higher than in the euro area.
6) The Eurosystem securities purchasing programme has been launched and it has already shown the first positive effects. The programme will affect Latvia mainly indirectly thanks to a more rapid development of the euro area.

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