The International Reserves Management in the Baltic States

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Abstract: The article deals with the activities of central banks of the Baltic states in the field of international reserves management. The structure and the adequacy of international reserves are analyzed in the Baltic countries during 2008-2016.

Keywords: international reserves, international reserves management, structure of international reserves, criteria of international reserves adequacy.

Управление международными резервами в странах Балтии

Аннотация: В статье дана характеристика деятельности центральных банков стран Балтии в сфере управления международными резервами. Проанализирована структура и достаточность международных резервов в исследуемых странах в течение 2008-2016 годов.

Ключевые слова: международные резервы, управление международными резервами, структура международных резервов, критерии достаточности международных резервов.

The process of international reserves management is a complex and multifaceted process. It involves not only the accumulation of reserves, but also it must take into account many other factors. Effective management of international reserves is one of the prerequisites for effective monetary policy in general.

Many scholars have been studying various aspects of international reserves management. Among the main ones are works of J. Frenkel, J. Wijndholds, R. Heller, J. Williamson, B. Eichengreen, A. Greenspan, J. A. Frankel, J. Aizenman and others.

Significant growth of the volume of international reserves in recent years has imposed central banks for cooperation in the field of competent international reserves management. Such management should take into account the features of the exchange rate policy of the country, look for an effective compromise between risk and profitability, and avoid market fluctuations. Much attention is paid to the clarity of roles, responsibilities and open process for reserve management market operations.

The Baltic states – Estonia, Latvia and Lithuania – have achieved substantial economic success since they regained independence in 1991. Market economies were established, living standards have increased and a high degree of macroeconomic stability has been attained. These achievements were crowned by the admittance of the countries into the European Union in 2004 and to the euro area starting in 2011.

Let's consider in details the activities of central banks of the Baltic states in the field of international reserves management.

The Bank of Estonia's (Eesti Pank) international reserves allow the central bank to remain independent of the government and ensure that it has sufficient capital to cover any possible losses. More broadly, the reserves help to ensure confidence in the monetary system of the euro area and to underpin the stability of the Estonian economy and financial system.[1]

All central banks of the euro area countries have international reserves and the Eurosystem can use those reserves if needed to regulate its exchange rate policy. When Estonia joined the euro area in 2011, the Bank of Estonia transferred assets to the foreign exchange reserve of the European Central Bank (ECB).

The international reserves of the European Central Bank consist of the US dollar portfolio, the Japanese yen portfolio, gold and special drawing rights (SDRs) of the International Monetary Fund.

The size of the Bank of Estonia reserves is restricted and limited by an agreement on net financial assets. The agreement has been signed between the central banks of the countries in the euro area and the European Central Bank. It sets out the rules and limits on financial assets not used for monetary policy that are used by national central banks for meeting their domestic responsibilities such as managing the central bank reserves. The net financial assets agreement is used to limit the ability of national central banks to create additional liquidity, in line with the goals of monetary policy.

[1] Central Bank Reserves [Electronic resource] – Available at: http://www.eestipank.ee/en/monetary-policy/central-bank-reserves

In addition to managing its own financial assets, the Bank of Estonia actively participates in the management of the ECB's reserves. On the basis of the currency specialization model, the Bank of Estonia cooperates with the Bank of Finland (Suomen Pankki) in managing a share of the ECB's dollar-denominated security portfolio. The currency specialization model enables the Eurosystem national central banks (NCB) to abstain from undertaking European Central Bank (ECB) foreign reserve management activities on behalf of the ECB to save costs, or may pool these operations together with another NCB. The NCBs which undertake ECB foreign reserve management activities are as a rule allocated a share of either the US dollar or the Japanese yen portfolio. The Bank of Estonia cooperates closely with the Bank of Finland in the following fields:

- development of an investment strategy;
- division of operational procedures;
- analysis of the portfolio yield.[2]

The Financial Markets Department is responsible for investing the financial assets of the Bank of Estonia. The goal of investment of the reserves is to earn a moderate level of stable income while ensuring that the assets are preserved over the long term. The investment portfolio consists of the foreign currency portfolio and the euro portfolio, and is invested in international financial markets. The investments are mainly made in the liquid money and capital markets of developed countries and meet strict requirements for credit quality.

In order to maintain sufficient diversity in its investment portfolio, the Bank of Estonia has invested its reserve assets in money markets and bond markets in Europe, the United States of America, Australia, Canada and the United Kingdom, and to some extent in the stock markets of developed countries.[3]

The Bank of Latvia (Latvijas Banka) holds and manages international reserves, including gold and foreign currency, and other financial investment. International reserves are the financial assets of the Bank of Latvia that cover the relevant liabilities of the Bank of Latvia, including currency in circulation and government and commercial bank deposits with the central bank. Total financial investment of the Bank of Latvia comprises foreign exchange and gold as well as investment in financial instruments denominated in euro.

Financial investment mainly includes debt securities denominated in US dollars, euros and other currencies such as the Japanese yen, the Canadian dollar, the UK pound sterling, the Danish krone and the Singapore dollar. These securities are issued by central governments and their agencies, international organizations, banks and commercial companies as well as issuer of asset-backed debt securities.

Gold is still accounting for a small portion of the total international reserves of the Bank of Latvia. This component of international reserves is stored at the Bank of England, the United Kingdom.[4]

The Bank of Latvia manages the international reserves in accordance with the guidelines approved by the Bank's Board of Governors. Preserving value, maintaining liquidity and ensuring return are the core of the Bank's international reserves management strategy.

The Bank of Latvia's international reserves consist of gold, foreign convertible currencies and SDRs. Limits to the volume and maturity of gold deposits are set out in the guidelines on investment of the Bank of Latvia's gold reserves approved by the Bank's Board of Governors.

The Bank of Latvia invests its international reserves in safe and liquid financial instruments. The Bank may invest its international reserves in bank accounts and time deposits with the International Bank for Reconstruction and Development, the Bank for International Settlements, the European Investment Bank, the European Bank for Reconstruction and Development, the Nordic Investment Bank and other international institutions. The Bank may also invest in government, government agency and bank securities of the following countries: the United States of America, Germany, Japan, the United Kingdom, France, Sweden, Denmark, the Netherlands and Canada. The international reserves may not be invested in equity instruments of any kind. Investment in financial instruments of international institutions, government agencies and banks may not exceed 20% of international reserves.

To keep up with development on financial markets and to have access to qualitative and varied information, in 1997 the Bank of Latvia purchased the Datastream system and enhanced the systems it had been using (Reuters, Bloomberg, Telerate). The information system of the Foreign Exchange Department was upgraded. The system envisages entering all transactions and payments related to foreign exchange into the system's database, electronic data flow and generating partly automatic SWIFT messages. New methods are used to calculate indexes for return on international reserves portfolio and interest rate risks.[5]

One of the main functions of the **Bank of Lithuania** (Lietuvos Bankas) is management, use and disposal of international reserves of the Bank of Lithuania. The Bank aims to invest international reserves in safe, liquid and return generating assets. International reserves of the Bank of Lithuania are managed in accordance with liquidity and safety principles.

In accordance with the liquidity principle, the Bank of Lithuania manages international reserves so as to ensure that its investment might be liquidated immediately and without significant costs. When implementing this principle, the Bank of Lithuania invests the greater part of international reserves in financial instruments of the highest liquidity.

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[2] Management of the Reserves of the European Central Bank [Electronic resource] – Available at: http://www.eestipank.ee/en/monetary-policy/management-reserves-european-central-bank

[3] Investment [Electronic resource] – Available at: http://www.eestipank.ee/en/monetary-policy/investment

[4] Reserve Management [Electronic resource] – Available at: https://www.bank.lv/en/about-us/tasks/reserve-management

[5] The Bank of Latvia's Foreign Reserves [Electronic resource] – Available at: https://www.bank.lv/en/ component/content/article/550-publications/3003-the-bank-of-latvias-foreignreserves?Itemid=201

Adhering to the safety principle, the Bank of Lithuania manages international reserves so that the assets could not be lost, frozen or otherwise constrained. In implementing the safety principle, the Bank invests international reserves in financial instruments with a very low probability of default.

Upon reaching compliance with the key requirements of safety and liquidity applied to the international reserve management, the international reserves are managed adhering to the principle of profitability, i.e. they are invested so that the return is maximised over the long term.[6]

It should be noted that effective management of international reserves means not only the accumulation of international reserves, but also their diversification. Official international reserves consist of foreign currency reserves, IMF reserve position, special drawing rights (SDRs), gold and other reserve assets. The correlation between these elements, as well as the choice of ways of their storage and use is individual for each country and corresponds to the peculiarities of economic policy and the situation in the country. Table 1 shows the international reserves structure of the Baltic states during 2008-2016.

Table 1. – The international reserves structure of the Baltic states, %

	2008	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***
Foreign currency reserves									
Estonia	98,53	97,24	74,65	48,59	58,72	59,49	72,99	72,46	69,94
Latvia	95,80	93,32	92,96	91,68	92,44	93,88	86,65	88,58	88,14
Lithuania	97,49	93,63	85,17	85,80	93,87	94,59	95,15	77,09	73,97
IMF reserve position									
Estonia	0,0002	0,0002	0,0004	0,01	4,17	6,44	4,70	4,74	17,95
Latvia	0,002	0,001	0,001	0,001	0,001	0,001	0,003	0,002	0
Lithuania	0,0016	0,0015	0,0015	0,0012	0,0012	0,0012	0	0	0
SDRs									
Estonia	0,002	2,44	3,75	45,90	31,65	30,31	20,56	20,72	8,92
Latvia	0,007	2,70	2,44	2,28	2,09	2,35	5,42	4,86	4,63
Lithuania	0,0016	3,25	3,19	2,58	2,48	2,63	2,28	11,21	11,78
Gold									
Estonia	0,18	0,23	0,45	6,26	4,55	3,14	2,26	2,11	2,65
Latvia	4,20	3,98	4,60	6,05	5,48	3,77	7,93	6,56	7,23
Lithuania	2,51	3,11	4,00	3,59	3,65	2,78	2,57	11,70	14,24
Other reserve assets									
Estonia	1,29	0,09	21,14	-0,75	0,89	0,62	-0,51	-0,02	0,55
Latvia	0	0	0	0	0	0	0	0	0
Lithuania	0	0	7,64	8,03	0	0	0	0	0

Central banks of the Baltic states were obliged to change the structure of international reserves because of the introduction of the euro as a national currency unit. On the one hand, the share of foreign currency reserves in Estonia decreased by 26% in 2011, by 7% in Latvia in 2014, and by 18% in Lithuania in 2015. On the other hand, with the introduction of the euro in Estonia, the share of SDRs has significantly increased (to 20-45%). In Latvia and Lithuania, the absolute share of international reserves is kept in the form of official currency reserves (75-95%). As for gold, in recent years only Lithuania has significantly increased its share (12-15%) compared with other countries (3-7%). In all Baltic states other reserve assets are practically absent.

Since holding of international reserves is related to both the benefits and the costs for the country, each country needs to determine its optimal volume. In the world practice there are such quantitative indicators of the adequacy of international reserves as the international reserves to import ratio, the international reserves to the short-term external debt ratio, the international reserves to money supply ratio, the international reserves per capita criterion and the international reserves to GDP ratio. Let's consider some of them for the Baltic states.

The international reserves per capita criterion shows how much the income of a citizen of the country can increase on average, if one assumes that some kind of hypothetical decision will be made to pass all liquid stocks.[7]

[6] Annual Report of the Bank of Lithuania 2016 [Electronic resource] – Available at: https://www.lb.lt/en/publications/annual-report-2016

[7] Малкина М. Ю. Управление официальными международными резервами государств в условиях глобальных рисков / М. Ю. Малкина // Труды Нижегородского государственного технического университета им. Р. Е. Алексеева. – 2010. – № 2 (81). – 286-293 с.

Table 2 shows the actual values of international reserves per capita of the Baltic states during 2008-2016.

Table 2. – The international reserves per capita criterion of the Baltic states, USD

	2008	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Estonia	2971	2983	1928	156	227	239	332	315	267
Latvia	2408	3223	3626	3097	3699	3923	1619	1742	1791
Lithuania	2015	2094	2130	2709	2855	2729	2977	584	905

We observe a sharp reduction in the share of international reserves per capita in all countries with the introduction of the euro as a national currency unit. In Estonia, in 2011, the share decreased by 12 times compared with 2010. In Lithuania, in 2015, the share decreased by 5 times compared with 2014. Latvia has the highest share of international reserves among all Baltic states and a reduction of international reserves per capita by only 2,5 times after the introduction of the euro.

The international reserves to GDP ratio (in %) shows the time during which a country can normally exist with a completely destroyed (non-working) national economy, providing a former standard of living. Of course, it does not concern the sector of non-traded goods, including the sphere of social services, objects of social infrastructure, because they can not be replaced by import.[8]

Table 3 shows the international reserves to GDP ratio of the Baltic states during 2008-2016.

Table 3. – The international reserves to GDP ratio of the Baltic states, %

	2008	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Estonia	16,4	20,3	13,2	0,9	1,3	1,3	1,7	1,8	1,5
Latvia	14,7	26,4	31,9	22,5	26,4	25,5	10,1	12,8	12,7
Lithuania	13,5	17,7	17,8	18,9	19,9	17,4	18,1	4,1	6,1

Using the data of Table 3 and the following formula:

$$X = \left(\frac{IR}{GDP} * 100\% \right) * 365 / 100\%, \qquad (1)$$

where X – the number of days of functioning of the country at a full stop of the economy, IR – volume of international reserves, GDP – volume of gross national product,

we have calculated the number of days for which the volume of international reserves will be sufficient at the complete stop of national economies in the Baltic states during 2008-2016. The results showed that in 2016, Latvia could have used its reserves for the longest time among the Baltic states - almost 1,5 months, and Estonia – for the shortest time (only 6 days).

Table 4. – The international reserves to GDP ratio of the Baltic states, days

	2008	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Estonia	60	74	48	3	5	5	6	7	6
Latvia	54	96	116	82	96	93	37	47	46
Lithuania	49	65	65	69	73	63	66	15	22

The international reserves to import ratio is a classic criterion of international reserves adequacy. It assesses the adequacy of international reserves in terms of import capability, and is therefore based on current account balance operations. The main idea is that international reserves should always be sufficient to cover future imports over some period of time, even in the case of temporary inflows of foreign capital. With regard to the specific minimum reserve value, the most frequently used indicator is three months of the future (expected) import, because during this time the country can overcome the import blockade and establish security (to conclude contracts with other countries, mobilize domestic production, etc.).[9]

Table 5 shows the international reserves to import ratio of the Baltic states during 2008-2016. The indexes of years when international reserves were sufficient in the countries according to this criterion (exceeded 3 months) are shown in bold type.

[8] Малкина М. Ю. Анализ динамики объемов и структуры золотовалютных резервов государства: в поисках экономической стратегии / М. Ю. Малкина // Финансовая аналитика: проблемы и решения. – 2008. – № 4. – 2-16 с.

[9] Мовчан В., Кірхнер Р., Джуччі Р. Адекватність офіційних резервів в Україні. Серія консультативних робіт [PP/08/2009]. – Берлін/Київ. – 2009. – 16 с.

Table 5. – The international reserves to import ratio of the Baltic states, months of import

	2008	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***
Estonia	2,16	**3,39**	1,84	0,12	0,16	0,16	0,22	0,27	0,22
Latvia	2,97	**7,43**	**6,49**	**3,97**	**4,47**	**4,52**	1,83	2,32	2,41
Lithuania	2,09	**3,82**	**3,06**	2,68	2,76	2,37	2,51	0,60	0,92

Summing up, it should be noted that the importance of international reserves management is based on the fact that they can ensure the country's resilience to economic shocks. The use of unreliable and risky reserve management techniques limits the ability of effective government decision-makers to take action during financial crises, which in turn can exacerbate crises themselves. In addition, the use of such methods often leads to significant financial costs and threatens the reputation of the country.