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MANAGEMENT OF FOREIGN EXCHANGE RESERVES OF THE EUROPEAN CENTRAL BANK

Abstract: The aim of the article is to analyze the foreign exchange reserves of the European Central Bank and the methods of their modern management. As a result of the study, it was proven that when implementing foreign reserve management policy, the European Central Bank and national central banks should pursue the objectives of the current monetary policy for future generations. Foreign exchange reserves are a special good that only the current generation and the current government cannot use. The character of the article implies different research methods: analysis of the sources of law, legal dogmatic, comparative dogmatic method. The analysis carried out as part of the study indicates that management of foreign exchange reserves of ECB has an impact on intergenerational justice.

Keywords: banking law, reserves, intergenerational justice, national central bank, financial system

INTRODUCTION

In proven world democracies, it has been accepted that in the proper development of economic order, it is necessary to have an independent central bank. The independent central bank includes guaranteeing an appropriate constitutional position and constitutionally entrusting an independent institution such as the central bank with the achievement of the overarching goal of ensuring a stable price level. Independent central banks in law-abiding countries carry out their most important task as part of their monetary policy, in which foreign exchange reserves play a crucial role. The research methods used in the article are characteristic for social sciences: from the typically legal methods, such as analysis of legal regulations and doctrines, which make up a full understanding of law; through the analysis of financial and statistical data published by banking and monetary institutions; up to the analysis of press statements to show the latest legal and factual status. Legal-dogmatic methods and data analysis and synthesis were supported by the descriptive method, which contributed to the conclusions summarizing the study. The author, based on current, official data, has published on institutions' websites.

THE ISSUE OF FOREIGN EXCHANGE RESERVES

The purpose of the article is to analyze changes in the approach to the currency reserves of the European Central Bank (hereinafter: the ECB) at the turn of the 20th and 21st centuries, taking into account the changes taking place in central banks outside the euro area, including the activities of the National Bank of Poland (hereinafter: the NBP).

The European Central Bank (ECB) is responsible for conducting the monetary policy of the euro area, the largest economy in the world after the USA, which, together with the national central banks (NCNs) of all 27 member states of the European Union, is part of the European System of Central Banks (ESCB). In accordance with article 127 (1) and article 282 (2) of the Treaty on the Functioning of the European Union,¹ the main objective of the ESCB is to maintain price stability and support general economic policies. The ESCB operates in accordance with the principle of an open market economy with free competition, favoring the efficient allocation of resources, and in accordance with the principles set out in article 119 of the Treaty on the Functioning of the European Union.

Pursuant to article 130 of the Treaty on the Functioning of the European Union, when exercising the powers and tasks and responsibilities that have been entrusted to them by the Treaties and the Statute of the ESCB and of the ECB, neither the ECB nor the national central bank or a member of any of their decision-making bodies shall seek instructions or they shall not be accepted by the institutions, bodies, offices or agencies of the Union, the governments of the Member States, or any other body. The institutions, bodies, offices and agencies of the Union and the governments of the Member States undertake to respect this principle and not to seek to influence the members of the decision-making bodies of the ECB or national central banks in the performance of their tasks.

Pursuant to the provisions of art. 18 of the Statute, the European System of Central Banks² carry out open market and credit operations to achieve their objectives and carry out tasks.

At the same time, the EU legislator in art. 19 paragraph 1 of the aforementioned statute decided that the ECB, in pursuing its monetary policy objectives, has the right to require credit institutions established in the Member States to hold minimum reserves on the accounts of the ECB and the national central banks of the euro area. The central banks of EU Member States not joining the euro area are not subject to the strict monetary policy of the ECB.

Managing foreign exchange reserves is an important task undertaken by central banks. Depending on the design of the exchange rate arrangements and mon-

¹ Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union (Journal of Law 2012/C 326/01, 2012).

² The Statute of the European System of Central Banks and of the European Central Bank, 2016.

etary policy requirements, foreign exchange reserve assets can serve a variety of purposes, ranging from exchange rate management to external debt management. The European Central Bank manages foreign exchange reserves to ensure the liquidity of the euro area and conducts currency operations when needed.³ For the ECB, foreign reserves were created from assets transferred by the national central banks of the euro area when the third stage of the Economic and Monetary Union began on 1 January 1999.⁴ In the process of managing official reserves by the European Central Bank, there are several criteria to be applied (according to their importance): liquidity, security and return on investment. The ECB's foreign reserve portfolio consists of: US dollars, Japanese yen, Chinese yuan (CNY), gold and special drawing rights. The national central banks may jointly conduct operational activities or independently manage only one portfolio, e.g. in dollars or yen, acting as representatives of the ECB. When selling gold, the ECB strictly complied with the Central Bank Agreement on gold and the joint statement on gold, to which it is a signatory.⁵

The management of the ECB's foreign reserves is subordinated to its main purpose, which is to ensure that the Eurosystem has sufficient liquid resources. The liquid resources needed to implement EU monetary policy include non-EU currencies. The investment framework includes three layers of management: 1) strategic investment policy; 2) medium-term tactical positioning; and 3) day-to-day portfolio management. The ECB's investment framework, translated into national central banks (hereinafter: NCBs), is very detailed and complex. In the following paper, an active approach to management, internal competition between NCB portfolio managers and a diversification of portfolio management styles that support the investment framework will be explored.

In the tradition of European central banking, it has been accepted that foreign exchange reserves refer to readily available shares in the safe assets of external monetary authorities. These authorities are usually the central bank, the Treasury or the Ministry of Finance of the country. The above-mentioned definition is the widest one and it covers international reserves, including both foreign and non-currency reserves. Foreign reserves are considered to be external assets generally controlled by the national monetary authorities and consist of securities and

³ Guideline of The European Central Bank of 20 September 2011 on monetary policy instruments and procedures of the Eurosystem (recast) (ECB/2011/14) (2011/817/EU), 2011.

⁴ ECB's official reserve.

⁵ The Central Bank Gold Agreement (hereinafter: CBGA) is a pact (agreement) regulating the cooperation of selected central banks on the gold market. In May 2014, the ECB, together with central banks, concluded the fourth agreement with a period of validity from 27 September 2014 to 26 September 2019. This next agreement regulated the order on the gold sales market by European central banks. On 26 July 2019, the ECB announced that the signatories to the Central Bank Agreement on Gold stated that after its expiry on 26 September 2019, such a formal agreement would no longer be necessary. This decision is without prejudice to the powers of the national central banks to manage their own gold reserves.

deposits. They are determined by foreign reserve policy decisions on regarding, for example, intervention in the foreign exchange market or reserve portfolio management. Such interventions may include changes between currency denominations, asset classes and maturities. The second major component of official reserves (usually a smaller share of the total official reserves) includes monetary gold and claims against international financial institutions that can be quickly converted to foreign exchange reserves.

Foreign exchange reserves are an important element of the macro policy toolkit, thus enabling all four sustainable development orders to be implemented. In the mid-nineteenth century, many countries developed the practice of maintaining foreign exchange reserves to support their obligations and the national currency to replenish gold and silver reserves.⁶ The concept of maintaining foreign exchange reserves has evolved over time in different countries. One possible use of foreign exchange reserves, applied by both advanced and emerging market economies, is to enable them to carry out currency interventions if they deem it necessary. In emerging markets, foreign exchange reserves serve a wider range of purposes.

Foreign exchange reserves are usually held for traditional operational purposes, as well as for preventive policy purposes. Traditional operational objectives include facilitating regular payments related to international debt and import payments made on behalf of the government; facilitating payment schedules; assistance in easing the restrictions on taking external loans; and a monetary policy in relation to liquidity operations.⁷ From a precautionary point of view, countries treat reserves as a buffer to neutralize or self-insure against balance of payments shocks, including sudden congestion in international capital flows, and to ensure foreign currency liquidity for banks in recession situations. In countries with no fluctuating exchange rates, the reserves act as a buffer to cover monetary liabilities. Countries with exchange rate flexibility need lower reserves because the exchange rate can act as a buffer and help absorb external shocks. However, an adjustment to the exchange rate can also have negative consequences, for example, in the event of large currency differences or currency exposures on the country's external balance sheet. In this case, foreign exchange reserves play a stabilizing role because they can discourage one-way bets during financial stress episodes.

THE SIZE OF GLOBAL CURRENCY RESERVES

It is estimated that at the end of 2018, total global currency reserves increased to over USD 11 trillion, which is a tenfold increase compared to the level in the

⁶ L. Chitu, A. Eichengreen, A. Mehl, *How Global Currencies Work: Past, Present and Future*, Princeton 2017.

⁷ B. Jones, *Central Bank Reserve Management and International Financial Stability — Some Post-Crisis Reflections*, Washington, D.C. 2018.

1990s. It is noteworthy that two-thirds of the world's foreign exchange reserves are in the national central banks of emerging and developing economies. After the Bretton Woods system ended in 1978, global currency reserves increased sharply, particularly among developed economies.⁸

After the Asian crisis of 1997, the economies of emerging markets and exporting goods began to change the approach to the country's financial security and accumulate significant foreign reserves. Commodity exporting countries have seen even faster accumulation of reserves after 2005, as rising commodity prices have contributed to their large balance of payments surpluses. The increase in foreign exchange reserves was widespread and the resources of developed economies also increased, albeit slightly. Global currency reserves continued to rise in the wake of the global financial crisis, as some countries were reluctant to use their reserves, fearing that this could be a negative signal of potential exchange rate pressure.

Extended research in this area shows that this situation may be explained in a twofold manner. The first explanation is that precautionary motives encourage countries to hold foreign exchange reserves to manage crises, as a way of preventing sudden congestion in capital flows. The conclusions of the late 1990s financial crisis have led many emerging market countries to accumulate currency reserves while opening their economies to global trade and finance. In addition, some Asian economies sought to secure themselves to avoid applying for IMF financial assistance.⁹

The second explanation resulting from the analysis of sources indicates additional factors of accumulation of reserves related to potential weaknesses and imperfections of the market in the international monetary and financial system. These include uncertainty about the international availability of liquidity during the financial crisis, volatility of capital flows or global imbalances.¹⁰

For the ECB, its official reserve assets, including both foreign reserves and foreign currency reserves, amounted to around EUR 68.6 billion at the end of 2018. These reserves include approximately EUR 49 billion in foreign currency (US dollar, Japanese yen and Chinese renminbi) and approximately EUR 18.2 billion in gold, with the remaining assets held in the IMF's SDR. The official reserves were initially transferred to the ECB by the national central banks of those EU Member States that adopted the euro in proportion to their share in the capital of the ECB.

At the end of 2018, the entire Eurosystem had a total of official reserve assets totaling EUR 719 billion, including the ECB's official reserve assets. As indicated by this figure, the national central banks have significant additional official

⁸ J. Frenkel, "International reserves: Pegged exchange rates and managed float", *Carnegie-Rochester Conference Series on Public Policy* 9, 1978, pp. 111–140.

⁹ L. Chitu, *Reserve accumulation, inflation and moral hazard: Evidence from a natural experiment*, Frankfurt am Mein 2016.

¹⁰ International Monetary Fund, 2010. Reserve Accumulation and International Monetary Stability. Policy Pap. 2010. <https://doi.org/10.5089/9781498337557.007>

reserves in addition to those held by the ECB. The national central banks have full autonomy in the management of their official reserve assets in terms of asset allocation, risk/return profile and management style, and have multiple investment objectives for assets. While the ECB's official reserve assets can be considered the most liquid Eurosystem tranche that would be used as the first pool of reserves to finance any currency intervention, the official reserves held by the national central banks can be seen as separate and autonomous investment tranches. Nevertheless, it is in accordance with the Statute of the European System of Central Banks.¹¹ Part of these reserves should be readily available for intervention in the short term.

OFFICIAL RESERVE ASSETS OF THE ECB AND THE EUROSISTEM

The level of foreign exchange reserves depends on several factors. It is worth quoting several factors: 1. the cost of having reserves; 2. the level of national financial development; 3. credibility of monetary policy and the exchange rate system; 4. trade and financial openness; 5. instruments available for domestic currency operations. It is worth emphasizing that in the scientific literature, there is no single dominant view as to one measure of the adequacy of the reserve that would reflect all these dimensions.

The passage of years and changes in European legal and political architecture along with the experience of global crises have developed several adequacy indicators. They focus primarily on increasing the resilience of the country, in particular on a sudden reversal of capital flows, and therefore focus on emerging and developing economies. As a result, they may be less relevant to developed economies. One traditional rule concerns the number of months that imports can be maintained. This is when all financial inflows in reserve currencies expire, resulting for example from export revenues and external financing. It is widely believed that reserves should cover at least three months of imports.

As global financial integration progresses, another indicator that has become widely used is the "Greenspan-Guidotti principle", which suggests that reserves should cover 100% of short-term external debt to insure against rolling risks in the event of sudden cessation of foreign funding. Today, the view is beginning to dominate that the adequacy of reserves should be assessed in relation to the risk of both external and internal sewage systems ("double outflows"). The point is that the outflow of capital reflects not only non-residents withdrawing capital, but also residents who want to transfer funds from the country. Ultimately, countries with open financial markets should have foreign exchange reserves proportional to the size of their banking systems. One common indicator used in this context

¹¹ The Statute of the European System...

is that foreign reserves should cover at least 20% of the broad money to cover capital flights.¹²

Global currency reserves are invested mainly in financial assets denominated in US dollars, while the euro is the second most used reserve currency. Based on IMF data on the composition of official foreign exchange reserves, at a constant exchange rate, the US dollar's share of globally-disclosed foreign exchange reserves was around 62% at the end of 2018, compared to 69% in 2007 (i.e. immediately before the global financial crisis) and 71% in 1999 at the beginning of the Economic and Monetary Union. At the end of 2018, the euro represented around 20% of global currency reserves, compared to 22% in 2007 and 19% in 1999.

Global reserve managers have diversified their portfolios in recent years towards other reserve currencies, including the Chinese renminbi. Before the global financial crisis, the US dollar and the euro together accounted for almost 90% of foreign exchange reserves. Since the crisis, an increase in the share of currencies such as the Canadian dollar, Australian dollar and Chinese renminbi in global reserves has been noticeable. Non-traditional reserve currencies currently account for almost 8% of the equity packages disclosed worldwide, compared with less than 2% before 2007. At the end of 2018, the share of the Chinese renminbi reached almost 2% of global currency reserves, i.e. twice as much as at the beginning of 2017.

Geopolitical considerations may also affect decisions regarding reserve management. By observing and analyzing the US-China political and trade tensions, Brexit has seen an increase in the diversification of reserves relative to other currencies and asset classes. The ECB's official reserves are currently invested in US dollars, Japanese yen, Chinese renminbi, gold and SDRs. The currency composition of the ECB's official reserves reflects EU political considerations. From this point of view, the US dollar and Japanese yen are the two most important intervention currencies. The Chinese renminbi was added in 2017 after it was included in the SDR basket in 2016, taking into account its growing international role and the importance of China as one of the largest trading partners of the eurozone. It is noteworthy that the ECB's gold reserves increased to 26% of its official reserves, compared to 15% in 1999. This increase is the result of a significant increase in gold prices over the past two decades, which must have affected the structure of the ECB's foreign reserve portfolio.

MANAGEMENT OF THE ECB'S FOREIGN RESERVES

The ECB's foreign reserve management investment framework is designed to ensure that it is readily available for sustainable development policies. The objectives

¹² M. Obstfeld, J. Shambaugh, A. Taylor, Financial stability, the trilemma, and international reserves", *American Economic Journal: Macroeconomics* 2, 2010, pp. 57–94.

of investing in managing the ECB's foreign reserve portfolio are, in order of importance, liquidity, security and return. Investment liquidity has priority to achieve the main objective of the ECB's foreign reserves, which is to ensure that the ECB can carry out foreign exchange operations at any time, when needed. This means that it must be possible to convert the portfolio into cash balances in a short time and with minimal costs. To achieve this, a large proportion of foreign exchange reserves are invested in US and Japanese government bonds with a relatively short residual maturity. They are considered the most liquid instruments available in their currencies. In addition, the high creditworthiness of issuers and the relatively short duration of portfolios serve the second investment principle: the retention of the ECB's foreign reserve capital. Subject to the principles of liquidity and security, the investment framework aims to maximize return on investment. For this purpose, the Eurosystem: 1) uses active portfolio management with incentives to use the allocated risk budget; and 2) allows the use of investment instruments that give a spread on government bonds or facilitate the expression of investment views. These include supranational and agency bonds, money market futures and bonds, commercial bank deposits, repos and reverse repos, secured currency swaps and interest rate swaps. Investments in each of these instruments are subject to risk management limits.

The management of the ECB's foreign reserves is composed of three levels: 1) strategic reference indicator; 2) tactical reference point; and 3) daily portfolio management by the national central banks. The three levels indicated should ensure that investments are made in line with the Governing Council's long-term risk/return preferences, while ensuring the flexibility of actively using investment opportunities in the shorter investment horizon.

The strategic indicator is intended to reflect the ECB's long-term risk/return preferences, taking into account the principles of liquidity and security. The ECB portfolio optimization process for the strategic reference indicator consists of two elements. The through-the-cycle component determines effective portfolio allocations based on long-term risk and return expectations in the business cycle. The "point in time" component completes the long-term perspective by reassessing the usefulness of effective cycle portfolios, taking into account financial variables and the current and projected state of the economy. The second level indicated in the management of the ECB's foreign reserves is: Tactical reference point. It is the first active level aimed at surpassing the strategic reference point. From a theoretical assumption, this level is to enable adjusting the risk characterization/return of the strategic reference indicator on the basis of medium-term (three-month) investment views, taking into account the prevailing financial market and macroeconomic conditions. The degree of freedom to express such views is set out in the Internal Investment Guidelines, while responsibility for managing the tactical reference point is attributed to the Investment Committee (ICO). The ICO discusses and evaluates the ECB portfolio managers' proposals and submits final recommendations to the ECB's Executive Board on a monthly basis.

In order to present this issue in practice, it is worth considering what may affect the ECB portfolio managers. The analysis of economic prospects, changes in monetary policy, valuation of the bond market and other significant variables may result in a change in the approach of the ECB portfolio managers when the profitability on one of the relevant bond markets increases in the next three-to-six months. Therefore, an increase in yields would mean a decrease in the value of bonds, and this in turn leads to a proposal to the ICO that the indicator should be adjusted so that the tactical indicator does not cover some of the strategic indicator bonds. If the ICO and the Management Board accept this request, an adjustment shall be made. The change in the tactical indicator is then communicated to the managers of the NCBs' (national central banks) portfolios with a certain lead time to enable them to prepare the implementation of this indicator adjustment in real portfolios.

The third level indicated in the management of the ECB's foreign reserves is the management of the ECB's portfolio by NCBs. In turn, this is the second active level whose return on investment is measured in relation to the tactical reference indicator. In contrast to internally maintained strategic and tactical indicators, the actual management of investment portfolios is organized in a decentralized manner within the Eurosystem, subject of course, to the principles set out in the guidelines governing the management of the ECB's foreign reserves by the NCBs. When the NCBs carry out transactions in the ECB's foreign reserves, they disclose their agency status to their counterparties prior to entering into the transaction, with the ECB acting as principal for all counterparties. The Eurosystem has a special working group that regularly discusses all issues related to the framework for the management of foreign reserve reserves and the actual management of the ECB's foreign reserves.

All NCBs that manage the ECB's portfolio have an identical mandate to manage their reserves carefully, so as to maximize their value as part of internal investment as determined by the Governing Council. NCBs can make and implement investment decisions on a daily basis using the investment horizon that best suits their preferred investment style.

The ECB's foreign reserves are currently split into 11 portfolios in US dollars, four portfolios in Japanese yen and one portfolio for the Chinese renminbi. This breakdown reflects the currency specialization of the NCBs. At the time of the emergence of the euro, all NCBs were still assumed to manage their portfolios in both US dollars and Japanese yen in proportion to their share in the ECB's capital key. However, a currency specialization system was implemented in 2006, which foresaw that the NCBs would usually choose one currency portfolio according to their preferences, subject to the ECB's goal of maintaining a reasonable number of currency portfolios.¹³

¹³ Article 12.2 1 of the Statute of the ESCB and of the ECB provides that "(...) the ECB shall use the national central banks to carry out operations forming part of the tasks of the ESCB".

The goal was to maintain an effective framework, including reducing the number of (small) portfolios, as more countries are expected to join the euro area, while facilitating more targeted investment activities and exploiting the various KBC expertise and management opportunities. Since then, most of the new euro area NCBs have decided to combine “their” share of ECB reserves with the participation of another NCB. Every three years, the Governing Council reviews the portfolio allocation and may decide to change the currency allocation.

The key features of the ECB’s foreign reserve management legal framework are proactive management ensuring competition between NCB portfolio managers and the diversification of portfolio management styles. The legal framework aims to provide a steady stream of additional investment returns compared to the strategic standard. Two of the three active levels in the management of the ECB’s foreign reserves should provide a contribution to strategic returns for all reserve currencies. For US dollar portfolios, all individual NCB portfolios made an average positive contribution.

It should be emphasized that active portfolio management takes place within a defined risk budget for both the tactical reference indicator and real portfolios. This budget is defined in terms of relative value at risk (Variance at Risk, hereinafter: VaR).¹⁴ The ECB’s independent risk management function is to define and maintain parameters within which portfolio managers can actively take risks. The risk budget allocated to the tactical indicator usually exceeds the budget of the NCBs’ portfolios by a factor of 2. Taking the above arguments into account, it can be concluded that tactical management gives the opportunity to adjust the risk characteristics of an indicator if the ICO considers, for example, that adjustment is required by economic cycle developments. The role of the NCB portfolio managers (predicting market developments) should be characterized by moderate risk adjustments, though with a moderate touch of flexibility.

It is important to note that the investment framework includes incentives for layers to actively use the risk budget. The incentive for the tactical reference level is the internal goal set by the ICO. The ICO sets this relative return target each year for each currency portfolio. This objective is an important element of the overall annual performance targets for ECB portfolio managers preparing ICO applica-

Initially, this meant that all NCBs were involved in the active management of the ECB’s foreign reserves. However, from 1 January 2006, NCBs may refrain from participating in operational activities related to the management of the ECB’s foreign reserves. This allows them to specialize and combine portfolios.

¹⁴ VaR is the maximum loss that was not exceeded at a certain confidence level over a specified time horizon. For example, if the portfolio has an annual 99% VaR of EUR 1 million, it means that there is a 1% probability that the portfolio will lose over EUR 1 million in one year. Relative VaR is a measure of the risk of loss in relation to the reference result and is defined as the VaR of the portfolio of differences (i.e. actual minus market comparative portfolio).

tions. This is in line with best asset management practices, which allow portfolio managers to better calibrate positions to achieve a goal.

The Eurosystem NCB ranking plays an important role in the actual management of the reserve portfolio. The ECB draws up and distributes an updated ranking among NCB portfolio managers on a monthly basis. This allows the ECB to monitor and compare the results with each other. According to internal research, the ranking and its dissemination are seen as an important risk motivation among portfolio managers. In this regard, Scalia and Sahel analyzed the behavior of the managers of the NCBs involved in the management of the ECB's foreign reserves and found evidence of a change in risk management observed in the behavior of the managers related to their current ranking.¹⁵ For example, some portfolio managers seemed to increase their relative risk taking in the second half of the year if they reached a lower position in the first half.

Although performance ranking allows portfolio managers to be encouraged to observe the decisions of other central banks, the relative performance of KBC appears to be persistent over time. Ranking in the years 2013–2018¹⁶ shows that two groups of national central banks can be observed occupying a relatively high or relatively low position in the examined period. The difference in ranking between the best and bottom performers has been steadily increasing. The observed trend may be related to a number of factors, such as portfolio managers' competences and KBC portfolio management styles, as well as the risk approach. Some NCBs take positions that are medium small and make relatively few positioning changes over time, while other NCBs take relatively large positions and change them more often. These style differences point to the effects of diversifying the possession of several active portfolios.

CONCLUSION

The European Central Bank, through its activities to date, has influenced the economic order in the European Union so much that it strengthened the implementation of the other three orders. The beginning of the 21st century forced a new discussion about the architecture of global banking and the management of foreign exchange reserves. None of the above orders will be able to be implemented and harmonized with others in the event of a collapse of monetary and financial systems.

In properly functioning democracies of world countries, it is unanimously recognized that to ensure the proper development of economic order, an independent central bank operation is necessary. The independent central bank must have

¹⁵ B. Sahel, A. Scalia, *Ranking, Risk-Taking and Effort: ECB Foreign Reserve Management Analysis*, Frankfurt am Mein 2011.

¹⁶ B. Jones, *op. cit.*

a guaranteed political position in the constitution. Only such a central banking architecture is capable of achieving the overarching goal of ensuring a stable price level. As discussed above, independent central banks are able to perform the most important tasks within the framework of their monetary policy, through proper management of foreign exchange reserves.

The reasons for maintaining foreign exchange reserves have substantially evolved over time and in different countries, so have the size and composition of these reserves. Global currency reserves have increased significantly, particularly since the Asian crisis in the late 1990s, when emerging markets accumulated large amounts of currency reserves,¹⁷ to insure itself against potential shocks, but also, in some cases, as a by-product of export-based growth strategies. While global currency reserves have traditionally been invested mainly in US dollar-denominated financial assets, shares have become more diverse in terms of both currency classes and assets.

As for the ECB, the main purpose of its foreign reserves is to ensure that the Eurosystem has sufficient liquid resources for foreign exchange operations when needed. The composition of the ECB's foreign reserves has remained broadly stable over time, with the exception of the recent addition of the Chinese renminbi.¹⁸

The ECB's foreign reserve investment framework has developed over time to support efficiency and create incentives to use the available risk budget through active layers, while ensuring that reserves are readily available for monetary policy purposes. It is noteworthy that global currency reserves are invested mainly in financial assets denominated in US dollars, while the euro is the second most used reserve currency. Decentralized management of reserves by the NCBs is a unique feature of this framework. It offers benefits, including information exchange and promotion of best practices among portfolio managers. Active management, encouraged by competition between KBC portfolio managers, and the diversification of portfolio management styles were key features of the investment framework and contributed to generating a steady stream of additional investment returns above the strategic return indicator.

The central banking publication of 29 April 2019, "HSBC Reserve Management Trends 2019", presents the results of a survey of 80 central bank reserves managers managing USD 6.9 trillion reserves. The survey shows that almost three-quarters of respondents cited international trade tensions as the most or the second most pressing issue in 2019. 80% of respondents said that geopolitical forces affect the allocation of currencies of official currency reserves.¹⁹ One ex-

¹⁷ L. Cabezas, J. De Gregorio, "Accumulation of reserves in emerging and developing countries: mercantilism versus insurance", *Review of World Economics* 155, 2019.

¹⁸ J. Gräß, T. Kostka, D. Quint, "Quantifying the 'exorbitant privilege' — potential benefits from a stronger international role of the euro", [in:] *The International Role of the Euro*, Frankfurt am Main 2019, pp. 51–60.

¹⁹ N. Carver, R. Pringle, *HSBC Reserve Management Trends 2019*, London 2019.

ample is Russia, one of the largest reserve holders in the world, which, following the new rounds of US sanctions, sold USD 100 billion worth of reserves in US dollars in the second quarter of 2018 and purchased euro-denominated assets and Chinese-denominated assets worth about USD 100 billion. With a share of 32%, the euro is currently the main currency of the denomination of Russia's foreign reserves, ahead of the US dollar and Chinese renminbi, with shares of 22% and 15% respectively.

A special test for the ECB and the strength of its monetary policy was the crisis in 2007-2014 and e.g. the threat of Greek bankruptcy.²⁰ The scale of political, financial, and legal problems related to Greece was a real threat to the stability of the euro area and the entire EU. This aspect was not in the spectrum of the article, but is an underestimated proof of the effectiveness of the ECB's monetary policy as well as the proper evolution of the management of the foreign exchange portfolio. In light of the above analysis, it should be recognized that the European Central Bank properly manages foreign exchange reserves through legal instruments, and at the same time, it effectively harmonizes the NCB policy to enable the implementation of the concept of sustainable development.

ZARZĄDZANIE REZERWAMI WALUTOWYMI EUROPEJSKIEGO BANKU CENTRALNEGO

Streszczenie: Celem artykułu jest analiza rezerw walutowych Europejskiego Banku Centralnego oraz metody nowoczesnego zarządzania nimi. W wyniku badania udowodniono, że zarówno Europejski Bank Centralny, jak i krajowe banki centralne wdrażając metody zarządzania rezerwami walutowymi w celu realizacji priorytetów obecnej polityki pieniężnej, powinny czynić to w zgodzie z interesami przyszłych pokoleń. Rezerwy walutowe są szczególnym dobrem, z którego nie mogą korzystać tylko obecne pokolenie i obecny rząd. W pracy badawczej wykorzystano następujące metody badawcze: analiza źródeł prawa, metoda prawnodogmatyczna oraz porównawcza. Analiza przeprowadzona w ramach badania wskazuje, że zarządzanie rezerwami walutowymi EBC ma wpływ na sprawiedliwość międzypokoleniową, dlatego zasługuje na podjęcie jako problematyka newralgiczna dziś w Polsce.

Słowa kluczowe: prawo bankowe, rezerwy, sprawiedliwość międzypokoleniowa, krajowy bank centralny, system finansowy

²⁰ P. Sitek, 2016. "Polityka pieniężna Narodowego Banku Polskiego i Europejskiego Banku Centralnego w obliczu kryzysu finansowego i po kryzysie" [Monetary policy of the National Bank of Poland and the European Central Bank in the face of the financial crisis and after the crisis], [in:] *Wpływ prawa Unii Europejskiej na gospodarkę i samorząd terytorialny państw członkowskich* [Monetary Policy of the National Bank of Poland in the European Central Bank in the Face of the Financial Crisis and after the Crisis], Łódź 2016, pp. 33–59.

REFERENCES

- Cabezas L., De Gregorio J., “Accumulation of reserves in emerging and developing countries: mercantilism versus insurance”, *Review of World Economics* 155, 2019.
- Carver N., Pringle R., *HSBC Reserve Management Trends 2019*, London 2019.
- Chitu L., Eichengreen A., Mehl A., *How Global Currencies Work: Past, Present and Future*, Princeton 2017.
- Chitu L., *Reserve accumulation, inflation and moral hazard: Evidence from a natural experiment*, Frankfurt am Mein 2016.
- Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union (Journal of Law 2012/C 326/01), 2012.
- Frenkel J., “International reserves: Pegged exchange rates and managed float”, *Carnegie-Rochester Conference Series on Public Policy* 9, 1978, pp. 111–140.
- Gräß J., Kostka T., Quint D., “Quantifying the ‘exorbitant privilege’ — potential benefits from a stronger international role of the euro”, [in:] *The International Role of the Euro*, Frankfurt am Main 2019, pp. 51–60.
- Guideline of The European Central Bank of 20 September 2011 on monetary policy instruments and procedures of the Eurosystem (recast) (ECB/2011/14) (2011/817/EU), 2011.
- International Monetary Fund, “Reserve accumulation and international monetary stability”, *Policy Papers* 2010, no. 305, <https://doi.org/10.5089/9781498337557.007>.
- Jones B., *Central Bank Reserve Management and International Financial Stability — Some Post-Crisis Reflections*, Washington, D.C. 2018.
- Obstfeld M., Shambaugh J., Taylor A., “Financial stability, the trilemma, and international reserves”, *American Economic Journal: Macroeconomics* 2, 2010, pp. 57–94.
- Protocol (No. 4) on the Statute of the European System of Central Banks and of the European Central Bank (Journal of Law 26.10.2012, C 326/230), 2012.
- Sahel B., Scalia A., *Ranking, Risk-Taking and Effort: ECB Foreign Reserve Management Analysis*, Frankfurt am Mein 2011.
- Sitek P., “Polityka pieniężna Narodowego Banku Polskiego i Europejskiego Banku Centralnego w obliczu kryzysu finansowego i po kryzysie”, [in:] *Wpływ prawa Unii Europejskiej na gospodarkę i samorząd terytorialny państw członkowskich*, Łódź 2016, pp. 33–59.
- The European Semester*, https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester_pl (accessed: 28.04.2020).
- The Statute of the European System of Central Banks and of the European Central Bank, 2016.