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Green Bonds in the Policy of Management of Central Banks' International Reserves

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Abstract
The article is devoted to the management of international reserves using green bonds, which makes it possible to ensure the priorities of sustainable development formulated by the UN. The authors aim to prove the possibility of using green bonds as alternative financial assets for placing the international reserves of countries pursuing a policy of de-dollarization. The authors conclude that the inclusion of these instruments in reserve portfolios ensures their necessary diversification, structure improvement, and risk reduction and increases the confidence of investors and creditors. Substantiation of the proposal to include green bonds, denominated in euros, in the Bank of Russia's portfolio of international reserve assets is an original contribution aimed at developing approaches to the management of international reserves, considering the existing realities.

Key-words: International Reserves, Green Bonds, Sustainable Development, Structural Transformations, Non-economic Risks, Portfolio of the Bank of Russia.

1. Introduction

International reserves are integral for advancing sustainable development in the global economy. According to the International Monetary Fund's (IMF), international reserves are defined as "...those external assets that are readily available to and controlled by monetary authorities for meeting the balance of payments financing needs, for intervention in exchange markets and for maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing" (Balance of payments and international investment position manual BPM6б 2012). Common guidelines and set objectives and purposes are now in place for developing and managing international reserves. Government authorities in different countries refer to, and use, these guidelines

in accordance with the national specifics. The currency composition of international reserves generally reflects the composition of international currency liquidity in the context of the undoubted prevalence of the US dollar. However, intensifying pressures in global economic relations require changes to be made to these guidelines, as international reserves appear a major factor for maintaining national economic security.

2. Methods

The main priorities in managing reserve assets include liquidity, conservation, and returns on these assets, as stipulated by usage directions. Economic literature outlines seven use directions: conducting international payments for goods and services required by the country (specifically amid limited access to financing sources); conducting currency interventions, securing external borrowing and servicing external debt; mitigating external vulnerability and countering shocks during crises and amid limited access to borrowings; ensuring trust among international creditors and investors, supporting the country's monetary policy and national currency; investing and earning income (Borio et al., 2008).

Different motivations and priorities guide international reserve management in different countries as national objectives may vary. E. g., the accumulation and spending of international reserves in developing countries and emerging markets is closely associated with global market conditions and objectives of macroeconomic and financial stabilisation. The transaction motive often prevails, which implies the use of reserves to influence the national currency exchange rate and the conditions in the domestic forex market via currency interventions (Borio, Galati, Heath, 2008). This group of countries currently accounts for approximately two-thirds of the total foreign exchange reserves in the world, which reflects not only the motive to pursue stabilisation effects but is also a side effect of currency rate regulation by the monetary authorities in export-oriented economies. They also typically have a major currency component in the composition of international reserves, with the significant prevalence of the US dollar and dollar-denominated financial instruments (Krylova, 2020, p. 113).

Developed countries do not need large international reserves, and their reserve composition notably includes major proportions of monetary gold and the component of reserve position at the IMF, which reflects the international status of the leading currencies. The prevalent motive in international reserve management in this group of countries is the motive of caution, associated with maintaining confidence among international investors and protection against extraordinary

circumstances. The priorities, in this case, would be ensuring reserve conservation and income-bearing investment opportunities. Return targeting assumes special importance if sovereign funds are part of international reserves.

Researchers note that focusing on returns in the triad of objectives of international reserve management has gained momentum recently, specifically with the expansion of the class of assets used for the investment of reserves and inclusion of higher-risk assets in reserve portfolios (Borio et al., 2008, p. 2).

Another reason for this transformation in the international reserve structure was the need to mitigate non-economic risks amid intensified international pressures. The need to protect national interests meant that international reserve managers must add a focus on political risks to the triad of reserve policy objectives and it also led to the search for new financial assets for the investment of reserves.

The global crisis caused by the Covid-19 pandemic provided further stimulus to review the guiding principles of international reserve management, as it uncovered the risks and instability of the global economy driven by the concept of globalisation and dominance of the US dollar.

Given the potential risks of expanded sanctions-related pressures, freezing of dollar assets of the Russian Federation and disconnection from the SWIFT system, the Bank of Russia is taking steps to cardinally change the policy of international reserve management. The regulator's language regarding foreign exchange assets as part of international reserve management now includes the term "non-economic" risks and this focus on this category has led to a change in the structure of international reserves. The Bank of Russia has built up gold purchases as an extraordinary reserve asset and has intently worked to bring down the share of dollar instruments by building up investments in the euro and the yuan. As a result, the share of monetary gold in the reserves rose to 20.8% (2020) from 14.2% (2017) and the relative weight of the US dollar was down in 2018 to 22.7% from 44%. That said, while globally the euro accounts for approximately 20% of the total foreign exchange reserves, its share in the portfolio of foreign exchange of the Bank of Russia stood at 31.7%.

However, holdings in the euro and euro-denominated assets have negative returns as a result of the interest rate policies conducted by the ECB. One more factor to take into account for the Bank of Russia in structuring the currency composition of the reserve portfolio is the statutory share of the US dollar set for the investment of the liquid component of the National Wealth Fund managed by the Bank of Russia. Accordingly, as per the latest available data on 31.03.2020, the dollar accounted for

30.3% and the euro, for 23.7% of the Bank of Russia holdings of gold and foreign exchange assets (Bank of Russia, 2020a).

This overreliance on the US dollar in the global economy raises concerns not only for Russian monetary authorities but the global community as a whole. This has stimulated active efforts to find alternative reserve assets. One example of potentially suitable assets for the investment of reserves is Green bonds.

These instruments are relatively new and exotic for the financial market, as they emerged in the early 2010ies. Until 2013, the market had been rather weak at approximately $3 billion in total. Though, it began to develop rapidly and had reached $579 billion by 2018 (Global Landscape of Climate Finance, 2019).

Green bonds are fixed-income instruments issued to provide stable financing of projects that have environmental benefits. The first Green bonds were issued by the International Bank of Reconstruction and Development (IBRD), the European Investment Bank (EIB), regional and national development banks and funds (2007-2008). Today, Green bonds are used to attract funds to finance projects in renewable energy and energy efficiency and support carbon-neutral transportation and water management.

According to the Climate Bonds Initiative, global Green bond issuance in 2019 equalled $258.9 billion (vs. $171.2 billion in 2018). The biggest issuing countries in 2019 were the USA ($51.3 billion), China ($31.3 billion), and France ($30.1 billion) (Climate Bonds Initiative, 2019).

Over the past five years, the global market of Green bonds rose by 20 times. The global Green bond market continues to develop through the diversification of financial products, leadership of issuing financial corporations, and building up its share in developing countries. The growing demand for sustainability-focused financial products and advances into the market of sovereign issuers underscore the significant potential for further growth in the segment.

Using Green bonds as financial assets for the investment of reserves could help diversify the reserve portfolio of the Bank of Russia and reduce the reliance on the US dollar. In 2019, almost half of the total Green bond issuance in the world was euro-denominated. This euro-dominated path of this market reflects both the strength of eurozone-based issuers and also wide adoption of the euro-denominated choices among issuers in other jurisdictions, as well. In 2019, the latter accounted for almost 30% of the total euro-denominated Green bonds (The international role of the euro, 2020). Partial investment of international reserves in Green bonds issued outside the eurozone helps to address the problem of losses on conventional euro-denominated financial instruments. This also provides the opportunity to reduce the share of reserves held in the US dollar in line with the target,

which helps to protect foreign exchange assets of the Bank of Russia against further sanctions-related moves on the part of the USA.

A significant support factor for these financial instruments as potentially acceptable for the investment of reserves is the interest shown by major supranational and international financial institutions and development banks in sustainable development, socially responsible investment, and active engagement in Green bond issuance.

E. g., in 2016, the International Finance Corporation issued a first-of-its-kind, five-year bond called the Forests Bond, raising a total of $152 million to finance the UN's "green projects" (Forest bond presentation, 2016).

The Bank for International Settlements (BIS) launched a fund for green bond investments by central banks. Responding to a growing demand for climate-friendly investments among official institutions and the global community, the BIS's initiative helps central banks to incorporate environmental sustainability objectives into the management of their reserves. The fund belongs to the BIS Investment Pool. Eligible bonds have a minimum rating of A- and comply with the International Capital Market Association's Green Bond Principles and/or the Climate Bond Standard published by the Climate Bonds Initiative (Bank of Russia (2020b). Presumably, Green bonds with a similar profile can be suitable for investing international reserves.

The Covid-19 pandemic brought the risks of a reduction of funding for environmental efforts and environmental investment in the context of social distancing requirements, wide-ranging measures adopted by the governments to support the affected industries and protectionist policies, which came as a test for the global market of Green bonds. However, between January and March this year, price declines in the Green bond market were within the limits of the downside in the conventional securities market. Despite the pandemic, this financial instrument of the green economy has continued its advance. According to Moody's Analytics report for 2019, banks issued $121.8 billion in green, social, and sustainability bonds, a 41% increase from the previous year. Sustainability-related and environmental project financing is continuing to grow. Moody's also expected the issuance level of such bonds could exceed $400 billion in 2020 (Moody's Analytics, 2019).

3. Results

An analysis of Green bonds in terms of their safety, liquidity, and returns and their potential as financial assets for the investment of reserves suggests the following ideas.

Green bonds meet the criteria of safety and return to serve as financial assets for the investment of international reserves. Though, liquidity stemming from the market size is limited. Meanwhile, incorporating Green bonds in the portfolios of financial assets used for the investment of international reserves brings better diversification by improving the structure and cutting down the risks.

Quality Green bonds with ratings above BBB+ constituted approximately 65% of new issuance, which is in line with the structure of the conventional bond market. An analysis of returns for 2014-2019 showed that dollar-denominated Green bonds rendered an average monthly return of 0.26%, vs. 0.24% for conventional instruments with comparable ratings of safety (Fender et al., 2019).

A comparison of returns on conventional and green financial instruments confirms there are no additional risks involved when the latter are used for managing international reserves.

The idea is confirmed by other research, as well. Equity and bonds of ESG-focused companies (Environmental, social and corporate governance) are more safe compared to conventional financial instruments, a report by Morgan Stanley has shown following a study of 1.8 thousand American mutual funds. According to their data, green financial instruments between March and September 2020 outperformed traditional ones by 3.9%. The trend is confirmed for a longer period: in 2019, ESG-funds outperformed their traditional peers by a median of 2.8 percentage points, while the risks were lower for green investments (Sustainable Reality…, 2019).

Green companies are better prepared for uncertainty and show a stronger focus on the future. Meanwhile, many investors believe that in environmental projects, resources are more likely to be managed and used more efficiently. That said, companies issuing Green bonds are more flexible and often more capable of coping with change and have a positive image in the global market, which reduces the volatility of such bonds in various market shocks (Mudretsov, Prudnikova, 2020, p. 36).

Liquidity parameters of financial instruments depend on the available supply and diversity and affect the level of transaction costs. Despite rapid growth in the global market of Green bonds, dollar- and euro-denominated instruments in total only represent 6.5% of the global foreign exchange reserves. Despite the consistently overbooked initial offerings of Green bonds and limited turnover in the secondary market in 2018 – 2019 signaling strong demand exceeding supply, these instruments are available in limited quantities. Transactions with Green bonds prove to be more costly compared to conventional bonds as can be seen from the analysis of buy-sell spreads (Fender et al., 2019).

Even with their limited liquidity and availability, Green bonds can be considered as alternative financial assets for the investment of international reserves. Central banks show interest in

incorporating sustainability goals into their international reserve management policies. The logic of development of the concept of international reserves is shifting from a triad of objectives toward a tetrad including also the objective of sustainable development. Sustainability as a target should be balanced with the objectives of liquidity, stability and returns. The adoption of Green bonds into reserve portfolios provides the benefits of diversification compared to portfolios of conventional bonds.

This logic is reinforced, particularly, by the recent launch of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) of about 40 central banks, supervisory authorities, and international financial organisations joining forces for coordinated efforts to mitigate the negative consequences of climate change and their effects on the global financial system. The issues of climate risks and their effects on the stability of the financial sector and global sustainable development are a key concern of central banks in different countries. The use of Green bonds and incorporating sustainability objectives into international reserve management policies can become an important strategic line in the greenisation of the financial system.

Central banks have two main options to adopt Green bonds in their asset portfolios, i. e., via the direct or indirect incorporation of new objectives and instruments in their reserve policies.

Direct integration would require a formal specification of sustainability as one of the objectives of central banks' reserve policies. This would require the introduction of statutory changes in legislation governing the operation of the central bank and in its charter. Currently, central banks and currency regulators are not prepared for that.

Indirect integration would mean incorporating environmental sustainability objectives and Green bonds in the traditional international foreign exchange reserve policies under the current mandate of the Central Bank. Such a move would imply an indirect recognition of the effects of environmental and climate-related risks on performance under the existing objectives of central banks' international reserve management policies. Strong demand for Green bonds from global investors provides stimulus for central banks to adopt Green bonds for their foreign exchange reserves as a tool to build investor confidence in the country. A decision on changing the structure of reserve portfolios to increase the share of assets less vulnerable to potential long-term losses caused by climate risks is in line with the traditional purpose of international reserves. That said, central banks holding sizable foreign exchange reserves would be more likely to use unconventional financial assets, such as Green bonds.

4. Conclusion

The emergence and rapid growth of new segments in capital markets shape the window of opportunity for wider use of global currencies other than the US dollar. While the euro is already a key currency in the market of Green bonds, central banks get a chance to pursue currency diversification of international reserve portfolios to cut down on dollar instruments and reduce the reliance on the US dollar.

Partial investment of international reserves in Green bonds by the Bank of Russia can contribute to the diversification of the reserve portfolio amid sanctions-related restrictions and non-economic risks.

Global economic recovery after the crisis caused by COVID-19 would follow the green path, as many countries have already stated, including Germany, South Korea, Japan, and others. The EU is willing to spend 1 trillion euros to rebuild industries and cities in line with sustainability technologies. In China, the Standing Committee of the Central Political Bureau adopted a new infrastructure initiative. The plan envisages investing $1.4 trillion over six years to finance efforts in renewable energy, electric vehicles, and railway transport.

In the context of global uncertainty, most governments and corporations were forced to temporarily adjust the directions of development, but in the long run, the priorities will be reinstated and the vector toward the green economy and responsible investment will become even stronger. The potential of the global market of Green bonds, their liquidity, and availability suggest that central banks may soon include them in their reserve asset portfolios.

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