



OPTIMIZING THE FINANCIAL STRUCTURE OF THE STATE TREASURY IN ROMANIA

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Abstract

The dynamics of financial industry globalization and integration reveals the existence of a direct link between the shocks on international markets and how the financial sector has evolved over the last two decades, towards total liberalization and decoupling from the real economy processes.

Crises generate and require rapid intervention responses based on innovation, because innovation is greatly stimulated by situations of difficulty to address either dramatic cost reductions, facilitation of high-income margins or the simultaneous approach to both guidelines.

Despite the greatest efforts to achieve rigor and sophistication, it is demonstrated that the applied scientific analysis failed to provide definitive answers to many of the questions involved in the allocation and management of government resources.

The analysis aim is to prove that a continuous search should be sustained either to achieve a more advantageous way of operating the Public Treasury in an increasingly globalized space or to assess its ability to adapt to permanently changing circumstances, responding to the challenges of financial innovation.

Keywords: treasury, economic governance, optimization, forecast, prediction

JEL Classification: E02, E42, E51, E63, F65, G14, G32, H63, H7

1. The Concept of European Economic Governance

The current context of the global economy is characterized by profound changes in the international economic relations. Economic globalization has allowed multiplication of production and trade processes in increasingly widespread areas of the world, amid the unprecedented development of production technologies, which has led to a reduction in production costs and, consequently, an increased access to consumption. At the same time, the increased speed of financial transactions processing and the regional diversification of international transport has allowed access to financial services and goods in all corners of

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the world. We are also witnessing the "democratization" of virtual communication spaces and the generalization of access to information for the world's population through the Internet, which, to some extent, induce different forms of perception. The access to online information, the rapid spread of financial services and the global distribution of goods have led to an increased interdependence between states, at a level that defines other paradigms of world economic.

Economic cycles can be controlled, on the one hand, by preventive measures for stimulating and maintaining the growth trends or by averting and mitigating the negative effects of recessions, on the other hand. Governmental strategies are more or less successful in updating the requirements of the momentum imposed by the state of the economy on this cyclical path. From the multi-year governmental experience, the terminology of governmental economic policies adopted the concept of macro-stabilization, which describes a national economy that aims to reduce vulnerability to the external shocks, increasing its prospects for long-term economic growth.

Thus, "any economic growth, if not balanced, will be sooner or later stopped, and the long-term trend is not to approach growth and narrow gaps, but, on the long run, you'll find that gaps are widening"³.

Macro-stability, as the leitmotiv of national economic policies, is thus defined not in relation to stagnation but rather to a continuous, sustainable long-term development.

A particular aspect is revealed in the case of the European Union, where, based on the view of economic macro-stability, the Member States of the European Community have defined their evolution strategies towards a confederation of independent states formed on the basis of accession agreements, within a unitary supra-state structure, with a centralized economic and political leadership for adopting common legislation, policies and strategies.

Thus, the national policies aiming at stability and at sustainable economic growth are synthesized at European level through the adoption, by the Maastricht Treaty⁴, of the stability criteria (defined in terms of economic indicators as convergence criteria) that allowed the Euro currency to be adopted by 19 of the current 28 EU Member States.

By adopting and assuming economic governance on the basis of macro-stabilization across all countries, the European Union tends to become, perhaps in response to the challenges posed by the financial crisis, an increasingly homogeneous political, economic and social structure, with all the development gaps still existing among the 28 Member States, with all the national historical features still visible, and even in the context of more or less scathing centrifugal movements, as in the Brexit's case.

The White Paper on European Governance and the Sustainable Development Strategy fueled the conception of a plan for the completion of the Economic and Monetary Union, whose principles and milestones were outlined in the updated version of the report presented by the European Commission President Jean-Claude Juncker on June 22nd, 2016⁵. The report, also referred to as the Five Presidents Report (because it is the result of collaboration with Donald Tusk, the Euro Area Chairman, Jeroen Dijsselbloem, the Eurogroup President, Mario Draghi, the President of the European Central Bank and Martin Schulz, the President of the European Parliament) very clearly defines the fundamental purpose of the European

³ Mugur Isărescu – Presentation at the Annual Conference of the Association of Financial-Banking Analysts in Romania, November 15, 2017.

⁴ In effect since November 1, 1993.

⁵ https://ec.europa.eu/commission/publications/five-presidents-report-completing-europes-economic-and-monetary-union_en.

Union: "The completion of the Economic and Monetary Union is not an end in itself but a means of ensuring a better and fairer life for all citizens, in order to prepare the Union to cope with future global challenges and to enable each of its members to thrive".

In the vision of the five presidents⁶, the directions for harmonization of the Member States' national policies are:

- Economic Union, ensuring that each economy has the structural characteristics needed to thrive within the EMU;
- Financial Union, to ensure the integrity of the euro at the level of the entire Monetary Union and to increase the degree of risk-sharing with the private sector;
- Fiscal (Budgetary) Union, that provides both sustainability and fiscal stabilization;
- Political Union, as the foundation of the European Union, through genuine democratic accountability, legitimacy and institutional consolidation.

All the four forms of the Union are interdependent and must therefore develop in parallel, and all the Member States must participate in all of them. Progress will be phased in over time, but it is important to plan these steps over the short and longer term, as well as the Member States' agreement on such steps.

2. European Public Governance at Macro-Financial Level

Promoting economic stability is, to a certain extent, a way to avoid economic and financial crises. This means, among others, avoiding high fluctuations in the economic activity, high inflation and excessive volatility of the exchange rate and the financial market.

Uncertainty increases instability and discourages investment, hinders or slows the economic growth and affects the standard of living. A dynamic market economy necessarily implies some degree of instability, as well as a gradual structural change. Thus, the challenge for decision-makers is to minimize instability without reducing the economic ability to increase the standard of living through productivity, efficiency and higher employment.

Economic and financial stability is a national and multilateral concern. Thus, recent experiences of the global financial markets revealed that countries have become more interconnected, and troubles in a particular sector can cause problems in other sectors and even cross-border effects.

Monitoring the macroeconomic imbalances has become a necessity, because their accumulation in certain peripheral states of the Euro Area threatened its very existence. Consequently, a system of indicators was introduced to detect imbalances at the macroeconomic level.

Considering the enforcement of the criteria of European economic macrostability, as well as the implementation of the principles of participatory governance, the national measures involve particular approaches, which are related to the socio-economic and political specificity of each Member State and its position on the pan-European arena.

Thus, in the case of Romania, the efforts to adopt the macrostability framework and to meet its criteria must take into account the following issues:

- Harmonizing the national legal framework with the European regulations, eliminating the legal redundancies and adopting, where appropriate, preferences to implement the

⁶ http://europa.eu/rapid/press-release_IP-15-5240_ro.htm.

European regulations in line with the specific features of the national economic governance,

- Designing and achieving a specific pathway of the economy, taking into account the goal of reducing the gaps against the developed member states, but also the specific features of the Romanian economy (the structure and dynamics of the national industry, the development level of agriculture, and the specificity of trade) considering the distribution of capital and investments in its different sectors.
- Ensuring sustainable social policies through strategies for attracting public financial resources from both the tax basis and through financial instruments (bond issues or public loans).
- Supporting the legitimate interests of the Romanian state in the European legislative process, by promoting initiatives on dedicated topics, such as the modernization of agriculture or of transport and communication infrastructures.

The financial and economic crisis of 2008 revealed a series of structural weaknesses of the economies of the European Union, in general, and of the Euro Area, in particular. Against this background, the need for a stronger coordination of Member States' economic policies has become evident. The European Council decided on June 17th, 2010, to implement one of the recommendations of the Van Rompuy Working Group on Economic Governance, by strengthening the *ex ante* coordination of economic policies, introducing the European Semester from January 1st, 2011.

Under a single monetary policy for the entire Euro Area, the national fiscal policies are essential to stabilize the economies whenever a shock occurs. Also, since all the Euro Area countries have the same exchange rate, it is necessary for their economies to be flexible and able to respond quickly to moments of economic downturn. Otherwise, there is a risk that these countries are severely and permanently affected by recessions.

3. The Mechanisms and Analysis Indicators of European Public Governance

Under the circumstances of new mechanisms for coordinating European economic governance and based on the lessons learned during the crisis, the European Semester⁷, introduced by the European Commission, incorporates three components⁸ of economic policy coordination for the Member States:

- Structural reforms as according to the Europe 2020 Strategy⁹;
- Fiscal and budgetary surveillance in compliance with the Stability and Growth Pact;
- Surveillance of macroeconomic imbalances – new component of macroeconomic policy coordination.

Concurrently, and under continual analysis, the excessive imbalance procedure is the second component of the economic governance mechanism. From this perspective, the

⁷ *The European Semester is a fundamental component of improving economic governance at European level by extending supervision also in the field of macroeconomic imbalances.*

⁸ <https://www.consilium.europa.eu/ro/policies/european-semester/>.

⁹ *Adopted in June 2010, the strategy is based on the type of desirable economic growth, that is smart, sustainable and inclusive at the social level. Under the National Reform Programs, Member States present their structural reforms to meet the targets of the Europe 2020 strategy.*

Medium-Term Budgetary Objective (MTO)¹⁰, the preventive part of the Stability and Growth Pact (SGP)¹¹, sets out the medium-term differentiated targets that the Member States must include in their budgetary positions.

Taking into account the public investment needs of the Member States, the diversity of economic and budgetary positions, the developments and fiscal risks regarding the sustainability of public finances in the context of future demographic change, the medium-term budgetary objectives specific to each Member State may suffer of irregularities concerning the safety margin of the public deficit ratio, that once recorded should be corrected by means of adjusting the budgetary position¹², thus avoiding the opening of an excessive deficit procedure.

The medium-term budgetary objectives ensure the following:

- i. Providing a safety margin against the 3% of GDP deficit threshold. This safety margin is assessed for each Member State, considering the past output volatility as well as the budget sensitivity to output fluctuations;
- ii. A rapid progress towards sustainability. This is assessed against the need to ensure debt convergence to prudent levels, taking into account the economic and budgetary impact of population aging;
- iii. Based on (i) and (ii), allowing room for budgetary manoeuvre, in particular taking into account the needs of public investments.

Specifically, the medium-term objectives of each Member State must take into account three components:

- i. The balance of stabilization debt, for a debt ratio equal to the reference value (60% of GDP) (it depends on the long-term growth potential), involving the budgetary manoeuvre room for the Member States with relatively low debt levels;
- ii. An additional debt-reduction to-do list for the Member States with a debt ratio exceeding the reference value (60% of GDP), which implies rapid progress towards achieving such effort, and
- iii. A fraction of the adjustment needed to cover the current value of the future increase in public spending on age.

The scoreboard architecture as an early warning tool for the economic governance component of the excessive imbalance procedure has set up a group of 11 economic indicators calibrated to adequately signal the accumulation of imbalances by a Member State.

They include:

- current account deficit / surplus (3-year average) as a percentage of GDP;
- the net international investment position as a percentage of GDP;
- the percentage decrease over the last 5 years of the export market share;
- the percentage increase in the unit cost of the workforce over the last 3 years;

¹⁰ <https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=CELEX%3A31997R1466>
Council Regulation (EC) No 1466/97 of 7 July 1997 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies.

¹¹ A set of rules designed to ensure that EU Member States aim to maintain sound public finances in coordination with fiscal policies.

¹² 0.5% of GDP per year as a benchmark.

- the percentage variation over the last 3 years of the effective exchange rate as compared to 35 countries;
- the share of private sector debt in GDP;
- the annual increase in the volume of loans to the private sector;
- the annual variation in the price of real estate as compared to the deflator of consumption calculated by the EUROSTAT;
- the government sector debt as a percentage of GDP;
- the average of unemployment over the last three years;
- the annual variation in financial sector liabilities.

As part of the ongoing efforts to develop arrangements to ensure financial stability at the level of the European Union and to strengthen cooperation between the relevant national authorities, in the light of the consensus reached at the previous ECOFIN Council meetings in 2006 and 2007 and at the informal ECOFIN Council meeting from April 4th, 2008, in Ljubljana, the Memorandum of Understanding between the Financial Supervisory Authorities, the central banks and the ministries of finance of the Member States of the European Union on the issue of cooperation in cross-border financial crises was signed.

The memorandum expressed the commitment of the signatories, including Romania, to ensure, even outside the national borders, the necessary conditions for the cooperation of the relevant authorities, both under normal conditions of economic development, with a special emphasis on preventing cross-border crises, and in crisis situations.

Thus, in 2017, with the enforcement of Law No.12 / 2017 on the macro-prudential supervision of the national financial system, the National Committee for Macro-prudential Supervision was established as an interinstitutional cooperation structure consisting of representatives of the National Bank of Romania, the Financial Supervisory Authority and the Government, which aimed at achieving the macro-prudential objectives through adequate instruments¹³:

- Reducing and preventing excessive credit growth and indebtedness;
- Reducing and preventing excessive maturity mismatch and lack of liquidity on the market;
- Limiting the concentration of direct and indirect exposures;
- Limiting the systemic impact of non-aligned incentives to reduce moral hazard;
- Enhancing the resilience of financial infrastructures;
- Sustainable growth of financial intermediation;
- Increasing financial inclusion.

The way in which Romania has been affected by the financial crisis has to be primarily considered in a regional context, and the efforts to achieve the goal of narrowing the gap need to be channeled externally, primarily through involvement in this regulatory process at Community level.

¹³ <http://www.cnsmro.ro/anexa-1a-lista-instrumentelor-macroprudentiale/>.

4. The State Treasury in Romania. Evolution and Perspectives

When taking decisions with an economic impact, from the budgeting of annual revenues to adopting development strategies, the states are determined to consider a mix of interventionist (mostly fiscal) and liberalist measures (in particular in the field of monetary policies), which stimulate the development of capital and the preservation or enhancement of social protection under circumstances of triggering or accelerating the economic growth.

At the same time, irrespective of the theoretical nature of macroeconomic management measures, it is obvious the importance of the state's role as player on the national goods and services markets. From this point of view, the economic decisions taken at governmental level influence the public capital's efficiency of use and trends of evolution in a given period, and the share of the state sector in the annual gross domestic product.

Against the background of globalization and centralization of treasury operations, setting the principles for the optimal management of these operations is the instrument by which economic stability, market dynamism and the standard of living can be ensured. The directions of such principles, as well as their flexibility, depend on the correct identification of the objectives of financial management planning of the treasury operations, in line with the European and world policies related to this field.

In addition to providing the operational part of the short-term management process, *i.e.* managing the available balance of the State Treasury, monitoring the performance of government liquidity management tools in the financial environment implies an innovative, modular information system, with specific functions and robust procedures, which can be adapted quickly to the new needs determined by the crisis management process.

Worldwide, theories of treasury and public debt management, organizational patterns, concepts, and even guides on this issue have emerged over the last decades (*e.g.* the Treasury Reference Model World Bank Technical Paper¹⁴). Most studies, however, focus on the fact that, as practice has shown, attempting to copy a particular model is not a solution, and it is necessary to adapt the regulations to the political, economic and social realities and even the specific cultural contexts of a particular area.

In Romania, the rules of operation that the State Treasury has assumed are the result of the obligation to provide the necessary funds to the state at any time of the exercise, so that it can fulfill in the best possible conditions the complex functions and attributions it has.

The State Treasury's obligation to balance its financial inflows and outflows is the iron rule that cannot be avoided, because this institution cannot function with an uncovered account. The entering financial flows must cover all payments at all times of the financial year. If the own resources, collected from taxes and fees, are not sufficient to cover the payments, they are supplemented by short- and very short-term loans.

Efficiency¹⁵ in the performance of treasury management has increased significantly over the past years as a result of changes stemming from the technological developments in the banking industry, as well as in the government operations. With an efficient management,

¹⁴ Ali Hashim, Bill Allan, 2001, *Treasury Reference Model World Bank Technical Paper no.505*.

¹⁵ See Andrei D., Brezeanu P., "Treasury Operations Mechanism in Romania, *FINANCE, Challenges of the future*, Universitaria Publishing House, Craiova, <http://www.financejournal.ro/fisiere/revista/638353956016-008.pdf>.

managers are able to retrieve almost instantly important information, which reduces the transaction processing times and costs through electronic data processing.

Considering the tendencies of the major transformation of the Romanian and European financial markets, starting in 2005, when the electronic payment system has become operational, the direct interoperability of the State Treasury with the Romanian credit institutions has allowed for the settlement of savings in the economy, good and efficient operations at the level of the economic operators and for the participation of banks in this electronic settlement system.

The new ways of collecting revenues and of making the government payments through electronic payment instruments promoted along with the banking system, and the wider adoption of these payment modalities in the relationship between the Treasury and its "clients" (taxpayers, public institutions, credit institutions) also contributed significantly to an increased efficiency of liquidity management.

The position of the State Treasury on the Romanian financial market and, above all, the monetary values that are passed through the State Treasury accounts, created the necessity to coordinate the cash management and budgetary fiscal policies with the monetary policy promoted by the National Bank of Romania. As a result of the State Treasury's robust operating model, proved efficiency and ability to replicate the solution in the European area, the State Treasury provides strategic value for the high degree of interoperability for all the active participants in the financial transactions market and cash management.

At the same time, the new challenges and transformations created new opportunities (besides the classic budget execution, audit and public cashier) for the Treasury activity in Romania:

- Securing public funds parked in accounts,
- The quality of ultimate lender as part of alternative funding measures within the resolution and compensation payments.

5. Optimizing the Financial Structure of the State Treasury

The continuous evolution of communications technologies and the tendency towards the digitalization of recurring relationships with clients assumed by the credit institutions on this continuous development fund require the State Treasury to assimilate new computing tools and methods in the relations with the banking system and, through this, with the tax payers.

Public institutions conducting their commercial operations through the State Treasury must benefit from the same level of operations as the credit institutions. At the same time, the criteria for time, safety and cost of operations require the participation of State Treasury in the projects of streamlining payment processes at national level.

The standardization of the EU-wide payment operations¹⁶ and Romania's firm commitment to join the Euro Area will allow the State Treasury to operate outside the country's borders

¹⁶ See Andrei D., Brezeanu P., "Single Euro Payments Area (SEPA) - Strategic value on the high degree of interoperability for all active participants in the financial transactions market", *Studia Universitatis „Vasile Goldiș” Arad Economics Series, The XXIV Edition, Vol 24, No 1 (2014): Studia Universitatis "Vasile Goldiș" Arad - Economics Series, <http://publicatii.uvvg.ro/index.php/studiaeconomia/issue/view/1/showToc>.*

at European level, which stimulates the evolution and the continuous upgrade of the operation mode.

5.1. Modernizing Government Cash Management

The global financial services industry, which in the wake of the crisis has registered 'waves' of bubbles in the capital market, credit market and derivative instruments markets, has been highly regulated in recent years at the global, regional and national level, by imposing stringent prudential capital adequacy measures (Basel III), anti-fraud and terrorist financing measures (AML), agile monitoring and uniform reporting.

Monitoring the performance¹⁷ of government liquidity management tools in the financial environment implies, in addition to providing the operational part of the short-term management process, namely managing the cash balance of the State Treasury, an innovative information system designed to be modular, with specific functions and robust procedures, quickly adapting to the new needs determined by the crisis management process.

Additional pressures on the financial services industry have also emerged, due to the revolutionary technologies for registering transactions in the blockchain open network of BTC type (the Bitcoin cryptocurrency underlying protocol), securing the identity of participants in transactions, restructuring of Ripple correspondent operations (Open Source TCP / IP based IP routing and payment optimization technology for Payments Service Providers (PSP) to clear and settle real-time transactions over a distributed network and run multiple currency payments on many markets).

The response of the banking institutions (at the forefront of restructuring) was a systematic approach to redesign their own institutions, portfolios and operations; thus, the architectural core of process automation and process objectification systems consists of back-office systems capable of agilely integrating new types of products and services, a flexible access system to customers and business partners, and a system for intelligent customer behavior analysis, segmented on the main business targets of the institution.

In this context, characterized by an environment in which the speed of change is breathtaking, the State Treasury must maintain both its safety and operational competitiveness, so that it can quickly implement its interoperability updates with business and citizens, manage optimally the financial resources and be able to set up new trading connections, fast and with reduced costs. The "lessons" of the economic and financial crisis have revealed the global extrapolation of market behavior and player protection measures in the financial market, which under normal circumstances apply to a counterparty in a stressful situation.

5.2. Particularities of Operational and Liquidity Risk Management within the State Treasury of Romania

Within the State Treasury, the risks are driven by the action of a mix of factors that depend on the general evolution of the economy, changes related to the organization of the State Treasury, personnel fluctuations, financial decision making, political and economic conditions. And, once the risks emerge, they lead to diminished public availability and increasing budget deficit.

¹⁷ See Andrei D., Brezeanu P., "Treasury Operations Management, Theoretical and Applied Economics, International Finance and Banking Conference FI BA 2014, XII Edition. <http://www.ectap.ro/supliment/international-finance-and-banking-conference-fi-ba-2014-xiith-edition/20/>.

Integrated risk management is a continuous, proactive and systematic process to understand, manage and communicate risk data from the perspective of the entire organization. It is necessary to adopt those strategic decisions that contribute to the achievement of the overall objectives of the State Treasury.

The State Treasury assumes the risks specific to the processes it operates, considering its compliance with the prudential requirements assumed, the risk exposure analysis and the risk dimensioning, so that the eventual loss resulting from risk materialization can be considered normal for its activity and internal and external image.

It should be noted that there is no clear separation line between the management methods and the risk monitoring tools in the literature; in principle, risk monitoring means the identification, assessment and control of risk management policies and practices that allow for detection of problems faced by the State Treasury, and risk management consists of all the risk management methods to eliminate, avoid, divide and finance risks, as well as the reduction in the risk exposure of the State Treasury.

In order to protect the interests of the state, the State Treasury must establish a medium-low risk exposure profile, which is reflected by the entire activity and the objectives, policies and exposure for each significant risk. Within the integrated risk management model, significant risks include those with a major impact on the State Treasury, such as: liquidity risk, counterparty credit risk, interest rate risk, operational risk and reputational risk.

Liquidity-based cash flow interpretation illustrates how the State Treasury manages to acquire sufficient resources to finance the state operations.

The main indicators for liquidity analysis from the State Treasury perspective are:

- Global liquidity, which reflects the ability of patrimonial assets to be turned into short-term liquidity, to meet the outstanding liabilities;
- Immediate (treasury) liquidity, which indicates the ability of patrimonial treasury assets (cash, current account of the NBR) to deal with short-term liabilities;
- Liquidity by the total attracted resources, showing the extent to which patrimonial assets meet the debts represented by total attracted resources;
- Liquidity by the total deposits and loans, illustrating the possibility of patrimonial assets to meet the debts represented by total deposits and loans.

The ways in which the State Treasury responds to different categories of operational and liquidity risks aim at keeping them at acceptable and controllable levels and at ensuring that these risks do not turn into factors that threaten the institution's operations and objectives.

This is done either through adequate internal control mechanisms for all activities, functions and processes or by defining appropriate responses to the emergence of identified risks and by ensuring that residual risk remaining after applying these pathways is under control.

5.3. Conclusions Regarding the Impact of Public Funds on Bank Liquidity Volatility

The management of liquidity in the banking system, the role of monetary policy, is conditioned by the net liquidity position, namely the position of the central bank towards the system, which can be creditor or debtor. Thus, the Treasury operations to implement

budgetary and fiscal policies can significantly influence this position because the government accounts are classified as autonomous liquidity factors¹⁸.

The complexity of organizational architectures determined by the new technological challenges in the financial field, the increasingly innovative correspondent channels and the restrictions caused by the fragmentation and compatibility of the IT&C systems, are factors that are considered as a "breakthrough", but which make the task of forecasting increasingly difficult.

Government financial flows contribute to the development of money markets through their ability to level out market liquidity flows using a mix of tools and management operations.

From this perspective, streamlining financial flows and ongoing processes of structuring and standardization are vital steps to effectively manage government liquidity, and if they are not properly implemented may burden the achievement of objectives and also may contribute to uncertainties in policy implementation.

Amounts resulting from significant forecast deviations may be unknown and often costly, because they can be quantifiable and depreciated relatively easy on short term, but they can lead to risks in the fiscal and monetary economy over a long time horizon.

The current rules and regulations summarized in Figure 1 (presented in the Appendix) indicate that besides the daily operations related to state transactions (receipts, payments) generating liquidity injection / sterilization with immediate effect in the Romanian financial market, other management instruments and operations, different from those related to the day-to-day operations of the State Treasury, have a major influence on the projections of the liquidity position performed by the National Bank of Romania.

5.4. Conclusions on Optimization Model and Optimization of Financial Flows through State Treasury

The State Treasury managers share the concern of tax and monetary policy specialists that the public sector indebtedness must remain within sustainable limits and there must be a credible strategy to reduce the excessive debt levels.

Financial innovation allowed for the distribution of risk and its packaging in the form of complex products that did not allow for a correct assessment of their high exposure to market fluctuations. Thus, the key tools for managing the government financial resources need to be quickly accommodated with the techniques for assessing the fiscal needs on long-term and for acquisition of the resources, the rational procedures for resource allocation and cost management, as well as the appropriate mechanisms for recording and disseminating relevant financial information.

The State Treasury must ensure that tax authorities are aware of the impact of funding needs and the level of domestic / external public debt on the borrowing costs. Given the increasing role of governments and the impact of their intervention in the economy, the public interest in the efficient performance of these organizations and institutions is also increasing (see Figure 1).

Regarding the liquidation position and the control of the consolidated cash flow of the State Treasury within the fiscal, monetary and legislative limits, it may be concluded that:

¹⁸ *Autonomous factors are positions in the central bank's balance sheet that affect the availability of current credit institutions' holdings but which are not under the direct control of the central bank's liquidity management function (BCE).*

- A good practice is the aggregation of government cash balances in a single account at the central bank. The premises for an optimal, cost-effective management can be provided, both by integrating the accounts with the central bank and by ensuring that the government bodies do not hold liquidity in the banking system outside the central bank.
- Much of the government spending is not directly related to the source of income or funding. Therefore, the need to balance the inflows with outflows makes the efficient administration a governmental necessity and the common denominator of the various resources within any Treasury is cost versus placement, under the conditions of risk minimization;
- There is a clear positive relationship between the level of the ON rate and the size of the current account balance of the State Treasury, reflecting the impact on the liquidity of the banking system (see Figure 2);
- The fluctuations with positive / negative amplitude of governmental availability are a symptom not only of a "non-liquid" money market, but also of a lack of sufficient actions to compensate the impact on the market and volatility of liquidity flows.

References

- Andrei, D.L. and Brezeanu, P., 2014. Treasury operations management. *Theoretical and Applied Economics*, 6, pp.77-87. Available at: <<http://www.ectap.ro/supliment/international-finance-and-banking-conference-fi-ba-2014-xiith-edition/20/>> [Accessed June 2018].
- Andrei, D.L. and Brezeanu, P., 2014. Treasury Operations Mechanism in Romania. *Finance – Challenges of the Future*, 16, pp.82-89. Available at: <www.financejournal.ro> [Accessed June 2018].
- Andrei, D.L. and Brezeanu, P., 2014. Treasury operations management. In: Faculty of Finance, Insurance, Banking and Stock Exchange, Bucharest University of Economic Studies, *XII International Finance and Banking Conference FI BA 2014*. Bucharest, Romania, 26–27 March 2014.
- Andrei, D.L. and Brezeanu, P., 2014. Single Euro Payments Area – Strategic Value on the high Degree of Interoperability for all the active participants in the financial transaction market. *Studia Universitatis Vasile Goldis Arad - Economics Series*, 24(1), pp. 1-16.
- Andrei, D.L., Vlad, C. and Brezeanu P., 2015. Governmental Liquidities Management 2008 – 2010. *Studia Universitatis „Vasile Goldis” Arad – Economics Series*, 25(2), pp. 21–34.
- Barrell, R. and Weale, M., 2010. Fiscal policy, fairness between generations, and national saving. *Oxford Review of Economic Policy*, 26(1), pp.87-116.
- Bessis, J., 1999. *Risk Management în Banking*. England: Ed. Wiley & Sons Ltd.
- Brezeanu, P., 2007. *Finanțe europene*. Bucharest: CH Beck Publishing House.
- Deroose, S. and Griesse, J., 2014. Implementing economic reforms – are EU Member States responding to European Semester recommendations?. ECFIN Economic Brief, Issue 37.
- Eggertson, G. B., 2010. What Fiscal Policy is Effective at Zero Interest Rates?. NBER Macroeconomics Annual.
- European Commission, 2018. The European Union’s economic governance framework aims to monitor, prevent, and correct problematic economic trends that could weaken national economies or negatively affect other EU countries.

- Available at <https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction_ro>. [Accessed January 2019].
- Hashim, A. and Allan, B., 2001. Treasury Reference Model. World Bank Technical Paper; No. 505. Washington, DC: World Bank. © World Bank. Available at: <<https://openknowledge.worldbank.org/handle/10986/>>. [Accessed July 2018].
- Isarescu, M.C., 2017. *Prezentare la Conferința anuală a Asociației Analizatorilor Financiar - Bancari din România*. Bucharest: National Romanian Bank.
- Kamps, Ch., De Stefani, N., Leiner - Killinger, N., Ruffer, R. and Sondermann, D., 2014. The identification of fiscal and macroeconomic imbalances unexploited synergies under the strengthened EU governance framework. ECB Occasional paper Series No 157.
- Ministerul de finante, 2002. *Emergency Ordinance No. 146, 2002 on the formation and use of resources ran through the State Treasury*. Available at: <<http://www.datoriepublica.mfinante.gov.ro/trezor/pagina.html?method=view&c=trezorlegislatiedatoriegubernamentalaprimara&locale=en>> [Accessed January 2019].
- Ministerul de finante, 2002. *Emergency Ordinance No. 64, 2007 on public debt*. Available at: <<http://www.datoriepublica.mfinante.gov.ro/trezor/pagina.html?method=view&c=trezorlegislatiedatoriegubernamentalaprimara&locale=en>> [Accessed January 2019].
- Moyer, R.C., McGuigan, J.R. and Kretlow, W.J., 2008. *Contemporary Financial Management*. Cengage Learning.
- Nakata, T., 2009. *Optimal Monetary Policy and Government Expenditure under a Liquidity Trap*. New York: New York University.
- Fainboim, Y.I. and Pattanyak, S., 2011. Treasury Single Account: An Essential Tool for Government, *IMF Technical Notes and Manuals*. Available at: <www.imf.org/external/pubs/ft/wp/2010/wp10143.pdf> [Accessed July 2018].
- Pessoa, M. and Williams, J. M., 2013. *Government Cash Management: Relationship between the Treasury and the Central Bank*. International Monetary Fund: Technical Notes and Manuals.
- Piga, G., 1998. In Search of an Independent Province for the Treasuries: How Should Public Debt be Managed. *Journal of Economics and Business*, 50(3), pp.257-275.
- Radu, C.F., Dumiter, F.C., Dudaș, L. and Jimon. Ș., 2017. Study on Budget Revenue Collection. Shadow Economy and tax Losses Caused by It. *Studia Universitatis "Vasile Goldis" Arad - Economics Series*, 27(2), pp.1-18. Available at: <<http://publicatii.uvvg.ro/index.php/studiaeconomia/issue/view/26>> [Accessed September 2018].
- Rossi, B., Skehposyan T. and Soupre, M., 2016. Understanding the sources of macroeconomic uncertainty. *Working paper. Pompeu Fabre*.
- Saxena, S. and Yläoutinen, S., 2016. *Managing Budgetary Virements*. International Monetary Fund: Technical Notes and Manuals.
- Tetlock, P.E. and Gardner, D., 2015. *Superforecasting. The Art and Science of Prediction*. NY: Crown Publishing Group New York.

- Vlad, C., Andrei, D. L. and Brezeanu, P., 2015. The Analysis of the evolution of fiscal pressure in correlation with the budget deficit in EU. *Theoretical and Applied Economics*, pp.167–175. Available at: <<http://www.ectap.ro/supliment/international-finance-and-banking-conference-fi-ba-2015-xiiith-edition/23/>> [Accessed January 2018].
- Williams, M., 2009. *Government Cash Management: International Practice*. Oxford policy management.
- Williams, M., 2010. *Government Cash Management: Its Interaction with Other Financial Policies*. International Monetary Fund. Technical Notes and Manuals.
- Win, N. N., Duggan, S., Garton, P., Premetis, S. and Li, B., 2013. Estimating the structural budget balance of the Australian Government: An update. Treasury Working Paper. Canberra. Available at: <<https://treasury.gov.au/publication/estimating-the-structural-budget-balance-of-the-australian-government-an-update>> [Accessed January 2019].
- Zarate J., 2013. *Treasury's War: The Unleashing of a New Era of Financial Warfare*, Public Affairs.

Appendix

Figure 1

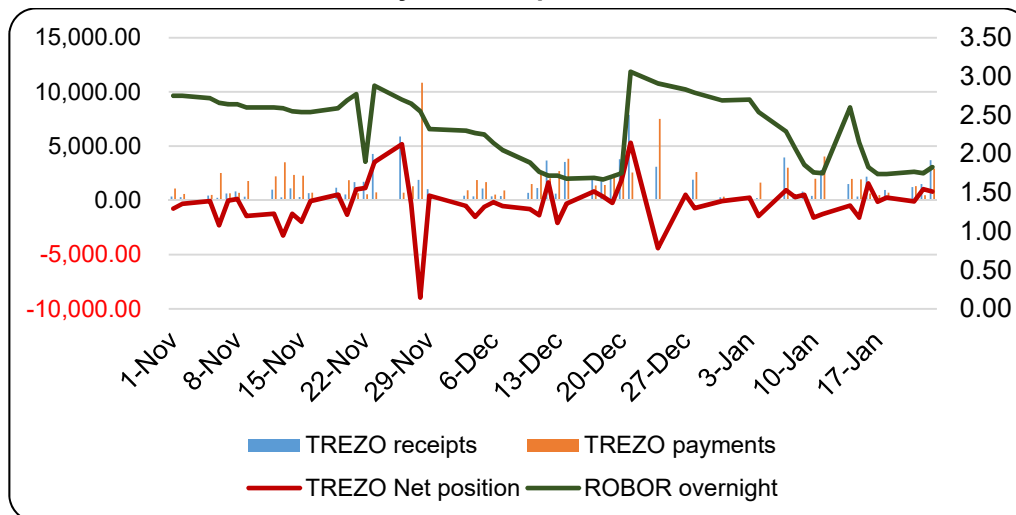
Daily transactions related to state transactions (receipts, payments) generating liquidity injection / sterilization with immediate effect on the financial market

<i>Instruments and operations</i>	Immediate effects on the liquidity of the financial market (+ Injection / - sterilization / * Neutral)
Funding tools	
Treasury bill & bonds launched on the domestic and international market	+/-
Government Emergency Ordinance 64/2007 on public debt from Romanian or foreign financial institutions	+/-
Borrowings from governments and foreign government agencies, or other international financial institutions	+/-
State guarantees	*/-
Financial leasing	*
Private placements	+/-
Structured Instruments	*
Temporary borrowings from the current Treasury State Treasury account (TSA)	*
Loans from the European Union under Regulation 332/2002	+/-
Cash management tools	
Deposit attraction	+/-
Placements	+/-
FX Operations	+/-
Treasury certificates	+/-
Government Emergency Ordinance 146/2002 on the formation and use of resources ran through the State Treasury REPO / DEPO	+/-

Source: Authors' data processing based on the information in the EOG 146/2002 & EOG 64/2007.

Figure 2

The evolution of ROBOR ON versus the net position of the Treasury determined by its own operations



Source: MFP and NBR data, own processing.