

## Treasury Operations Mechanism in Romania

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**Abstract:** *The transition from a payment system on paper support to an electronic one in Romania was determined, on the one hand, by the development of the financial markets and the significant increase of the activity performed by means of payment systems, and on the other hand, by the need to move to a predominantly cashless society and to streamline cashless payments, as well as by the requests of the final customers for payment services that are safe, effective and low cost.*

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**JEL Classification:** H12, H60, H63, H83

### 1. Introduction

The State Treasury facilitates the use of fundamental analysis and monitoring tools for achieving financial, monetary, and foreign currency balance as well as that of domestic and external state debt by the Ministry of Public Finance.

The efficiency in performing the treasury operations management has increased significantly in recent years due to changes driven by technological developments in the banking industry, but also in government operations. Basically, managers are able to retrieve relevant information in an efficient management instantaneously, leading to reduced transaction processing time and costs by electronically processing the data. The new methods for revenue collection and government disbursement by electronic means of payment have also contributed significantly to increasing the efficiency of cash management.

There is a growing need to reduce settlement risk, to streamline treasury activities, maximizing the efficiency of the staff, all in order to increase the profitability of operations. Financial institutions have often purchased or built software designed to satisfy those needs. However, such software often proved to be unsuccessful in today's market environment, since it usually addresses only some limited types of processing.

### 2. Direct Interoperability and Streamlining Operations

#### 2.1 Ensuring the interoperability

The direct interoperability of the State Treasury with the Romanian credit institutions has allowed the streamlining of settlements in the economy, a better control and streamlined operations among economic operators, the banks participating in the system.

There is a growing need to reduce settlement risk, to streamline treasury activities, and to maximize the efficiency of all staff in order to increase the profitability of operations. Financial institutions often have purchased or built software designed to satisfy those needs.

However, such software has often proved to be unsuccessful in today's market environment, since it normally addresses only some limited types of processing. Meanwhile, financial regulators are increasingly critical of institutions whose internal operation systems and procedures are unable to support the rapid transformation of markets and the business environment of today.

The direct interoperability of the State Treasury with the Romanian credit institutions, starting in 2005 by the commissioning of the Electronic payment system (EPS), has allowed the streamlining of settlements in the economy, a better control and streamlined operations among economic operators and banks participating in this electronic settlement system.

The State Treasury, as a direct participant in the Electronic Payment System in Romania and as a payment service provider for the public administration in Romania, has pledged to ensure financial transactions related to the consolidated general budget execution, as well as to streamline financial flows related to the participants in the system and the National Bank of Romania. With the accession to the new settlement system, but also in the European legislation spirit and that of the Treaty of Accession of Romania to the European Union, the treatment offered to the State Treasury, which was susceptible of being preferential, has been removed, and nowadays the State Treasury has rights and obligations just as the all participants in the system, with the responsibility for ensuring, in the financial market conditions, resources to conduct all State transactions without perturbing in any way the functioning of the national payment system.

From this perspective, the State Treasury has assumed responsibility for its actions and it gives the utmost importance to this activity, moreover since the settlement activity takes place in a complex framework, which is constantly subject to a number of objective and subjective influences that ultimately may lead to uncertainties in completing payments and achieving revenue.

Although being the last European country to adopt (in 2005) an electronic payment system, Romania has the advantage of the "last one arrived" – that to have implemented the newest solutions and technologies.

## ***2.2 Electronic Payment System Components***

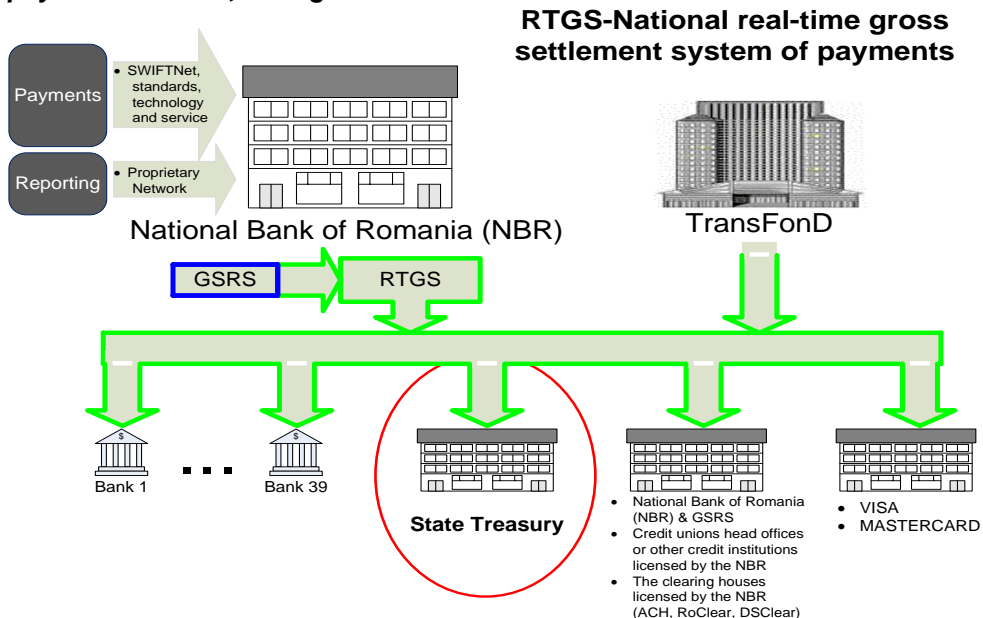
The EPS Architecture in Romania contains all the components of a national payment system: RTGS [1] (ReGIS), ACH [2] (SENT) and GSRS [3] (SaFIR). Also, in 2008 the subsystem for processing debit instruments (checks and promissory notes) was released, and at the operational level, the banking system adopted in 2012 the SEPA Schemes (implemented in the European Union by Regulation EC no. 260/2012) for interbank payments in RON. The RTGS and GSRS systems run on the SWIFTNet platform [4], while the ACH runs on a proprietary network (TFDNet).

The State Treasury participation in the RTGS system, in addition to the 40 banks (most of them also being stakeholders in TransFonD – the supplier of the infrastructure and of the clearing and settlement mechanism in Romania), is also allowed for other categories of institutions: the Central Depository, Visa, MasterCard and the Romanian Ministry of Public Finance.

If we take a look at the GSRS system, the Ministry of Public Finance – State Treasury is a participant along with the Stock Exchange, the Central Depository, primary dealers, secondary dealers and non-dealers.

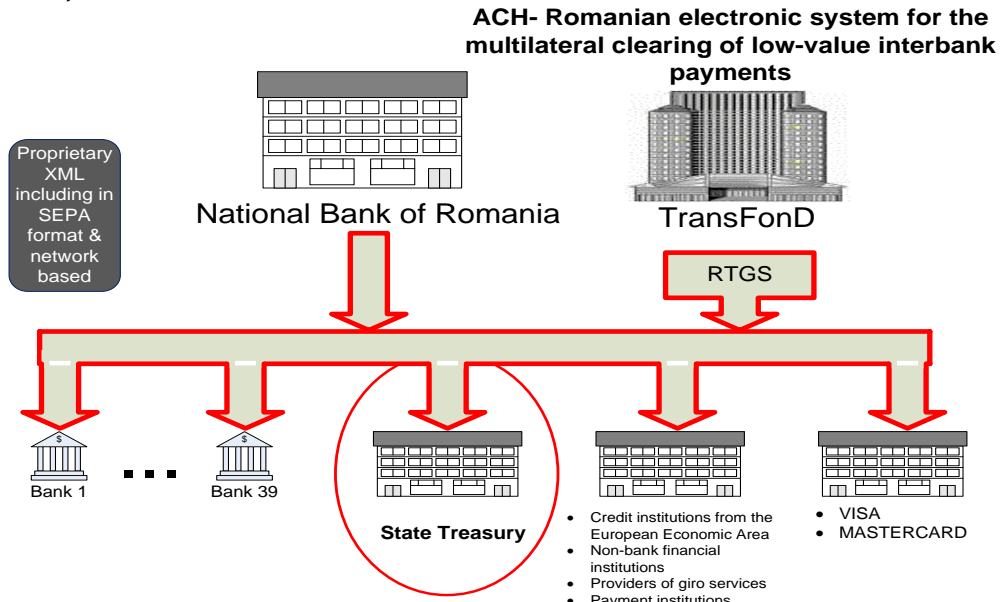
The three subsystems of EPS in Romania are presented as follows: (Chart 1-3)

**Chart 1 – Gross-based settlement system with real-time interbank payments in RON, of large value.**



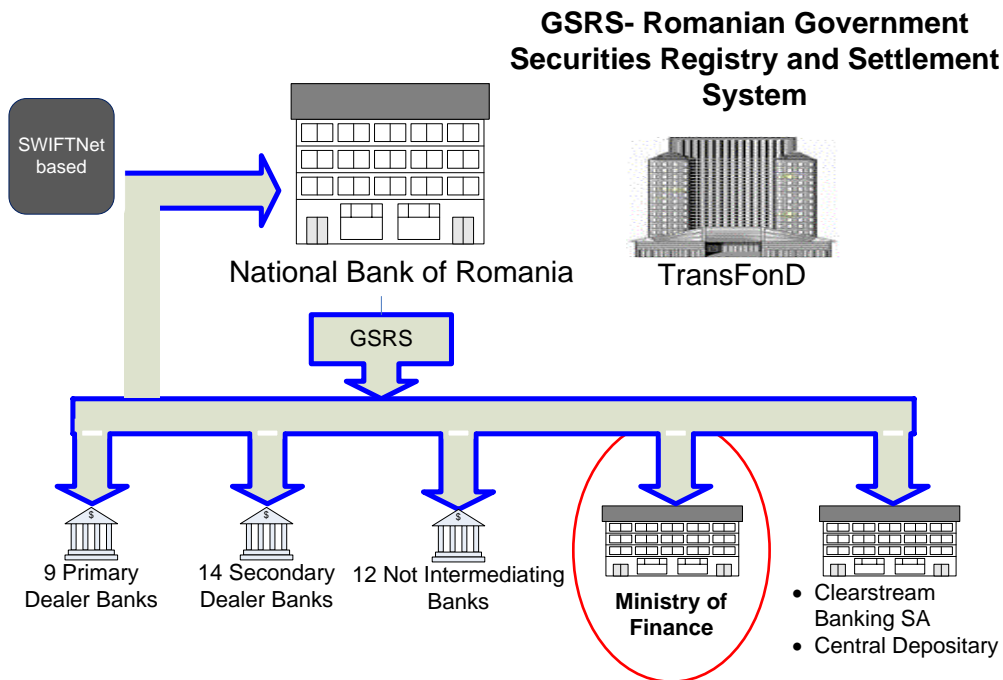
Source: own processing, also exposed in compliance with the banking standards of the Romanian State Treasury

**Chart 2 – Electronic system for multilateral clearing of interbank payments in RON, of small value.**



Source: own processing, also exposed in compliance with the banking standards of the Romanian State Treasury

**Chart 3 – The storage and settlement system for financial instruments**



Source: own processing, also exposed in compliance with the banking standards of the Romanian State Treasury

### 3. The Electronic Payment System of the State Treasury

The Electronic Payment System of the State Treasury (RoSTEPS [5]) has been implemented and developed in order to process on a daily basis receipts and payments on public funds managed by the Romanian State Treasury.

#### 3.1 RoSTEPS architecture

RoSTEPS, designed and built around the qPayIntegrator payment suite, contains and provides a number of innovative features: financial message formatting and processing; the mechanism of adaptive routing by type of capacitated transaction processing of financial transactions and related information; processing end-to-end non-volatile transactions; integrated reconciliation of financial messages, resilience at the transaction level in real time, the ability to investigate exceptions and detect duplicates, ensuring transaction delivery by using their confirmation at the application level and that of market infrastructures or correspondent banks; cash management, continuous accounting reconciliation and competitive statistical reports on transactions. In addition to that, the implementation of an advanced monitoring system, both at the financial transactions level and that of the IT&C platform, has proven extremely beneficial for providing a proactive management environment and an efficient tool to reduce operational risk.

The system has been recently enhanced to be compliant with the SEPA standard [6], both for SCT transactions (SEPA Credit Transfer) and SDD (SEPA Direct Debit). Adding the forecasting and monitoring tool for all the pro-active cash management activities of the State Treasury allowed rapid and appropriate decisions,

which are essential in the situation of a financial market dominated by high financial volatility.

Through the contribution it had to taking safe and proper decisions, this tool has proven to be of great importance during 2008 and later, when the context of the financial market has changed unexpectedly and quickly, when practically in these circumstances the entities that lacked a fast reaction time to adapt to the high fluidity of the market were eliminated.

Currently, the State Treasury analyzes the implementation of new business features for improving the facilities offered by the State Treasury to its clients by means of RoSTEPS, namely:

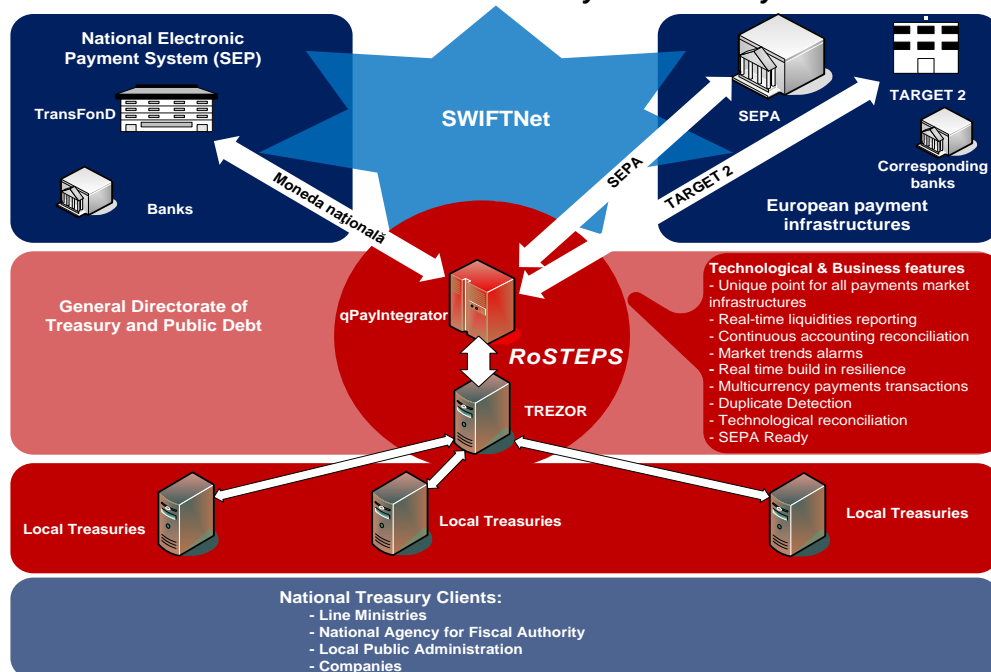
- EU governmental funds allocation to beneficiaries and financial execution of corresponding projects;
- streamlining the flow of pensions and salaries and the transition to the SEPA format.

Given the centralized architecture of the RoSTEPS payment engine and the high automation level (STP [7]), the entire flow of transactions is carried out online, in real time. All State Treasury customers place payment orders directly at the territorial units of the Treasury, which processes and consolidates them in the central payment engine. Treasury receipts are routed based on their reference (IBAN account and tax code) to the appropriate accounts of the clients in order to discharge obligations. Transfers of funds (payments and receipts) are centralized, providing useful information for forecasting and cash management.

### **3.2 RoSteps Interoperability**

A significant part of the RoSTEPS success is the use of banking instruments and standards that ensure an interoperability bridge with the business community. Thus, the State Treasury uses international standards of financial settlement:

- adoption and processing of both MT and MX messages [8] ;
- using identification codes adopted at the EU level, such as BIC, IBAN and ISIN [9];
- business standards: services, technology and SWIFT standards (RoSTEPS implements data of the same quality as SWIFT regarding security, authenticity, opposability, reliability and uniqueness), EPC (SEPA Credit Transfer Scheme and SEPA DD Core Scheme), ECB, ISO (ISO 20022 [10] );
- de facto standards in the IT industry: the relational databases management system (Oracle), reliable messaging transport protocols (IBM WebSphereMQ), presentation protocols (IBM WebSphere Application Server).

**Chart 4 – The architecture of the State Treasury settlement system – RoSTEPS**

Source: own processing, also exposed in compliance with the banking standards of the Romanian State Treasury

### 3.3 The Advantages of the Unitary Treasury System

To summarize, the centralized architecture of the RoSTEPS engine implemented at the State Treasury level has the following advantages:

- Continuous accounting reconciliation with correspondent banks and achievement of budgetary executions;
- Real-time reporting of liquidity, currency and other criteria;
- Support for the main payment (credit transfer) instruments in the national currency, according to FIN and ISO20022 banking standards, and ECB (TARGET2) and EPC (SEPA) settlement regulations, using the same banking practices and technologies;
- Real-time reporting of liquidity by cost centers (territorial units of the State Treasury);
- Competitive reporting of deviations from the statistical average of public income and expenditures regarding the behavior of the main correspondents or customers;
- Automatic reconciliation of transactions, native resilience on the financial transactions and non-volatile end-to-end transactions level;
- Reducing transaction costs for clients of the State Treasury in relation to fees charged by credit institutions.

The advantages of the unitary treasury system presented above and analyzed in relation to the disadvantages that can be invoked should not be dissociated from the positive effect that the State Treasury has on strengthening and enhancing the competitiveness of the public authority's activity, to streamline financial flows and the ability to achieve an integrated budget execution.

By computerizing and automating the treasury flows, the efficiency in performing operations on public debt and cash management has increased significantly, with visible results on:

- reducing the time period between ordering the payment and the moment when funds become available in the beneficiary's account;
- improving cash management and liquidity risks at the State Treasury level;
- eliminating the paper support and simplifying and streamlining payment instrument circuits by STP processing;
- government debt management;
- managing the EU grants received by Romania as a member state of the European Union.

Thus, the turnover of large/small value and/or expedite transactions processed:

- initiated by the State Treasury in 2012 amounted to 252.84 billion RON, representing approximately 43.10% of the GDP for 2012;
- received by the State Treasury in 2012 amounted to 211.15 billion RON, representing approximately 35.99% of GDP, a comparable performance to that of the payment systems in other European countries.

The turnovers volume (about 30% of all transactions in Romania belong to the State Treasury) and the need to balance the outflows of funds make the efficient resource management a governmental necessity.

As a daily average, the aggregate value of payment/receipt transactions processed by RoSTEPS amounts to 1.79 billion RON, registering a peak processing average of 2.77 billion RON in January 2012.

In 2012, the ReGIS system processed a total of 3,173,000 payments totaling 7,608,328 million RON. The daily average number of payments processed in ReGIS was of 12,541 transactions, with a daily average of 30,072 million RON, the average value of a payment initiated in the system being of 2.40 million RON. [\[11\]](#)

#### **4. Conclusion**

In the context of the major transformation trends of the Romanian and European financial markets, the State Treasury is considering a permanent alignment of the activity to the current requirements imposed by the new regulations of the European central institutions (European Payments Council – EPC – on SEPA, and European Central Bank – ECB – on TARGET2), by adopting major steps in terms of modernizing the settlement system of the State Treasury in RON and foreign currency and of developing projects in this regard.

The State Treasury position in the payments industry market in Romania and especially monetary values that are conveyed through the accounts of the State Treasury, require cash management policy coordination on its fiscal budget with the monetary policy promoted by the National Bank of Romania. Due to the robust operating model of the State Treasury in the Ministry of Public Finance, of the practically proven efficiency and the possibility of replicating the solution in the European area, we strongly believe that this practice promoted by implementing RoSTEPS ensures broad interoperability, as well as rapid and efficient financial transactions.

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