FINANCIAL-MONETARY ANALYSIS MODEL

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Abstract

In this paper, the authors propose an analysis model for the financial-monetary sector of a national economy. The model takes into consideration the indicators included in the balance of the central bank, and also the contents of the aggregate balance: external and internal assets and liabilities, and their components, specific to the central banks, as government loans and loans granted to commercial banks (assets), the components of monetary base, the government deposits (liabilities)

Key words: *balance, assets, liabilities, model, monetary base*

Central Bank Balance

Currency issuance (CI) and monetary base (MB) are monetary aggregates are defined by the monetary authorities (the central bank) having as data source the bank issuance balance.

By its issuance and economy crediting function, the central bank has a primordial role in the monetary creation, which is a process directly and indirectly implying some important economic objectives: complete work force use, inflation, economy increase and stability.

The central bank balance is:

Activ	Pasiv
1. External assets–AE_E 2. Internal assets –AI_E A. Government loans–CG_e B. Loans granted to commercial banks–CB	1. External liablilites –PE_E 2. Internal liablilites –PI_E A. Monetary base –BM - Money emission –N = cash owned by population–N = cash owned by commercial banks - C - commercial banks reserves at the central bank–R B. Public (government) deposits –DG_E C. Other liabilities (net) –APN_E

The balance equation is:

$$AE_E + CG_E + CB = PE_E + \underbrace{\underbrace{N + C}_{EB} + R}_{BM} + DG_E + APN_E \quad (1)$$

This balance represents a regrouping of the main accounts of monetary authoritys, which is necesarry in order to conceive the monetary situation.

• The assets contain three main possibilities used by the Central Bank in order to create the currency.

- The external assets (AE_E) comprising the assets to which the economic agent not resident is final debtor: the gold mineral stock, foreign currency, foreign currency external deposits, the special drawing rights, the reserve tranche position of the IMF.

Generally, the external assets, the international reserves set and managed by the issuance bank in order to ensure the national monetary authority's reaction to the efective or potential inbalances of external payments and to ensure exchange rate stability through currency market interventions.

- Governmental credits given by the issuance bank are made up of direct financial obligations of the central management in regard to the monetary authority as vouchers, certificates, loans and upfront payments towards the state treasury.

- Credits given to commercial banks are intended to ensure the necesarry liquidities, by rediscounting. The counterpart of this active role of the central bank can be found in the aggregate balance of the commercial banks, as liabilities (credits from the central bank or refinancing credits).

• For the liabilities of the central bank balance we find positions regrouping the obligations of the monetary authorities reflecting the size and partition of the primary currency holders.

- The main liability position is the monetary base comprising money issuance(EB) and mandatory reserve of the commercial bank to the issuance bank (R).

$$BM = EB + R. \quad (2)$$

The monetary bank or primary currency represents the currency issued and controlled by the central bank which fuels the banking system, so that the commercial banks are in position to give back (in cash) the amounts deposited in the economic agents and population accounts.

- The external liabilities (PE) comprise all monetary obligations to the not residents (deposits made from external credits.)

- Public deposits (DGE) at the issuance bank are obligations of the monetary authorities to the central administration (availablities from budgetary and extrabudgetary funds existing at a certain moment)

- Other liabilities (net) are a residual position.

In conclusion, the monetary base represents the most important counterpart position of the total net assets of the issuance bank:

BM = Assets amount – Liabilities amount not included in BM.

As a consequence, any modification of the assets and liabilities elements of the issuance bank will indirectly influence the size of the monetary base. Thus, any increase of the assets leads to the increase of BM, while the increase of liabilities implies the decrease of BM.

The last relation can be written as follows:

$$BM = (AE_E - PE_E) + (CG_E - DG_E) + CB - APN_E = \\ = AEN_E + CGN_E + CB - APN_E \quad (3)$$

and it explains the three determinant causes of the monetary issuance:

- the increase of the net external assets (AEN_E); in this way, the monetary issuance is determined by the increase of the currency reserve by external credits and central bank currency aquisition;
- the increase of net governmental credit volume(CGN_E) intended to cover the budgetary deficit as a result of a time gap between budgetary expenses and income; generally speaking, the financial imbalance through budgetary deficits(DB) represent the starting point of a monetary imbalance, causal relation expressed by:

$$DB = CB - VB = \Delta BM + \Delta DP \quad (4)$$

where:
CB – budgetary expenses;
VB – budgetary income;
ΔBM – increase of monetary base;
ΔDP – increase of public debt;

- the increase of commercial banks credit volume, from the central bank(CB), in order to satisfy the liquidity demands from the holder account banks of debt balance, in the monetary market.

By monetary base, the central bank controls monetary creation process inside the banking system, which is quantified by multiplier of the monetary base (m).

$$m = \frac{M_2}{BM} \tag{5}$$

The BM multiplier expressed the increase of the monetary mass at large (M_2) at each 1 RON of BM. in 1996, this indicator was about 4,1-4,2, which means that at every 1 RON increase of the monetary base, corresponds to an increase of the monetary mass of 4,1 -4,2.

• **The aggregate balance of the commercial banks**

The commercial banks have also a contribution to the monetary creation being, themselves, creators of scriptural or account currency. The commercial banks operate by setting up deposits(mobilisation of monetary resources) and by using them in order to give credits. The scriptural(or account) currency is made up, by a multiplying credit process which plays an extremely important role in the saving-investing relation, decisive for the economic increase.

The aggregate balance of the commercial banks is:

Activ	Pasiv
1. External assets – AE_C 2. Internal assets – AI_C A. Non-government loans– CNG - Granted to companies - Granted to the population - Other loans B. Government credits – CG_C C. Reserves of commercial banks at the central bank - R D. Cash in the commercial banks – C	1. External liabilities – PE_C 2. Internal liabilities – PI_C A. Deposits on demand – DV B. Economies of the population – EP C. Time deposits– DI D. Currency deposits, of the residents– V E. Public deposits – DG_C F. Credits from the central bank – CB G. Other (net) liabilities – APN_C

The balance equation:

$$AE_C + CNG + CG_C + R + C =$$
$$= PE_C + DV + EP + DT + V + DG_C + CB + APN_C \tag{6}$$

The balance represents a consolidation of the commercial banks accounts. The most posts in this table do not require additional clarifications, having a similar content with the monetary authority posts. Liabilities operations of the commercial banks aim to: deposits, rediscount (credits from

the central bank) and own capital (inculded in the „other assets" post). Among assets operations, specific to commercial banks, are non-governmental credits.

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