

## **5. Principles of Compilation of Monetary Statistics for Armenia**

The framework for the monetary statistics involves analytical presentation of balance sheets of financial sector's depository and nondepository corporations. For the purpose of compiling and presenting the monetary statistics, the depository corporations are divided into two sub-sectors: the central bank and other depository corporations. For the Republic of Armenia, the subsector "Other depository corporations" presently coincides with the system of commercial banks and in the subsector of "Nondepository corporations" only credit institutions are considered.

### **5.1. Concept of Sectoral Balance Sheets**

The sectoral balance sheets are used for compilation of data related to the particular sector of the economy. To organize the sub-sectoral balance sheets, the primary (entry) data are collected from accountable units; for the financial sector, the data are collected from individual financial corporations. The sub-sectoral balance sheets are compiled by grouping these data, and the entire sectoral balance sheet is compiled by consolidation of the sub-sectoral balance sheets. For example, the summary balance sheet of commercial banks, as one sub-sector, is organized based on balance sheets of individual commercial banks. The summary balance sheet of central bank (monetary authorities) is organized based on the central bank balance sheet. The summary balance sheet of the banking system is organized based on these two sub-sectoral balance sheets. The balance sheet of entire banking system is used to compile the monetary survey (Appendix 4.1) that is the main table for presentation of the monetary statistics.

This section describes the process of compiling summary balance sheet indicators of the Central Bank and commercial banks (other depository institutions).

### **5.2. Statistical presentation of Central Bank's Balance Sheet <sup>14</sup>**

#### *5.2.1 Statistical Classification of the Central Bank's Balance Sheet Items*

In the context of effective implementation of the monetary policy, correct assessment of the indicators, that are under the direct (operational) control of the Central Bank of Armenia, is of marked significance. The source of compilation of these indicators is the accounting balance sheet of the Central Bank. The statistical analysis

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<sup>14</sup> The Central Bank's Chart of Accounts and Comments, see the CBA Board resolution No. 58, March 22, 2000, Resolution No. 227, August 30, 2000, as well as Resolution No. 403, December 9, 2003.

and compilation of the central bank balance sheet gets much importance as it is the first and the most important phase in compiling the monetary statistics. The structure of the accounting balance sheet of the central bank, the country's monetary authority, is peculiar, unlike those of financial corporations, due to distinctive features of the central bank tasks, i.e. implementation of monetary policy, issuance of national currency, banking and financial service of the Government, foreign reserve management, supervision of the banking system. The peculiarities of the central bank balance sheet (Appendix 2) are:

- Issued national currency is not treated as a financial asset for the central bank; currency outside the central bank is treated as the central bank's liability and is shown in the liabilities side of the balance sheet.
- Being the country's monetary authority, the central bank operates the accounts of the International Monetary Fund (IMF). Transactions related to the IMF are shown in the central bank's foreign assets and liabilities.<sup>15</sup>
- Standard gold bullions included in the central bank's foreign assets are treated as monetary gold. Unlike the central bank, standard gold bullions are not treated as monetary gold for commercial banks.

In the context of the monetary statistics, accounts in the central bank balance sheet are classified according to the principles of sectorization of the economy.

Assets and liabilities of the central bank balance sheet are divided into foreign and domestic categories. Foreign assets and liabilities are claims and liabilities on/to nonresidents; domestic assets and liabilities are claims and liabilities on/to residents.

According to the System of National Accounts, 1993 the economy is divided into several sectors. From the central bank point of view, there are three principal sectors set to classify the assets:

- Government sector
- Real sector
- Financial sector

Nonresidents represent the rest of the world, that may engage in transactions with domestic sectors.

The statistically classified balance sheet of the Central Bank looks as follows<sup>16</sup>.

ASSETS	LIABILITIES AND CAPITAL
Foreign assets	Currency outside the Central Bank
Convertible foreign currency and gold	Liabilities to Government
Monetary gold	Deposits of government
Reserve position in the IMF	Social Security Fund accounts
SDR holdings	PIUs' accounts
Claims on foreign banks	Liabilities to banks in Armenia

<sup>15</sup> Relations with the IMF and reflection of the IMF accounts in the Central Bank balance sheet are described in detail in Section 6 of this Manual.

<sup>16</sup> Statistically classified detailed balance sheet of the CBA (by chart of accounts) is provided in Appendices 2.2 and 2.3 of this Manual.

Other convertible foreign currency	Correspondent accounts (required reserves)
Non-convertible foreign currency	Time deposits
Claims on foreign banks	Reverse REPO agreements
Other non-convertible foreign currency	Foreign currency (allocation) swap
Dram	Capital paid-in accounts
Claims on Government	Other deposits (economy)
Credits to Government	Foreign liabilities
Government securities	Convertible foreign currency
Claims on banks in Armenia	IMF credit
Credits to banks	Other foreign liabilities
REPO agreements	Non-convertible foreign currency
Foreign currency (attraction) swap	Dram
Claims on economy	Other liabilities
Other assets	Capital accounts
Other financial assets	Current and undistributed profit
Accounts receivable	Statutory fund
Nonfinancial assets	General reserves
	Asset and other loss reserves
	Revaluation reserves

Statistical compilation of the annual balance sheet of the Central Bank of Armenia is carried out based on the closing entry results.

The foreign currency in the CBA balance sheet is classified into free convertible and non-convertible foreign currencies. Convertible is foreign currency that is freely convertible in international markets, and often is used to finance the balance of payments transactions. Gold is also treated as a convertible item. The rest of foreign currencies are treated as non-convertible.<sup>17</sup>

#### 5.2.2 Balance Sheet Items (Assets)

**Foreign assets:** Foreign assets are classified into convertible and non-convertible foreign currencies. In this context, the dram is a non-convertible currency. The foreign assets in convertible currencies comprise:

- Monetary gold
- SDR holdings
- Reserve position in the IMF
- Foreign currency assets (in convertible foreign currencies).

The detailed description of the CBA's foreign assets and foreign liabilities, and net foreign assets is provided in Section 7 of this Manual.

**Domestic assets:** Domestic assets are the central bank claims on resident sectors of economy that are separated into the following main groups:

- Claims on Government
- Claims on banks

<sup>17</sup> More detailed description is provided in Section 7 of this Manual.

- Other assets

Such classification of domestic assets is determined by the main functions of central banks. Lending to economy is not considered the main area of the business of the central bank, therefore claims on the economy are not reflected separately in the summary balance sheet of the central bank.

**Claims on Government** (Appendix 2.12). These represent financial liabilities of Government of Armenia to the CBA. These liabilities include:

- Government bonds, including treasury bills obtained by the Central Bank from secondary market, and coupon bonds rescheduled against line of credit,
- Discrete credits extended to Government,
- Budget account's overdraft or line of credit.

**Claims on commercial banks** include all credits, extended to resident banks, including REPO agreements, foreign currency (attraction) swap operations. The central bank views commercial banks as a separate sub-sector, and operations with them are very active, in the context of the central bank functions.

**Other assets** include the assets that are not directly related to the main activities of the central bank:

- Claims on nondepository financial corporations
- Claims on economy
- Other financial assets
- Accounts receivable
- Inventory, fixed assets and other tangible assets.

Section 8 of this Manual provides more detailed description of other assets, other liabilities and other items net assets of the Central Bank and commercial banks.

#### 5.2.3. Balance Sheet Items (Liabilities)

**Currency outside the Central Bank.** The only issuer of the Armenian dram is the Central Bank of Armenia, therefore currency outside the Central Bank (banknotes and coins) is liability of the Central Bank. This includes both Armenian currency in circulation and Armenian currency in vaults of commercial banks.

**Liabilities to commercial banks** include required and excess reserves of banks, time deposits with the Central Bank, and funds allocated in the Central Bank by reverse repo agreements, foreign currency (allocation) swap operations and for a capital paid-up.

**Other deposits from economy** involve deposits of the CBA employees, enterprises and voluntary institutions (real sector) that make no large amounts.

**Central Bank liabilities to Government** (Appendix 2.12). These represent deposits of government. Normally, such deposits include operational accounts of the Treasury, all deposits of state governance units and project implementation units with the Central Bank.

**Foreign liabilities.** Foreign liabilities include all CBA liabilities to nonresidents. Foreign liabilities, as foreign assets too, are classified into convertible and non-convertible foreign currencies. Here,

dram denominated foreign liabilities deserve attention. Unlike foreign assets, dram denominated foreign liabilities are almost the same by nature as foreign liabilities in convertible currencies owing to domestic convertibility of the dram.

Foreign liabilities of the CBA are:

- Loans received from the International Monetary Fund,
- Loans received, deposits attracted and other liabilities from/to nonresidents,
- Dram denominated liabilities to nonresidents.

**Other liabilities** include resident external and internal creditors and intermediate accounts, accounts payable, and other accounts not classified elsewhere.

**Capital accounts** include current and undistributed profit, statutory fund, general reserve, asset and other loss reserves and revaluation reserves of the CBA.

Accounting balance sheet of the CBA is organized on an accrual basis; according to monetary statistics principles all accrued interests must be included in their respective instruments. However, considering Armenia's peculiarities, and definitions of credit program currently implemented with the IMF, the monetary statistics generally is not being developed on an accrual basis. Despite this, basic monetary statistics indicators are calculated and published on an accrual basis as well. Hence, actually, the monetary statistics is developed on a both cash and accrual basis. All accumulation accounts are included in other assets or other liabilities once calculations are made on a cash basis, and each accumulation account is classified as a relevant financial instrument's component once calculations are made on an accrual basis.

#### 5.2.4. Central Bank Survey

In the context of monetary statistics, the central bank's position, or relations with certain sectors of economy is more advisable to view on net basis. This is done by netting of central bank claims against liabilities to the particular sector of the economy. Besides, the monetary base, as an operational target of the CBA, shall derive from the statistically classified central bank balance sheet.

To assess the country's international liquidity one should view not gross but rather net foreign assets. Non-convertible currency denominated foreign assets do not describe a country's international liquidity, which is why these are separated from foreign assets, in the context of the monetary policy. Armenian dram denominated foreign assets are considered non-convertible as well. The case is different with dram denominated foreign liabilities. Foreign liabilities are, by nature, identical to convertible currency denominated foreign liabilities, owing to domestic convertibility of the dram.

The government's ability to spend is not expressed in, or restricted to, volume of its deposits. Besides, these deposits are under control of policy makers, and they do not follow liquidity preference principles when making decisions. For these reasons, the Government deposits are not included in the monetary base but rather netted against the CBA claims on Government.

Generally, the monetary base (reserve money) is considered a group of the central bank liabilities that are treated as money (currency

outside the central bank, deposits of real sector of economy), or contribute to the process of money creation (required and excess reserves of banks) and are under a direct operational control of the central bank. The resident economy deposits with the CBA are not characteristic to activities of the central bank but these, as well as the real sector deposits with any bank, are treated as money and included in respective monetary aggregates.

Relying on the principles, the summary balance sheet of the CBA shall be as follows:

**1. Net foreign assets in convertible currency**

Foreign assets in convertible currency (asset) less  
Foreign liabilities in convertible currency (liability)  
Foreign liabilities in dram (liability)

**2. Net domestic assets**

2.1 Net claims on Government

Claims on Government (asset) less  
Liabilities to Government (liability)

2.2. Claims on banks in Armenia (asset) less

Time deposits of banks (liability)  
Reverse repo agreements with banks (liability)  
Foreign currency (allocation) swap, (liability)

2.3 Other items net

Foreign assets in non-convertible currency (asset)  
Foreign assets in dram (asset)  
Claims on economy (asset)  
Other assets (asset)less  
Foreign liabilities in non-convertible currency (liability)  
Bank capital paid-in accounts (liability)  
Other liabilities (liability)  
Capital accounts (capital)

**Monetary base (reserve money)**

1. Currency outside the Central Bank
2. Required reserves and excess reserves of banks
3. Other deposits (including accounts)

The presented scheme obviously shows the structure of the summary balance sheet of the CBA, however there is a need to refer to some clarifications. According to international principles on monetary statistics the monetary base may include all commercial bank accounts with the central bank, including time deposits, reverse repo agreements and foreign currency (allocation)swap operations. However, with regard to the summary balance sheet of the CBA, time deposits, reverse repo agreements and foreign currency (allocation)swap operations of commercial banks with the CBA are not included in the monetary base but rather netted against claims on banks. The above accounts are not included in the monetary base as, in view of the monetary policy, reverse repo agreements are considered instruments to manage the monetary base, while time deposits contribute to contraction of the monetary base. Their netting against claims on banks allows to reflect changes in the monetary base due to these instruments.

There is another peculiarity related to calculation of foreign assets in addition to that of the monetary base calculation. Foreign currency holdings generated from privatization of state entities are accounted separately and accumulated in the Special Privatization Account of the Government with the CBA. These funds are included in the Gross International Reserves of the Republic of Armenia but are not included in the calculation of the Central Bank's NFA as their use is restricted.

Conventionally, the monetary base may be considered in two points of view:

1. **Supply** - The central bank creates the monetary base by acquiring financial assets. The assets that the central bank acquires are net foreign reserves, net claims on Government, claims on banks and other assets net.

$$MB = NFA + NDA, \text{ where}$$

MB is the monetary base

NFA - net foreign assets of the central bank

NDA - net domestic assets of the central bank

$$NFA = GFA - GFL, \text{ where}$$

GFA - gross foreign assets

GFL - gross foreign liabilities

$$NDA = G + B + OIN, \text{ where}$$

G - net claims on Government

B - claims on banks

OIN - other items net

2. **Demand** - The monetary base is the group of central bank liabilities that are treated as money or contribute to money creation in the economy.

$$MB = CCB + R + D, \text{ where}$$

CCB - currency outside the central bank

R - required reserves and excess reserves of commercial banks with the central bank

D - real sector deposits of resident economy with the central bank

Indicators shown in the summary balance sheet of the CBA, particularly the monetary base, are defined as operational targets of the monetary policy, therefore the accuracy of their compilation is of material importance in implementing an effective policy.

### 5.3. Statistical Presentation of Armenian Commercial Banks' Balance Sheet<sup>18</sup>

#### 5.3.1. Statistical Classification of Armenian Commercial banks' Balance Sheet Items

As an integral system, commercial banks of Armenia represent a sub-sector of the banking system of Armenia. Principles of organizing a summary balance sheet of commercial banks are very close to those of the CBA. The differences derive from different functions of the central bank and commercial banks.

Unlike the central bank, an ultimate objective of commercial banks is the profit by investments in financial instruments. In view of this

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<sup>18</sup> See CBA Board resolution No. 258, August, 2002, for guidelines to chart of accounts and comments of commercial banks operating in Armenia.

financial instruments of commercial banks should be classified more detailed.

Nevertheless, principles of statistical classification of commercial bank balance sheet are almost the same as for the central bank. So, the principles of statistical classification of balance sheet items of commercial banks are as follows:

- Residency
- Classification of currencies
- Sectors of economy
- Classification or types of financial instruments.

The first two principles stated are applied in the central bank balance sheet analysis almost in the same way. Namely, according to the principle of residency, all types of assets and liabilities should be classified by owners into domestic (residents) and foreign (nonresidents). Currencies are classified into three groups: i) national currency (Armenian dram), ii) convertible currencies, and iii) non-convertible currencies. Convertible currencies are of material significance in view of financing the balance of payments transactions. Non-convertible currencies or currencies with limited convertibility are of very low usage outside the issuer country.

Claims on, and liabilities to, residents of commercial banks are classified into two sectors of economy:

- Government sector
- Real sector

Armenia's nonbank financial sector is very small, therefore it is not separately treated in the Monetary Survey but included in the real sector, instead. Armenia's nonbank financial sector is classified into sub-sectors of the resident economy. Nevertheless, there will arise a need in future to treat their relationship with the banking system separately as nonbank financial corporations become active and their role in the financial market enhances.

Classifying the real sector of the economy into corporations, households and nonprofit institutions serving households is vital for analysis of the commercial bank balance sheet. Accordingly, corporations must be broken down into corporations controlled by the government and private corporations.

Financial instruments are classified also based on maturity and types. By maturity, all instruments are divided into two groups: long-term and short-term. Instruments with maturity up to one year are treated as short-term, instruments with maturity over one year - as long term.<sup>19</sup> Classification of financial assets by maturity is not fundamental from the monetary statistics point of view, but is strongly encouraged for analytical purposes. Statistical classification of financial instruments is provided in detail in Section 3 of this Manual.

The statistically classified summary balance sheet of commercial banks is organized as follows:<sup>20</sup>

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<sup>19</sup> Normally, in financial operations medium term instruments are also distinguished that have maturity of one to five years depending on the situation of country's financial market. In the context of the monetary statistics, distinction of medium term instruments from those of long term is not of material importance.

<sup>20</sup> The statistically classified detailed balance sheet of commercial banks (by chart of accounts) is provided in Appendices 3.2 and 3.3.

ASSETS	LIABILITIES AND CAPITAL
Reserve assets	Demand deposits in Dram <sup>21</sup>
Armenian dram in vault	Enterprises
Reserves in Central Bank, including	Households
Required and excess reserves	Non-profit institutions
Other reserves	Other financial institutions
Foreign assets	Time deposits in Dram
Foreign assets in convertible currency	Enterprises
Foreign assets in non-convertible currency	Households
Foreign assets in dram	Non-profit institutions
Claims on Government	Other financial institutions
Claims on economy	Foreign currency deposits
Claims on enterprises	Enterprises
In dram	Households
In foreign currency	Non-profit institutions
Claims on households	Other financial institutions
In dram	Foreign liabilities
In foreign currency	In convertible currency
Claims on non-profit institutions	In non-convertible currency
In dram	In dram
In foreign currency	Liabilities to Government
Claims on other financial institutions	Liabilities to Central Bank
In dram	Inter-bank liabilities
In foreign currency	Money market instruments
Claims on other residents	Other liabilities
In dram	Capital accounts
In foreign currency	Current and undistributed profit
Investment in equity	Statutory fund
Inter-bank claims	General reserves
Frozen accounts	Asset and other loss reserves
Intra-bank net claims	Revaluation reserves
Other assets	
Other financial assets	
Accounts receivable	

<sup>21</sup> Including current accounts.

Accounting of commercial banks is based on an accrual basis, i.e. the transactions are recorded when they are actually carried out rather than upon payments.

In the balance sheet, interests accrued on all assets and liabilities are included in respective instruments. For example, interests accrued on credits shall be recorded in section "Credits", interests on deposits - in section "Deposits", etc. However, considering Armenia's specific features, and definitions of the credit program currently implemented with the IMF, the monetary statistics is being developed also on a cash basis. So, as is the case with the CBA indicators, one may say that the monetary statistics is developed and presented on both cash and accrual bases.

### 5.3.2. Commercial Banks Survey

In the context of monetary statistics, relations of commercial banks with certain sectors of economy are advisable to view on net basis, as was the case with the central bank. This is realized when bank claims and liabilities to that particular sector are netted against each other.

The central bank is a separate sub-sector for commercial banks. The relations with central bank are separately shown in the summary balance sheet. Considering the CBA's role as a monetary authority, commercial bank liabilities to the CBA should be netted against commercial bank claims on the Central Bank in the summary balance sheet.

For more explicative presentation of monetary indicators of commercial banks, a summary balance sheet (a commercial bank survey) is organized that looks as follows:

#### 1. Net foreign assets in convertible currency

Foreign assets in convertible currency (asset) less  
 Foreign liabilities in convertible currency (liability)  
 Foreign liabilities in dram (liability)

#### 2. Net domestic assets

##### 2.1 Net claims on Government

Claims on Government (asset) less  
 Liabilities to Government (liability)

##### 2.2 Net claims on the Central Bank

Reserve assets (asset) less  
 Liabilities to the Central Bank (liability)

##### 2.3 Claims on economy (asset)

##### 2.4 Other items net

Foreign assets in non-convertible currency (asset)  
 Foreign assets in dram (asset)  
 Investment in equities (asset)  
 Frozen accounts (asset)  
 Inter-bank claims (asset)  
 Intra-bank claims (asset)  
 Other assets (asset) less  
 Money market instruments (liability)  
 Inter-bank liabilities (liability)  
 Intra-bank liabilities (liability)  
 Foreign liabilities in non-convertible currency (liability)  
 Other liabilities (liability)  
 Capital accounts (capital)

#### Deposits:

1. Demand deposits in Dram

2. Time deposits in Dram
3. Foreign currency deposits

Though the above table shows the way a summary balance sheet is organized, it is expedient to refer in detail to those indicators.

NFA of commercial banks represent the difference between foreign assets in convertible currencies and foreign liabilities in convertible currencies and in dram. Foreign assets in non-convertible currencies and in dram are not included in foreign reserves, as these do not describe the country's international liquidity. Nor foreign liabilities in non-convertible currencies are included in NFA, for the same reason. Dram denominated foreign liabilities are included in NFA since Armenian dram is convertible domestically. Dram denominated liabilities to nonresidents can be converted into a foreign currency any time. On this point, these represent a potential claim on foreign assets, and are included in NFA.

Deposits of nonresidents are not included in monetary aggregates of Armenia, as these are not treated as domestic money of the economy irrespective of the currency and maturity. Nor their purpose is to finance transactions of the domestic economy. Further sectorization of nonresidents' assets and liabilities is not important. Whether or not a nonresident is a bank, an enterprise or an individual, its resources and claims on it are treated as relations with the rest of the world. Despite this, Armenian commercial banks' accounts related to nonresidents are, as a matter of fact, divided into appropriate sectors.

In view of a classification of the monetary statistics, classification of accounts by type of currency is important. All accounts are classified by currency, i.e. in dram, convertible and non-convertible currencies (Appendices 2.1, 3.1 and 5.1).

Claims on Government are netted against liabilities to Government for the same reason that was stated in the case of summary balance sheet of the CBA.

Claims on economy are presented as gross, while deposits attracted from economy are included in the monetary aggregates.

Presently, the chart of accounts of Armenian commercial banks does not allow the breakdown of extended credits by maturity, which is encouraged from the monetary statistics point of view. Maturity of banks' assets is derived from a special report but it does not enable to determine maturity of assets by the appropriate breakdown of sectors (enterprises: state and private, households, voluntary institutions).

Accounts that cannot be classified as claims on Government and the economy are included in other items net (OIN). Important items of OIN are banks' nonfinancial assets, capital accounts, NFA in non-convertible currencies, deviation in inter-bank claims and liabilities. The group of the latter accounts is appropriate to mention. Ideally, inter-bank claims of commercial banks should be equal to inter-bank liabilities as the same transaction carried on the inter-bank market is recorded as a claim for one bank, and as a liability for another. However, cases occur when the same transaction is recorded in parties' accounts in different periods, which generates a deviation. Such deviations always occur in practice, and the point is that they be as little as possible. In the past, the deviation of inter-bank claims and liabilities has been up to 30 %, it has currently declined to 1-5 %. The same is true about mutual claims and liabilities of the CBA and commercial banks, with the deviation, though, reaching at times up to 15 %.

Liabilities not netted against assets of commercial banks involve

deposits attracted from the economy (enterprises, households, voluntary institutions).

This kind of institution of the summary balance sheet facilitates the disclosure of changes in accounts of commercial banks. The accounts produced in such a manner may be added to the balance sheet of the CBA to produce the consolidated indicators of the banking system.

So, the sectoral balance sheet of the banking system is produced through consolidation of balance sheets of the CBA and commercial banks.

#### **5.4 Banking System Survey of Armenia**

The banking system of Armenia is the integrity of the Central Bank and commercial banks. The sectoral balance sheet for the system covers basic indicators of the monetary statistics. The surveyed balance sheet of the banking system looks as follows:<sup>22</sup>

##### **1. Net foreign assets, NFA**

Net foreign assets (Central Bank)

Net foreign assets (Commercial banks)

##### **2. Net domestic assets, NDA**

###### **2.1 Net claims on Government**

Net claims of Central Bank on Government

Net claims of commercial banks on Government

###### **2.2 Claims on economy**

Claims on enterprises

Claims on households

Claims on voluntary (nonprofit) institutions

Other claims on economy

###### **2.3 Other items net**

Central Bank other items net

Commercial bank other items net

Deviation of net claims between the Central Bank and commercial banks

##### **Broad money**

1. Currency in circulation

2. Demand deposits in Dram

3. Time deposits in Dram

4. Foreign currency deposits

Thus the way the sectoral balance sheet indicators for the banking system are produced is presented below:

$NFA = NFA \text{ (Central Bank)} + NFA \text{ (Commercial banks)}, \text{ where}$

$NFA \text{ (Central Bank)}$  - the Central Bank's net foreign assets

$NFA \text{ (Commercial banks)}$  - commercial banks' net foreign assets

$NDA = G + E + OIN, \text{ where}$

$G$  - net claims of the banking system on Government

$E$  - claims of the banking system on economy

$OIN$  - other items net of the banking system

$G = G \text{ (Central Bank)} + G \text{ (Commercial banks)}, \text{ where}$

$G \text{ (Central Bank)}$  - net claims of the Central Bank on the Government

$G \text{ (Commercial banks)}$  - net claims of commercial banks on the Government

<sup>22</sup> The surveyed balance sheet of the banking system (the monetary survey) is provided in detail in Appendix 4.1.

G - net claims of the banking system on the Government

$E = E (\text{Central Bank}) + E (\text{Commercial banks}), \text{ where}$

$E (\text{Central Bank})$  - claims of the Central Bank on the economy

$E (\text{Commercial banks})$  - claims of commercial banks on the economy.

Though claims of the Central Bank on economy are treated as "Other assets" in the summary balance sheet of the CBA, these are added to commercial bank claims on economy in the sectoral balance sheet for the entire banking system. The commercial bank claims on economy are classified: claims on enterprises, households, voluntary (nonprofit) institutions and other claims, that are not possible to sectorize. The latter include leasing and factoring operations and credits to bank related parties that can be both households and enterprises.

$OIN = OIN (\text{Central Bank}) + OIN (\text{Commercial banks}) + D, \text{ where}$

$OIN (\text{Central Bank})$  - Central Bank's other items net

$OIN (\text{Commercial banks})$  - commercial banks' other items net

D - deviation of net claims between the Central Bank and commercial banks, according to balance sheets of the Central Bank and commercial banks

Claims between sub-sectors of the banking system, i.e. between the Central Bank and commercial banks, are recorded in  $OIN^{23}$ . When organizing sectoral balance sheets for both the Central Bank and commercial banks these claims and liabilities cannot be netted as commercial banks make a separate sector to the Central Bank and vice versa. Therefore, neither the Central Bank survey nor the commercial bank survey include such claims and liabilities in other assets net. Contrary to this, as the banking system is treated as an integrity, mutual claims and liabilities of the Central Bank and commercial banks are included in other (residual) assets and liabilities. For the Central Bank, net claims on commercial banks are equal:

Claims on commercial banks, less

Liabilities to commercial banks

Net claims of commercial banks on the Central Bank include the same accounts of banks' balance sheets with opposite sign. As was noted above, such net claims should match in the balance sheets of the Central Bank and commercial banks. However cases occur when the Central Bank and commercial banks record the same transaction at different periods, and this brings in balance sheet deviations.

$CC = CCB - DV, \text{ where}$

CCB - Armenian currency outside the Central Bank

DV - Armenian currency at commercial bank vaults

CC - Currency in circulation

$DDD = DDD (\text{Central Bank}) + DDD (\text{Commercial banks}), \text{ where}$

$DDD (\text{Central Bank})$  - real sector demand deposits in dram with the Central Bank

$DDD (\text{Commercial banks})$  - real sector demand deposits in dram with commercial banks

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<sup>23</sup> More detailed description is provided in section 8 of this Manual.

DTD = DTD (Central Bank) + DTD (Commercial banks), where

DTD (Central Bank) - real sector time deposits in dram with the Central Bank

DTD (Commercial banks) - real sector time deposits in dram with commercial banks

FCD = FCD (Central Bank) + FCD (Commercial banks), where

FCD (Central Bank) - real sector foreign currency deposits with the Central Bank

FCD (Commercial banks) - real sector foreign currency deposits with commercial banks

The banking system survey (the Monetary Survey)<sup>24</sup> is the main table for monetary statistics. It covers relationship of the banking system with other sectors of the economy and the rest of the world. All units operating in Armenia that are treated as "bank", i.e. have a banking license, are included in the Monetary Survey. Accounts of banks that are under receivership or administration are also included in the Monetary Survey unless license of such banks is revoked or unless they discontinue carrying banking operations.

Once filled in by balance sheet indicators of other financial corporations, the Monetary Survey will produce the survey for the country's entire financial system. As nonbank financial institutions become active in Armenia, with a growing role, the financial survey will become increasingly important.

### **5.5. Statistical Classification of Armenian Credit Institutions' Balance Sheet**<sup>25</sup>

#### **5.5.1. Statistical Classification of Armenian Credit Institutions' Balance Sheet Items**

Presently, credit institutions are relatively active among the nonfinancial depository institutions in Armenia. Overall, the statistical classification of credit institutions' balance sheet items is almost the same as of commercial banks. Nevertheless, there are some peculiarities for statistical classification of credit institutions' balance sheet items:

- as credit institutions do not carry out operations with the CBA, their reserve assets include only Armenian dram in vault,
- in commercial banks' balance sheet, the item "Other financial institutions" includes also credit institutions, though in credit institutions' balance sheet, credit institutions are presented in a separate item and are not included in "Other financial institutions",
- in the liabilities side of credit institutions' balance sheet, grants make rather a big share and thus, in view of monetary statistics, it is advisable to present them separately,
- credit institutions attract funds not in form of deposits but

<sup>24</sup> See Appendix 4.1.

<sup>25</sup> Chart of accounts, and notes to these accounts, for accounting of credit institutions operating in Armenia, see the CBA Board Resolution 42, January 27 2003.

borrowings, according to Armenian Law on "Credit Institutions".

The Armenian credit institutions survey, grouped according to monetary statistics, is as follows:<sup>26</sup>

ASSETS	LIABILITIES AND CAPITAL
Reserve assets	Demand borrowings in dram
Armenian dram in vault	Enterprises
Claims on banks in Armenia	Households
Foreign assets	Non-profit institutions
Foreign assets in convertible currency	Other financial institutions
Foreign assets in non-convertible currency	Time borrowings in dram
Foreign assets in dram	Enterprises
Claims on Government	Households
Claims on economy	Non-profit institutions
Claims on enterprises	Other financial institutions
in dram	Foreign currency borrowings
in foreign currency	Enterprises
Claims on households	Households
in dram	Non-profit institutions
in foreign currency	Other financial institutions
Claims on nonprofit institutions	Foreign liabilities
in dram	In convertible currency
in foreign currency	In non-convertible currency
Claims on other financial institutions	In dram
in dram	Liabilities to Government
in foreign currency	Liabilities to banks in Armenia
Claims on other residents	Liabilities to credit institutions
in dram	Money market instruments
in foreign currency	Grants
Investments in equity	Other liabilities
Claims on credit institutions	Capital accounts
Frozen accounts	Current and undistributed profit
Net claims between credit institutions and their branches	Statutory fund
Other assets	General reserves
Other financial assets	Asset and other loss reserves
Accounts receivable	Revaluation reserves
Nonfinancial assets	

<sup>26</sup> The statistically classified detailed balance sheet of credit institutions (by chart of accounts) is provided in Appendices 5.2 and 5.3.

### 5.5.2. Credit Institutions' Survey

As for commercial banks, in view of monetary statistics, for credit institutions it is also advisable to observe the positions with some sectors of economy on a net basis, netting claims and liabilities to the given sector. Almost the same principles are used here as for commercial banks, though for Armenian commercial banks net claims are included in net domestic assets separately, whereas the mutual claims and liabilities of credit institutions are included in other assets net to the extent deviated.

To present the indicators of credit institutions more precise the Credit Institutions' survey is compiled as follows:

#### **1. Net foreign assets in convertible currency**

Foreign assets in convertible currency (asset) less  
Foreign liabilities in convertible currency (liability)  
Foreign liabilities in dram (liability)

#### **2. Net domestic assets**

##### 2.1 Net claims on Government

Claims on Government (asset) less  
Liabilities to Government (liability)

##### 2.2 Claims on banks in Armenia

Claims banks in Armenia (asset) less  
Liabilities to banks in Armenia (liability)

##### 2.3 Claims on economy (asset)

##### 2.4 Other assets net

Foreign assets in non-convertible currency (asset)  
Foreign assets in dram (asset)  
Investments in equity (assets)  
Frozen accounts (asset)  
Claims on credit institutions (asset)  
Claims on the branches of credit institutions (asset)  
Other assets (asset) less  
Money market instruments (liability)  
Liabilities to credit institutions (liability)  
Liabilities to the branches of credit institutions (liability)  
Foreign liabilities in non-convertible currency (liability)  
Other liabilities (liability)  
Grants (liability)  
Capital accounts (liability)

#### **Borrowings**

1. Demand borrowings in dram
2. Time borrowings in dram
3. Borrowings in foreign currency

### **5.6. Financial Survey of Armenia**

At present, considering the emergence of credit institutions in the nondepository financial corporations sector and the tendency of their development, the compilation of financial survey for Armenia becomes vital. In the context of this chapter the financial system consists of the Central Bank, commercial banks and credit institutions.

In view of compilation of financial system indicators, interest arises with relation to the positions (claims and liabilities) with the rest of the world, claims on other sectors of economy: Government and the real sector, as well as the liquid liabilities of financial system. The mutual claims and liabilities (interbank deposits and loans) of the entities included in financial sector are netted against each other so that the survey could show the overall relations of the financial sector

with other sectors of economy.

Net foreign assets (NFA) of financial system comprise the sum of net foreign assets of the Central Bank, commercial banks and credit institutions. NDA are the sum of net claims on government, gross claims on real sector of economy and net other assets.

Net claims on Government comprise the sum of net claims of the Central Bank, commercial banks and credit institutions. Claims on real sector of economy are calculated as the sum of claims of the Central Bank, commercial banks and credit institutions on real sector of economy. This needs some adjustment. In particular, the item "Claims on other financial institutions" in claims of commercial banks on real sector of economy includes also claims on credit institutions, which contradicts the principles of consolidation according to which the mutual claims and liabilities between the entities of the given sector should be netted. But as it is impossible to separate the claims on credit institutions from the balance sheet of commercial banks, the item "Liabilities to Armenian banks" of the balance sheet of credit institutions is used. In fact, the item "Claims on other financial institutions" of commercial banks is decreased by the amount of item "Liabilities to Armenian banks" of the credit institutions' balance sheet.

Similarly, the funds attracted from financial institutions on the balance sheet of commercial banks include also funds attracted from credit institutions; consequently, it is necessary to decrease their amount by the sum of item "Claims on banks in Armenia" of credit institutions' balance sheet.

Net other assets are calculated as the sum of net other assets of banking system and credit institutions (for details see section 8.4).

Thus, the liabilities of financial system include the components of broad money (excluding funds attracted from credit institutions) and liquid liabilities of credit institutions.

Currency outside the financial system is the difference of currency outside the Central Bank and Armenian currency in the vaults of commercial banks and credit institutions.

The financial survey (including the CBA, commercial banks and credit institutions) looks as follows:<sup>27</sup>

**1. Net foreign assets**

- 1.1 Net foreign assets (CBA)
- 1.2 Net foreign assets (Com. banks)
- 1.3 Net foreign assets (CI)

**2. Net domestic assets**

- 2.1. Net claims on Government
  - CBA net claims on Government
  - Commercial banks' net claims on Government
  - Credit institutions' net claims on Government
- 2.2 Claim on economy
  - Claims on economy (CBA)
  - Claims on economy (Com. banks)<sup>28</sup>
  - Claims on economy (CI)
- 2.3. Other assets (net)

**Liquid liabilities of financial system**

- 1. Currency outside financial system
- 2. Demand deposits in Dram<sup>29</sup>

<sup>27</sup> The financial survey is provided in detail in Appendix 6.1.

<sup>28</sup> This item is decreased to the extent of the sum of item "Liabilities to banks in Armenia" of credit institutions' balance sheet.

<sup>29</sup> This item is decreased to the extent of the sum of accounts and deposits of credit

3. Time deposits in Dram<sup>29</sup>
4. Foreign currency deposits<sup>29</sup>
5. Credit institutions' borrowings

## References

1. Monetary and Financial Statistics Manual, IMF, Washington D. C., 2000.
2. Balance of Payments Manual, fifth edition, IMF, Washington D. C., 1993.
3. System of National Accounts, Eurostat, IMF, OECD, UN, WB, Washington D. C., 1993.
4. Macroeconomic Accounting and Analysis in Transition Economies, Abdessatar Ouanes and Subhash Thakur, IMF, Washington D. C., 1997.

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*institutions with commercial banks, the amount of which is taken from respective accounts of credit institutions' balance sheet.*