Colombia's Balance of Payments

Methodology and data sources

Methodological update of Colombia's Balance of Payments according to the International Monetary Fund's Balance of Payments and International Investment Position Manual, Sixth Edition.

Written by:
Banco de la República
Economic Studies Division
Technical and Economic Information Department
External Sector Section

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I. Introduction

The conceptual and methodological criteria under which Colombia's balance of payments statistics compilation is done are aligned with the International Monetary Fund's Balance of Payments and International Investment Position Manual, IMF, sixth edition (BPM6).

The compilation of the balance of payments (BOP) in Colombia is under the responsibility of the Central Bank of Colombia (Banco de la República) and it is based on a wide range of data sources. Those data sources are accessed by regulations directly issued by the Bank or by the establishment of inter-institutional agreements, on cases where its legal authority do not allow a direct access. Data sources are composed by: i) Administrative records, ii) Reports obtained from the International Transactions Reporting System (ITRS), which in the case of Colombia, does not only include the transactions carried out through the domestic financial system but also the ones taking place through deposit accounts in foreign banks that are registered and reported to the Banco de la República, iii) Accounting statements and balance sheets of the financial and non-financial sector companies, iv) International specialized databases and, v) in cases where no direct information is available, estimates are used. These estimations are built according to the methodological criteria defined by the BPM6. Compilation process of the Balance of Payments statistics considers its consistency with other macroeconomic indicators such as the Rest of the World Account from the National Accounts System, foreign trade on goods statistics, and monetary and financial statistics.

The following section describes the main conceptual and Balance of Payments' statistical measurement aspects in Colombia.

I. International Investment Position and Balance of Payments: conceptual and methodological framework[1]

The measurement of the transactions carried out by an economy with the rest of the world and the impact of these flows on the external assets and liabilities are done through the compilation of two statistics: the international investment position (positions) and the balance of payments (transactions).

The international investment position (IIP) *shows the value, at a point in time, of the financial assets hold by residents of an economy that are acquire claims over nonresidents´ assets and gold bullion held as reserve assets. It shows also financial liabilities hold by residents of an economy to nonresidents*. For its part, the **balance of payments (BOP)** *corresponds to the economic transactions taking place between residents and nonresidents of an economy within an accounting period.*

BOP flows or transactions, are one of the accounts included in the IIP, and help to explain stocks' variations on financial assets and liabilities; other variations different from transactions are due to prices and exchange rates changes in which assets and liabilities are denominated. Therefore, the IIP is considered as an integrated statement, in which the opening values and closing values of the external financial assets and liabilities are explained by transactions registered on the financial account of the BOP and other variations of the diverse IIP components (valuations and other volume variations). The difference between financial assets and liabilities reflects a net creditor or debtor position of an economy with the rest of the world.

[1] BPM6, 2.2.

II. Balance of Payments

The balance of payments records transactions between residents and nonresidents within an accounting period. Next, its components, methodology of compilation and data sources used for its calculation are described.

1. Current account

The current account registers all the transactions with real resources between an economy and the rest of the world. It covers goods and services flows, the primary income account and the secondary income account.

The balance of the current account, whether it is in deficit or surplus, is the result of the net balance of the accounts that comprise it; a surplus (or deficit) occurs when the sum of goods and services exports produced locally, plus the net income received from the rest of the world (primary income and secondary income) exceeds (or is less than) the value of imports and expenses paid in the same concepts. A current account surplus means the capacity of an economy of lending resources (savings) to the rest of the world, while a deficit is considered as the need of an economy for external financing.

1.1 Goods and Services Account

a. Methodological concepts:

Goods and services are the result of a production process. Goods are physical and produced items on which property rights can be established and whose economic ownership can be transferred from one institutional unit to another[2]. Meanwhile, services are the result of a productive activity that modifies the state of the units

[2] BPM6, 10.7

consumed, or facilitates the exchange of products or financial assets[3]. For its intangible nature, services are difficult to differentiate, and on which it is impossible to establish property rights and, in most cases, cannot be separated from production.

1.1.1 **Goods**

Trade in goods corresponds to the export or import of an asset and it occurs when the property transfer takes place between a resident and a nonresident. General merchandise concept excludes goods under merchanting and those purchased by international travelers, for construction, and government goods and services not included elsewhere (n.i.e.).

b. M**ethodology and data sources**:

i) General trade:

Foreign trade databases are provided to the Banco de la República by the National Department of Statistics (Departamento Administrativo Nacional de Estadísticas, DANE in Spanish) and the National Directorate of Taxes and Customs (Dirección de Impuestos y Aduanas Nacionales, DIAN in Spanish), in a monthly basis. These are the main data sources used in measuring the foreign trade of goods. The values of exports and imports of goods are recorded on a gross basis and in their F.O.B (Free On Board) value, excluding freight costs and insurances, which are part of the Balance of Payments' services account. The mentioned databases contain information related to the values in dollars from the United States (U.S.), the volume on foreign trade transactions in units of measurement, the reporting companies, the country of origin and the country of destination of the merchandise, and the cost of freight, insurances and other expenses, among other variables.

[3] BPM6, 10.8

In addition, the Banco de la República includes estimation on exports and imports taking place within Free Zones and other transactions not included in the trade on goods´ databases, such as: fuel under merchanting for aviation and marine transportation among nonresident (resident) airlines and shipping companies with domestic (nonresident) distribution companies. Also, is considered data about aviation and marine transportation supplies expenses, food, catering and flight attendance, obtained from Banco de la República's quarterly services survey.

Foreign trade on Free Zones captures exports and imports carried out by companies that operate under this special custom regime. Since 2002, information is directly provided by DANE and is incorporated in the overall trade calculation.

ii) Re-exports

According to the BPM6, this item is part of a supplementary account within the general trade. Its calculation includes re-exports of goods preceded by a long-term temporary import (generally corresponding to machinery and equipment temporarily imported). This item is estimated based on the customs information and external debt records reported to the Banco de la República.

iii) Non-monetary gold

Under the BPM6, this variable is part of a supplementary item within the general trade. It refers to the exports and imports on commodity gold, i.e., all the gold that is not held by the authorities as a reserve asset (monetary gold). They are divided into:

The Banco de la República's non-monetary gold transactions with foreign banks: It refers to the Central Bank's non-monetary gold exports. The purchases and sales of gold by Banco de la República to foreign commercial banks are captured through Banco de la República's financial reports.

Non-monetary gold transactions carried out by individuals: Correspond to the purchase or sale of nonmonetary gold between a resident and a nonresident other than the Central Bank. The information is obtained from the Departamento Administrativo Nacional de Estadísticas (DANE)´s databases on foreign trade statistics.

iv) Net exports of goods under merchanting

Net exports of goods under merchanting are defined as the purchase of a good by a resident (of the compiling economy) to a non-resident, and subsequent resale of the same good to another nonresident, without the goods being present in the compiling economy. According to BPM6, the difference between sales and purchases of goods under merchanting, is reflected under the account "net exports of goods under merchanting". This item includes commercialization margins, holding gains and losses, and variations in inventories of goods under merchanting. Net exports of goods under merchanting may be negative as a result of losses or an increase in stocks. Its source of information is the services foreign trade survey put in place by the Banco de la República[4].

1.1.2. Services

The measurement methodology update of the Balance of Payments and International Investment Position Manual (BPM6), presents a classification of twelve (12) activities on cross-border services. Below, is a summary on the basic concepts of services, the methodological aspects associated with its measurement, and the sources of information used for obtaining the country's exports and imports of services. It is noteworthy that the data collected under the methodology defined

[4] Due to shortcomings in information sources, these transactions are still compiled in the services account.

by the IMF's BPM6, is consistent with the Manual on Statistics of International Trade in Services (MSITS, 2010) issued by the United Nations.

a. **Concepts**

i) Manufacturing services on physical inputs owned by others. These services take place when the owner of the inputs of an economy pays for the transformation services provided by a resident company from another economy. The transformation includes processing, mounting, labeling, refining, assembly and packaging of physical assets owned by nonresidents. It includes the costs associated with the manufacturing services process (use of resident labor, lease expenses, payment of utilities, local transportation, etc). In this case, the ownership of the goods does not change; hence it is not recorded as a general merchandise transaction between the processor and the owner of the goods.

ii) Maintenance and repair not included elsewhere (n.i.e.). Corresponds to commissions fee earned by residents on repair and maintenance (other than routine) of machinery, equipment and aircraft, ships and other kind of transportation engines that are owned by nonresidents (and vice versa). Includes replacement parts or pieces used in the repair in order to expand goods life and increase its efficiency and capacity.

iii) Transport. Covers all manned transportation services (sea, air and others) provided by residents of one economy to another, ranging the services of: i) passengers services (buy and sell of tickets and commissions paid to travel agencies and other booking services providers); ii) freight services; iii) other transport services; and iv) postal and courier services, which comprise different services in any kind of immediate delivery, by installments or door to door.

iv) Travel. This service refers to the measurement of goods and services purchased by resident travelers during their short term visit (less than a year) to another economy. This criterion does not apply to students or people under medical treatment, who remain residents of their home economy even if they stay in another economy for a year or more. This service includes travels done by airports and by land and river border.

v) Construction. Refers to services related to the development of building projects for less than a year term, such as roads, bridges and dams, since their creation, management (installation, assembly, site preparation, demolition, plumbing and painting), until renovation, repair, maintenance and works improvement.

vi) Insurance and pension services. This item includes the provision of insurance to nonresidents engaged with resident insurance companies and vice versa, including direct insurance, insurance auxiliary services , reinsurance, pension services, and standardized guarantees. Direct insurance include life insurance, freight insurance services (for exported and imported goods) and non-life insurance.

vii) Financial services. They cover financial intermediation and auxiliary financial services between residents and nonresidents. It also includes broker's commissions on futures markets and asset management services and securities custody services. BPM6 adds Financial Intermediation Services Indirectly Measured (FISIM), which correspond to the indirect service charged by financial institutions to their customers for managing deposits and cross-border lending operations. For bank depositors, FISIM may include management of checking accounts, sending bank statements and transfers of funds between accounts. For borrowers, it includes following up of reimbursements, financial counseling and the recording of payments with accounting purposes.

viii) Charges for the use of intellectual property, not included elsewhere (n.i.e.), include 1) the services of royalties and charge for licenses and 2) the services of commercial franchises, use of registered trademarks and other similar rights.

ix) Telecommunications, computer, and information services. In the case of telecommunications, services include transactions between residents and nonresidents for the broadcast or transmission of sound, images or data provided to nonresidents by resident companies through means such as telephone, radio, television and satellite, among others. Mobile communication, primary networking sites and internet delivery services are also included. Computer services are related to computer equipment and software, as well as data processing services; information services include, among others, the ones provided by news agencies, design services, storage and dissemination of databases and the provision of information on the Internet.

x) Other business services. These services are broken down into three groups: 1) research and development services (R&D), 2) Professional and management consulting services, and 3) technical services, trade-related and other business ones.

The second group comprises legal, accounting, management consulting, managerial services and public relations, advertising and public opinion polling services, and services between related enterprises. As for the third, it is broken down in architectural, engineering, scientific and other technical ones, mining, agricultural and environmental, operating leasing, sale and trade-related and other business services.

xi) Personal, cultural and recreational services. These services include four groups: audiovisual and artistic, health, educational and cultural and recreational services.

xii) Government services. Cover official transactions (including international organizations) on goods and services not included in the above classifications.

b. Data sources

Estimation of services in the current account is done through a combination of data sources such as surveys, administrative records and accounting information provided by the companies to the supervisory bodies. The surveys include Banco de la República's Quarterly Survey on International Trade in Services (ETCES-BR), and the quarterly boarder traffic traveler's survey on Stay and Expenditure performed by Banco de la República (ETF-BR). Administrative sources include freight services figures and data on freight insurance obtained from the foreign trade in goods databases from the National Directorate of Taxes and Customs (Dirección de Impuestos y Aduanas Nacionales, DIAN in Spanish), ITRS reports processed by the Foreign Exchange Department (DCIN) at Banco de la República, the declaration of baggage, money in cash and securities representing money from DIAN's 530 format, the accounting information provided by insurance companies to the Financial Superintendency, and the statistics of entry and exit of international travelers by airport furnished by the Colombian Civil Aviation Authority (Aeronáutica Civil de Colombia, Aerocivil). Additionally, official agencies send reports of their cross-border transactions on a quarterly basis report.

Since 1994, Banco de la República implemented the measuring on foreign trade in services in Colombia along with the guidelines of V revision of the Balance of Payments Manual (BPM5), published by the International Monetary Fund (IMF)[5] through the Banco de la República's Quarterly Survey on International Trade in Services (ETCES-BR), which allowed to obtain statistics for the eleven (11) accounts of the extended balance of payments services manual classification (EBOPS). The ETCES-BR survey allows a direct measurement of the international transactions in services through the implementation of 23 different formats to a sample of 719 exporting companies and 1228 importing companies. Banco de la República makes a permanent and strict follow-up of the quality of the information

[5] Colombia has annual service statistics on travel, transport and insurance since 1947. From 1970 to 1996, annual data belong to 5 service and quarterly accounts for 11 services accounts from 1997 until today. For more information refer to "Main Economic Indicators 1923-1997", Banco de la República.

reported, but the unavailability of a directory prevents from the expansion of these results.

For the measure of exports and imports for travel, insurance, financial and FISIM, the Banco de la República employs an indirect estimation method which is described below.

- *Airport travel*: the estimation on revenues and expenditures of international travelers uses the declaration of luggage, cash and securities representing money from DIAN's 530 format, which records the residence status of the traveler, the number of days traveled and the additional expenditures (outside the package) in meals, tours, transportation (for local mobilization), shopping, among others. With this information, the daily average expenditure is calculated, and a population expansion is performed using the entry and exit statistics on international travelers by airports released by the AEROCIVIL.

- *Land and river border travel*: The calculation of income and expenses on travel carried out in border countries is based on the results obtained from the quarterly boarder traffic traveler's survey on Stay and Expenditure (ETF-BR) performed by the Banco de la República in 11 points from 6 border cities[6]. It investigates the expenses, days of stay, and the international travelers' country of residence, among other information. In addition, a tally of the number of people and vehicles passing through the area of border of influence is carried out, for building a sampling frame in order to expand the expenditure..

    - *The measuring of the export and import of insurance and reinsurance services* is calculated based on the financial statements of the resident insurance companies, as the difference between premiums receivable, including interest premiums from the investment return on assets, and expected claims, which vary according to the average loss ratio by types of

[6] Cúcuta, Maicao, Leticia, Arauca, Ipiales y Casuarito.

insurance covered. It should be noted so far, Colombia´s BOP mainly records external reinsurance transactions.

- *Government services*: Revenues correspond to information reported by international organizations and an estimate of the expenses incurred by foreign embassies established in Colombia. This estimation is based on data supplied by some foreign embassies and the Ministry of Foreign Affairs regarding the employed diplomatic staff and the number of embassies and diplomatic missions located in Colombia. Expenses are obtained from the information provided by the Revolving Fund of the Ministry of Foreign Affairs regarding the expenses of the Colombian diplomatic missions abroad.

- *Financial services, income and expenses,* correspond to fees paid by the public and private sectors to non-resident financial institutions related with the approval of external loans or the issue of foreign debt securities, banking services associated with foreign trade, and the companies' financial intermediation value. The statistics are provided by the Unified Statistical Debt System (SEUD in Spanish) of the Ministry of Finance, debt reports provided to the Banco de la República by multilateral agencies such as the World Bank and the Inter-American Development Bank, the financial statements of both private and public financial entities reporting to the Financial Superintendency of Colombia, the foreign exchange transactions reports sent to the Banco de la República through the International Transactions Notification System (ITRS), and the reports of the transactions taking place through checking accounts in foreign banks registered at the Banco de la República (CCO in Spanish).

Under BPM6, the Financial Intermediation Services Indirectly Measured (FISIM) is estimated as a component of the financial services. The FISIM constitute the indirect remuneration received by financial institutions in the deposits and lending operations performed with their nonresident clients.

According to the BPM6, effective interest may include both an income element and a service charge. Lenders and deposit takers operate by offering their depositors lower interest rates than the ones they charge to its borrowers. The interest rates margin is used by financial companies to cover its expenses and to create an operating surplus. The interest differential is an alternative to not charge customers an explicit fee on financial services[7]. Box 1 explains in detail the methodology employed by Banco de la República for estimating the FISIM.

Box 1

CROSS-BORDER FINANCIAL INTERMEDIATION SERVICES INDIRECTLY MEASURED (FISIM) CALCULATION METHODOLOGY

This box describes the methodology built by the Banco de la República to estimate the cross-border financial intermediation services indirectly measured (FISIM). Expressed in a general way, the FISIM constitute the indirect remuneration received by financial institutions in the deposits and lending operations performed with their nonresident clients[8].

According to the BPM6, effective interest may include both an income element and a service charge. Lenders and deposit takers operate by offering their depositors lower interest rates than the ones they charge to their borrowers. The interest rates margin is used by financial companies to cover its expenses and to create an operating surplus. The interest rate margin is an alternative to not charge customers an explicit fee on financial services.

According to paragraph 10.129 of BPM6, Financial Intermediation Services Indirectly Measured payable by depositors and borrowers, are calculated using the “reference” interest rate concept. The reference rate should not contain any service element, and should only reflect the risk and maturity structure for deposits and loans (pure capital cost). Since most of the debt transactions in the Colombian economy with the rest of the world are agreed at a Libor rate, it is used as the reference rate. Given that in the spread (additional interest rate added to the LIBOR rate) underlies a risk component, we propose to subtract that risk[9]. As a proxy of the risk, we use the Colombia’s Emerging Markets Bond Index (EMBI[10]) and the rates differential between sovereign Colombian bonds and bonds issued by private Colombian enterprises.

By convention, these indirect financial services are only applied to loans and deposits when these operations are carried out through financial intermediaries (BPM6 paragraph 4.63). Due to the fact that the Colombian financial sector hires debt with its counterparts abroad at market conditions, we also estimate the FISIM for this sector. Trade credit and bond issues are excluded from the FISIM’s calculation.

[7] For a further methodological detail, see "Methodology for the calculation of the Cross-Border Financial Intermediation Services Indirectly Measured - FISIM".
[8] Spain’s National Accounting, 2000 Base.
[9] In the case of private real sector.
[10] Corresponds to the interest rate differential between a Colombian bond and a US Treasury bond.

To estimate the private sector FISIM, three reference interest rates are used depending on the sector (financial or non-financial sector) and on the term (short term or large term).

- 6 months Libor rate for short-term: non-financial sector.
- 1 year Libor rate for long-term: non-financial sector.
- 3 months Libor rate for the financial sector for both, long and short-term.

In the public sector, the FISIM is calculated loan by loan; hence the Libor rate at which each operation was agreed is used as the reference rate. When the loan is defined under a fixed rate, the 3 month Libor rate is used as the reference rate[11].

The FISIM paid by the private sector is calculated as:

$$FISIM_t^{pr} = FISIM_t^r + FISIM_t^f$$

Where $FISIM_t^r$ refers to the FISIM paid by non-financial private companies (real sector), and $FISIM_t^f$ to the one paid by the financial private sector.

1. Estimated FISIM on the Colombian economy's external liabilities

$$FISIM_t^r = (Spread_t - Risk_t)(S_t + S_{t-1})/2$$

$Spread_t$ is the difference between the total interest rate and the reference rate. The spread is calculated from the external debt loans registered with the Banco de la República. Since the spread includes the risk premium, it is necessary to deduce it from the FISIM's calculation using the aforementioned proxies.

St corresponds to the estimated outstanding private external debt with foreign financial institutions at the end of the quarter to be measured, and S_{t-1} is the outstanding debt at the end of the previous quarter.

1.1. Private financial sector's FISIM:

The estimation of the FISIM charged to the financial sector is calculated by subtracting from the average weighted interest rate [12](i_{ft}), the 3-month LIBOR rate and the risk factor. This result is applied to the average stock of the financial sector's debt of the current and past quarter$(F_t + F_{t-1})/2$.

$$FISIM_t^f = (i_{ft} - Libor3m_t - Risk_t)_t(F_t + F_{t-1})/2$$

1.2 Public sector's FISIM:

The FISIM's calculation for the financial and non-financial public sector is made by excluding trade credit and long-term debt securities (bonds). The methodology used is the following:

[11] As it is the most frequent rate used in loan contracts (mode).
[12] Estimates based on the external debt reports done to Banco de la República (i_{ft})

a) Each loan is classified according to its interest rate (1 month Libor, 2 months Libor, 3 months Libor, 6 months Libor, 1 year Libor and fixed rate).

b) If Libor rate, the FISIM is estimated as the product between the spread and the outstanding external public sector debt.

$$FISIM_{it} = spread_{it} \cdot outstanding_{it}$$

c) If it is a fixed rate, we subtract the three month Libor[13] rate at the agreed rate, and the result of this differential is multiplied by the external outstanding debt.

$$FISIM_{it} = (fixedrate_{it} - libor3_t) \cdot outstanding_{it}$$

d) Finally, we add up the FISIMs from numerals (b) and (c).

It is worth noting that public sector FISIM's methodology differs from the one corresponding to the private sector because of the risk premium that is not subtracted from the spread. This is due to the fact that over 90% of the Colombian public sector´s debt has been disbursed by multilateral institutions[14], hence the spread does not include any premium risk that requires to be excluded.

2. Estimated FISIM on Colombia's external assets.

a. In accordance with paragraphs 10.127 and 10.129 in the BPM6, the FISIM's lending calculation applies only to loans granted by the financial sector to non-residents, as well as to savings and checking accounts of residents abroad. Thus, loans that are not intermediated by financial institutions, and investments in bonds, are excluded from the calculation of these intermediation services.

b. Since deposits are mostly related to checking accounts with no interest rate income, then they are also excluded from the FISIM's calculation.

c. In the case of loans, FISIM corresponds to the financial services charged by the resident financial system to its non-resident debtors, whether from the real or financial sectors. Therefore the calculation of the FISIM, as well as for the liabilities side, takes into account a spread estimated as the average sovereign risk premium of the main recipient countries of the loans granted by Colombian banks. The reference interest rate is assumed to be the 6-month Libor, given the term at which these loans are normally contracted. Given these assumptions, the asset FISIM is calculated as:

$$FISIM = (\pi_f - \beta_f)$$

where

$$\pi_f = i_t \cdot \frac{(S_t + S_{t-1})}{2} \text{ and } \beta_f = libor6m \cdot \frac{(S_t + S_{t-1})}{2}$$

[13] The 3 month Libor rate is subtracted since it is the mode rate in the public sector's debt.
[14] Inter-American Development Bank, World Bank, International Monetary Fund and the Andean Development Corporation

i_t corresponds to the total interest rate, which includes the estimated spread, and S_t is the loans outstanding debt in a given period.

1.2 Primary income

Primary income flows between resident and non-resident institutional units are registered in this account[15]. As in the National Accounts System, this account captures the income received by institutional units for the provision of financial assets to non-residents (or received from non-residents), labor and natural resources in the form of profit (primary income allocation). In the net, the primary income account shows the net income receivable (payable) to non-residents for the provision (use) of production factors.

Description of the concepts and methodology employed for the estimation on primary income components is done in the following section.

i) Compensation of employees

a. Conceptual framework

Compensation of employees represents the remuneration in exchange for labor incorporated into the production process as an input. Cross-border employees' compensation occurs only when a resident worker is hired by a non-resident or when a resident institutional unit hires a non-resident worker.

b. Estimation sources and methodology

The estimation of income and expenses for employee's compensation is based on the results of the Stay and Expenditure of land and river border travelers (ETF-BR)

[15] BPM6, 11.1.

survey[16]. The number of workers is identified based on the purpose of travel question, which in turn is contrasted with the country of residence variable in order to identify the resident and non-resident workers in the Colombian economy. According to the country where they perform their work, income is estimated based on the current legal minimum wage stated by each country.

ii) Direct investment income (DI)

a. Conceptual framework

a.1 Dividends:

Direct Investment income or revenue arises in return for provisioning financial assets in the form of equity participation and debt instruments; it includes distributed earnings and reinvested earnings and interest yielded over loans between fellow enterprises. Therefore, the related yield is recorded for each direct investment component. A credit in this account corresponds to the income obtained by the Colombian capital invested in non-resident companies, and a debit is originated in the income earned by non-resident investors in Colombian capital companies.

Distributed earnings, also named dividends, are the distributed earnings allocated to equity owners for placing their funds at the disposal of corporations[17], i.e., earnings generated by a firm with Direct Investment in a current period, that shareholders decide to receive as compensation for the investment carried out.

Meanwhile, reinvested earnings represent the direct investor's income proportion, which foreign subsidiaries and fellow enterprises do not distribute as dividends, i.e., earnings generated by a firm with direct investment in the current period, which shareholders decide to use as working capital.

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[16] Applied at the border posts of Cúcuta, Maicao, Leticia, Arauca, Ipiales and Casuarito.
[17] BPM6, 11.24.

a.2 Interests on loans between direct investment companies[18]:

Interests are, according to the BPM6[19], a form of investment income that is received by the owners of financial assets, namely deposits, debt securities, loans and other accounts receivable, for placing their financial assets at the disposal of another institutional unit".

b. Data sources and estimation methodology.

Data sources used in estimating the profits earned by direct investment companies are:

- Customs declarations include information about quantities and monthly values exported by companies in the oil and mining sector.

- Financial statements reported on a quarterly and yearly basis are the data source employed to infer the structure and value of costs of the economic activity and to know dividends and reinvested earnings. In the case of direct investment income of the Colombian assets abroad, corporate headquarters publish on a regular basis subsidiaries´ financial statements.

- Specialized sectorial indicators: economic performance indicators published either by specialized agencies or by companies, for the Colombian economy and for the main countries of destination of the Colombian direct investment abroad (IDCE in Spanish), are used for the calculation.

- ITRS reports: transactions of dividends and interests paid and received are reported to the Banco de la República.

[18] These interests show up when loans are granted and accounts receivable / payable are established between direct investors and their direct investment companies.

[19] IMF, BPM6, 11.48.

Financial statements and corporate balance sheets of companies with direct investment[20] are the primary source of information for the calculation of foreign direct investment income. However, data sources are not available on a quarterly basis, except for the financial sector entities case. By consequence, it is necessary to estimate total earnings and reinvested earnings, meanwhile distributed earnings are observable through the ITRS.

Given the business differences that characterize each economic activity, total earnings estimates are based on a simulated profit and loss financial statement suitable for each sector, which incorporates specific indicators (Annex 1). Estimation of total income (TI) and total costs (TC), minus taxes (t), allows calculating total earnings (TE), understood as the sum of distributed earnings (DE) plus reinvested earnings (RE),

$$TE = TI - TC - t \quad ; \quad \text{where } TE = DE + RE \quad (1)$$

Quarterly TE are assumed to be reinvested based on the decision on reinvestment profits taken on an annual basis in the shareholders general assembly. Given the annual financial statements and balance sheets, previous quarterly estimates of reinvested and distributed earnings are reviewed. They are assumed to be the results of changes in equity reserves (ΔRES) and changes in the accumulated earnings (ΔAE).

$$DE = TE_{t-1} - (\Delta RES) - (\Delta AE), \quad (2)$$

$$RE = TE_t - DE \quad (3)$$

[20] Foreign direct investment companies are those with non-resident shareholding above 10%. A more precise definition and other particular cases are found at: IMF (2009) "Balance of Payments and International Position Manual" BPM6 Sixth Edition, pp. 144-146.

Once the total earnings and distributed earnings are deduced, from the difference between the total and distributed earnings, it is possible to estimate the reinvested earnings (see Equation 3).

An example of the earnings sectorial estimation is the one carried out for foreign direct investment companies belonging to oil and mining sector, most of them subsidiaries. Total earnings are estimated by multiplying the quantities produced with the commodity´s international prices. The value obtained must be equal to the sum of sales to residents (local sales) and non -residents (exports). On the other hand, total costs reported on an annual basis by the mining and oil industry to the Banco de la República, are estimated each quarter taking into account the behavior of quantities produced and the international prices of the products. Therefore, total earnings correspond to the difference between total income and total costs, after taxes to be paid. Reinvested earnings flows are estimated from local sales of the product, which capital that is not transferred to the headquarters and remains as working capital. The difference between total earnings and reinvested ones are compiled as distributed earnings.

Because financial statements are expressed in current Colombian pesos, for monetary conversion to a standard unit of account (the United States dollar), it is used the quarterly or annual average of the market exchange rate, depending on the frequency of publication of the financial statements.

Accrued interests (income and expenditures) over external loans granted or received by direct investment companies, are calculated based on the average outstanding loans reported to the Banco de la República, and on the estimation of a market interest rate.

iii) **Portfolio investment income**.

Portfolio investment income is the capital return received from non-residents (paid to residents) for holding stocks, bonds, notes and financial market instruments. Portfolio investment credits refer to returns from financial assets issued by non-residents which are held by Colombians. Moreover, debits from portfolio investment income correspond to interest payments and dividends received by non-residents in return for their external financing granted by buying Colombian debt securities and equities shares.

b. Data sources and estimation methodology

Different data sources are used to estimate the income from portfolio investment on external assets, such as: direct reports from the General Government to the Banco de la República, financial reports from trustee institutions and pension and severance funds registered at the Superintendencia Financiera (in Spanish) and international transactions reported through ITRS and reports of checking and savings accounts in foreign banks. As a source of contrast, the Coordinated Portfolio Investment Survey (CPIS) is also used. The CPIS covers the portfolio investment done by the resident financial sector companies, and the non-financial public ones.

It should be noted that in Colombia, local bonds and equities issuance by non-residents companies are allowed, whose acquisition must be distinguished and classified as a Colombian portfolio investment asset. Its identification is done through surveys applied to specialized investment funds, such as trust companies and stock brokers. Using the above described data sources; income (credits side) is estimated as the multiplication between the average of the deposits interest rate, and the estimated average stock of portfolio investment.

Data sources to estimate debits are: the database of the external public debt (bonds) provided by the Ministry of Finance to Banco de la República containing the interest paid on the bonds issued in international markets bought by non-residents[21],[22] the private debt database from the BR that includes private sector´s bonds and equities liabilities and its financial terms, and the survey applied to specialized investment funds such as fiduciary agents and brokers.

As in the case of credits, the income of foreign portfolio investment (debit side) is estimated as the multiplication of an average deposits interest rate and an estimated average stock.

iv) **Other investments**.

Other investments includes all other interests earned (accrued) on external assets (liabilities), including loans, deposits in foreign banks, trade credits, other assets or liabilities and special drawing rights allocations by the International Monetary Fund.

Credits: Income on deposits and loans, including commercial loans, granted to non-residents, is calculated from an estimated average stock and an average interest rate in the international markets, which varies according to its term. For this purpose, Banco de la República's external private debt database and the ITRS reports are used[23].

Debits: Interest accrued on loans, commercial lending, financial leasing, and other liabilities, particularly accounts payable and receivable between insurance and reinsurance companies, are calculated using a variety of data sources; the measurement of public sector expenditures is derived from information of the public

[21] It should be noted that exercises comparing the estimation of interest under the accrual and cash criteria, annually do not provide major differences, since most of the bonds comprise the semi-annual payment of coupons and not a single coupon.

[22] Up to this date, it is not possible to estimate what portion of these bonds has been acquired by residents in subsequent negotiations, hence no longer constitute an external liability.

[23] A more detailed description of the data sources used in the estimation of Other Investments is made in the financial account.

external debt database (loans) reported to the BR by the Ministry of Finance and, in the case of the private sector, interests are calculated based on its earned value, starting from the average outstanding debt obligations and the weighted average cost of foreign borrowing, which is derived from the interest rates reported in the debt records to the Banco de la República. As for the special drawings rights liabilities, accrued interests are obtained from Banco de la República's accounting information.

iv) Investment portfolio income from reserve assets

Reserves assets income obtained from the investment in bonds and other financial assets issued by non-resident financial institutions and central banks of high credit rating and low risk, is obtained from Banco de la República's accounting information system, excluding valuation effects due to changes in the interest rates and exchange rates.

1.3 Secondary income account

a. Conceptual framework

The secondary income account shows current transfers between residents and non-residents by which income distribution is carried out among economies. According to BPM6, a transfer corresponds to the provision of a good, service, financial asset or other asset not produced by an institutional unit to another institutional unit without obtaining in exchange other item of economic value[24]. It could take place under the form of a cash transfer (payment of currency or transferable deposit by one institutional unit to another) or in kind transfer (transfer of ownership of a good or asset, other than cash, or the provision of a service).

The secondary income account is broken down according to institutional sector receiving or providing transfers. Agents fall into two institutional sectors: i) General

[24] BPM6, 12.7.

government, and ii) financial and non-financial institutions, households and non-profit institutions.

In the first case, transfers are classified according to the agent. Government may be a recipient of taxes levied on income earned by non-residents from the provision of their labor or financial assets; taxes on capital gains arising from assets of nonresidents are also included, i.e taxes on interest and dividends. The government could receive payments on contributions and social benefits carried out by non-resident workers (or their employers) working temporarily in the local economy; it could be beneficiary of contributions from international cooperation; and it could be involved in other current transfers sent by government agencies or nonprofit institutions of a public nature. These operations are related basically to cash donations between governments to finance current expenditures, in kind donations for the relief of disaster victims, weapons and military equipment donations, contributions to non-monetary international organizations, technical assistance and tax payments and other contributions[25].

Meanwhile, transfers that are received (sent) by agents other than the Government comprise two major accounts which are: i) personal transfers, whose largest category is workers remittances, and ii) Other Current Transfers, within which are recorded, besides payment or receipt of taxes, contributions and social benefits and international cooperation, net premiums on nonlife insurance and reinsurance and compensations received or paid for economic losses. In Colombia, insurance net premiums are primarily related to reinsurance. Current transfers received/sent by non-profit institutions, correspond to membership fees, subscriptions, donations, among others, carried out on a regular or casual basis. It also includes the payment of fines or sanctions imposed as compensation for damage to persons or property or for breach of contract, other than the compensation covered by insurance policies.

[25] BPM6, 12.28.

After identifying the institutional sector, current transfers are classified into two groups: personal transfers and other current transfers.

i. Personal transfers

Personal transfers (personal remittances) include all current transfers between resident and non-resident households, independently of the income's origin. Under BPM6, remittances in its broadest definition are "household income received from foreign economies, primarily generated from temporary or permanent migration of people to these economies". Remittances could take place in kind or in cash, could be transacted trough formal or informal channels[26] and, under the new manual, are classified as a supplementary item of the personal transfers.

ii. Other current transfers

Other Current Transfers cover taxes levied on the current income paid by non-resident workers to the government of the economy where they work, or on the earnings or dividends obtained from the non-resident financial assets. It also includes contributions and social services provided by workers, net premiums on non-life insurance, and claims for compensations on disasters, current international cooperation flows and other miscellaneous current transfers, such as those that take place between households (remittances) and non-governmental organizations.

b. **Methodology and estimation sources**:

b.1 Remittances:

[26] Formal channels are those involving entities or regulated and registered agents with a competent supervision, which in Colombia are called foreign exchange market intermediaries; informal channels are constituted by non-regulated agents, and are mainly composed of pocket remittances directly brought by resident migrants living abroad to their families in Colombia.

Depending on the channel through which inflows and outflows remittances take place, different data sources and estimation methodology are used.

Remittances sent/received through formal channels: ITRS reports are used as a main data source. ITRS system classifies remittance transactions by codes, identification number and name of the receiver/sender, transferred amount, the currency of origin and the exchange rate used for the conversion into local currency[27]. Remittances received through the international postal network are also captured through monthly reports sent to Banco de la República by the institution authorized to transact international money orders in Colombia[28].

Remittances sent/received through informal channels: Based on surveys to remittance receivers nationwide, the participation of remittances received through informal channels was obtained in 2004. This coefficient has been evolved based on the border traffic surveys applied quarterly at the main immigration control points between Colombia and Venezuela, Ecuador, Peru and Brazil.

b.2 Current taxes and border workers contributions:

The source of information available to estimate the remuneration of border and temporary employees, currently does not allow identifying the credits or debits associated with the payment of taxes and contributions carried out by these workers, nor is an estimate related to its value. Therefore, Colombia's Balance of Payments estimates the gross value of the temporary employees' remuneration, which is recorded in the primary income account as compensation of employees.

[27] Exchange reports are supplemented by a quarterly survey on the exchange market intermediaries, through which the country of origin/sending of the remittance is known as well as its the payment department, the number of transactions (which allows tracking the remittance's average value), its payment rate of exchange, the transaction costs and means of payment (cash, account deposit, money orders, etc.), and the transfer agent (remittance service provider) through which the remittance is sent or channeled.

[28] The postal national institution is *4-72.*

b.3 Other current transfers

For estimating the Other Current Transfers, different sources of information are used, namely:

- Non-life Net insurance premiums: Mainly insurance assignments contracts take place between local insurance companies to non-resident reinsurance companies. Reinsurances are estimated based on the accounting reports provided by local insurance companies to the Superintendencia Financiera (in Spanish), which identify premiums assignments to non-resident reinsurance companies, and the compensations paid or about to be received/paid.

- The current transactions for international cooperation are compiled from two data sources: i) those taking place through the General Government are captured by a direct report carried out by the National Government from which are identified the sender and the receiver institutions and in the case of technical assistance, the project under which this consultancy is received or given and, ii) the transfers received or sent from institutions different from the government, are obtained through the ITRS.

- In the case of diverse current transactions and those realized between non-profit institutions and households, the main data source is the ITRS.

- Transfers that take place in the form of goods and services are captured by the foreign trade database and the Banco de la República's Quarterly Survey on International Trade in Services (ETCES-BR).

2. CAPITAL ACCOUNT

Capital transfers corresponds to donations or transfers of fixed or tangible assets which are used to produce goods and services and have not been produced (e.g.

land and subsoil resource rights, fishing rights and rights on the use of the air and electromagnetic space), and the related with intangible assets (patents, trademarks, copyrights, etc.). The sum of the current account balance and the capital account is called net lending or net borrowing, and should be equivalent to the result of the financial account. It should be noted that current available data sources do not allow identifying capital transfers in Colombia’s Balance of Payments.

1. **FINANCIAL ACCOUNT**

The financial account of the Balance of Payments records financial transactions of assets and liabilities carried out by the Colombian economy (residents) and the rest of the world (non-residents). Financial flows correspond to net acquisitions of financial assets and to net incurrence of liabilities of the Colombian economy vis a vis the non-residents. Assets represent financial rights against non-residents and from which future economic benefits may flow to the owner and liabilities for the financial commitments. Assets comprise monetary gold holdings, special drawings rights, foreign currency and other holdings against other economies. On the other hand, external liabilities of the Colombian economy are represented by financial commitments with the rest of the world.

The financial account comprises for each asset and liability transaction, its functional category (direct investment, portfolio investment, financial derivatives, other investment and reserve assets), the institutional unit that performs it (central bank, monetary authority, deposit-taking corporations, general government and other sectors), the financial instrument employed (equity participations and shares in investment funds, debt securities, credits and loans) and its maturity (short and long term). The overall balance of the financial account is named net lending or net borrowing, according to its result. In the case where the local economy is supplying more funds to the rest of the world that it is requiring from it, the difference is called *net lending*. On the opposite, when an economy is incurring in more liabilities (requiring more foreign funds) than it is providing, this economy is denominated a *net borrower* one.

By components, the key features, sources of information and the methodology of estimation for the financial account are described below.

3.1 **Direct investment (DI)**

a. Conceptual framework

Direct Investment is a category of cross-border investment carried out by a resident in one economy (the direct investor) with the aim of establishing a long term relationship in an enterprise which resides in another economy (Direct Investment enterprise). In order to generate a long-term relationship, the direct investor must establish a significant level of influence over the management of the Direct Investment enterprise. It is considered that the ownership of **at least 10%** of the shares already reflects such level of significant influence; hence a Direct Investment relationship is established. If the shareholding is less than 10%, it is classified as a portfolio investment.

Direct Investment flows include the acquisition or sells of equity shares in a company, the reinvestment of earnings and the debt instruments between Direct Investment companies. The net acquisition of financial assets is the rights that the country has on overseas investments done by Colombian companies. By contrast, the net acquisition of liabilities, are the obligations that the country assume because of the investments done by non-resident companies in Colombia (Foreign Direct Investment).

Direct Investment can be classified as:

Financial instrument:

a.) Equity participations: Correspond to purchases of shares between the direct investor and the direct Investment enterprise. This category also includes the reinvestment of earnings.

b.) Debt instruments: Include all debts between direct investors and their Direct Investment companies[29],[30]

b. Data sources and estimation methodology:

Foreign investment in Colombia is regulated by the Statute of International Investment [31] issued by the Ministry of Finance. This regulation establishes that all capital investments from Colombians abroad, and from foreign capital in Colombia, whether direct or portfolio must be registered at the Banco de la República.

Direct Investment flows are captured through various data sources:

i) Records executed at the Banco de la República by Direct Investment receiving companies and those who perform Direct Investment overseas, where all forms of investment (contributions in foreign currency, goods, services, technology, etc.) are disaggregated;

ii) Direct Investment transactions in foreign exchange captured in the International Transactions Notification System (ITRS) reports, and in the

[29] Direct investment excludes all debts among financial intermediaries, except insurance companies, pension funds and real sector auxiliaries, which must be recorded as portfolio investment or other investment.

[30] Direct investor in direct investment companies: Investments and loans that the direct investor makes on its direct investment company are classified in this category. Direct Investment companies in the direct investor: Purchases lower than10% of equity interest and loans that the Direct Investment company grants on its direct investor are recorded in this category. Between fellow companies (sisters): Two sister companies are those that have the same direct investor, but none of them has more than a 10% shareholding in the other. Investment between two sister companies is considered direct, and is recorded in this category. It should be noted that, in the Colombian case, the available data sources do not allow to fully identify transactions between related companies

[31] Decree 2080 of 2000.

current compensation accounts reports (CCO in Spanish), particularly investments and loans in foreign currency;

iii) Import Custom Declarations (Dirección de Impuestos y Aduanas Nacionales, DIAN -Departamento Administrativo Nacional de Estadística, DANE) that allow to identify capital contributions under the goods modality,

iv) Services' Quarterly Survey that allows to keep track on imports and exports on services from Direct Investment companies linked to the oil and mining activity;

v) Private external debt records executed at the Banco de la República, on which it is possible to identify the funding that the direct investor gives to the investment recipient company in the form of loans, denominated debt instruments and,

vi) Accounting and business information, including financial statements and reports prepared by the companies (management reports) sent to the control entities. Based on the Direct Investment records in the Banco de la República in addition to the business information, it is possible to verify the foreign investor's percentage participation in the capital and to capture the reinvested earnings.

Direct Investment income related to equity participation refers to the sum of contributions in foreign exchange, goods and services allocated for the purchase of shares and the reinvestment of earnings. Capital expenses are deducted when the foreign subsidiary returns part or the whole capital contributed and/or the direct investor sells his stock participation to a resident, data provided by direct reports at the Banco de la República and taken from the company's balance sheets. When the financing granted by the non-resident direct investor to the investment recipient company is given in the form of loans, its amount is calculated as the difference between disbursements and debt repayments. Therefore the estimation of Direct Investment flows considers both equity participations and debt instruments.

3.2 Portfolio investment

Portfolio investment includes cross-border transactions with debt securities or equity, different from those specified as Direct Investment or reserve assets. Investments in equity also incorporate buying and selling shares in investment funds[32]. Debt securities are defined as negotiable instruments used as a debt proof. In the case of Colombia refers mainly to bonds purchased (assets) or sold to non-residents (liabilities).

Portfolio investment- Assets:

In Colombia, portfolio investments abroad are mainly carried out by the general government and financial institutions belonging to other sectors, particularly pension funds. The compilation of portfolio investments abroad carried out by deposit-taking corporations is done based on the monthly balances provided to the Superintendencia Financiera (in Spanish) by such entities[33]. For the General Government, information is obtained from direct reports, and for the remaining sectors are used ITRS reports and CCO´s monthly transaction reports. It should be noted that in Colombia, the issuance and trading of shares and equity are allowed to non-residents companies in the local market, whose acquisition by residents become an asset portfolio investment. For statistical purposes its identification is done through surveys applied to specialized investment funds such as trusts and stock brokers.

Portfolio Investment- Liabilities: Portfolio investment in Colombia comprehends the issuance, purchase and redemption by non-residents of debt securities and equities shares issued in the international markets and, in the local market by the national government, resident deposit-taking corporations and non-financial private

[32] IMF, BPM6, paragraph 6.54
[33] Banco de la República has access to these balances through administrative agreements.

companies. Note that the subsequent negotiations of these securities between non-residents and residents are not captured in the Balance of Payments due to the difficulty on tracking these transactions.

Since portfolio investment is a mandatory transaction reported to the Banco de la República, such transactions have a good coverage through the ITRS system and the CCO reports that are indeed the main data sources employed for the estimation of this variable. In the case of the public sector, data is supplied to the Banco de la República by the Ministry of Finance and Public Credit. Surveys covering specific sector's entities are also put in place; and, in the case of the private sector, data is complemented with accounting reports published by the Superintendencia Financiera (in Spanish).

Given that data sources allow identifying portfolio investment according to the methodological criteria required by Banco de la República for the BOP compilation, flows are directly compiled as they are reported.

3.3 Financial derivatives

The financial account from the Balance of Payments incorporates as one of its components the transactions of financial derivatives subscribed with nonresidents.

A financial derivative contract is a financial instrument that is linked to another specific financial instrument, or indicator, or commodity (called underlying asset) which main feature is that its price depends on the underlying and its liquidation occurs in the future. Through such instruments, it is possible to trade in financial markets specific financial risks in their own (such as interest rate risk, foreign exchange risk, credit risks, and so on).

Data sources and estimation methodology:

a) Data sources:

Transactions of financial derivatives between residents and authorized nonresidents, or between Forex Market Intermediaries (IMC in Spanish) and authorized nonresidents, must be informed electronically to Banco de la República through the corresponding forms .

Although all types of derivatives are recorded, this manual only presents the estimation methodology for the most relevant contracts in the Colombian market. The forwards Colombian peso (COP) - United States Dollar (USD), the foreign exchange forwards and the COP-USD options, represents, both by the notional amounts negotiated and the number of contracts settled, from 98% to 100% of all financial derivatives contracts.

This report is the main data source for the recording of transactions and positions of financial derivatives traded with nonresidents. The historical information about the spot prices for the underlying asset are obtained from the daily report that the Financial Superintendence furnishes to the BR (for the exchange rate COP/USD) and from Bloomberg information system (for commodities and exchange rates different from COP/USD).

b) Estimation methodology:

Financial derivatives must be priced in United States dollars for their recording in the Balance of Payments and International Investment Position. Box 2 contains a detailed explanation about the estimation methodology for the transactions and positions in derivatives used by Banco de la República.

Box 2

ESTIMATION METHODOLOGY FOR TRANSACTIONS AND POSITIONS IN FINANCIAL DERIVATIVES

There are two broad types of financial derivatives that are of the interest for the BOP and IIP compilation in the Colombian market:

i) **Option: This instrument g**ive**s** the owner the right, but not the obligation, to buy (*call* option) or sell (*put* option) an underlying asset at a specified price (*strike* price) at the maturity **d**ate (*European* option) or at any time up to the maturity date (*American* option)**.**

ii) **Forward-type:** It is an unconditional contract by which two counterparties agree to exchange a specified quantity of an underlying item (real or financial) at an agreed-on contract price (the strike price) on a specified date. These are unconditional contracts because of the obligation to redeem them on the maturity date. In this group we can include the futures, forwards and swaps contracts.

The BPM6[34] specifies that transactions and positions in financial derivatives must be treated and recorded separately from the values of any underlying items to which they are linked. Transaction in financial derivatives can arise at the inception, in the secondary markets, in the continuous payments of services (as in exchanges of swaps and margins for standardized contracts) and at maturity.

At inception: There is usually no up-front payment for a forward-type contract and no recording should be done since the derivative contract begins with zero value. For the options, it should be recorded the value of the premium that the buyer pays to the writer. Any posterior variation in the price of the derivative must be registered as holding profit or loss and not as a transaction.

In the secondary markets: All sales must be valuated at market prices and recorded in the financial account as transactions of financial derivatives.

In the continuous payment of services: Following the BPM6 **recommendation**, all received cash payments are recorded as a reduction in assets and all cash payments made as decreases in liabilities. The counterparty of the transactions must be registered in the account "currency and deposits".

Margins: All the repayable margins are classified as "currency and deposits" or "other accounts receivable/payable". Non repayable margins must be recorded in the "financial derivatives" account**.**

At maturity: If the contract specifies non delivery of the underlying asset (NDF) [35], a transaction is recorded in the account "financial derivatives" by the cash value of the redemption; which is equivalent to the difference between the prevailing spot price of the underlying asset at maturity date and the agreed-on price of the contract, times the notional amount.

If the contract specifies the delivery of the underlying asset (DF), two transactions are recorded: One for the underlying asset that is valuated at the prevailing market price and should be recorded in the corresponding category (goods, currency and so on). The transaction of the derivative contract is valuated as the difference between the

[34] For detailed information see BPM6-IMF, chapter V, paragraphs 5.80 to 5.98 and The Statistical Measurement of Financial Derivatives, IMF, 1997.

[35] Non delivery refers to contracts that are liquidated by settling the difference between the contracted price and the prevailing spot price at maturity date, without delivering the underlying asset. Delivery refers to the Exchange of the underlying asset at maturity of the contract.

prevailing spot price of the underlying asset at maturity date and the agreed-on price of the contract, times the notional amount. Recording is done in the financial account**.**

It is important to highlight that contrary to other functional categories, financial derivatives do not generate any income, neither primary nor from investment; all amounts received from the contract must be classified as holding profit or loss.

Financial derivatives and employee stock options must be valuated at the prevailing market prices at the moment of recording. According to the type of contract, the valuation follows one of the next methodologies:

a. Valuation of Colombian peso-United States dollar: These contracts represent about 90% of all derivatives in Colombia, thus it is quite important to do a correct valuation of them. Given that they are forward-type contracts, their value at inception is zero; and is only valuated at the maturity date through the next equation:

$$V = \frac{N_{USD} * (TC_{contract} - TC_{market})}{TC_{market}}$$

With: N_{USD} the notional amount of the contract in United States dollars, $TC_{Contract}$ the foreign Exchange rate set at the inception of the contract (Colombian pesos per each dollar) and TC_{Market} the prevailing ask rate (bid rate) at the maturity rate when it is a purchasing (selling) contract or the exchange rate the last day of the quarter when valuation is done for the International Investment Position.

b. Valuation of foreign exchange contracts (other than COP/USD): Colombian residents can write a forward contract for any pair of currencies, setting the amount of currency 1 that will be given in exchange of each unit of currency 2 at the maturity date. Just as in the previous case, since it is a forward-type contract, its val**u**e at inception is zero, and it will be recorded only at maturity, in such **case** , **its** valuation **is done as** follow:

$$V = N_{M_1} * \left(TC_{contract\frac{M_2}{M_1}} - TC_{market\frac{M_2}{M_1}} \right) * \mathrm{TC}_{market\frac{USD}{M_2}}$$

With N_{M1} the notional amount of the contract express**ed** in terms of currency 1; $TC_{Contract\frac{M_2}{M_1}}$ the exchange rate agreed at the inception date (in terms of quantity of currency 1 that should be given per each unit of currency 2); $TC_{market\frac{M_2}{M_1}}$ the prevailing ask rate (bid rate) at the maturity date when it is a purchasing (selling) contract or the exchange rate the last day of the quarter when valuation is done for the International Investment Position and $TC_{market\frac{USD}{M_2}}$ the exchange rate between currency 2 and US dollars prevailing at the **valuation** time (at maturity for Balance of Payments, or the last day of the quarter for the International Investment Position). **In the case of** the International investment position, the value of the outstanding contracts must be discounted to the valuation date**.**

c. **Valuation of Colombian peso-United States dollar:** According to the BPM6, at the inception date, premium **paid by the buyer to** the seller of the option for the acquisition of the right embedded in the financial derivative **must be recorded**.

Additionally, when the option is exercised, it is necessary to record in the financial account of the Balance of Payments the profits (buyer **country**) or losses (**seller country**) **at** the spot price prevailing at maturity date. Therefore, the value of the financial derivative at liquidation **date is done according to** the following equation

$$V = \begin{cases} \dfrac{N_{USD} * (TC_{contract} - \mathrm{TC}_{market})}{TC_{market}} & \text{if option is exercised} \\ 0 & \text{if option is not exercised} \end{cases}$$

Notation here is equivalent to the **one** used in the valuation of Colombian peso-United States dollar forwards.

For the International Investment Position, options are valuated using Black-Scholes Merton methodology.

3.4 Other investment:

Other investment is *a residual category that includes positions and transactions other than those included in direct investment, portfolio investment, financial derivatives and employee stock options, and reserve assets*[36].

[36] BPM6, 6.61.

i. Currency and deposits

Currency consists of notes and coins that are of fixed nominal value and are issued or authorized by central banks or governments[37]. In Colombia, the legal tender currency is the Colombian peso and only in some special cases transactions among residents are allowed to be carried out in foreign currencies[38]. On the other hand, Deposits *include all claims that are (a) on the central bank, deposit-taking corporations other than the central bank, and, in some cases, other institutional units; and (b) represented by evidence of deposit.* In general, deposits are covered by a contract, are transferable or exchangeable for banknotes and coins on demand and allow the placement of a variable amount of money. Given the immediate availability of these resources, they are classified as short-term assets.

Transactions done through deposits are recorded as a change of *Other Currency and Deposits* account. It corresponds to those reported by the deposit-taking corporations (other than the central bank) in its financial statements and includes interbank transactions (overnight operations). Transactions done by non-financial sector entities through checking and savings accounts in foreign banks are also incorporated (CCO in Spanish) and an estimation of the flows carried out through checking or savings accounts not registered at the Banco de la República, named as *free current accounts* is also incorporated. This estimate considers the ITRS reports, information published by the Bank for International Settlements (BIS) and other specialized international organizations. Flows are converted into US dollars using the exchange rate peso/dollar at the end of the period.

[37] BPM6, 5.36

[38] Only under exceptional cases, regulations allow transactions between residents to be agreed in currencies other than the Colombian peso. Resolution number 8 of the Board of Directors at Banco de República, Title II, Article 75.

ii. Loans

It occurs when a lender (creditor) lends (grants) funds directly to a borrower (debtor) under an agreement which becomes a non-negotiable document. It includes financial leasing because is a mechanism by which the lessee finances the acquisition of goods, creating a financial credit, which is an asset to the lessor and a liability to the lessee.

The contractual criterion is considered for the register of the obligations. Loans maturity is agreed to the original term defined in the contract and the instrument considers the Balance of Payments functional categories. Disbursements and repayments are recorded when they take place and are calculated according to the data provided by debtors to the Banco de la República. Short and long term loans acquired by depository taking-corporations with non-resident financial institutions, mainly to finance foreign trade, are captured through a weekly report sent to the Banco de la República.

Regarding the unit of account, transactions carried out by the public sector are converted to US dollars using the average exchange rate. On the other hand, private sector flows in other currency different from US dollars are converted into this currency using the exchange rate of the transactional date, while stocks are converted using the end of the month exchange rate. It should be noted that the currency structure of loans owned by the private sector is concentrated in US dollars.

Main data sources used for the compilation of external liabilities of the Colombian economy are described below, according to the debtor's institutional classification.

Central Bank: transactions and outstanding liabilities of the Central Bank are provided by the Accounting Information System (SIC in Spanish) from the Banco de la República. They correspond to the commissions to be paid (accrual basis) by the BR to the non-resident international reserves assets´ managers.

Depository taking corporations, excepting the Central Bank[39]: The public sector´s depository financial entities are required to report on a monthly basis its external liabilities to the Ministry of Finance. The private depository financial corporations are obliged to report on a weekly basis its external indebtedness to Banco de la República, following the regulation issued by the Financial Superintendence[40].

General Government: Government external debt transactions and positions are calculated on a monthly basis from the data reported to the Banco de la República by the Ministry of Finance (debtor side) and the reports received from World Bank and the Inter-American Development Bank (creditor side).

-Other sectors: liabilities transactions and outstanding loans from "Other Sectors" are calculated each month based on two sources: in the case of the public sector, data sources comprise external debt data-base from the Ministry of Finance and Public Credit, and the reports done by World Bank and the Inter-American Development Bank. Data are discriminate by loan and by its financial conditions. For the private sector debtors, data comes from the Banco de la República's database that includes each external loan granted by non-resident creditor, its transactions (disbursements and amortizations) and financial conditions[41], including interest rate and amortization schedule.

It should be noted that the external debt statistics (external debt transactions and positions) are built from a wide and reliable database, since the Colombian legislation requires real sector agents to inform their foreign borrowing operations to the Banco de la República. Likewise, public entities external monthly debt reports´ sent to the

[39] For further details please consult the quarterly external debt newsletter issued by the Banco de la República at http://www.banrep.gov.co/sites/default/files/paginas/bdeudax_t.pdf.

[40] Circular 060 of October of 1999.

[41] In the case of external loans for the concept of financial leasing, disbursements are equivalent to the import of the good whose value is reported in the database provided by Banco de la República by the National Directorate of Taxes and Customs (DIAN), and amortizations are calculated from external credit records provided to the BR, including its financial conditions.

Ministry of Finance are also compulsory and financial institutions must follow the same report to the Superintendencia Financiera (in Spanish), assuring statistical consistency among institutions. In the case of commercial loans that are not reported to the Banco de la República, estimates described in previous sections are performed.

iii. Insurance, pension and standardized guarantee schemes

The BP registers the technical reserves and accounts payable and receivable between non-life insurance companies and life insurance companies' residents in Colombia with their non-resident counterparts. Non-life insurance technical reserves incorporate net unearned premiums paid by non-residents to resident insurance companies (liability), and premiums ceded in the case of overseas reinsurance (asset), and compensation for losses already incurred but for which payment is pending. This information is obtained from the balances reported by insurance companies to the Financial Superintendence.

iv. **Trade credit and advances**:

It refers to assets and liabilities related to the direct credit grant by suppliers and buyers in goods and services transactions, and advance payments for products under elaboration. The credit is represented by the traded value of the goods and services, where disbursements are not made in cash but in kind, and the payment of the service and fees are made in cash. Trade credit and advances comprise: a) loans granted directly by suppliers of goods and services to their customers, and b) advances for works in progress (or tasks not yet started), and advance payments from customers for goods and services not yet received.

Asset register: corresponds to the financing that Colombian exporters grant to their non-resident buyer. In general, it usually corresponds to short-term operations (less than a year). The value of exports constitutes the disbursement, while amortizations are done through the foreign exchange market. Estimates consider the reimbursable exports value reported by Departamento Administrativo Nacional de Estadística (DANE) and payments reported through the ITRS and the CCO. It should be remarked that this category is calculated on an aggregate type and it is subject to adjustments depending on the evolution of some indicators such as revolving credit, which are in line with the evolution of the main determinants of the costs of these credits (i.e exchange rate of the Colombian peso against the US dollar) and the opportunity cost to grant these loans (deposits interest rate in the local market).

Liability register: In the case of the Government, transactions and positions of trade credit and advances are calculated on a monthly basis upon the data reported to Banco de la República by the Ministry of Finance and Public Credit. The registered credits have a long-term maturity. For the private sector enterprises, data source is the ITRS and the CCO, supplemented with estimates of the trade credit flow that is not reported to the Banco de la República (short-term credits). This estimate takes into account the imports value reported in the DIAN-DANE databases and its payments captured trough the ITRS and CCO reports.

v. Other accounts receivable/payable-Other

The other category of *Other accounts receivable/payable* includes accounts receivable or payable different from those included in the trade credit and advances or other instruments category.

In the case of Other Liabilities, which includes the international conventions balance, the source is Banco de la República's financial statements. Other assets or liabilities in favor of the Government include the contributions paid and payable on non-monetary international entities.

vi. **Special Drawings Rights liabilities:**

Special Drawing Rights are international reserve assets created by the International Monetary Fund (IMF) that are allocated to its countries members to strengthen the

IMF´s financial position. Special Drawing Rights allocations are recorded both as an asset (international reserve asset) and as a liability of the country member, giving origin to an interest payment. Special Drawing Rights are held exclusively by the monetary authorities of the member countries and by a limited number of authorized international financial institutions. The data source used to compile this liability is the Banco de la República's Accounting Information System (financial statement and balance sheet).

3.5 **Reserve Assets**

Are the external assets under the control of the monetary authority mainly expressed in monetary gold, special drawing rights, reserve position at the IMF and other assets, principally investments in securities, currency and deposits, and financial derivatives. It is the fifth functional category of the financial account, and is the most important external asset of the Colombian economy. Reserve assets must fulfill the condition to be under the control of monetary authorities, composed by foreign currency assets and immediately available for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes (such as maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing)[42]

Reserves assets transactions compiled in the Balance of Payments exclude prices and exchanges rates variations, changes that are recorded in the international investment position as valuation adjustments. Net asset balances in bilateral payments agreements (i.e Aladi agreement) are also excluded.

Reserve assets consist of monetary gold, special drawings rights (SDR), holdings, reserve position in the IMF, currency and deposits, securities (including debt and equity securities), financial derivatives, and other claims (loans and other financial instruments).

[42] BPM6, 6.64.

According to the BPM6, **Monetary Gold** assets refer to gold to which the monetary authorities (Banco de la República) have title and are kept as a reserve asset. This asset consists of gold bullion with quality and purity certified, which are deposited in specialized institutions abroad, which must ensure the immediate availability of this asset, if required. These deposits are named "*allocated gold accounts*". The immediate availability and liquidity of gold under custody meets the basic requirements of a reserve asset. Its valuation is done according to the Troy ounce price of, Fix am of the London gold market.

Special Drawing Rights (SDR): Are reserve assets created by the IMF to be used exclusively by member countries to cover a Balance of Payments deficit. SDR are equivalent to liquid balances that could be exchanged to a convertible currency among IMF´s countries member; transactions in SDR are mainly due to IMF´s allocations that are registered simultaneously a country reserve asset and as a liability, subject to interest accrues.

Reserve position in the IMF: Mainly includes the subscription quota to the IMF paid in SDRs or currencies accepted by the IMF, known as Reserve Tranche, and the loans that member countries grant to this body. Countries can unconditionally withdraw against the Reserve Tranche in a very short term under a condition of Balance of Payments deficit situation.

Other reserves assets are mostly composed by deposits and investments in securities. The Banco de la República mainly carries out its deposits with other central banks, BIS and, to a lesser extent, in other non-resident deposit-taking-corporations. Deposits refer to those available on demand and the ones with a fixed term redeemable on demand or at very short notice without unduly affecting the value of the deposit[43].

Investments in securities are made primarily in negotiable and highly liquid debt securities, subject to strict reserves investment criteria that seek to provide

[43] BPM6, 6.86.

liquidity, safety and, as a last priority, a return on investment. The liquidity criteria states that investments should be made in financial assets having a permanent demand in the secondary market, in order to ensure its conversion into cash in a short notice and low transactional costs. Meanwhile, safety considers a lesser exposure to fluctuations in asset market prices; the probability of default in payments is aimed to be controlled by taking into account the risk credit ratings assigned by the major rating agencies to issuers of securities, by controlling the exposure of reserves to investments in securities and issuing sectors; foreign exchange risk arising from the fluctuation of the currencies in which the reserves are invested against the US dollar are also considered and controlled. Finally, the counterparty risk seeks to limit the possibility that the counterparty enters into a default.

Other reserves assets also include contributions to monetary international organizations that qualify to be considered as reserve assets. Net operations in financial derivatives valued at market prices, are also considered a component of the gross international reserves.

Accounting Information System (SIC in Spanish) of the Banco de la República provides all the data required for the compilation of reserve assets transactions and positions, allowing to identify the valuation changes related to price and foreign exchange rate market fluctuations in a separate way.

Annex 1

Data sources and total earnings quarterly estimation methodology

SECTOR	SOURCES
AGRICULTURE, HUNTING, FORESTRY AND FISHING	Exports and Imports (Departamento Administrativo Nacional de Estadística – DANE)
MINING AND QUARRYING	Exports by volume and quantity (DANE)
	Price and quarterly variation in the price of Diesel - Index price per gallon of Diesel calculated by US Energy Information Administration (EIA)
MANUFACTURING INDUSTRIES	Financial statements and press releases published on the websites of leading companies
	Index of sales and real production - monthly manufacturing sample (DANE)
	Exports and Imports (DANE)
ELECTRICITY, GAS AND WATER	Real electricity generation (XM)
	Price and average cost of electricity supply contracts (XM)
	Financial statements and press releases published on the websites of leading companies
CONSTRUCTION	Cost index of heavy construction, housing construction, investment in civil works and non-metallic minerals real sales (DANE)
WHOLESALE AND RETAIL TRADE, RESTAURANTS AND HOTELS	Financial statements and press releases published on the websites of leading companies
	Imports by volume and quantity (DANE)
	Sales index – Retail monthly sample (DANE)
TRANSPORTATION, STORAGE AND COMMUNICATIONS	Financial statements and press releases published on the websites of leading companies
	Telephone, internet and telecommunications indicators (Ministry of Information Technology and Communications - MINTIC)
FINANCIAL INSTITUTIONS, INSURANCE, REAL ESTATE AND BUSINESS SERVICES	Financial statements (Financial Superintendence)
COMMUNITY, SOCIAL AND PERSONAL SERVICES	IO_BASE = Operating income for the year 2007 (base year for the subsequent index) – Financial statements (Superintendence of Companies)
	Operating income index for community, social and personal services (DANE)