Methodological Notes of the Historical Statistical Series: Monetary aggregates and loan portfolio

Must reads Historical Statistical Series for Colombia

See the Historical Statistical Series 

Monetary base and monetary aggregates

Monetary aggregates represent the measurement of the quantity of money in the economy. In this sense, they are the set of financial instruments (which are assets for the holder and liabilities for the issuer) that fulfill the function of money, *i.e.*, those that are accepted as a means of payment and serve as a store of value1. Their different definitions vary according to the degree of liquidity of the instruments included. Most of these instruments are issued by the financial system (particularly, depository corporations) through the generation of loans (secondary issuance), so monetary and credit aggregates are closely related.

Since its creation in 1923, Banco de la República (the Central Bank of Colombia) was entrusted with the exclusive power to issue Colombian legal tender and to exercise monetary regulation and control. For this reason, since its inception, it has kept records of the balance of the monetary base2, that is, the money issued directly by the Central Bank. Likewise, the Bank has disclosed information related to the different monetary aggregates, and as new financial instruments have appeared, it has incorporated them into its statistics.

The figures presented here correspond mainly to an update of the series included in Chapter 1 of the book "*Principales Indicadores Económicos, 1923-1997*," published by the Bank in commemoration of its 75th anniversary3. The series of monetary aggregates of that document were calculated, at the time, from *Banco de la República*'s Journal, the Governor's Reports to the Board of Directors, and the balance sheets of the financial system held by the Banking Superintendence. For the monetary base, the first two data (1923 and 1924) were taken from the document "Desempeño macroeconómico colombiano, series estadísticas (1905-1997)4. The data was updated with the weekly statistics published by Banco de la República, which are based on its accounting information and that of the financial institutions5. These series include all holders of financial instruments that are incorporated in the different monetary aggregates, both from the public and the private sectors.

The following series are available:

- Cash: corresponds to Colombian peso banknotes and coins held by the public, that is, it does not include banknotes and coins in the vault cash of depository corporations.
- Bank reserve: corresponds to the vault cash of depository corporations and their balances in deposit accounts at Banco de la República, that is, those deposits that compute to meet the reserve requirement.
- Monetary base = Cash held by the public + bank reserve.
- M1 = Cash held by the public + Checking accounts.
- M2= M1 + Savings accounts + Certificates of deposit (CDTs)
- M3 = M2 + Bonds issued by credit institutions + Other deposits (fiduciary, other demand deposits, mortgage bonds, repos with the non-financial sector).

In this new version, the frequency of the series was homogenized to quarterly data, since in the publication "Main Economic Indicators" for the 1920s and the first years of the following decade, only annual information was available. Specifically:

Cash and monetary base:

For the period from 1923 to 1934, only annual data were available6. The Catmull-Rom (for the 1923-1927 period)7 and Denton (for the 1927-1934 period)8, methods were applied to obtain quarterly data. The banking reserve was calculated by difference.

Checking accounts and savings deposits:

For the period from 1923 to 1932, an interpolation by the Catmull-Rom method was performed since only annual data were available.

References

Banco de la República (1998): Principales indicadores económicos: 1923-1997. Bogotá: Banco de la República, Chief Office for Economic Studies.

Grupo de estudios de crecimiento económico colombiano (Colombian Economic Growth Study Group (GRECO in Spanish) (1999). Colombian macroeconomic performance, Statistical series (1905-1997). Working Paper 121, second version.

Catmull, E., and Rom, R. A class of local interpolating splines. In Computer Aided Geometric Design, R. E. Barnhill and R. F. Reisenfeld, Eds. Academic Press, New York, 1974, pp. 317–326.

Denton, F. T. (1971). Adjustment of Monthly or Quarterly Series to Annual Totals: An Approach Based on Quadratic Minimization. Journal of the American Statistical Association, 66(333), 99–102.

Loan portfolio

Credit aggregates represent the measurement of the volume of loans that depository corporations, as financial intermediaries, grant to the rest of the economic sectors. This is a fundamental variable for monetary policy due to its relationship with general economic activity9, with the transmission of the Central Bank's decisions to the rest of the economy, and because of its impact on the economy's liquidity, given the role that credit plays in the secondary issuance process carried out by the financial system.

This publication presents series of the aggregate loan portfolio as well as series by type of loan, as follows:

Aggregate data for the total loan portfolio are included since 192410. The available series from 1924 to 1968 is the one published for the total financial system in the book "*Principales Indicadores Económicos, 1923-1997* "11. From 1969, the net loan portfolio12 is available in local, foreign, and total currency, and it updates the series included in the aforementioned book. The figures in that publication were calculated, at the time, based on the monthly financial balances (whose source is the Banking Superintendence) under the definitions of the mandatory Chart of Accounts (PUC, by its acronym in Spanish) in force in each period13, and included the loan portfolio balances of banking institutions, savings and loan associations, financial corporations, commercial financing companies, and high-degree cooperatives, as well as the commercial and savings and housing sections of the defunct *Banco Central Hipotecario*, and the balances of the *Financiera Eléctrica Nacional* (Nacional Electric Finance Agency), which later became the F*inanciera de Desarrollo Nacional* (FDN, National Development Finance Agency) in 2011.

The data was updated based on the weekly statistics published by Banco de la República, based on the accounting information from financial institutions, nowadays recorded under the definitions of the International Financial Reporting Standards (IFRS)14. These series correspond only to the operations of the institutions in Colombia; therefore, they do not consider transactions of their branches abroad. The data includes adjustments for securitization of the housing portfolio and exclude loans to employees, among others15. Additionally, they were complemented with the balances of special financial institutions, according to the available information16. The series in foreign currency correspond to balances expressed in local currency.

Quarterly series of gross loan portfolio by type of credit are available since 1994. Most of the characteristics described for the aggregate series also apply to this group of data; however, these series do not include loans granted by special financial institutions. The types of loans into which the portfolio is subdivided are as follows:

- Commercial portfolio: disbursed mainly to companies17, to develop its production process (either funding capital expenditures or costs or production).
- Consumer portfolio: disbursed to individuals to finance the acquisition of goods and services.
- Mortgage portfolio: for housing purchase. The balance is presented with and without adjustment for securitization.
- Microcredit portfolio: loans disbursed to microenterprises or individuals for low amounts for the development of a productive activity18.

References

Banco de la República (1998) *Principales indicadores económicos*: 1923-1997. Bogotá: *Banco de la República*, Chief Office for Economic Studies.

Law 546 of 1999 (http://www.secretariasenado.gov.co/senado/basedoc/ley_0546_1999.html).

Ruling C-955 of 2000 (https://www.corteconstitucional.gov.co/relatoria/2000/C-955-00.htm).

Law 590 of 2000 (http://www.secretariasenado.gov.co/senado/basedoc/ley_0590_2000.html).

Decree 455 of 2023 (https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=205884).

1 In addition, money serves as a unit of account and as a standard for deferred payments.

2 The monetary base is composed of banknotes and coins in circulation and deposits of financial institutions with *Banco de la República* to comply with the banking reserve requirement.

3 See "*Principales indicadores económicos: 1923-1997*" / *Banco de la República*. (1998). Bogotá: *Banco de la República*, Chief Office for Economic Studies, Chapter 1: “Estadísticas Monetarias”. If there were any difference between the series in that book and those in the current databases, the figure of the current databases was retained.

4 *Grupo de estudios de crecimiento económico colombiano* (Colombian Economic Growth Study Group (GRECO in Spanish) (1999). Colombian macroeconomic performance, Statistical series (1905-1997). Working Paper 121, Second version. Available at: https://www.banrep.gov.co/es/el-desempeno-macroeconomico-colombiano-ser….

5 In the weekly monetary aggregate statistics is detailed the current methodology. For information from the accounting records of financial institutions, the source is Form 281 of the Financial Superintendency of Colombia (SFC in Spanish) (Weekly report on main assets and liabilities - closing balances).

6 See notes 3 and 4.

7 Catmull, E., and Rom, R. A class of local interpolating splines. In Computer Aided Geometric Design, R. E. Barnhill and R. F. Reisenfeld, Eds. Academic Press, New York, 1974, pp. 317–326.

8 Denton's time disaggregation method requires a reference series. Thus, to interpolate the series of cash held by the public, the reference series of cash in circulation (Banknotes in circulation - banknotes in cash) was constructed based on the financial statements published in Banco de la República Journal (available at https://publicaciones.banrepcultural.org/index.php/banrep/issue/archive). For the banking reserve, the legal reserve deposits (Art. 18, Law 15 of 1923), taken from the same Journal, were used as a reference series. The cash series and the banking reserve series were added to obtain the monetary base. For more details on the time disaggregation method, see Denton, F. T. (1971). Adjustment of Monthly or Quarterly Series to Annual Totals: An Approach Based on Quadratic Minimization. Journal of the American Statistical Association, 66(333), 99–102. https://doi.org/10.2307/2284856.

9 Additionally, financial intermediation allows for a better allocation of available resources in the economy since saving agents obtain financial assets that generate returns or remuneration, while agents in need of financing can obtain it and carry out the investments or expenses they require. Similarly, credit allows smoothing household consumption over time, increasing their welfare.

10 Data are presented annually since 1924, semi-annually since June 1932, and quarterly since March 1940.

11 See "*Principales indicadores económicos: 1923-1997*" / *Banco de la República*. (1998). Bogotá: *Banco de la República*, Chief Office for Economic Studies."

12 The net portfolio deducts the balance of portfolio provisions (impairments under IFRS).

13 As of 1989, account 14 of the mandatory chart of accounts (PUC by its acronym in Spanish).

14 In the weekly portfolio statistics is detailed the current methodology. For information from the accounting records of financial institutions, the source is Form 281 of the Financial Superintendency of Colombia (weekly report on main asset and liability accounts - closing balances). The IFRS were adopted as of 2015.

15 This includes adjustments for mortgage portfolio securitization, portfolio sales for management through fiduciary rights, and adjustments for operating leasing.

16 Specifically, the portfolio of the National Savings Fund (FNA in Spanish) has been included since June 2002, the portfolio of the *Caja de Vivienda Militar* since September 2006, and the direct portfolio of the Colombian Foreign Trade Bank (Bancoldex) and the Financial Corporation for Territorial Development S.A. (Findeter in Spanish) since 2002 and 2020, respectively. For the latter two institutions, the direct portfolio corresponds to the non-rediscounted portfolio. The rediscounted portfolio is the one in which the operation is disbursed through another credit institution and, therefore, appears on the balance sheet of the special financial institution and the credit institution.

17 Commercial loans may also be granted to individuals.

18 Established as microcredit operations in Law 590 of 2000. Loans disbursed as of 01 April 2023 change their denomination to productive loans as per Decree 455 of 2023. Their amount must be less than 120 legal monthly minimum wages in force.

Fuente: https://d1b4gd4m8561gs.cloudfront.net/en/historical-statistical-series/monetary-aggregates-loan-portfolio