



BANCO CENTRAL DO BRASIL

Banco Central do Brasil Technical Notes

**Number 31
December**

**Comments on Debtor Country and BIS External
Debt Calculation Methodologies**

Maria do Carmo Vieira Féres
Geraldo Villar Sampaio Maia

ISSN 1677-4205
CGC 00.038.166/0001-05

Banco Central do Brasil Technical Notes	Brasília	n. 31	Dec	2002	P. 1 - 11
--	----------	-------	-----	------	-----------

Banco Central do Brasil Technical Notes

The views expressed in this work are the author(s) opinions only and do not reflect the ones of the Banco Central do Brasil, except in what relates to methodological notes.

Coordination:

Economic Department (Depec)

E-mail: depec@bcb.gov.br

Reproduction permitted provided the source is mentioned. Banco Central do Brasil Technical Notes, no. 31, December/2002.

General Control of Subscriptions

Banco Central do Brasil
Demap/Disud/Subip
SBS - Quadra 3 - Bloco B - Edifício-Sede - 2º Subsolo
Caixa Postal 8670
70074-900 - Brasília (DF)
Telephone (5561) 414-3165
Fax (5561) 414-1359

Statistical conventions:

- ... Data unknown.
- Null data or an indication that the corresponding item does not exist.
- 0** ou **0,0** figure smaller than half the value of the last digit to the right.
- * preliminary data.

An hyphen (-) between years (1970-1975) indicates the total of years, including the first and the last. A slash (/) between years indicates the yearly average of such years, including the first and the last, or harvest-year or agreement-year, according to the text.

Any discrepancy between data and totals or percentage variations are due to rounding.

The sources for tables and graphs prepared by the Banco Central itself are not mentioned.

Banco Central do Brasil Information Center

Address:	Secre/Surel/Dinfo Edifício-Sede, 2º subsolo SBS - Quadra 3, Zona Central 70074-900 - Brasília (DF)	Telephones: (5561) 414 (...) 2401, 2402, 2403, 2404, 2405, 2406 <u>Toll-free:</u> 0800 992345 (just in the country) Fax: (5561) 321 9453
Internet:	http://www.bcb.gov.br	
E-mail:	cap.secre@bcb.gov.br	

Foreword

The institutionalization of the Banco Central do Brasil Technical Notes, conducted by the Department of Economics, promotes the dissemination of works featuring economic content, attracting both theoretical and methodological interest, giving a view of the short-term developments of the economy and reflecting the work of the Bank's employees in all areas of action. Besides, other works, though external to the Banco Central, may be included in this series provided the Bank has afforded institutional support to their preparation.

COMMENTS ON DEBTOR COUNTRY AND BIS EXTERNAL DEBT CALCULATION METHODOLOGIES

Maria do Carmo Vieira Féres

Geraldo Villar Sampaio Maia

Introduction

A comparison of Brazilian external debt statistics as issued by the Central Bank of Brazil (Bacen) and announced jointly by the group of international organizations composed of the BIS, IMF, OECD and IBRD based on creditor supplied data (referred to below as the “joint statistics”)¹ has given rise to considerable skepticism among users of this information², as a result of the differences found to exist between the two sets of figures.

In the specific case of short-term external debt, BIS data have been consistently higher than those published by the Central Bank. As will be demonstrated below, this gap is a consequence of the different criteria used to classify short-term debt. It would seem that the question of consistency is not restricted to Brazilian data, as is evident in a still unpublished BIS study that deals precisely with the question of comparisons between short-term external debt data compiled by creditors and by debtors and has the objective of providing guidance in the elaboration of comparative analyses.³ This technical note is based on this study and has

¹ In English, “Joint BIS-IMF-OECD World Bank Statistics on External Debt”.

² To simplify this presentation, we will refer to the “BIS statistics”, in the understanding that this term refers to the jointly published data cited above, since our comparisons will encompass the total debt and not only the share of debt in which banking institutions are creditors, as published separately by BIS.

³ Von Kleist, Karsten (2002): “Comparison of creditor and debtor data on short-term external debt”, Bank for International Settlements (BIS), draft, Basel, March.

the aim of elucidating the differences in the methodologies adopted in the two cases. Specific emphasis will be given to the factors underlying increases or reductions in the debt as calculated by BIS *vis-à-vis* the country's official debt. Aside from this, a comparative chart encompassing the two sets of data will be presented demonstrating that these differences are fully justified.

Explanatory comments on the differences between this information and the external debt data announced by the Brazilian government will be added in the section that details the criteria utilized in surveying local banking statistics.

General comments

BIS utilizes two types of statistics on international banking assets: consolidated data, based principally on the criterion of the nationality of the informing institutions, independently of their location or country of residence; and local data, based on the criterion of the residence of the debtor and creditor. Two types of adjustments are made in the consolidated statistics. On the one hand, positions among units of the same group are excluded, thus eliminating intragroup operations. On the other, all local assets in foreign currencies held by the branches of a specific institution in a debtor country are considered, since the objective of consolidated statistics is to gain knowledge on the total value of the international assets of a banking institution and, in this way, come to a conclusion regarding its country exposure. Therefore, since this criterion is different from that used in calculating the Brazilian debt, which utilizes the residence criterion, the comparison in this case will be made with local statistics.

As is well known, the short-term external debt takes on greater importance in moments of crisis not only as a result of the magnitude of this debt but particularly in relation to its greater volatility. The 1997 Asian crisis revealed shortcomings in the debt calculation criteria. It was precisely in this context that the joint statistics, which were first published in March 1999, sought to facilitate the process of external debt monitoring. It is important to stress that the BIS banking statistics introduced following the Latin American debt crisis in the early 80s had the objective of monitoring the international exposure of the banking systems of the countries included in the BIS data bank and of those that perform the role of off-shore financial centers. The institution recognizes that the external debt information it calculates

contains gaps and duplicate accounting, though many of those who utilize the data fail to take these shortcomings into consideration. At the start of his study, Von Kleist (2002, pg. 9) recognizes that these data do not substitute national data and do not provide estimates of total debt per creditor. To a certain extent, these data are complementary to national figures and provide information on external debt components from the viewpoint of the creditor

General differences between debt calculation methods used by debtor countries and BIS

Below, we have listed some of the differences in the scope of the debt as demonstrated through creditor and debtor data, explaining why the volume of the total debt calculated by BIS is smaller than that announced by the debtor countries:

- 1) The share of debt not covered by the joint statistics is composed of: “suppliers’ credits”, without government guaranties; loans made by governments that are not members of the OECD’s Development Assistance Committee (DAC); securities issued and held by nonresident, nonbanking institutions; and loans among companies that do not belong to the same group.

A breakdown of the December 2001 Brazilian external debt position shows that the balance of “suppliers’ credits” came to US\$ 6 billion, of which US\$ 5.5 billion had no government guaranties. In the case of securities held by nonfinancial companies, the total came to US\$ 2.7 billion, while direct loans made to Brazil by extragroup companies totaled US\$ 197 million.

- 2) In the case of debt with banks, BIS data indicate an increase in the participation of loans from subsidiaries of foreign banks from non-informing countries. In the case of Brazil, the credits provided by these bank branches were equivalent to approximately 2.33% of the total debt in December 1999, according to BIS estimates. Thus, if one were to project this same percentage to placements of debt securities with banks and to direct loans and bank financing, the conclusion would be that US\$ 12.6 billion of the Brazilian medium and long-term debt are not included in the BIS debt figures for December 2001. In the case of the short-term registered debt, application of the same percentage cited above would mean that the volume of bank loans not included in BIS statistics would come to a total of US\$ 228 billion.

- 3) In loan restructuring operations involving conversions of credits into bonds, any new long-term papers generated by the restructuring process are not perceived by BIS statistics.⁴

The table below indicates other differences in debt calculation criteria and scope as adopted in the two types of statistics presented by BIS and in those elaborated by the debtor countries⁵:

Item	Consolidated statistics	Local statistics	Brazilian statistics
Coverage	Local and external assets in foreign currency, whether they are debt instruments or not.	External debt based on the residence of the debtor and creditor. Nondebt instruments, such as stock holdings, are presented separately	External debt based on the residence of the debtor and creditor
Valuation	Nominal value, cost or market value	Nominal value, cost or market value	Nominal value
Maturity	Short and long-term, according to remaining due dates.	None	Short and long-term, according to original due dates.
Debt instruments	All financial assets	Loans, including trade credits and securities.	Securities, trade credits and other loans and financing.
Debtors	Banks, nonfinancial private sector and public sector.	Banks, including central banks and nonbanks.	Public sector, with breakdown by federal government, states and government companies.

⁴ BIS is analyzing whether data on these issues may be provided separately, which would make it possible to correct the value of the debt stock in bonds. See Von Kleist (2002, pg. 11).

⁵ See sections "Consolidated banking statistics" and "Local banking statistics", for greater detail.

			Financial and nonfinancial public sector.
Creditors	Commercial banks	Commercial banks	All
Effects of exchange fluctuations	Not subject to calculation (does not state currency composition).	Can be calculated (states currency composition)	Can be calculated (states currency composition)

Consolidated banking statistics

With respect to the consolidated short-term debt, Von Kleist (2002) suggests adjustments that would make these data more consistent with the external debt statistics calculated according to the IMF Guide on External Debt (Grey Book, 1988). Two of the proposed adjustments, however, are related to operations carried out internally in foreign currency, which would not be valid for the case of Brazil. The third adjustment proposed would be to add net local assets in domestic currency belonging to foreign bank branches of informing banks to the total debt. These data would be indicative of domestic loans derived from foreign inflows. It would be much too risky to state that these resources would consist entirely of short-term operations.

Adoption of different valuation rules for the short-term debt results in only slight discrepancies between debtor and creditor information. The reason for this is that traditional loans, which still account for the major share of bank business with developing countries, are valued at nominal prices by both creditors and debtors. Aside from this, differences between valuation methods will impact short-term debt only marginally.

Based on the above, the consolidated BIS statistics differ from those provided by debtor countries in a number of aspects. However, at the same time, the BIS data are the only ones to provide maturity details (short-term and long-term) which one can then compare to debt data supplied by debtor countries. However, it should be stressed that the maturity criterion used by BIS considers remaining maturities or, in other words, the short-term debt in this case is composed of assets with original maturities of up to one year plus assets with longer original maturities but that will mature within one year. Debtor countries, in contrast, tend to utilize

the criterion of original maturity.

Insofar as debt instruments are concerned, four major sources of discrepancies can be identified between the short-term debt data provided by debtors and those supplied by creditors:

- 1) Possible duplicate accounting of some loans from official bilateral institutions, since there is always the possibility that this information may be contained in the data provided by the OECD and by the BIS information system. However, in the specific case of Brazil, no evidence has been found of any short-term loans or financing from this type of institution.
- 2) As stated previously, not all of a specific country's creditors channel information to the BIS system. This is one more element that contributes to the fact that the debt calculated by BIS is smaller than that notified by debtor countries. This is clear in the appended comparative chart. When the short-term debt calculated by Brazil is adapted to the criterion utilized by BIS (remaining maturities), national statistics registered a balance that was sharply higher than that announced by BIS.
- 3) It is more than likely that data supplied by debtors underestimate domestic debt papers in foreign hands since it is difficult to gather data on those holding bearer securities. However, this does not apply to Brazil since the country does not issue domestic debt in foreign currency to nonresidents. In the case of data provided by creditors, the amounts listed under domestic and external debt in securities may fail to include specific items while, at the same time, including certain types of data more than once. The incompleteness of BIS local data is due to the fact that the information is supplied only by banks included in the system without maturity profiles, which are then estimated on the basis of the consolidated statistics. The debt in securities tends to be overestimated when international papers are purchased by BIS informing banks and are indistinctly included in the consolidated data or when they are acquired by residents of the issuer country.
- 4) Insofar as trade credits are concerned, information provided by debtor countries does not encompass the entire statistical universe due to the simple fact that complete data on nonbank trade credits are not available. On the creditor side, it is also difficult to

calculate total operations, since these data cover only government credits or those guaranteed by government entities.

With regard to debtor type, classification differences do exist but this would not generate conflicting values for the total debt. One point to be emphasized is that BIS data allocate central banks under banks and present sectoral breakdowns that cover only banks, public sector and nonbank private sector. It should further be noted that, according to Von Kleist (2002, pg.21), the sectoral breakdown of the data provided by debtor countries itemizes the monetary authorities, general government, banks and other sectors and does not allocate government enterprises within the government sector but rather under “other sectors”. Consequently, as of the end of 2004, the assets listed under public sector companies will be included in BIS statistics under nonbank private sector. In the case of the Brazilian debt, state enterprises are allocated under the public sector, though balance of payments flows related to operations carried out by government companies are classified under “other sectors”, according to the orientation included in the 5th edition of the IMF 1993 balance of payment manual.

Local banking statistics

One important point that deserves emphasis involves specification of maturity terms. These data are not notified in the breakdown of short and long-term assets. Though some central banks have breakdowns of maturities by country, reliable aggregate information would depend on whether data were available for the majority of informing countries. Thus, a breakdown of the maturities of local data would have to be estimated on the basis of the distribution of maturities in the consolidated data. Nonetheless, this type of estimation is not recommended, since local and consolidated data for each informing country are not, for the most part, equivalent. Even if this were the case, geographic maturities would not be similar. However, one should note that banks located in all parts of the world from all the informing countries are taken into account so that the major share of credit positions is included in both sets of statistics. In this way, aggregate consolidated loans to Brazil tend to be equal to aggregate local loans to Brazil. The exception would be loans through informing countries or financial centers or through subsidiaries located in non-informing countries. It is true that the error expected in utilization of the maturity structure of the consolidated data to estimate the

maturities of the local data may be limited. Therefore, utilization of maturity details for the consolidated debt to estimate the breakdown of the debt according to the local criterion into short and long-term seems to be a satisfactory methodology, though it bears an evident cost, which is the doubt as to whether the two systems are encompassing the same assets. According to the comparison made between data from December 2001, calculated by Bacen and BIS, short-term papers represented 9% and 11%, respectively, of the total securitized debts compiled by these institutions, a fact that clearly ratifies the adequacy of the BIS criterion in the case of Brazil.

A breakdown by debt instrument includes loans, deposits and securities. This is also provided by the debt data.

BIS data on the external debt in securities tend, on the one hand, to consider a volume greater than that which in fact exists, since the papers issued by the debtor country can be purchased partially by residents and partially by foreign banks, which are already included in the consolidated banking statistics. On the other hand, creditor data cover an amount below that which truly exists, since they consider only papers held by banks. In the case of the Brazilian debt, the amount in securities held by nonfinancial companies was quite small in December 2001, with the exception of US\$ 2.5 billion in medium and long-term bonds. These papers involve three placements of Bonds of the Republic in which the placement agents were nonbank institutions.

Also with regard to the debt in securities, BIS data may be underestimating this amount, since this debt heading is truly no more than an estimation, as demonstrated by the fact that the vast majority of countries notify only the total amount of bank loans and do not provide specifics on debt in securities. Thus, in the comparative chart of the two statistical systems under analysis, one can observe that the total debt in securities notified by BIS is much lower than that stated in Bacen figures, with precisely the opposite occurring under total bank loans.

With regard to the trade credits of nonbanking institutions, even though BIS data take account only of government credits and those guaranteed by governments, one must recognize that these data may also contain duplicate accounting of specific operations, in the case of relevant export operations discounted by BIS informing banks. With respect to data on short-term unregistered Brazilian debt, the credit lines taken by banks are calculated as a data source in

the Accounting Plan of National Financial System Institutions (Cosif). A comparison of the numbers compiled by Bacen and BIS for December 2001 indicates that the amount specified by BIS is larger. However, just the opposite occurs when the numbers on debt with government agencies are compared. This means that the trade financing provided by official agencies is included under the heading “trade credits of nonbanking institutions”.

Conclusion

The comparative chart elaborated to complete this study shows that the great difference between the external debt data announced by the Central Bank and by BIS refers to the criterion of maturity. Even though the BIS numbers analyzed correspond to local banking statistics, it is worthwhile noting that, as already mentioned, the short-term estimate is based on the distribution of maturities of the consolidated banking statistics which, in turn, utilize the criterion of remaining maturities. Thus, when one adjusts the concept of short-term debt and begins to utilize the concept of remaining maturities instead of original maturities, the conclusion that is drawn is that Brazilian official debt encompasses differences in relation to BIS data and that these differences are fully coherent. This is due to the fact that the data calculated by the country are larger in magnitude, since they correspond to the statistical universe, while those put forward by the BIS correspond to a sampling. Aside from this, the data issued by that institution on specific debt contracting instruments are estimated, which also contributes to the existence of differences, as already discussed above.

Brazilian external debt - Position on 12.31.2001
Comparison between Bacen and BIS data

US\$ Million

Itemization	Bacen	Remaining maturities	Total	BIS^{1/}	Difference
Total debt	209,934		209,934	182,588	27,346
Bonds	93,860		93,860	59,558	34,302
Bradies	19,330		19,330	19,232	98
Bank loans	47,318		47,318	64,257	-16,939
Commercial loans from nonbanking institution	6,222		6,222	7,706	-1,484
International organizations	30,786		30,786	27,873	2,913
Government agencies	12,418		12,418	3,962	8,456
Medium and long-term debt	182,651		163,499	142,120	21,379
Bonds	93,035	-7,846	85,189	52,726	32,463
Bradies	19,330		19,330	19,232	98
Bank loans	21,494	-8,866	12,628	32,207	-19,579
Commercial loans from nonbanking institution	5,588	-2,440	3,148	6,120	-2,972
International organizations	30,786		30,786	27,873	2,913
Government agencies	12,418		12,418	3,962	8,456
Short-term debt	27,283		46,435	40,468	5,967
Bonds	825	7,846	8,671	6,832	1,839
Commercial credits from nonbanking institutio	634	2,440	3,074	1,586	1,488
Bank loans	25,824	8,866	34,690	32,050	2,640

1/ Joint statistical data from BIS-FMI-OCDE-BIRD.

References:

Von Kleist, Karsten (2002) – “Comparison of creditor and debtor data on short-term external debt”, Bank for International Settlements (BIS), draft, Basel, March.

Guide on External Debt, IMF, Washington, 1988.

Balance of Payments Manual, IMF, 5th edition, Washington, 1993.