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Impact of Revisions on the Global Balance of Payments Discrepancies

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I. Introduction

1. Each year the *Annual Report* of the IMF Committee on Balance of Payments Statistics (the Committee) includes a discussion of discrepancies in the global balance of payments statistics, based on data published in Part 2 of the *Balance of Payments Statistics Yearbook (BOPSY)*. The latest national data are usually preliminary and global totals naturally are subject to revision in subsequent years.

2. The "Godeaux Report" (1992) contained a brief study of the impact of revisions on the global financial account discrepancy.[1] During its 2001 meeting, the Committee agreed on the importance of conducting analyses of revisions and the IMF staff consequently offered to provide a note to update and expand the Godeaux Report's revisions analysis. This note is based on data from the successive issues of the *BOPSY, P*art 2, from Volume 44 (1993) through Volume 52 (2001).

II. Summary

3. Unlike national revision studies that often make various assumptions about notional true values, such studies of global imbalances have an intrinsic true value, because, in principle, the combined surpluses and combined deficits arising from the current, capital and financial account transactions of all countries should equal zero. Therefore, a study of global imbalances can benefit from both assessing the proximity of various vintages of revised data to the true value and measuring the magnitude of revisions and their direction. Of course, a zero result at the level of global aggregated components would not necessarily mean that the gross data are accurate, because some positive errors may cancel out negative ones.

4. Compilers in most countries make revisions in their balance of payments statistics. For example, the 1999 current account totals of 85 of the 165 countries published in the Volume 51 (2000) were revised a year later, in Volume 52. The totals for all 24 industrial country reporters and 61 of 141 (43 percent) developing country reporters were revised to some degree. The absolute size of revisions to the balance of payments component series is not large. Revisions to the current account comprise less than five percent of the global imbalance and on average reduced the imbalance by $2.6 billion annually. Although the global imbalances for the financial account have more than doubled since the publication of the "Godeaux Report," the absolute size of financial account revisions has not been changed markedly and remain very small compared with the size of the underlying discrepancies. However, the magnitude of the financial account revisions measured by the average standard deviation have increased by 40 percent since the 1992 report, while the direction of revisions has become more obviously biased toward reducing the global financial account discrepancies over time; namely the algebraic average of revisions has changed from -$0.4 billion in the 1992 study to -$4.5 billion in this study.

[1] *Report on the Measurement of International Capital Flows* (the "Godeaux Report"), IMF, 1992.

III. Impact of Revisions on the Imbalances in the Global Current Capital, and Financial Accounts

5. Tables 1a to1c show the developments in the *amounts* of the imbalances in major balance of payments aggregates for specified years as published in the successive issues of the *BOPSY*. Reading down the columns illustrates the evolution of each annual figure through the time. Row descriptors in the tables show publication dates, and column headings are years to which the data refer. For example, the first- published world current account discrepancy in Volume 44 for the year 1992 was -$104.6 billion. This figure was revised in each succeeding issue of the *BOPSY* and, as published in Volume 50, was -$101.5 billion.

6. Tables 2a to 2c show the amount of *revisions*, or the first differences, of column entries. Most revisions to global totals result from revisions to data contained in country reports to the Fund and some are due to the introduction of country statistics that previously were missing (for example because of late submissions) and estimated by the IMF staff.

7. The annual revisions shown in these tables vary considerably in size and direction; the *range* in absolute terms is from $48.4 billion to $0.1 billion. The most extensive revisions are made to the financial account imbalance and the *average absolute annual revision* (regardless of sign) is $12.5 billion. The average size for the annual revisions to the current account and capital account is $7 billion and $2.5 billion, respectively. The *magnitude* of revisions to the global balance of payments accounts measured by the average standard deviation ranges from $15.8 billion for the financial account to $5.9 billion for the capital account. The annual current account revisions may shift the global imbalance by $10.7 billion in either direction.

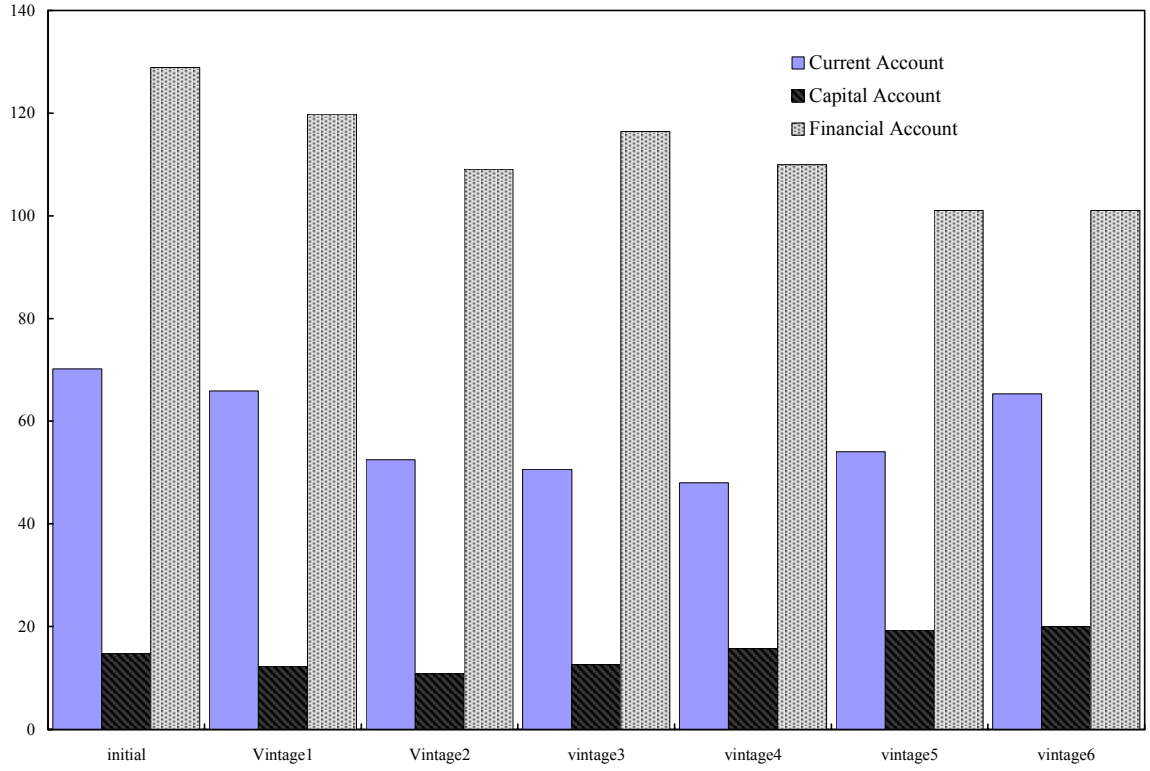
8. The most revised components of the current account are income and services where the average absolute size for the annual revisions is $6.2 billion and $5.1 billion, respectively. The financial account components are revised more substantially, particularly portfolio investment (with an average revision size of $14.4 billion and revision magnitude of $13.1 billion) and other investment (with an average revision size of $12.3 and magnitude of $18.2 billion). Somewhat more modest are revisions to the direct investment component with an average annual size of $5.9 billion and an average magnitude of $9.4 billion.

9. Overall, the direction of revisions is toward decreasing the size of global discrepancies. The *average bias* of the revisions, which is measured for simplicity by the algebraic average of revisions (with positive and negative values netted), is -$4.5 billion for the financial account, -$2.6 billion for the current account, and -$0.4 for capital account imbalances. However, various vintages of revision have different impacts on the size of global imbalances.

10. Given that an increasing number of countries apply a continuous revision practice, the change of the global imbalances of the current, capital, and financial accounts as a result of various vintages of revisions over time was scrutinized. For all vintages the average absolute discrepancy over years 1992-2000 was calculated separately for each

global balance of payments account. As indicated in Table 1, the effect of particular revision round on the size of the discrepancy varies significantly for each global account; for example the second to fourth vintages of revisions would reduce the current account imbalance the most (by 30 percent), while subsequent revisions would trigger an upward trend in the imbalance. The capital account revisions also follow this pattern, notably the second vintage of revisions would give the best result (27 percent reduction), but there is considerable increase in the imbalance in the following rounds. On the contrary, practically each subsequent round of revisions to global financial account reduces the statistical discrepancy, resulting by the sixth vintage by an almost 30 percent reduction to the initial value of the global imbalance.

Table 1: Impact of successive revisions on the global imbalances (US$ billions)



11. In view of the limited number of observations and of the potential effect of occasional sharp fluctuations in revisions that were not isolated (apart for three observations for the capital account for 1992–1993 that reflected the transition from the *BPM4* to the *BPM5*) and might infringe the soundness of the analysis, care must be applied in drawing conclusions. However, the outcome of the analysis may encourage further discussion on how the routine revision procedures followed by the national compilers may improve final estimates, and to what extent the imbalances in global aggregates may yield to improved compliance with international statistical standards to improvements in data sources or statistical techniques.

- ***Does the Committee have any comments or suggestions on how to enhance this revision study of the global balance of payments aggregates or on how to use the results to inform the national or global compilation process?***

Table 1a. Current Account Imbalances: Imbalance Amounts, 1992- 2000
(In billions of US dollars)

BOPSY	1992	1993	1994	1995	1996	1997	1998	1999	2000
Vol. 44, 1993	-104.6								
Vol. 45, 1994	-106.3	-75.4							
Vol. 46, 1995	-107.6	-83.8	-78.5						
Vol. 47, 1996	-114.1	-80.4	-78.8	-82.4					
Vol. 48, 1997	-102.7	-63.7	-45	-41.9	-40.5				
Vol. 49, 1998	-94.6	-59.6	-39.1	-36.8	-47.4	-16.2			
Vol. 50, 1999	-101.5	-62.1	-36	-34.3	-18.6	32.3	-36.8		
Vol. 51, 2000		-60.6	-32.4	-27.3	-15.3	35.3	-43.7	-127.2	
Vol. 52, 2001			-33.9	-27	-14.4	37.4	-43.9	-92.8	-127.5

Table 1b. Capital Account Imbalances: Imbalance Amounts, 1992- 2000
(In billions of US dollars)

BOPSY	1992	1993	1994	1995	1996	1997	1998	1999	2000
Vol. 44, 1993	....								
Vol. 45, 1994	...	....							
Vol. 46, 1995	12.9	11.8	5.4						
Vol. 47, 1996	12.3	9.9	5.2	10.9					
Vol. 48, 1997	17.6	17.5	19.8	17.5	19.6				
Vol. 49, 1998	17.7	17.2	20.7	17.9	20.7	18.4			
Vol. 50, 1999	19.6	19.3	22.5	17.6	1.1	-0.5	-8.8		
Vol. 51, 2000		19	21.7	17.5	1.9	0.1	-13.6	-18.8	
Vol. 52, 2001			21.5	18.8	3.7	5.7	-14.1	-16.6	21.6

Table 1c. Financial Account Imbalances: Imbalance Amounts, 1992- 2000
(In billions of US dollars)

BOPSY	1992	1993	1994	1995	1996	1997	1998	1999	2000
Vol. 44, 1993	154.2								
Vol. 45, 1994	139.4	96.7							
Vol. 46, 1995	125.4	80.7	101.8						
Vol. 47, 1996	134.1	78.6	90.6	69.3					
Vol. 48, 1997	145.8	107.8	72.9	117.7	164.7				
Vol. 49, 1998	133.1	98.5	68.7	124.2	176	142.2			
Vol. 50, 1999	129.1	91.6	62.2	118.6	154.8	144.1	110.3		
Vol. 51, 2000		99.7	73.4	109.6	137.4	149	69.7	121.6	
Vol. 52, 2001			77	105.9	140.6	131.8	58.7	139.8	199.1

Table 2a. Current Account Revisions: Revision Amounts, 1992- 2000
(In billions of US dollars)

BOPSY	1992	1993	1994	1995	1996	1997	1998	1999	2000
Vol. 44, 1993									
Vol. 45, 1994	1.7								
Vol. 46, 1995	1.3	8.4							
Vol. 47, 1996	6.5	-3.4	0.3						
Vol. 48, 1997	-11.4	-16.7	-33.8	-40.5					
Vol. 49, 1998	-8.1	-4.1	-5.9	-5.1	6.9				
Vol. 50, 1999	6.9	2.5	-3.1	-2.5	-28.8	-48.5			
Vol. 51, 2000		-1.5	-3.6	-7.0	-3.3	-3.0	6.9		
Vol. 52, 2001			1.5	-0.3	-0.9	-2.1	0.2	-34.4	...

Table 2b. Capital Account Revisions: Revision Amounts, 1992- 2000
(In billions of US dollars)

BOPSY	1992	1993	1994	1995	1996	1997	1998	1999	2000
Vol. 44, 1993									
Vol. 45, 1994	....								
Vol. 46, 1995	....	....							
Vol. 47, 1996	0.6	1.9	0.2						
Vol. 48, 1997	-5.3	-7.6	-14.6	-6.6					
Vol. 49, 1998	-0.1	0.3	-0.9	-0.4	-1.1				
Vol. 50, 1999	-1.9	-2.1	-1.8	0.3	19.6	18.9			
Vol. 51, 2000		0.3	0.8	0.1	-0.8	-0.6	4.8		
Vol. 52, 2001			0.2	-1.3	-1.8	-5.6	0.5	-2.2	...

Table 2c. Financial Account Revisions: Revision Amounts, 1992- 2000
(In billions of US dollars)

BOPSY	1992	1993	1994	1995	1996	1997	1998	1999	2000
Vol. 44, 1993									
Vol. 45, 1994	14.8								
Vol. 46, 1995	14	16							
Vol. 47, 1996	-8.7	2.1	11.2						
Vol. 48, 1997	-11.7	-29.2	17.7	-48.4					
Vol. 49, 1998	12.7	9.3	4.2	-6.5	-11.3				
Vol. 50, 1999	4	6.9	6.5	5.6	21.2	-1.9			
Vol. 51, 2000		-8.1	-11.2	9	17.4	-4.9	40.6		
Vol. 52, 2001			-3.6	3.7	-3.2	17.2	11	-18.2	...