

International Development Association

Methodology Used for Encashment of Donor Contributions to IDA

Technical Note No. 12

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1. At the meeting in September 1989, in Washington, D.C., an IDA Deputy proposed that the method of encashing contributions to IDA9 be revised so that the shares based on the agreed contributions in SDR terms would be the basis for encashments. Management was requested to prepare a technical note analyzing the implications of the suggested change. This technical note describes the current and proposed systems, compares illustrative drawdowns under both approaches and presents some issues for donors to consider in deciding which approach to adopt for IDA9.

Background

2. The Articles of Agreement of the Association required that the Association "take appropriate steps to ensure that, over reasonable intervals of time," the 90% initial subscriptions of original Part I members, payable in gold or freely convertible currency, be used "on an approximately pro-rata basis," except that the portion of such subscription "paid in gold or in a currency other than that of the subscribing member may be used more rapidly." (Article IV, Section 1(e)). The terms of replenishments are not required to

reflect this provision, but this guideline has, subsequently, been made applicable to the eight IDA Replenishments with certain modifications.

3. Translating this requirement into practice did not present particular difficulties as long as all members' obligations were expressed in a common denominator, i.e., 1960 gold dollars, and were subject to maintenance of value (MOV) in terms of that standard. This system prevailed up to and including the Third Replenishment. Beginning with the Fourth Replenishment, members' obligations were no longer subject to the MOV provisions. Since then, exchange rate fluctuations have caused donors' contributions (which for the most part are denominated in national currencies) to change in value when expressed in terms of a common standard (the U.S. dollar for IDA4 and IDA5 and the SDR for IDA6 to IDA8). Significant variations have resulted in (a) the total value of contributions, and (b) a donor's "share" of the replenishment, when both are expressed in terms of a common standard. Consequently, it has become less obvious what pro-rata should mean. After the adoption of several formulae to ensure that donors' contributions are drawn down pro-rata,

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**BOX 1: ENCASHMENT OF CONTRIBUTIONS TO IDA
ILLUSTRATIVE EXAMPLE**

ASSUMPTIONS: (a) CONTRIBUTIONS (AT TIME OF AGREEMENT)

	Currency Unit Obligation	SDR Equivalent	% Share
Country A	125	300	33.33
Country B	450	300	33.33
Country C	300	300	33.33

(b) EXCHANGE RATES DURING THE ENCASHMENT PERIOD:

Country A - 3% Depreciation Per Annum
Country B - 3% Appreciation Per Annum
Country C - No Change

CURRENT SYSTEM

Years	Cumulative Percent Encashed			
	As % of Unit Of Obligation All Countries	As % Of Agreed SDR Contribution		
		Country A	Country B	Country C
1	2.8	2.7	2.9	2.8
2	11.1	10.5	11.7	11.1
3	24.9	23.1	26.7	24.9
4	40.9	37.2	44.7	40.9
5	55.5	49.7	61.5	55.5
6	68.2	60.2	76.5	68.2
7	79.4	69.4	89.7	79.4
8	88.9	76.7	101.6	88.9
9	96.3	82.2	111.0	96.3
10	100.0	85.5	117.0	100.0

PROPOSED SYSTEM

Years	Cumulative Percent Encashed					
	As % Of Unit of Obligation			As % of Agreed SDR Contribution		
	Country A	Country B	Country C	Country A	Country B	Country C
1	2.9	2.7	2.8	2.8	2.8	2.8
2	11.7	10.5	11.1	11.1	11.1	11.1
3	26.8	23.2	24.9	24.9	24.9	24.9
4	44.9	37.4	40.9	40.9	40.9	40.9
5	61.9	50.0	55.5	55.5	55.5	55.5
6	77.1	60.6	68.2	68.2	68.2	68.2
7	91.0	69.7	79.4	79.4	79.4	79.4
8	100.0	78.2	90.1	86.4	90.1	90.1
9		87.6	100.0		102.5	100.0
10		100.0			119.1	

PERCENTAGE DIFFERENCE IN AMOUNTS ENCASHED
(MEASURED IN TERMS OF THE CURRENCY UNIT OF OBLIGATION)
PROPOSED VERSUS CURRENT SYSTEM

Years	Country A	Country B	Country C	Years	Country A	Country B	Country C
1	+0.1	-0.1	0	6	+2.5	-2.1	0
2	+0.5	-0.5	0	7	+2.7	-2.1	0
3	+1.3	-1.1	0	8	-0.5	-1.0	+1.2
4	+2.1	-1.8	0	9	-7.4	+2.0	+2.5
5	+2.4	-2.0	0	10	-3.7	+8.7	-3.7

the one which was found satisfactory was decided at the beginning of the Sixth Replenishment, and is still in effect.

4. Under the current system, donors' contributions are drawn down in equal proportion in terms of their unit of obligation. Encashments for each period are determined in such a way that the encashed amounts as a percentage of the face value of the contribution of a country, as expressed in the currency of denomination is the same for each donor. However, when encashments are expressed in SDR terms (i.e., in the same unit of account as IDA credits), the payment shares may be quite different for individual donors depending on fluctuations in exchange rates of their national currencies. Under the present method, the drawdowns for each country can be expected to be spread over the same period of time, i.e. about 10 years.

Proposed System for Note Encashment

5. The system that has been suggested for IDA9 aims at calculating calls on donors in a manner which would extend the agreed burdensharing percentages to the encashment process. Encashments for each period would be computed on the basis that the SDR value of the encashments of each country would represent its pro-rata share in the replenishment. Donors would thus pay according to their respective contribution shares fixed at the time of the replenishment agreement. In national currency terms, this results in an acceleration of encashments from countries whose currencies depreciate relative to the SDR, and a slowing down of encashments from countries whose currencies appreciate against the SDR. The higher the rate of depreciation (or appreciation) of the currency vis-a-vis the SDR, the faster there would be a divergence in the rate of encashments in national currency terms. In the case of a depreciating currency, encashments in national currency would be much faster under the proposed system. Depending on the rate of depreciation, contributions from a donor with a depreciating currency may be fully encashed well before the other donors. Conversely, encashments from a country with an appreciating currency will be completed at a later time. In the case of a country with an unchanged exchange rate throughout the entire encashment period vis-a-

vis the SDR, the rate of encashment could either be left unchanged from the present system or be adjusted, along with that of all other donors, to take into account the liquidity gap created after full encashment of contributions from donors with depreciating currencies. The latter approach is used in the illustrative examples in this note.

Impact on Donors

6. In order to analyze the impact on donors, an illustrative example (Box 1) shows encashments under both approaches. The results are also summarized graphically in Figure 1 (for encashments in terms of the currency unit of obligation) and in Figure 2 (for encashments in terms of SDR shares). The example assumes that a particular replenishment is funded equally by three countries and that exchange rates during the encashment period move as follows: for Country A, the rates depreciate by 3% per annum; for Country B, they appreciate by 3% per annum; and for Country C, its national currency remains unchanged vis-a-vis the SDR. As can be seen from the example, under the current approach the encashment rates for each call are the same for each country. For instance, encashments through years 2 and 5 are 11.1% and 55.4% percent, respectively, of the contribution of each country as expressed in its currency unit of obligation. Irrespective of changes in exchange rates, each donor is asked to pay in the same proportion. However, the rates are quite different when expressed in terms of the agreed contributions in SDR terms. For instance, by the fifth year, Country A would have paid 49.7% of its contribution, while Country B's payments would amount to 61.5%.

7. Under the proposed approach, the drawdown rates, measured in terms of the contribution shares in SDR terms, are exactly the same for each country in the initial years of the encashment period. They begin to vary when the contribution of Country A (which has a depreciating currency) is fully exhausted, in year 8. This would result in an exchange loss for IDA. Thereafter, the Association would encash the balance of the contributions of the two other countries. Cumulative encashments from Country B, shown in Box 1 with an appreciating currency, would only amount to 78 percent of its contribution at the end of the eighth year.

**BOX 2: IDA RESOURCE POSITION AT THE
END OF THE ENCASHMENT PERIOD**

ASSUMPTIONS:

Same as for Box 1, except for exchange rates

<u>Scenario I</u>	<u>Assumed Exchange Rate During Encashment Period (Change Per Annum)</u>	<u>Surplus/(Shortfall) As a % of Contribution & Total Replenishment</u>	
		<u>Current System</u>	<u>Proposed System</u>
Country A	3% Depreciation	-14.5	-4.6
Country B	3% Appreciation	<u>16.9</u>	<u>6.3</u>
Total Replenishment		8	1.7
 <u>Scenario II</u>			
Country A	5% Depreciation	-22.9	-6.9
Country B	5% Appreciation	<u>29.7</u>	<u>11.9</u>
Total Replenishment		2.3	5.0
 <u>Scenario III</u>			
Country A	2% Dep. Yrs. 1-5; 2% Apr. Yrs. 6-10	-6.3	-2.0
Country B	2% Apr. Yrs. 1-5; 2% Dep. Yrs. 6-10	<u>6.3</u>	<u>2.0</u>
Total Replenishment		0	0
 <u>Scenario IV</u>			
Country A	5% Dep. Yrs. 1-5; 2% Apr. Yrs. 6-10	-17.9	-6.0
Country B	2% Apr. Yrs. 1-5; 5% Dep. Yrs. 6-10	<u>4.3</u>	<u>4.7</u>
Total Replenishment		-4.5	-1.3

Encashments would continue through the tenth year and there would be an exchange gain for IDA because of the continued appreciation of this country's currency. It is worth noting that, even countries whose unit of obligation is the SDR would be affected by the proposed change. For instance, encashments for Country C would be recalled earlier under the proposed system (fully encashed in year 9 versus year 10 under the current system), in order to fill the resource gap caused by the depreciation of Country A's contribution.

Impact on IDA

8. The effect on IDA resources is difficult to measure precisely since the value of encashments is determined by a number of factors that interact simultaneously, including the exchange rate fluctuations coupled with the timing of such changes. Encashments under the proposed system would be accelerated for depreciating currencies. This in turn, would help preserve the value of the replenishment since a larger proportion of the depreciating contribution would be "locked-in" at a faster rate. Box 2 illustrates the impact on IDA under various exchange rate scenarios. As can be seen, under all but Scenario III, the resource position is more favorable for IDA and its borrowers under the proposed system than under the current one. This is because, as stated above, encashments in the initial years have a greater value when drawn down according to the proposed system. Under Scenario III, the appreciation and depreciation of one country is made up precisely by the corresponding depreciation and appreciation of the other country resulting in no change in the overall value of the replenishment resources under both the current as well as the proposed encashment systems.

Issues for Consideration

9. Deputies may wish to take account of the following issues:

(a) Predictability of drawings: At present, the Association estimates encashment needs based on the projected funds needed to cover disbursements of credits financed by donor contributions. Under the present encashment formula, donor encashments in

national currency are affected by changes in IDA's rate of disbursement, but not by exchange rate changes. Under the new system, encashments would be accelerated from countries whose currencies depreciate relative to the SDR, and slowed down from countries whose currencies appreciate against the SDR. Consequently, under this system, in addition to the pace of disbursements, exchange rates would introduce an additional uncertainty into the rate of encashments.

(b) Equity among donors: Under the present system, for each call made, all donors are asked for the same percentage of their total contributions expressed in terms of their unit/currency of obligation. Because of the exchange rate movement, donors' shares of any particular call (expressed in SDR terms) may be quite different from their agreed share of the replenishment. The proposed system would extend the agreed burdensharing to the encashment process.

(c) Implications for IDA: In the absence of maintenance of value, changes in the SDR value of the total replenishment can result in a surplus or deficit of donors' total contributions compared with the agreed value of the replenishment. The proposed system would go some way toward providing protection for IDA resources against erosion caused by unfavorable movements of exchange rates since the value of contributions expressed in depreciating currencies would be increased through accelerated encashments.

**Figure 1: Cumulative Encashments of Contributions
(In Terms of Currency Unit of Obligation)**

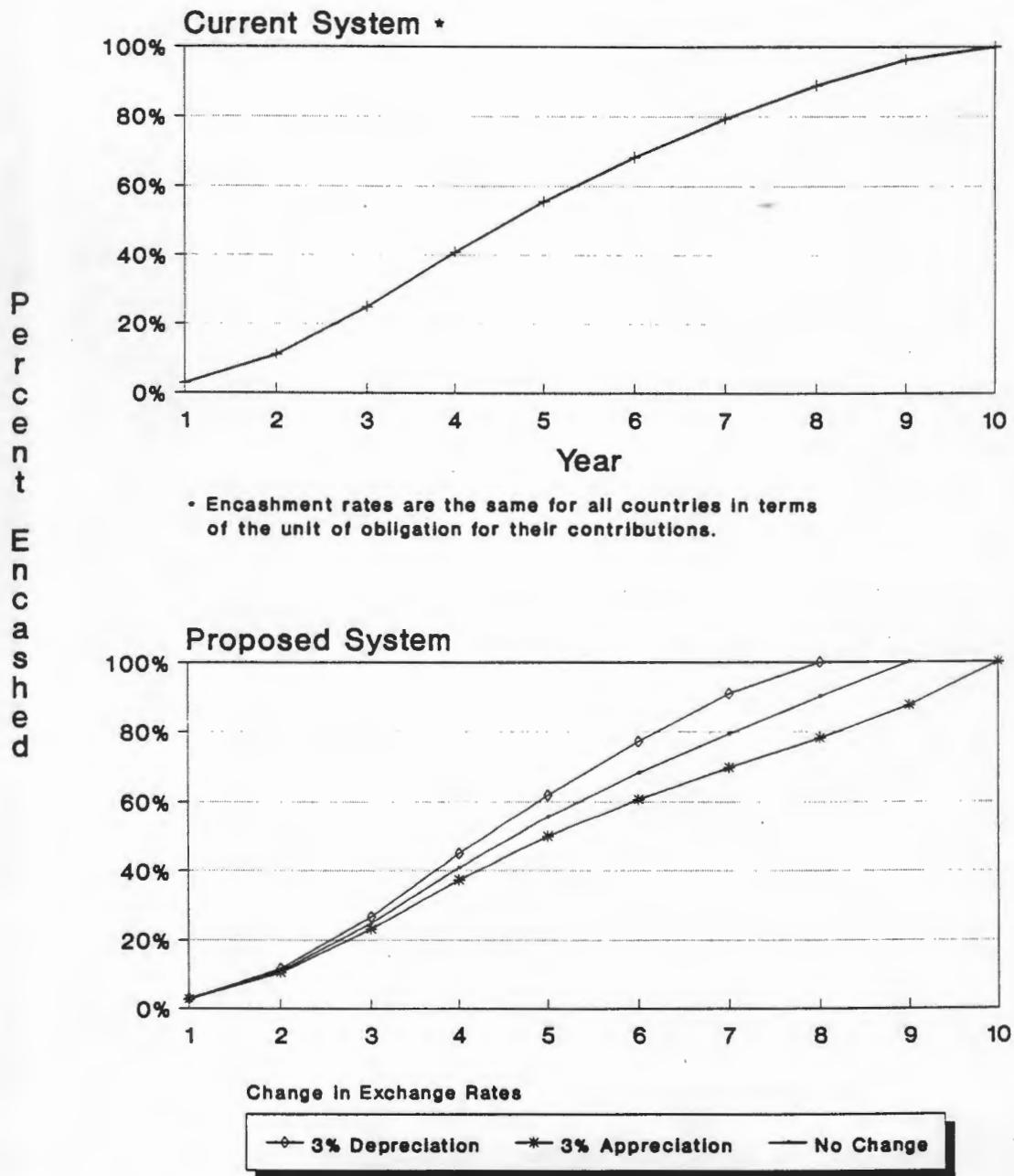


Figure 2: Cumulative Encashments of Contributions (In Terms of Agreed SDR Shares)

