
Recoveries Report for the period ended 30 June 2019

42nd Board Meeting

GF/B42/18

14-15 November 2019, Geneva, Switzerland

Board Information

Purpose of the paper: This report is provided to the Audit & Finance Committee for review pursuant to a decision of the Board at its Thirty-Second meeting (GF/B32/DP04) and contains background information and an updated table regarding the status of non-compliant expenditures identified by the Office of the Inspector General (“OIG”) as of 30 June 2019, as well as recoverable amounts identified in the due course of grant management operations as of 30 June 2019. The OIG reports independently to the Board on the Secretariat’s progress on matters related to recoveries.

I. Action Required

1. There are no specific actions required for Secretariat, OIG, Board or Committees emanating from this report.

II. Background

01 Introduction

2. The Global Fund is fully committed to the principles of transparency and accountability. To fulfill this commitment, the Global Fund works, through its risk management and assurance processes, to expose irregularities and misuse of resources. Key measures are dedicated towards prevention but where irregularities or misuse have materialized, action is taken to address the underlying weaknesses and seek recoveries as appropriate.

3. The Global Fund maintains a zero-tolerance approach to fraud and corruption and aims to take swift and appropriate action when cases of misuse of funds are identified. The Global Fund will continue to ensure that all identified irregularities are communicated responsibly and in a timely manner to the Board and to other stakeholders.

4. Reports on amounts identified as compromised by various compliance issues and on the Secretariat's efforts to seek refunds from recipients should be read in full awareness of the context and broad environment within which the Global Fund operates. Specifically, the Global Fund works in countries where governance, programmatic and oversight capacities are often weak, which carries inherent financial and programmatic risks.

III. Discussion

01 On-going recovery efforts and recoveries context

Executive Summary

During the first half of 2019, the total outstanding OIG recoverable balance, net of written commitments to repay, decreased from US\$ 1.9 million to US\$ 0.2 million. The US\$ 0.2 million total outstanding recoverable balance, net of written commitments, demonstrates resolution of 99.9% of the aggregate recoverable amount over time. The 99.9% results from an increase in resolution of recoveries cases.

Turnaround times for new cases continue to improve compared to 'legacy' cases, i.e., pre-2014. Of the 9 open OIG cases, only 1 case dates back to pre-2014. The improvement with respect to legacy cases reflects the more rigorous approach to recoveries referred to in previous reports with the Global Fund seeing considerable benefits: recoverable funds are being returned more quickly than was the case pre-2015. In the last two quarters, the Secretariat had five new cases amounting to US\$ 8.48 million, with three of these cases having been closed before 30 June 2019.

The non-OIG aggregate outstanding balance, net of written commitments to repay, amounted to US\$ 13 million. This amount is distributed amongst 58 grant implementers in 32 countries with a median recoverable balance of US\$ 62,018.

5. Table 1 provides an overview as of 30 June 2019.
6. Table 2 presents the detailed country-by-country data for OIG-reported open cases as of 30 June 2019.
7. Fully resolved OIG-reported cases feature in Table 3 as of 30 June 2019.
8. Table 4 presents a summary of recoverable amounts identified in the due course of grant management as of 30 June 2019.

OIG Recoverable Amounts

9. When the OIG publishes audit or investigation reports that include the identification of non-compliant expenditures, the Secretariat identifies an appropriate amount to recover, taking into account the Global Fund's legal right to recover, Global Fund policies and procedures, the financial loss to the program, relevant business and political implications, and the specific facts of the case, and engages in a process to seek recovery of such amount. All OIG recoverable amounts are approved by the Executive Director, upon the recommendation of the Recoveries Committee.

10. With respect to open OIG investigation reports, which are reflected in the amounts in Tables 1 - 2, the Secretariat uses as a starting point the proposed recoverable amount indicated by the OIG in the investigation reports rather than the total non-compliant amount, given that the total non-compliant amount includes amounts that may not be recoverable because, for example, the associated services or goods have been delivered to the grants. The historical difference between total non-compliant expenditures and the proposed recoverable amounts identified in OIG investigation reports from March 2009 through 30 June 2019 amounted to US\$ 59.8 million. Specifically, for the first half of 2019, the total non-compliant expenditures amounted to US\$ 24,903,939, of which there was a difference of US\$ 16,422,652 between the total non-compliant expenditures identified in OIG reports and the proposed recoverable amounts (see table below for full details). This difference of US\$ 16,422,652 is primarily the result of the difference between the total non-compliant expenditures identified in OIG reports and the proposed recoverable amounts for the Democratic Republic of Congo case (US\$ 16,313,717).

	Non-Compliant Amount	Proposed Recoverable Amount	Δ
Haiti	216,870	109,368	107,502
Guinea	114,366	114,366	-
DRC	23,699,783	7,386,066	16,313,717
Sudan	846,900	846,900	-
Mozambique	26,020	24,587	1,433
	24,903,939	8,481,287	16,422,652

11. As OIG audit reports typically do not include a proposed recoverable amount, the Secretariat, with input from the OIG, determines the appropriate recoverable amount based on the content of the OIG audit report. This recoverable amount is then presented to Recoveries Committee's review and subsequent recommendation to the Executive Director for approval.

12. During the six-month period ended 30 June 2019, there were five new audit and investigations cases that were presented to Recoveries Committee with an aggregate recoverable amount of approximately US\$ 8.48 million. Of this amount, the Guinea case represented US\$ 114,366, the DRC case represented US\$ 7,386,066,

the Sudan case represented US\$ 846,900, the Mozambique - CCM case represented US\$ 26,020 and the Haiti case represented US\$ 109,368.

13. As of 30 June 2019, there was one OIG report relating to an OIG audit of grants in the Republic of Ghana pending presentation to the Recoveries Committee.

14. During the first half of 2019, further good progress was made: US\$ 10.2 million was recovered and credited to the Global Fund's bank accounts, relating to cases for which demand letters were sent as well as cases subject to Reimbursement Protocols. Of those cases with an aggregate recoverable amount of US\$ 8.9 million that were closed in the first half of 2019, it is important to note that US\$ 8.5 million in cash was actually received during the same period. Since the inception of the recoveries process, a total amount of US\$ 96.6 million has been recovered and written commitments for a further US\$ 6 million have been obtained.

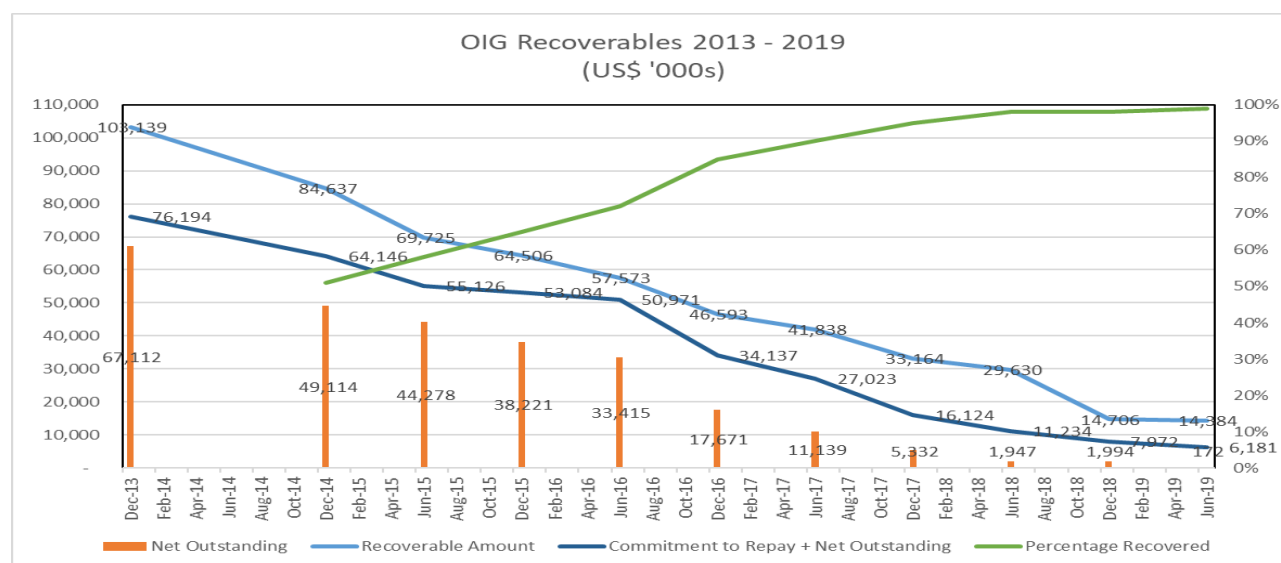
15. The total outstanding recoverable balance, net of written commitments to repay, decreased from US\$ 1.9 million to US\$ 0.2 million.

16. The US\$ 0.2 million total outstanding recoverable balance, net of written commitments, demonstrates resolution of 99.9% of the aggregate recoverable amount over time (up from 98% as of 31 December 2018). The 99.9% results from an increase in resolution of recoveries cases.

17. Written commitments to repay amount to US\$ 6.0 million. Despite occasional short delays in transferring funds as per a country's contractual obligations to the Global Fund, the repayments are largely on track. Nonetheless, it should be noted that there is still residual credit risk until such time as the amounts due are fully settled.

	Commitment to Repay + Net Outstanding	Commitment to Repay
Burkina Faso	3,518,291	3,518,291
Central African Republic	858,979	858,979
Mali	494,491	494,491
Niger	376,275	376,275
Rest of Portfolio	760,484	760,484
TOTAL	6,008,520	6,008,520

18. Graph 1 below illustrates the evolution of the total gross amount deemed recoverable (all cases), the net recoverable outstanding amounts, and the percentage recovered for the previous five and a half years.



19. Turnaround times for new cases continue to improve compared to 'legacy' cases, i.e., pre-2014. The improvement with respect to legacy cases reflects the more rigorous approach to recoveries referred to in previous reports and the Global Fund is seeing considerable benefits as recoverable funds are being returned more quickly than was the case several years ago.

20. Recoverable amounts are recorded in the Global Fund's financial statements in accordance with International Financial Reporting Standards (IFRS). The net recoverable amounts in this report may be different from those presented in the financial statements due to the accounting method adopted to comply with the requirements of IFRS. For example, the OIG may release a report that is promptly reflected in this report but converting the findings into a demand letter (which is then booked in the financial statements) may not take place until after the reporting period and may also reflect adjustments based on recommendations by the Recoveries Committee and approval by the Executive Director. It should be noted that the financial statements reporting on losses and recoveries uses the exact same underlying data as that presented within the tables below, and that a formal reconciliation process is implemented and validated through the Recoveries Committee.

Non-OIG Recoverable Amounts

21. The Secretariat has finalised the development and implementation of an automated process to centrally capture and report on confirmed non-compliant expenditures. During the first half of 2019, the majority of the development of the automated process was completed and the Secretariat launched the automated process in the Grant Operating System (GOS) in June-July 2019.

The migration of the monitoring of the non-OIG non-compliant expenditures to the Grant Operating System should further reinforce the Secretariat's ability to use this data as an early warning on potential financial control matters. As the Secretariat has experienced with OIG non-compliant expenditures, early escalation and focus can yield significant results.

22. Whilst the Secretariat ran the automated process in parallel in order to identify and resolve any data reconciliation issues, this is the last Recoveries Report whereby the Secretariat implemented a manual process to centrally capture and report on confirmed non-compliant expenditures that arise in the ordinary course of grant management. Non-OIG recoverable amount data is collected each quarter from Country Teams and offers a snapshot of a rolling total. In the event that they are not resolved within specified timeframes these instances are reported to the Recoveries Committee for their review and recommendation in accordance with guidance provided to Country Teams.

As of 30 June 2019, the non-OIG aggregate outstanding balance, net of written commitments to repay, amounted to US\$ 13 million. This amount is distributed amongst 58 grant implementers in 32 countries with a median recoverable balance of US\$ 62,018.

23. Of this US\$ 13 million, there are five Principal Recipients that account for approximately 63.5% of the total net outstanding amount due, as follows:

a) Ghana – Ministry of Health:	US\$2,379,987
b) Nigeria – NACA:	US\$ 1,907,105
c) Chad – FOSAP:	US\$ 1,476,770
d) DRC – Ministry of Health:	US\$ 1,447,462
e) Mozambique – World Vision:	US\$ 1,027,950

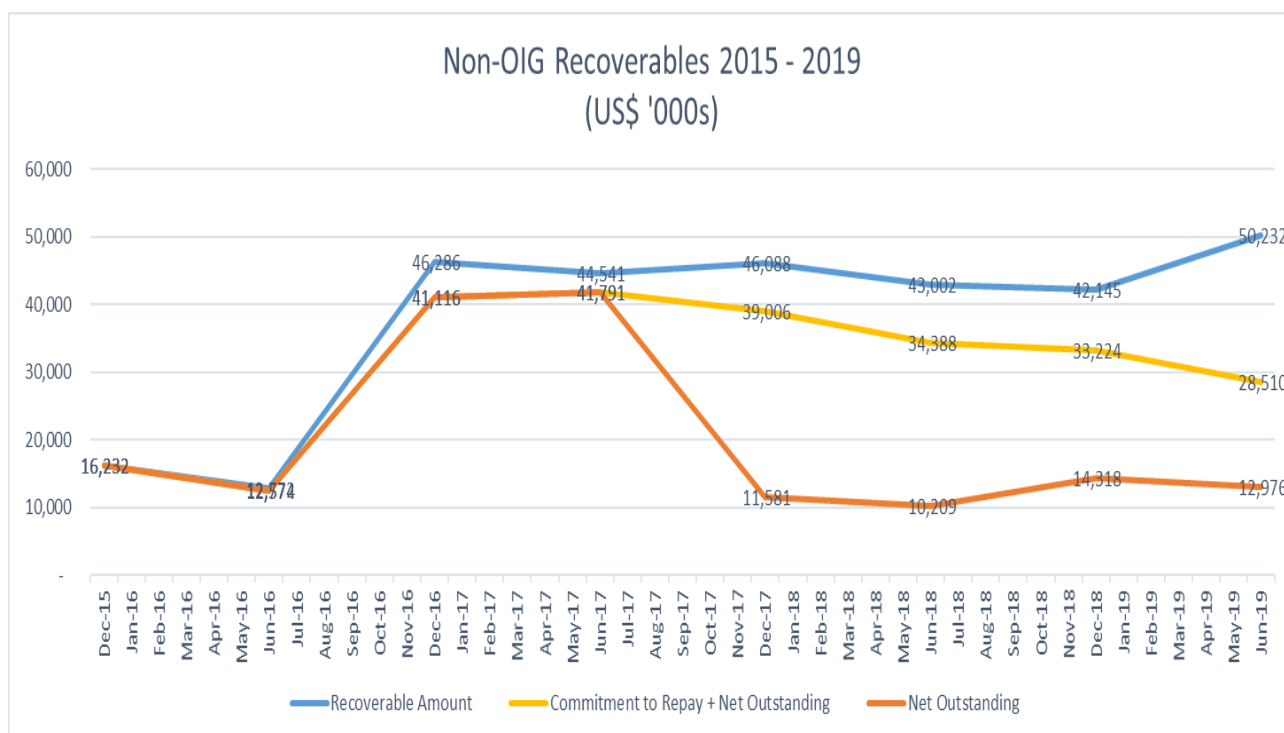
24. The table below provides details on the number of days outstanding since the issuance of a demand letter to the grant implementer requesting reimbursement of the non-compliant expenditure, in addition to the principal grant implementers which have committed to reimburse the Global Fund.

	Commitment to Repay + Net Outstanding	Commitment to Repay	Net Recoverable Amount	Days Outstanding
Ghana – Ministry of Health	2,379,987	-	2,379,987	346
Nigeria – NACA	1,907,105	-	1,907,105	N/A
Chad – FOSAP	1,476,770	-	1,476,770	65
DRC – Ministry of Health	1,447,462	-	1,447,462	347
Mozambique – World Vision	1,027,950	-	1,027,950	32
Ghana – Govt of Ghana	7,500,000	7,500,000	-	N/A
Zambia - Ministry of Health	4,638,025	4,638,025	-	N/A
Mozambique - Ministry of Health	1,710,499	1,710,499	-	N/A
Rest of Portfolio	6,421,806	1,685,290	4,736,516	N/A
TOTAL	28,509,604	15,533,814	12,975,790	

Of note is that both of the Nigeria – NACA and the Ghana – Government of Ghana non-compliant amounts are subject to separate supply chain strengthening agreements with the Global Fund whereby some or all of the recoverable amounts due may be considered as repaid if certain milestones are respected.

With respect to the Zambia – Ministry of Health, the Government of Zambia has committed to reimburse the Global Fund over the 2019-2020 period. The first installment of US\$ 900,000 is due no later than 30 December 2019.

25. Graph 2 below illustrates the evolution of the total gross amount deemed recoverable (all cases), the sum of all open commitments to repay and the net recoverable outstanding (represents the total amount still to be recovered), and the net recoverable outstanding amounts for the previous five and a half years.



2:1 Allocation Reduction

26. The first half of 2019 has also seen one further applications of the so-called “2-for-1 allocation reduction” method to resolve particularly difficult cases, where all reasonable recovery approaches have failed to produce results. Allocation reductions represent a means available to the Secretariat of resolving exceptionally difficult cases where all means of recovery have been considered exhausted. Upon approval by the Executive Director the country’s allocation is reduced by a factor of 2:1, being two units of allocation reduction for every one unit of recoverable amount.

27. There are a number of reasons why the allocation reduction approach is only applied as a last resort. For one, there is a negative impact on the country’s available budget to fight the three diseases. Additionally, the misused funds with respect to which the reduction is applied are not actually recovered. As a result, there may be less accountability and ‘consequence’ for an implementer who misspent funds.

28. Accordingly, it is important that there is adequate visibility for the cases in which it was concluded that there was no better option but to apply the 2-for-1 allocation reduction approach, which is why the allocation reduction that occurred during the period ended 30 June 2019 is described in the following paragraphs.

29. During the period ended 30 June 2019, an 2-for-1 allocation reduction was used to resolve US\$ 30,994 of an outstanding recoverable amount. Regarding this case, the Recoveries Committee reached the conclusion that all other reasonable options for recovery and forms of leverage had been considered and exhausted and deemed the programmatic impact of the allocation reduction to be limited. This allocation reduction recommendation was approved by the Executive Director.

Guatemala (Non-OIG)

As a result of the review of the 2016 audit report concerning the Ministry of Health and Social Assistance (MSPAS), the Guatemala Country Team noticed severe observations from the auditors highlighting irregularities linked to refurbishment works that had been funded by the grant in 2012 and 2013 for a total amount of US\$ 15,547. In addition, another ineligible amount of US\$ 15,447 was identified during the review of the July to December 2017 Progress Report. It is important to note that the lack of response or even acknowledgement by the MSPAS who received several official communications clearly showed that the PR had no intention to refund the outstanding amount of US\$ 30,994.

Based on previous experiences with the same PR and considering the similarity of the situation, the Country Team recommended applying a 2:1 reduction to specific cost groupings included in the GTM-M-MSPAS grant, specifically: Human Resources for program management for US\$ 30,994. This will promote further co-financing of HR costs by the MSPAS; and, Health Products for US\$ 30,994 to promote co-financing of Rapid Diagnostic Tests (RDTs) for malaria which is an essential input in the context of the malaria elimination and for which the National Sub-Program of Malaria is entirely dependent on external funding (Global Fund grant mainly). This will promote absorption of these key health products with public resources.

Based on the Country Team’s submission, the Executive Director, or his delegate, approved the application of a 2:1 reduction totaling US\$ 61,988 to specific cost groupings included in the GTM-M-MSPAS grant as it provided the clearest means to deliver a strong message to mitigate potential misuses of funds going forward, noting that previous allocation reductions (April 2015 and January 2017) had had little effect as the PR did not experience any direct consequences given that the amount was reduced from the allocation and not from recurring expenditures funded by the Grant.

Post Script (Significant events occurring or expected after 30 June 2019)

30. At the end of August 2019, the Government of the Central African Republic transferred EUR 609,794 to the Global Fund.

31. At the end of September 2019, the Government of Burkina Faso transferred EUR 1,065,984 as part of their commitment to repay the Global Fund under the signed Reimbursement Protocol.

32. At the end of September 2019, the Government of Kenya transferred US\$ 611,124 to settle all of its outstanding OIG and Non-OIG non-compliant expenditures.

Table 1: Overview of OIG recoverable amounts considered by the Recoveries Committee as of 30 June 2019

All amounts expressed in US\$									
	Recoveries and other Adjustments								
	OIG Reported Figures	Management Adjustments	Amount deemed Recoverable	Written off	Allocation Reduction	Received	Net Still to Recover	Committed to Repay	Net after Commitments
Balance as at 01 January 2019	16,584,728	(1,878,854)	14,705,874	0	0	(6,733,244)	7,972,630	(5,978,410)	1,994,220
Add/(Less): Recoveries and other Adjustments									
<i>Cash recovery</i>						(8,491,391)	(8,491,391)		(8,491,391)
<i>New Commitments</i>							0	(1,738,549)	(1,738,549)
<i>Commitments recovered</i>						(1,708,439)	(1,708,439)	1,708,439	0
<i>Net management adjustments</i>							0		0
<i>Write offs</i>				(75,118)			(75,118)		(75,118)
<i>Allocation Reduction</i>							0		0
	0	0	0	(75,118)	0	(10,199,830)	(10,274,948)	(30,110)	(10,305,058)
Add: New cases reported by the OIG during the period:	8,482,720	0	8,482,720	0	0	0	8,482,720	0	8,482,720
Less: Cases closed after full resolution	(8,900,715)	96,559	(8,804,156)	75,118	0	8,729,038	0	0	0
Balance as at 30 June 2019	16,166,733	(1,782,295)	14,384,438	0	0	(8,204,036)	6,180,402	(6,008,520)	171,882
Total closed cases (n=88)	146,665,580	(37,526,660)	109,138,920	(5,367,141)	(15,382,178)	(88,389,601)	0	0	0
Total all reported cases (n=107)	162,832,313	(39,308,955)	123,523,358	(5,367,141)	(15,382,178)	(96,593,637)	6,180,402	(6,008,520)	171,882

Table 2: Recoveries Committee OIG cases with outstanding recoverable amounts as of 30 June 2019- Dates provided below each country refer to the date the OIG report was published.

	OIG Reported figures					Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written-off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)	Net Amount still to Recover (in USD)	Commitment to Repay (in USD)	Net After Commitments (in USD)
	Misappropriated (in USD)	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)									
Burkina Faso	0	0	9,918,532	13,035	0	9,931,567	0	0	-6,413,276	3,518,291	-3,518,291	0	
OIG - Audit													
30-10-15													
PADS / Plan International	0	0	9,918,532	13,035	0	9,931,567	0	0	-6,413,276	3,518,291	-3,518,291	0	
Central African Republic	0	718,106	219,908	70,119	-26,749	981,384	0	0	-122,405	858,979	-858,979	0	
OIG - Audit													
06-02-13													
CN/CNLS	0	718,106	219,908	70,119	-26,749	981,384	0	0	-122,405	858,979	-858,979	0	
Guinea	114,366					114,366				114,366		114,366	
OIG - Investigation													
30-10-18													
Conseil National de Lutte contre le SIDA	114,366					114,366				114,366		114,366	
Kenya		62,557				62,557			-11,932	50,625	-50,625	0	
OIG - Investigation													
09-02-18													
NTLDP		62,557				62,557			-11,932	50,625	-50,625	0	
Mali	2,210,113	0	0	0	-1,586,977	623,136	0	0	-128,645	494,491	-494,491	0	
OIG - Investigation													
06-10-14													
Rep. of Mali	2,210,113	0	0	0	-1,586,977	623,136	0	0	-128,645	494,491	-494,491	0	
Mozambique	22,593		3,427			26,020			-12,227	13,793		13,793	
OIG - Investigation													
13-11-18													
Country Coordinating Mechanism	22,593		3,427			26,020			-12,227	13,793		13,793	
Niger	94,712	1,590,897	0	0	-168,569	1,517,040	0	0	-1,140,765	376,275	-376,275	0	
OIG - Investigation													
01-12-14													
UNDP	94,712	1,590,897	0	0	-168,569	1,517,040	0	0	-1,140,765	376,275	-376,275	0	
Nigeria	54,472			9,108		63,580			-19,858	43,722		43,722	
OIG - Investigation													
06-08-18													
ARFH	36,196			9,108		45,304			-13,169	32,135		32,135	
IHAVN	18,276					18,276			-6,689	11,587		11,587	
Zambia	1,064,788					1,064,788			-354,929	709,859	-709,859	0	
OIG - Investigation													
26-04-18													
MOH	1,064,788					1,064,788			-354,929	709,859	-709,859	0	
Grand Total	3,561,044	2,371,560	10,141,867	92,262	-1,782,295	14,384,438	0	0	-8,204,037	6,180,401	-6,008,520	171,881	

Table 3: Fully resolved Recoveries Committee OIG cases as of 30 June 2019 – Dates provided below each country refer to the date the case was closed.

Row Labels	OIG reported figures					Gross Recoverable Amount (in USD)	Written-Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)
	Misappropriated (in USD)	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Management Adjustments (in USD)				
Angola		3,964,884	304,500		-72,688	4,196,696			-4,196,696
19-10-16		3,964,884	304,500		-72,688	4,196,696			-4,196,696
MOH		3,964,884	304,500		-72,688	4,196,696			-4,196,696
AGO-M-MOH / AGO-911-G05-T		3,964,884	304,500		-72,688	4,196,696			-4,196,696
Bangladesh	2,008,276	0	1,267,887	325,396	-1,088,870	2,512,689	-30,211	-2,101,588	-380,890
04-12-15	3,571	0	1,267,887	325,396	-1,088,870	507,984	-23,324	-207,162	-277,498
MoHFW, SCUSA	3,571	0	1,267,887	325,396	-1,088,870	507,984	-23,324	-207,162	-277,498
BAN-202-G01-H	3,571	0	1,267,887	325,396	-1,088,870	507,984	-23,324	-207,162	-277,498
27-04-15	1,894,426	0	0	0	0	1,894,426	0	-1,894,426	0
PMUK	1,894,426	0	0	0	0	1,894,426	0	-1,894,426	0
BAN-202-G01-H-00	1,894,426	0	0	0	0	1,894,426	0	-1,894,426	0
27-05-16			0	0	0	0	0	0	0
Ministry of Finance of Bangladesh			0	0	0	0	0	0	0
BAN-809-G09-T			0	0	0	0	0	0	0
23-10-18	110,279					110,279	-6,887		-103,392
MOHFW / NTP	110,279					110,279	-6,887		-103,392
BGD-T-NTP	110,279					110,279	-6,887		-103,392
Burkina Faso			78,880		-5,600	73,280			-73,280
04-09-18			78,880		-5,600	73,280			-73,280
NCS / SP / CNLS			78,880		-5,600	73,280			-73,280
BUR-810-G11-T			78,880		-5,600	73,280			-73,280
Burundi	328,072	11,920	178,084	0	0	518,076	-2,272	-143,429	-372,375
19-08-15	144,021	0	139,047	0	0	283,068	0	0	-283,068
SEP-CNLS	144,021	0	139,047	0	0	283,068	0	0	-283,068
BRN-506-G04-H	144,021	0	139,047	0	0	283,068	0	0	-283,068
24-10-17	184,051	11,920	39,037	0	0	235,008	-2,272	-143,429	-89,307
RBP+	184,051	0	0	0	0	184,051	-2,272	-95,150	-86,629
BRN-809-G08-H	184,051	0	0	0	0	184,051	-2,272	-95,150	-86,629
SEP-CNLS PNLT RBP+ CED-CARITAS	0	11,920	39,037	0	0	50,957	0	-48,279	-2,678
BRN-102-G01-H / BRN-809-G08-H	0	11,920	39,037	0	0	50,957	0	-48,279	-2,678
Cambodia	411,000	223,000	24,940	1,362,000	-157,000	1,863,940	0	0	-1,863,940
13-07-15	411,000	223,000	21,000	1,362,000	-157,000	1,860,000	0	0	-1,860,000
CNM, NCHADS and MoH and NCHADS	411,000	0	21,000	0	41,000	473,000	0	0	-473,000
CAM-H-NCHADS	411,000	0	21,000	0	41,000	473,000	0	0	-473,000
CNM, NCHADS, CENAT, and MOH	0	223,000	0	1,362,000	-198,000	1,387,000	0	0	-1,387,000
CAM-102-G01-H-0 and others	0	223,000	0	1,362,000	-198,000	1,387,000	0	0	-1,387,000
23-02-18			3,940			3,940			-3,940
UNOPS			3,940			3,940			-3,940
KHM-M-UNOPS / CAM-M-UNOPS			3,940			3,940			-3,940
Cameroon	33,455	2,199,530	3,631,924	0	-2,199,530	3,665,379	0	0	-3,665,379
26-02-16	33,455	2,199,530	3,370,322	0	-2,199,530	3,403,777	0	0	-3,403,777
MoPH and Care International	33,455	2,199,530	3,370,322	0	-2,199,530	3,403,777	0	0	-3,403,777
CMR-304-G01-H and others	33,455	2,199,530	3,370,322	0	-2,199,530	3,403,777	0	0	-3,403,777
16-05-17			261,602			261,602			-261,602
Ministry of Public Health			261,602			261,602			-261,602
CMR-011-G11-H / CMR-910-G07-M			261,602			261,602			-261,602
Central African Republic	198,334					198,334	-75,009		-123,325
29-05-19	198,334					198,334	-75,009		-123,325
IFRC	198,334					198,334	-75,009		-123,325
CAF-C-IFRC / CAF-M-IFRC	198,334					198,334	-75,009		-123,325

Table 3 (continued): Fully resolved Recoveries Committee OIG cases as of 30 June 2019 – Dates provided below each country refer to the date the case was closed.

Row Labels	OIG reported figures					Gross Recoverable Amount (in USD)	Written-Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)
	Misappropriated (in USD)	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Management Adjustments (in USD)				
Congo	0	3,656,000	0	0	-1,241,000	2,415,000	0	0	-2,415,000
10-02-15	0	3,656,000	0	0	-1,241,000	2,415,000	0	0	-2,415,000
MOHP, SEP/CNLS, Medecins d'Afrique	0	3,656,000	0	0	-1,241,000	2,415,000	0	0	-2,415,000
XXX-000-G00-X	0	3,656,000	0	0	-1,241,000	2,415,000	0	0	-2,415,000
Congo (Democratic Republic)	139,216	3,766,502	7,389,066	0	-2,074,250	9,220,534	-208,105	0	-9,012,429
08-06-17	139,216	1,286,502	3,000	0	0	1,428,718	0	0	-1,428,718
UNDP	139,216	1,286,502	3,000	0	0	1,428,718	0	0	-1,428,718
ZAR-506-G04-T and others	139,216	1,286,502	3,000	0	0	1,428,718	0	0	-1,428,718
15-12-17	0	2,480,000	0	0	-2,074,250	405,750	-208,105	0	-197,645
UNDP	0	2,480,000	0	0	-2,074,250	405,750	-208,105	0	-197,645
ZAR-304-G02-H and others	0	2,480,000	0	0	-2,074,250	405,750	-208,105	0	-197,645
22-03-19			7,386,066			7,386,066			-7,386,066
PSI			7,386,066			7,386,066			-7,386,066
COD-M-PSI			7,386,066			7,386,066			-7,386,066
Côte d'Ivoire			155,605		-20,916	134,689			-134,689
19-04-17			155,605		-20,916	134,689			-134,689
PNLT			155,605		-20,916	134,689			-134,689
CIV-S10-G10-T			155,605		-20,916	134,689			-134,689
Djibouti	0	4,136,029	4,068,530	0	-1,498,451	6,706,108	0	-1,845,209	-4,860,899
03-08-18	0	4,136,029	4,068,530	0	-1,498,451	6,706,108	0	-1,845,209	-4,860,899
MoH (part I)	0	0	4,068,530	0	0	4,068,530	0	0	-4,068,530
DJB-404-G01-H and others	0	0	4,068,530	0	0	4,068,530	0	0	-4,068,530
MoH (part II)	0	4,136,029	0	0	-1,498,451	2,637,578	0	-1,845,209	-792,369
(blank)	0	4,136,029	0	0	-1,498,451	2,637,578	0	-1,845,209	-792,369
Dominican Republic	0	0	174,760	0	0	174,760	0	0	-174,760
18-09-13	0	0	174,760	0	0	174,760	0	0	-174,760
COPRESIDA	0	0	174,760	0	0	174,760	0	0	-174,760
DMR-202-G01-H-O	0	0	174,760	0	0	174,760	0	0	-174,760
Egypt	0	0	668,877	0	0	668,877	-668,877	0	0
29-09-17	0	0	668,877	0	0	668,877	-668,877	0	0
NAP / MoHP	0	0	668,877	0	0	668,877	-668,877	0	0
EGY-608-G03-H	0	0	668,877	0	0	668,877	-668,877	0	0
Eswatini	26,701					26,701			-26,701
25-12-18	26,701					26,701			-26,701
CANGO	26,701					26,701			-26,701
SWZ-H-CANGO	26,701					26,701			-26,701
Ethiopia	0	5,703,000	1,324,000	0	0	7,027,000	-245,000	0	-6,782,000
27-05-14	0	5,703,000	1,324,000	0	0	7,027,000	-245,000	0	-6,782,000
MOH, HAPCO, EIFDDA, and NEP+	0	5,703,000	1,324,000	0	0	7,027,000	-245,000	0	-6,782,000
XXX-000-G00-X	0	5,703,000	1,324,000	0	0	7,027,000	-245,000	0	-6,782,000
Georgia	877,947	0	0	0	-184,804	693,143	0	0	-693,143
11-11-15	877,947	0	0	0	-184,804	693,143	0	0	-693,143
MLHSA	877,947	0	0	0	-184,804	693,143	0	0	-693,143
XXX-000-G00-X	877,947	0	0	0	-184,804	693,143	0	0	-693,143
Ghana	3,840,003	0	1,974,876	555,474	-1,021,333	5,349,020	0	-826,494	-4,522,526
08-08-17	0	0	1,974,876	555,474	-1,021,333	1,509,017	0	0	-1,509,017
Ghana Health Service	0	0	1,974,876	555,474	-1,021,333	1,509,017	0	0	-1,509,017
GHN-102-G01-H-O and others	0	0	1,974,876	555,474	-1,021,333	1,509,017	0	0	-1,509,017
23-10-18	3,840,003	0	0	0	0	3,840,003	0	-826,494	-3,013,509
Ghana Health Service	3,840,003	0	0	0	0	3,840,003	0	-826,494	-3,013,509
XXX-000-G00-X	3,840,003	0	0	0	0	3,840,003	0	-826,494	-3,013,509

Table 3 (continued): Fully resolved Recoveries Committee OIG cases as of 30 June 2019 – Dates provided below each country refer to the date the case was closed.

Row Labels	OIG reported figures					Gross Recoverable Amount (in USD)	Written-Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)
	Misappropriated (in USD)	Unsupervised (in USD)	Ineligible (in USD)	Other (in USD)	Management Adjustments (in USD)				
Guatemala	0	0	272,032	0	1,311,165	1,583,197	0	-1,583,197	0
16-04-15	0	0	272,032	0	1,311,165	1,583,197	0	-1,583,197	0
MOH	0	0	272,032	0	1,311,165	1,583,197	0	-1,583,197	0
GUA-311-G06-H, GUA-M-MSPAS, GUA-610-G04-T	0	0	272,032	0	1,311,165	1,583,197	0	-1,583,197	0
Guinea	165,331	250,852	0	0	0	416,183	0	0	-416,183
25-03-16	165,331	250,852	0	0	0	416,183	0	0	-416,183
PNPCSP	165,331	250,852	0	0	0	416,183	0	0	-416,183
GIN-607-G04-H	165,331	250,852	0	0	0	416,183	0	0	-416,183
Guyana			56,966			56,966			-56,966
09-12-16			56,966			56,966			-56,966
MOH			56,966			56,966			-56,966
GYA-M-MOH			56,966			56,966			-56,966
Haiti	109,368	519,000	1,254,000	705,000	-661,000	1,926,368	-660,000	0	-1,266,368
31-12-13	0	519,000	1,254,000	705,000	-661,000	1,817,000	-660,000	0	-1,157,000
UNDP and Fondation Sogebank	0	519,000	1,254,000	705,000	-661,000	1,817,000	-660,000	0	-1,157,000
XXX-000-G00-X	0	519,000	1,254,000	705,000	-661,000	1,817,000	-660,000	0	-1,157,000
21-06-19	109,368					109,368			-109,368
Organisation Haitienne de Marketing Social pour la Sante	109,368					109,368			-109,368
HTI-M-PSI	109,368					109,368			-109,368
India	872,000	0	1,140,000	0	-635,000	1,377,000	-81,000	0	-1,296,000
13-12-13	872,000	0	1,140,000	0	-635,000	1,377,000	-81,000	0	-1,296,000
INP+	872,000	0	0	0	-525,000	347,000	-81,000	0	-266,000
XXX-000-G00-X	872,000	0	0	0	-525,000	347,000	-81,000	0	-266,000
NACO	0	0	1,140,000	0	-110,000	1,030,000	0	0	-1,030,000
IDA-202-G02-H-00	0	0	1,140,000	0	-110,000	1,030,000	0	0	-1,030,000
24-05-16			0			0			0
International Union against TB and Lung Disease / Central TB Division			0			0			0
IDA-T-IUATLD / IDA-T-CTD			0			0			0
Kazakhstan	5,537,324	211,000	37,000	142,000	-385,000	5,542,324	-5,000	-5,432,097	-105,227
28-10-14	105,227	211,000	37,000	142,000	-385,000	110,227	-5,000	0	-105,227
Republican Centre for Prophylactics and Control of AIDS	105,227	0	0	0	0	105,227	0	0	-105,227
XXX-000-G00-X	105,227	0	0	0	0	105,227	0	0	-105,227
Republican Centre for Prophylactics and Control of AIDS / National Centre of TB Problems of the MoH	0	211,000	37,000	142,000	-385,000	5,000	-5,000	0	0
XXX-000-G00-X	0	211,000	37,000	142,000	-385,000	5,000	-5,000	0	0
24-05-16	5,432,097	0	0	0	0	5,432,097	0	-5,432,097	0
RCAIDS & NCTP	5,432,097	0	0	0	0	5,432,097	0	-5,432,097	0
KAZ-202-G01-H-00	5,432,097	0	0	0	0	5,432,097	0	-5,432,097	0
Kenya	0	1,437,000	1,816,000	0	-2,059,000	1,194,000	0	0	-1,194,000
29-06-15	0	1,437,000	1,816,000	0	-2,059,000	1,194,000	0	0	-1,194,000
Treasury CARE KNWA SANAA	0	1,437,000	1,816,000	0	-2,059,000	1,194,000	0	0	-1,194,000
KEN-202-G03-H-00 and others	0	1,437,000	1,816,000	0	-2,059,000	1,194,000	0	0	-1,194,000
Kyrgyzstan	0	38,617	136,577	4,262	-58,482	120,974	0	-120,974	0
04-12-13	0	0	58,482	0	-58,482	0	0	0	0
SSED	0	0	58,482	0	-58,482	0	0	0	0
KGZ-202-G02-T and others	0	0	58,482	0	-58,482	0	0	0	0
20-10-17	0	38,617	78,095	4,262	0	120,974	0	-120,974	0
NCP	0	28,354	46,729	4,262		79,345	0	-79,345	0
KGZ-202-G01-H-00 and others	0	28,354	46,729	4,262		79,345	0	-79,345	0
RAC	0	10,263	31,366	0	0	41,629	0	-41,629	0
KGZ-202-G02-H-00	0	10,263	31,366	0	0	41,629	0	-41,629	0

Table 3 (continued): Fully resolved Recoveries Committee OIG cases as of 30 June 2019 – Dates provided below each country refer to the date the case was closed.

Row Labels	Misappropriated (in USD)	OIG reported figures Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written-Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)
Lao (Peoples Democratic Republic)	0	41,000	99,000	1,876,000	-1,070,000	946,000	0	0	-946,000
19-02-15	0	41,000	99,000	1,876,000	-1,070,000	946,000	0	0	-946,000
MOH	0	41,000	99,000	1,876,000	-1,070,000	946,000	0	0	-946,000
LAO-405-G05-M and LAO-405-G04-H	0	41,000	99,000	1,876,000	-1,070,000	946,000	0	0	-946,000
Madagascar	0	0	693,933	64,038	-176,000	581,971	-9,699	0	-572,272
09-07-15	0	0	410,933	64,038	0	474,971	-9,699	0	-465,272
UCP Pact SALAMA AIM	0	0	410,933	64,038	0	474,971	-9,699	0	-465,272
MDG-708-G09-M and others	0	0	410,933	64,038	0	474,971	-9,699	0	-465,272
21-04-15	0	0	283,000	0	-176,000	107,000	0	0	-107,000
PSI	0	0	283,000	0	-176,000	107,000	0	0	-107,000
MDG-405-G07-M	0	0	283,000	0	-176,000	107,000	0	0	-107,000
Malawi	0	3,559,198	435,566	0	-681,051	3,313,713	0	0	-3,313,713
07-12-16	0	3,559,198	435,566	0	-681,051	3,313,713	0	0	-3,313,713
NAC	0	3,559,198	435,566	0	-681,051	3,313,713	0	0	-3,313,713
MLW-102-G01-H-00 and others	0	3,559,198	435,566	0	-681,051	3,313,713	0	0	-3,313,713
Maldives	4,074,444	1,034,935	122,106	0	0	5,231,485	-770,599	0	-4,460,886
06-12-18	4,074,444	1,034,935	122,106	0	0	5,231,485	-770,599	0	-4,460,886
PNLT & PNLT	4,074,444	1,034,935	122,106	0	0	5,231,485	-770,599	0	-4,460,886
MAL-102-G01-M-00 / MAL-607-G04-M / MAL-405-G03-T / MAL-708-G06-T	4,074,444	1,034,935	122,106	0	0	5,231,485	-770,599	0	-4,460,886
Mauritania	4,173,671	2,558,295	0	0	0	6,731,966	0	0	-6,731,966
21-10-11	1,737,966	2,489,180	0	0	0	4,227,146	0	0	-4,227,146
SENIS	1,737,966	2,489,180	0	0	0	4,227,146	0	0	-4,227,146
MRT-506G03-H-00	1,737,966	2,489,180	0	0	0	4,227,146	0	0	-4,227,146
30-06-16	2,435,705	69,115	0	0	0	2,504,820	0	0	-2,504,820
UNDP	2,435,705	69,115	0	0	0	2,504,820	0	0	-2,504,820
MRT-202-G01-T-00	702,951	27,495	0	0	0	730,446	0	0	-730,446
MRT-202-G02-M-00	533,914	11,600	0	0	0	545,514	0	0	-545,514
MRT-607-G04-M	440,594	1,277	0	0	0	441,871	0	0	-441,871
MRT-607-G05-T	758,246	28,743	0	0	0	786,989	0	0	-786,989
Mozambique	0	500,000	0	0	0	500,000	0	0	-500,000
19-09-13	0	500,000	0	0	0	500,000	0	0	-500,000
Ministry of Health	0	500,000	0	0	0	500,000	0	0	-500,000
MOZ-911-G09-H	0	500,000	0	0	0	500,000	0	0	-500,000
Namibia	0	1,654,070	583,553	0	-1,368,532	869,091	0	0	-869,091
12-07-16	0	1,654,070	583,553	0	-1,368,532	869,091	0	0	-869,091
MOHSS	0	1,654,070	583,553	0	-1,368,532	869,091	0	0	-869,091
NMB-202-G03-M-00 / NMB-607-G06-M / NMB-202-G02-T-00 / NMB-506-G04-T / NMB-202-G01-H-00	0	1,654,070	583,553	0	-1,368,532	869,091	0	0	-869,091
Niger	266,304	225,757	0	0	-4,254	524,253	0	0	-524,253
16-04-15	0	36,546	0	0	0	36,546	0	0	-36,546
CRS	0	36,546	0	0	0	36,546	0	0	-36,546
NGR-708-G07-M	0	36,546	0	0	0	36,546	0	0	-36,546
05-09-17	266,304	225,757	0	0	-4,254	487,807	0	0	-487,807
CISLS	266,304	225,757	0	0	-4,254	487,807	0	0	-487,807
NGR-708-G08-H and NGR-304-G01-H	266,304	225,757	0	0	-4,254	487,807	0	0	-487,807
Nigeria	11,189	16,083,977	5,413,424	0	-11,508,235	10,000,355	0	-2,635,898	-7,364,457
22-09-15	0	7,895,746	1,596,658	0	-4,942,838	4,549,566	0	-2,635,898	-1,913,668
CHAN	0	1,665,759	511,590	0	-1,289,416	887,933	0	-887,933	0
XXX-000-G00-X	0	1,665,759	511,590	0	-1,289,416	887,933	0	-887,933	0
CISHAN	0	383,318	0	0	0	383,318	0	-360,026	-23,292
XXX-000-G00-X	0	383,318	0	0	0	383,318	0	-360,026	-23,292
NACA	0	1,548,993	786,000	0	0	2,334,993	0	-444,617	-1,890,376
XXX-000-G00-X	0	1,548,993	786,000	0	0	2,334,993	0	-444,617	-1,890,376
YGC	0	4,297,676	299,068	0	-3,653,422	943,322	0	-943,322	0
XXX-000-G00-X	0	4,297,676	299,068	0	-3,653,422	943,322	0	-943,322	0
09-10-17	11,189	3,068,230	0	0	-1,775,671	1,303,748	0	0	-1,303,748
CHAN - SRs	0	329,017	0	0	0	329,017	0	0	-329,017
NGA-506-G06-T	0	329,017	0	0	0	329,017	0	0	-329,017
NMCP	11,189	343,491	0	0	0	354,680	0	0	-354,680
NGA-M-NMCP	11,189	343,491	0	0	0	354,680	0	0	-354,680
NMCP	0	2,395,722	0	0	-1,775,671	620,051	0	0	-620,051
NGA-M-NMCP	0	2,395,722	0	0	-1,775,671	620,051	0	0	-620,051
10-10-17	0	2,965,516	0	0	-2,665,394	300,122	0	0	-300,122
NACA	0	2,965,516	0	0	-2,665,394	300,122	0	0	-300,122
NGA-H-NACA	0	2,965,516	0	0	-2,665,394	300,122	0	0	-300,122
11-10-17	0	2,154,485	0	0	-2,124,332	30,153	0	0	-30,153
SFH	0	2,154,485	0	0	-2,124,332	30,153	0	0	-30,153
NGA-M-SFH	0	2,154,485	0	0	-2,124,332	30,153	0	0	-30,153
19-01-18	0	0	3,816,766	0	0	3,816,766	0	0	-3,816,766
NACA	0	0	3,816,766	0	0	3,816,766	0	0	-3,816,766
NGA-H-NACA	0	0	3,816,766	0	0	3,816,766	0	0	-3,816,766
Pakistan	0	41,921	0	0	-33,013	8,908	0	0	-8,908
08-10-18	0	41,921	0	0	-33,013	8,908	0	0	-8,908
NTP	0	41,921	0	0	-33,013	8,908	0	0	-8,908
PAK-T-NTP	0	41,921	0	0	-33,013	8,908	0	0	-8,908
Panama	0	0	104,911	0	20,611	125,522	-48,839	0	-76,683
29-11-17	0	0	104,911	0	20,611	125,522	-48,839	0	-76,683
CAI	0	0	104,911	0	20,611	125,522	-48,839	0	-76,683
PAN-H-CAI	0	0	104,911	0	20,611	125,522	-48,839	0	-76,683

Table 3 (continued): Fully resolved Recoveries Committee OIG cases as of 30 June 2019 – Dates provided below each country refer to the date the case was closed.

Row Labels	OIG reported figures					Gross Recoverable Amount (in USD)	Written-Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)
	Misappropriated (in USD)	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Management Adjustments (in USD)				
Papua New Guinea	359,543	2,528,252	2,092,659	0	-653,449	4,327,005	-97,048	0	-4,229,957
10-06-14	359,543	24,859	280,623	0	-298,386	366,639	0	0	-366,639
Rotary Against Malaria (RAM)	359,543	24,859	280,623	0	-298,386	366,639	0	0	-366,639
PNG-809-G06M		24,859	280,623	0	-9,676	295,806	0	0	-295,806
PNG-809-G06-M	359,543	0	0	0	-288,710	70,833	0	0	-70,833
27-01-16	0	0	1,352,696	0	-355,063	997,633	0	0	-997,633
NDOH	0	0	1,352,696	0	-355,063	997,633	0	0	-997,633
PNG-405-G02-H & others	0	0	1,352,696	0	-355,063	997,633	0	0	-997,633
07-11-17	0	2,327,575	459,340	0	0	2,786,915	-97,048	0	-2,689,867
NDOH	0	2,327,575	459,340	0	0	2,786,915	-97,048	0	-2,689,867
PNG-304-G01-M & others (blank)	0	1,943,575	459,340	0	0	2,402,915	-97,048	0	-2,305,867
24-07-18	0	384,000	175,818	0	0	384,000	0	0	-384,000
PSI	0	384,000	175,818	0	0	384,000	0	0	-384,000
PNG-809-G05	0	175,818	175,818	0	0	175,818	0	0	-175,818
Philippines	0	0	2,012,000	0	-1,757,000	255,000	0	0	-255,000
09-11-12	0	0	2,012,000	0	-1,757,000	255,000	0	0	-255,000
TDF / PSF / Department of Health	0	0	2,012,000	0	-1,757,000	255,000	0	0	-255,000
XXX-000-G00-X	0	0	2,012,000	0	-1,757,000	255,000	0	0	-255,000
Senegal	0	140,000	0	0	-87,000	53,000	0	0	-53,000
24-11-16	0	140,000	0	0	-87,000	53,000	0	0	-53,000
MSH and PNL	0	140,000	0	0	-87,000	53,000	0	0	-53,000
SNG-405-G03-M & others	0	140,000	0	0	-87,000	53,000	0	0	-53,000
Sierra Leone	70,510	0	0	0	0	70,510	0	0	-70,510
03-03-16	70,510	0	0	0	0	70,510	0	0	-70,510
MOH	70,510	0	0	0	0	70,510	0	0	-70,510
SLE-708-G05-M	70,510	0	0	0	0	70,510	0	0	-70,510
South Sudan	0	1,439,917	265,100	0	-611,950	1,093,067	0	0	-1,093,067
24-02-16	0	262,295	265,100	0	-372,132	155,263	0	0	-155,263
PSI	0	262,295	265,100	0	-372,132	155,263	0	0	-155,263
SUD-708-G09-M	0	262,295	265,100	0	-372,132	155,263	0	0	-155,263
03-04-17	0	127,131	0	0	0	127,131	0	0	-127,131
PSI	0	127,131	0	0	0	127,131	0	0	-127,131
SSD-M-PSI	0	127,131	0	0	0	127,131	0	0	-127,131
04-05-17	0	8,338	0	0	0	8,338	0	0	-8,338
UNDP	0	8,338	0	0	0	8,338	0	0	-8,338
SSD-405-G05-H / SSD-708-G11-T	0	8,338	0	0	0	8,338	0	0	-8,338
07-11-17	0	500,564	0	0	0	500,564	0	0	-500,564
PSI	0	500,564	0	0	0	500,564	0	0	-500,564
SSD-M-PSI	0	500,564	0	0	0	500,564	0	0	-500,564
26-12-18	0	541,589	0	0	-239,818	301,771	0	0	-301,771
UNDP	0	541,589	0	0	-239,818	301,771	0	0	-301,771
(blank)	0	541,589	0	0	-239,818	301,771	0	0	-301,771
Sri Lanka	0	982,030	1,665,126	0	-1,240,734	1,406,422	0	-693,292	-713,130
25-01-16	0	982,030	1,665,126	0	-1,240,734	1,406,422	0	-693,292	-713,130
TEDHA Sarvodaya MoH	0	982,030	1,665,126	0	-1,240,734	1,406,422	0	-693,292	-713,130
XXX-000-G00-X	0	982,030	1,665,126	0	-1,240,734	1,406,422	0	-693,292	-713,130
Sudan	0	846,900	846,900	0	0	846,900	0	0	-846,900
28-05-19	0	846,900	846,900	0	0	846,900	0	0	-846,900
UNDP	0	846,900	846,900	0	0	846,900	0	0	-846,900
SDN-H-UNDP / SDN-M-UNDP / SND-S-FMOH / SDN-T-UNDP	0	846,900	846,900	0	0	846,900	0	0	-846,900
Swaziland	0	767,000	1,641,000	0	-1,137,000	1,271,000	-138,000	0	-1,133,000
30-05-14	0	767,000	1,641,000	0	-1,137,000	1,271,000	-138,000	0	-1,133,000
NERCHA	0	767,000	1,641,000	0	-1,137,000	1,271,000	-138,000	0	-1,133,000
XXX-000-G00-X	0	767,000	1,641,000	0	-1,137,000	1,271,000	-138,000	0	-1,133,000
Tajikistan	13,985	0	0	109,541	0	123,526	0	0	-123,526
09-08-13	6,800	0	0	0	0	6,800	0	0	-6,800
Project HOPE	6,800	0	0	0	0	6,800	0	0	-6,800
XXX-000-G00-X	6,800	0	0	0	0	6,800	0	0	-6,800
09-09-16	7,185	0	0	109,541	0	116,726	0	0	-116,726
UNDP	7,185	0	0	109,541	0	116,726	0	0	-116,726
TAJ-809-G07-H	7,185	0	0	109,541	0	116,726	0	0	-116,726

Table 3 (continued): Fully resolved Recoveries Committee OIG cases as of 30 June 2019 – Dates provided below each country refer to the date the case was closed.

Row Labels	OIG reported figures					Gross Recoverable Amount (in USD)	Written-Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)
	Misappropriated (in USD)	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Management Adjustments (in USD)				
Tanzania (United Republic)	0	283,454	0	819,000	-819,000	283,454	0	0	-283,454
31-12-14	0	0	0	819,000	-819,000	0	0	0	0
MOHSW / PMO-RALG / AMREF / TACAIDS / NACP / NTLP / NMCP	0	0	0	819,000	-819,000	0	0	0	0
XXX-000-G00-X	0	0	0	819,000	-819,000	0	0	0	0
29-05-17		283,454				283,454			-283,454
PSI / MOF		283,454				283,454			-283,454
Multiple		283,454				283,454			-283,454
Timor-Leste	0	152,626	0	0	-96,559	56,067	0	0	-56,067
21-01-19	0	152,626	0	0	-96,559	56,067	0	0	-56,067
MOH	0	152,626	0	0	-96,559	56,067	0	0	-56,067
TLS-H-MOH	0	152,626	0	0	-96,559	56,067	0	0	-56,067
Togo	0	128,508	736,361	0	-570,735	294,134	0	0	-294,134
16-09-16	0	128,508	736,361	0	-570,735	294,134	0	0	-294,134
PSI	0	128,508	736,361	0	-570,735	294,134	0	0	-294,134
TGO-405-G04-H and TGO-809-G09-H	0	128,508	736,361	0	-570,735	294,134	0	0	-294,134
Uganda	0	0	1,857,197	0	0	1,857,197	-485,109	0	-1,372,088
05-12-14	0	0	1,600,000	0	0	1,600,000	-485,000	0	-1,115,000
MoFPED	0	0	1,600,000	0	0	1,600,000	-485,000	0	-1,115,000
XXX-000-G00-X	0	0	1,600,000	0	0	1,600,000	-485,000	0	-1,115,000
09-07-18			49,776			49,776			-49,776
TASO			49,776			49,776			-49,776
Multiple			49,776			49,776			-49,776
19-06-19			207,421			207,421	-109		-207,312
MOFPED			207,421			207,421	-109		-207,312
Multiple			207,421			207,421	-109		-207,312
Ukraine	0	2,393,000	171,373	0	-2,559,000	5,373	-5,373	0	0
04-12-15	0	0	5,373	0	0	5,373	-5,373	0	0
International HIV/AIDs Alliance and the Network of People Living with HIV	0	0	5,373	0	0	5,373	-5,373	0	0
UKR-011-G08-H / UKR-011-G09-H / UKR-607-G05-H / UKR-607-G06-H	0	0	5,373	0	0	5,373	-5,373	0	0
31-12-14	0	2,393,000	166,000	0	-2,559,000	0	0	0	0
Alliance UK / Alliance Ukraine / All Ukrainian Network of People Living with HIV/AIDS	0	2,393,000	166,000	0	-2,559,000	0	0	0	0
XXX-000-G00-X	0	2,393,000	166,000	0	-2,559,000	0	0	0	0
Yemen	15,712	0	0	0	0	15,712	0	0	-15,712
22-02-16	15,712	0	0	0	0	15,712	0	0	-15,712
NTCP	15,712	0	0	0	0	15,712	0	0	-15,712
YEM-405-G04-T	15,712	0	0	0	0	15,712	0	0	-15,712
Zambia	13,000	5,760,000	4,998,000	0	-895,000	9,876,000	-1,701,000	0	-8,175,000
16-10-15	13,000	5,760,000	4,998,000	0	-895,000	9,876,000	-1,701,000	0	-8,175,000
ZNAN	13,000	5,760,000	4,998,000	0	-895,000	9,876,000	-1,701,000	0	-8,175,000
ZAM-708-G20-T	13,000	5,760,000	4,998,000	0	-895,000	9,876,000	-1,701,000	0	-8,175,000
Zanzibar	0	62,000	388,000	0	-36,000	414,000	-2,000	0	-412,000
10-03-15	0	62,000	388,000	0	-36,000	414,000	-2,000	0	-412,000
MoH & ZGFCCM	0	62,000	388,000	0	-36,000	414,000	-2,000	0	-412,000
ZAN-304-G03-T / ZAN-404-G04-M / ZAN-607-G05-H / ZAN-809-G07-M	0	62,000	388,000	0	-36,000	414,000	-2,000	0	-412,000
Zimbabwe	0	297,952	289,000	0	-191,000	395,952	-134,000	0	-261,952
30-06-15	0	0	134,000	0	0	134,000	-134,000	0	0
Ministry of Health and Child Welfare / National Aids Council / Zimbabwe Association of Church Related Hospitals	0	0	134,000	0	0	134,000	-134,000	0	0
XXX-000-G00-X	0	0	134,000	0	0	134,000	-134,000	0	0
20-06-17		261,952				261,952			-261,952
UNDP / MOHCC		261,952				261,952			-261,952
Multiple		261,952				261,952			-261,952
30-06-17		36,000	155,000		-191,000	0			
MUTAMBARA FOUNDATION		36,000	155,000		-191,000	0			
PO 20054418 / PO 20154328		36,000	155,000		-191,000	0			
Grand Total	23,545,385	66,787,772	50,369,713	5,962,711	-37,526,660	109,138,921	-5,367,141	-15,382,178	-88,389,601

Table 4: Recoverable amounts identified and submitted to the Recoveries Committee in the ordinary course of grant management operations outstanding as of 30 June 2019

	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Misappropriated (in USD)	Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written- Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)	Commitment to Repay (in USD)	Net After Commitments (in USD)
Afghanistan	80,099					80,099					80,099
MOH	80,099					80,099					80,099
(blank)	80,099					80,099					80,099
AFG-708-G04-H	80,099					80,099					80,099
<24-03-09	80,099					80,099					80,099
Angola		51,036				51,036					51,036
MOH		51,036				51,036					51,036
(blank)		51,036				51,036					51,036
AGO-M-MOH		51,036				51,036					51,036
<24-03-09		51,036				51,036					51,036
Belarus		352,547				352,547					45,091
RSPCMT		352,547				352,547			-307,456		45,091
(blank)		352,547				352,547			-307,456		45,091
BLR-H-RSPCMT / BLR-T-RSPCMT		352,547				352,547			-307,456		45,091
<24-03-09		352,547				352,547			-307,456		45,091
Benin		115,949				115,949					115,949
AFRICARE		49,037				49,037					49,037
(blank)		49,037				49,037					49,037
BEN-304-G04-M		49,037				49,037					49,037
2014		49,037				49,037					49,037
PNLP		66,912				66,912					66,912
(blank)		66,912				66,912					66,912
BEN-M-PNLP		66,912				66,912					66,912
<24-03-09		66,912				66,912					66,912
Burundi		124,126				124,126				-4,629	119,497
PNLS		62,983				62,983					62,983
(blank)		62,983				62,983					62,983
BDI-H-PNLS		62,983				62,983					62,983
<24-03-09		62,983				62,983					62,983
SEP/CNLS		1,907				1,907					1,907
(blank)		1,907				1,907					1,907
BRN-809-G07-H		1,907				1,907					1,907
2013		1,907				1,907					1,907
CRB		358				358					358
(blank)		358				358					358
BDI-C-CRB		358				358					358
<24-03-09		358				358					358
PNILP		27,753				27,753					27,753
(blank)		27,753				27,753					27,753
BDI-M-PNILP		27,753				27,753					27,753
<24-03-09		27,753				27,753					27,753
PNILT		17,857				17,857					17,857
(blank)		17,857				17,857					17,857
BDI-T-PNILT		17,857				17,857					17,857
<24-03-09		17,857				17,857					17,857
CED-CARITAS		11,999				11,999			-4,629		7,370
(blank)		11,999				11,999			-4,629		7,370
BRN-910-G10-M		11,999				11,999			-4,629		7,370
<24-03-09		11,999				11,999			-4,629		7,370
PNILT		1,268				1,268					1,268
(blank)		1,268				1,268					1,268
BRN-708-G06-T		1,268				1,268					1,268
<24-03-09		1,268				1,268					1,268
Central African Republic	158,704					158,704				-16,724	141,980
NAC, NCLS, MOPHP	158,704					158,704				-16,724	141,980
(blank)	158,704					158,704				-16,724	141,980
CAF-708-G05-H / CAF-810-G08-M / CAF-911-G09-T	158,704					158,704				-16,724	141,980
<24-03-09	158,704					158,704				-16,724	141,980

Table 4 (continued): Recoverable amounts identified and submitted to the Recoveries Committee in the ordinary course of grant management operations outstanding as of 30 June 2019

	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Misappropriated (in USD)	Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written- Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)	Commitment to Repay (in USD)	Net After Commitments (in USD)
Chad		1,694,867	48,731			1,743,598			-33,169	-54,060	1,656,369
FOSAP		1,476,770				1,476,770					1,476,770
(blank)		1,476,770				1,476,770					1,476,770
TCD-810-G07T / TCD-T13-G09-M / TCD-810-G05-H <24-03-09		1,476,770				1,476,770					1,476,770
AMASOT		176,833	31,610			208,443					179,599
(blank)		176,833	31,610			208,443			-28,844		179,599
TCD-810-G04-H <24-03-09		176,833	31,610			208,443			-28,844		179,599
UNAD		41,264	17,121			58,385				-54,060	0
(blank)		41,264	17,121			58,385			-4,325	-54,060	0
TCD-810-G06-H <24-03-09		41,264	17,121			58,385			-4,325	-54,060	0
Congo (Democratic Republic)		1,941,164				1,941,164			-293,700		1,647,464
MOH		1,480,912				1,480,912				-33,450	1,447,462
(blank)		1,480,912				1,480,912			-33,450		1,447,462
COD-H-MOH <24-03-09		1,958				1,958					1,958
ZAR-S-MOH / ZAR-911-G13-T <24-03-09		42,310				42,310			-33,450		8,860
ZAR-S-MOH / ZAR-M-MOH / ZAR-911-G13-T / KPMG <24-03-09		969,641				969,641					969,641
COD-M-SANRU / COD-H-CORDAID <24-03-09		467,003				467,003					467,003
SANRU		460,252				460,252			-260,250		200,002
(blank)		460,252				460,252			-260,250		200,002
COD-H-SANRU <24-03-09		460,252				460,252			-260,250		200,002
Gabon		11,458				11,458					11,458
MSPS		11,458				11,458					11,458
(blank)		11,458				11,458					11,458
GAB-T-MSPS <24-03-09		11,458				11,458					11,458
Ghana	8,126	2,462,372	27,809,277			30,279,775			-19,900,000	-7,500,000	2,879,775
MOH		2,379,987				2,379,987					2,379,987
(blank)		2,379,987				2,379,987					2,379,987
GHA-M-MOH <24-03-09		2,341,037				2,341,037					2,341,037
GHA-H-MOH / GHA-T-MOH / GHA-M-MOH <24-03-09		38,950				38,950					38,950
GOVERNMENT OF GHANA			27,400,000			27,400,000			-19,900,000	-7,500,000	0
(blank)			27,400,000			27,400,000			-19,900,000	-7,500,000	0
(blank) <24-03-09			27,400,000			27,400,000			-19,900,000	-7,500,000	0
GAC	8,126	82,385	409,277			499,788					499,788
(blank)	8,126	82,385	409,277			499,788					499,788
GHA-H-HAC <24-03-09	8,126	82,385	409,277			499,788					499,788
Guinea		77,742				77,742			-44,077		33,665
PLAN		66,440				66,440					22,363
(blank)		66,440				66,440			-44,077		22,363
GIN-T-PLAN <24-03-09		66,440				66,440			-44,077		22,363
MSHP		11,302				11,302					11,302
(blank)		11,302				11,302					11,302
GIN-T-MSHP <24-03-09		11,302				11,302					11,302
Indonesia		25,423				25,423			-593		24,830
MOH		25,423				25,423				-593	24,830
(blank)		25,423				25,423			-593		24,830
IDN-M-MOH <24-03-09		23,472				23,472					23,472
IDN-T-MOH <24-03-09		1,951				1,951				-593	1,358
		1,951				1,951			-593		1,358

Table 4 (continued): Recoverable amounts identified and submitted to the Recoveries Committee in the ordinary course of grant management operations outstanding as of 30 June 2019

	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Misappropriated (in USD)	Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written- Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)	Commitment to Repay (in USD)	Net After Commitments (in USD)
Kenya		560,498				560,498				-560,498	0
MOF		360,042				360,042				-360,042	0
(blank)		360,042				360,042				-360,042	0
KEN-405-G06-M <24-03-09		360,042				360,042				-360,042	0
NT		200,456				200,456				-200,456	0
(blank)		200,456				200,456				-200,456	0
KEN-H-TNT <24-03-09		71,470				71,470				-71,470	0
(blank)		71,470				71,470				-71,470	0
KEN-M-TNT <24-03-09		7,260				7,260				-7,260	0
(blank)		7,260				7,260				-7,260	0
KEN-T-TNT <24-03-09		121,726				121,726				-121,726	0
(blank)		121,726				121,726				-121,726	0
Lesotho		122,591				122,591					122,591
MOF		122,591				122,591				122,591	0
(blank)		122,591				122,591				122,591	0
LSO-C-MOF <24-03-09		122,591				122,591				122,591	0
(blank)		122,591				122,591				122,591	0
Liberia		209,697		55,193		264,890			-53,585	-1,608	209,697
MOH				55,193		55,193			-53,585	-1,608	0
(blank)				55,193		55,193			-53,585	-1,608	0
LBR-M-MOH / LBR-C-MOH <24-03-09				55,193		55,193			-53,585	-1,608	0
(blank)				55,193		55,193			-53,585	-1,608	0
MOH and SW		209,697				209,697					209,697
(blank)		209,697				209,697					209,697
LBR-M-MOH / LBR-T-MOH / LBR-810-G07-H <24-03-09		209,697				209,697					209,697
(blank)		209,697				209,697					209,697
Macedonia (Former Yugoslav Republic)		28,490				28,490					28,490
MOH		28,490				28,490				28,490	0
(blank)		28,490				28,490				28,490	0
MKD-011-G04-T <24-03-09		19,880				19,880				19,880	0
(blank)		19,880				19,880				19,880	0
MKD-H-MOH <24-03-09		8,610				8,610				8,610	0
(blank)		8,610				8,610				8,610	0
Malawi		160,839				160,839			-146,258		14,581
NAC		160,839				160,839			-146,258		14,581
(blank)		160,839				160,839			-146,258		14,581
MLW-H-NAC <24-03-09		160,839				160,839			-146,258		14,581
(blank)		160,839				160,839			-146,258		14,581
Mali		1,072,322				1,072,322			-405,932	-666,390	0
HCNLS		1,072,322				1,072,322			-405,932	-666,390	0
(blank)		1,072,322				1,072,322			-405,932	-666,390	0
MAL-405-G02-H <24-03-09		314,815				314,815			-128,645	-186,170	0
(blank)		314,815				314,815			-128,645	-186,170	0
MAL-809-G08-H <24-03-09		757,507				757,507			-277,287	-480,220	0
(blank)		757,507				757,507			-277,287	-480,220	0
Mauritania		14,053				14,053			-7,883	-6,170	0
CCM		14,053				14,053			-7,883	-6,170	0
(blank)		14,053				14,053			-7,883	-6,170	0
MRT-CFUND-1305 2016		14,053				14,053			-7,883	-6,170	0
(blank)		14,053				14,053			-7,883	-6,170	0
Mozambique		489,845	2,705,680			3,195,525				-1,710,499	1,485,026
FDC			457,076			457,076					457,076
(blank)			457,076			457,076					457,076
MOZ-C-FDC <24-03-09			457,076			457,076					457,076
(blank)			457,076			457,076					457,076
MOH		489,845	1,220,654			1,710,499				-1,710,499	0
(blank)		489,845	1,220,654			1,710,499				-1,710,499	0
MOZ-H-MOH / MOZ-M-MOH / MOZ-T-MOH / MOZ-809-G08-S / MOZ-911-G10H / MOZ-911-G11M <24-03-09		489,845	1,220,654			1,710,499				-1,710,499	0
(blank)		489,845	1,220,654			1,710,499				-1,710,499	0
MOZ-H-MOH / MOZ-M-MOH / MOZ-T-MOH <24-03-09		489,845	1,220,654			1,710,499				-1,710,499	0
(blank)		489,845	1,220,654			1,710,499				-1,710,499	0
WV						1,027,950					1,027,950
(blank)						1,027,950					1,027,950
MOZ-M-WV <24-03-09						1,027,950					1,027,950
(blank)						1,027,950					1,027,950

Table 4 (continued): Recoverable amounts identified and submitted to the Recoveries Committee in the ordinary course of grant management operations outstanding as of 30 June 2019

	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Misappropriated (in USD)	Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written- Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)	Commitment to Repay (in USD)	Net After Commitments (in USD)
Namibia		146,472			-121,619	24,854					24,854
NANASO		146,472			-121,619	24,854					24,854
(blank)		146,472			-121,619	24,854					24,854
NMB-202-G07-H-00		146,472			-121,619	24,854					24,854
<24-03-09		146,472			-121,619	24,854					24,854
Nepal		3,082	454,932			458,014					458,014
CCM Nepal		3,082	58,233			61,315					61,315
(blank)		3,082	58,233			61,315					61,315
CCM Funding		3,082	58,233			61,315					61,315
<24-03-09		3,082	58,233			61,315					61,315
NTC			62,720			62,720					62,720
(blank)			62,720			62,720					62,720
NEP-T-NTC			62,720			62,720					62,720
<24-03-09			62,720			62,720					62,720
NCASC			278,568			278,568					278,568
(blank)			278,568			278,568					278,568
NEP-H-NCASC			278,568			278,568					278,568
<24-03-09			278,568			278,568					278,568
EDCD			55,411			55,411					55,411
(blank)			55,411			55,411					55,411
NEP-M-EDCD			55,411			55,411					55,411
<24-03-09			55,411			55,411					55,411
Nigeria		2,112,933				2,112,933					2,112,933
NACA		1,907,105				1,907,105					1,907,105
(blank)		1,907,105				1,907,105					1,907,105
NGA-H-NACA		1,907,105				1,907,105					1,907,105
<24-03-09		1,907,105				1,907,105					1,907,105
NMEP		205,828				205,828					205,828
(blank)		205,828				205,828					205,828
NGA-M-NMEP		205,828				205,828					205,828
<24-03-09		205,828				205,828					205,828
Pakistan		548,844				548,844			-61,466	-392,044	95,334
NTP		58,921				58,921					58,921
(blank)		58,921				58,921					58,921
PAK-T-NTP		58,921				58,921					58,921
<24-03-09		58,921				58,921					58,921
NACP		19,534				19,534			-522		19,012
(blank)		19,534				19,534			-522		19,012
PAK-H-NACP		19,534				19,534			-522		19,012
<24-03-09		19,534				19,534			-522		19,012
DOMC		6,994				6,994			-4,937		2,057
(blank)		6,994				6,994			-4,937		2,057
PAK-M-DOMC		6,994				6,994			-4,937		2,057
<24-03-09		6,994				6,994			-4,937		2,057
TIH		463,395				463,395			-56,007	-392,044	15,344
(blank)		463,395				463,395			-56,007	-392,044	15,344
PAK-T-TIH		463,395				463,395			-56,007	-392,044	15,344
<24-03-09		463,395				463,395			-56,007	-392,044	15,344

Table 4 (continued): Recoverable amounts identified and submitted to the Recoveries Committee in the ordinary course of grant management operations outstanding as of 30 June 2019

	Unsupported (in USD)	Ineligible (in USD)	Other (in USD)	Misappropriated (in USD)	Management Adjustments (in USD)	Gross Recoverable Amount (in USD)	Written- Off (in USD)	Allocation Reduction (in USD)	Recovered (in USD)	Commitment to Repay (in USD)	Net After Commitments (in USD)
Senegal		144,593				144,593					144,593
DLSI		144,593				144,593					144,593
(blank)		144,593				144,593					144,593
SNG-H-DLSI		144,593				144,593					144,593
<24-03-09		144,593				144,593					144,593
Sierra Leone	35,955	424,726				460,681					460,681
NAS		108,445				108,445					108,445
(blank)		108,445				108,445					108,445
SLE-H-NAS		108,445				108,445					108,445
<24-03-09		108,445				108,445					108,445
MOHS	35,955	316,281				352,236					352,236
(blank)	35,955	316,281				352,236					352,236
SLE-Z-MOHS	35,955	316,281				352,236					352,236
<24-03-09	35,955	316,281				352,236					352,236
South Sudan				18,615		18,615			-14,095	-4,520	0
ACHI				18,615		18,615			-14,095	-4,520	0
(blank)				18,615		18,615			-14,095	-4,520	0
SSD-CFUND-13				18,615		18,615			-14,095	-4,520	0
<24-03-09				18,615		18,615			-14,095	-4,520	0
Tajikistan		48,328				48,328			-4,250		44,078
UNDP		7,863				7,863					7,863
(blank)		7,863				7,863					7,863
TJK-H-UNDP		7,863				7,863					7,863
<24-03-09		7,863				7,863					7,863
RCTC		40,465				40,465			-4,250		36,215
(blank)		40,465				40,465			-4,250		36,215
TJK-T-RCTC		40,465				40,465			-4,250		36,215
<24-03-09		40,465				40,465			-4,250		36,215
Tanzania (United Republic)				963,188		963,188			-428,699		534,489
MOF				963,188		963,188			-428,699		534,489
(blank)				963,188		963,188			-428,699		534,489
TZA-H-MOF / TZA-M-MOFP / TZA-T-MOF				963,188		963,188			-428,699		534,489
<24-03-09				963,188		963,188			-428,699		534,489
Ukraine		179,567				179,567					179,567
APH		179,567				179,567					179,567
(blank)		179,567				179,567					179,567
UKR-C-AUA		179,567				179,567					179,567
<24-03-09		179,567				179,567					179,567
Uzbekistan		253,649				253,649					253,649
RAC		253,649				253,649					253,649
(blank)		253,649				253,649					253,649
UZB-H-RAC		253,649				253,649					253,649
<24-03-09		253,649				253,649					253,649
Zambia	4,638,025					4,638,025				-4,638,025	0
UNDP	4,638,025					4,638,025				-4,638,025	0
(blank)	4,638,025					4,638,025				-4,638,025	0
ZAM-H-UNDP	4,638,025					4,638,025				-4,638,025	0
<24-03-09	4,638,025					4,638,025				-4,638,025	0
Grand Total	4,920,909	13,377,213	31,018,620	1,036,996	-121,619	50,232,119			-21,722,516	-15,533,814	12,975,790

Notes to tables:

(1) Each OIG report leading to a recoverable amount is counted as a separate case, even if multiple reports apply to the same country.

(2) A written commitment is recognized as such once signed by a competent authority, in practice usually the Ministry of Health with co-signature by the Ministry of Finance.

(3) Adjustments by management include changes to the OIG-reported figures based on additional considerations, which may include review of additional supporting documentation, retroactive approval of expenditures reported by the OIG as non-compliant where sound rationales exist, an evaluation of the Global Fund's available legal rights and remedies, and amounts identified by the Secretariat as recoverable in addition to the amounts reported by the OIG. Such adjustments are made in consultation with the OIG.

(4) The amount deemed recoverable represents the maximum amount to be recovered based on the deliberations of the Recoveries Committee and the Executive Director and latest information available. The amounts include considerable sums which are subject to further analysis or explanation by the Secretariat and validation by the OIG. Part or all such amounts may be shifted to the management adjustments column following further deliberations of the Recoveries Committee and the Executive Director. For cases not yet fully resolved, the amounts in the 'written off', 'recovered' and 'commitment to repay' columns may not fully represent the amount ultimately recovered, as recovery work is still ongoing on a portion of the amount shown as 'net deemed recoverable'.

(5) Allocation reductions represent a means of resolving exceptionally difficult cases where all means of recovery have been exhausted. Upon approval by the Executive Director, a country's allocation may be reduced by a factor of 2:1, being two units of allocation reduction for every one unit of recoverable amount. The amounts in the table represent the recoverable amounts written off as a result of the application of allocation reductions.