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¹ See the main SG3 report for a full list of acronyms and abbreviations.

ANNEX 1: DATA SOURCES ON DONOR FUNDING FOR HEALTH AND IMMUNISATION

Our analysis of global funding flows to health and immunisation is based on three main data sources, described in Table 1.

In our view, the DAH database represents the most comprehensive source of data on donor funding for health. As against the OECD ODA data on health, DAH includes funding from private foundations and NGOs as well.² However, the OECD ODA data is also helpful for a number of purposes including, for example, making comparisons between sectors. The IF database, drawn from a larger database on financing for Maternal and Newborn Child Health is, to our knowledge, the first attempt to collate this information.

² The approach used by DAH is to sum amounts disbursed from bilateral, multilateral, GHPs and private donors/agencies, net of contributions to other channels monitored in the analysis. The ‘channel’ through which resources are recorded as flowing is therefore defined as the most proximal channel to the recipient country. Thus the bilateral development assistance as noted by DAH is different from bilateral ODA recorded in the OECD database.

Table 1: Description of data sources

| Name of database | Description | Time period available | Data caveats ³ | Source/ reference |
|---|--|------------------------|---|--|
| Development Assistance for Health (DAH) | Tracks disbursements for health from bilateral donors organisations, multilaterals, GHPs, private foundations and NGOs | 1990-2007 | <ul style="list-style-type: none"> • Data for bilateral donors are drawn from the OECD DAC CRS database, which we understand suffers from under-reporting. Disbursement figures for these donors are therefore estimated rather than directly observed (to correct for the under-reporting). • Health sector specific contributions are estimated for some channels (e.g. UNICEF, NGOs), in the absence of clear data. These estimates are based on assumptions on the trends. • Only two GHPs are tracked (GAVI and GFATM) – hence any contributions from bilateral donors to other GHPs will be recorded as bilateral contributions rather than contributions channelled through GHPs. • Owing to non-availability of data, non-US foundation and NGO contributions are not included, and data for some channels’ administrative costs are estimated. | Ravishankar et al (2009): <i>“Financing of global health: tracking development assistance for health from 1990 to 2007”</i> , Lancet |
| OECD DAC aggregates database (ODA) ⁴ | <ul style="list-style-type: none"> • Data on ODA health⁵ • Data on ODA for other comparable sectors | 1967-2008 ⁶ | <ul style="list-style-type: none"> • The OECD data tracks ‘gross disbursements’ i.e. any repayments are not netted off. We understand that where data on disbursements is not available, commitment figures are used in the database. • We understand that the DAC aggregate tables may suffer from under-reporting. Ravishankar et al (2009) note that in some years (notably 2007) DAC members report higher contributions to the CRS than to the DAC aggregate tables. | www.oecd.org/dac/stats/idsonline (accessed February 2010). |

³ The referenced papers also provide more details on the caveats – we present here only a summary of the main points.

⁴ The CRS database, which is a detailed, project-level database of resources as they arrive in the recipient country, is an alternative OECD data source. However, it is not complete for some multilateral institutions, and so we do not use it here. Data from this source are incorporated in both the DAH and IF databases.

| Name of database | Description | Time period available | Data caveats ³ | Source/ reference |
|------------------------------------|---|-----------------------|--|--|
| Immunisation funding database (IF) | <ul style="list-style-type: none"> Tracks disbursements for immunisation (both polio and non-polio) from bilateral donors, multilaterals and GAVI (as a part of a broader database on maternal neonatal and child health (MNCH) funding) | 2003-07 | <ul style="list-style-type: none"> Data is based on the OECD CRS database and hence does not include WHO and some other multilaterals. CEPA has obtained data on WHO non-polio immunisation expenditure (on a bi-annual basis, so we have assumed equal amounts in each of the two years covered by each data point), which we have incorporated in this database, While it has not been possible to include information on any other multilaterals, our view however is that this data is fairly complete as the key agencies relevant for immunisation are covered. There is a difference between the data recorded for GAVI in the DAH and IF databases (which are recorded as \$301m in 2007 vs. \$918m in the DAH database). We understand that the IF database only includes program disbursements for immunisation (i.e. HSS is not covered). Also our view is that the IFFIm monies are not included here. | <p>Greco et al (2008): <i>“Countdown to 2015: assessment of donor assistance to maternal newborn and child health between 2003 and 2006”</i>, Lancet</p> <p>Greco et al (2006): <i>“Countdown to 2015: tracking donor assistance to maternal newborn and child health”</i>, Lancet</p> |

⁵ For consistency with the DAH data source, ‘Health’ is defined to include ‘Basic Health’, ‘General Health’ and ‘Population & Reproductive Health’.

⁶ For the purposes of our analysis, we have considered data for the years 1990-2007.

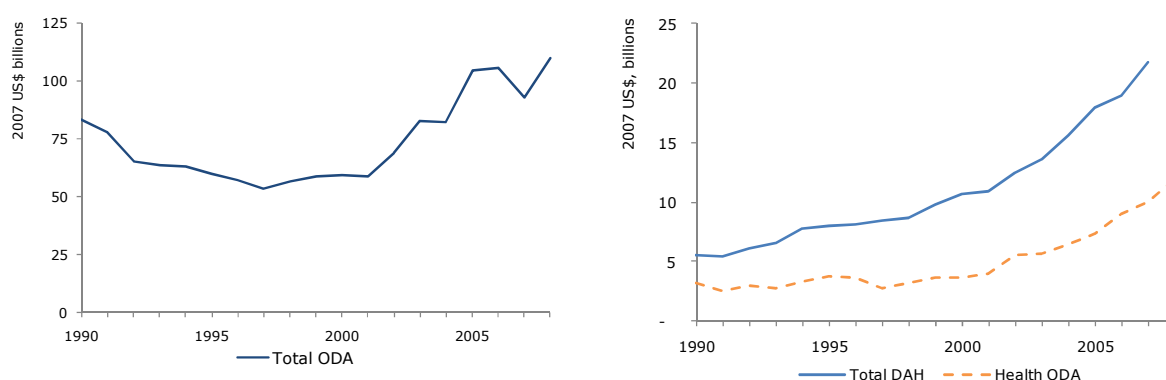
ANNEX 2: ANALYSIS OF TOTAL ODA, HEALTH AND IMMUNISATION FUNDING

This annex presents the detailed analysis of the growth of total ODA, health and immunisation funding, summarised in Section 3.3 of the main SG3 report. The data sources are described in Annex 1.

1. Total ODA and health funding

Total ODA declined in the mid 1990s, however, after reaching a trough in 1997, has been increasing at a compound rate of 6.8% per year (Figure 1, Chart 1). Within this, health ODA has been increasing, albeit at a faster rate from the early 2000s (Figure 1, Chart 2). A broader measure of health sector funding – DAH, which includes funding from private foundations and NGOs⁷ – also depicts a rising trend. Health ODA and DAH represented 11% and 23% respectively of total ODA in 2007.⁸ These proportions rose from 6% and 18% respectively in 2000, implying that health, relative to other development assistance sectors, has grown in importance over time.

Figure 1: Chart 1- Total ODA flows, DAC country donors and Chart 2- Health ODA and DAH



Source: OECD DAC; DAH database

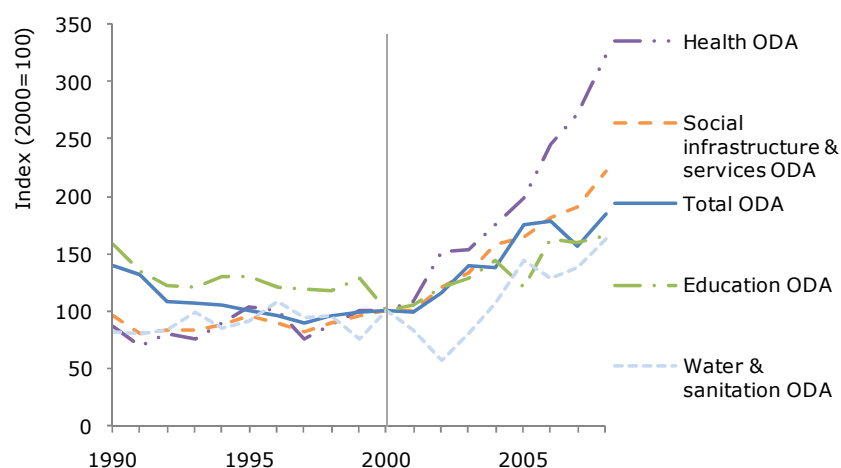
In addition, Figure 2 presents indices for a number of comparable ODA sectors, as well as total ODA (based on a value of 100 in the year 2000). As can be seen from the figure, the health sector has attracted greater than average proportional increases in contributions since the late 1990s/ 2000. While some sectors did grow faster still (not represented in the figure, as we have only included some comparable sectors here), health resources grew faster than both an overall index of social infrastructure ODA (note that health ODA is a subset of this overall category, as are education, and water & sanitation) and the index of total ODA.⁹

⁷ Ravishankar et al (2009): “Financing of global health: tracking development assistance for health from 1990 to 2007”, Lancet Please refer Annex 1 for a detailed explanation of DAH.

⁸ It is not possible for us to reconcile the differences between the DAH and ODA data and our view for an examination of the data is that the difference between the two datasets is not only the addition of private foundation and NGO funding in the DAH measure, but also some differences in the way bilateral and multilateral ODA have been included.

⁹ The proportion of total ODA that was directed to the health sector grew from 6.2% in 2000 to 10.8% in 2008.

Figure 2: Index of ODA



Source: OECD DAC

2. Immunisation funding with total health funding

In order to examine whether the immunisation sector has grown in importance within health as a whole, we have examined the sub-categories included within health ODA i.e. general health, basic health and reproductive health.^{10 11} The yearly levels of funding recorded in each of these three categories are presented in Figure 3 below.¹² By far the fastest growth has been for *reproductive health*, which accounted for a 63% share of total health ODA in 2008 – up from only 22% in 1997, when the recent period of growth in ODA began.

Funding for immunisation, which is captured within *basic health*, grew less rapidly than funding for reproductive health. As a result, despite strong real growth, the share of health-specific ODA accounted for by basic health actually fell from 30% in 1997 to 25% in 2008 (it reached a high of 35% in 2000). This suggests that reproductive health was more of a priority than basic health.

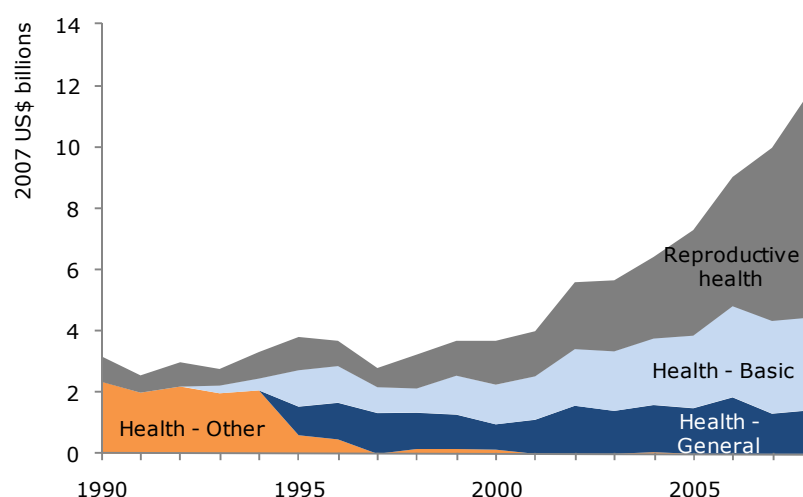
By contrast, ODA resources for *general health* grew very little in real terms over the whole period, and its share fell from 47% in 1997 to 12% in 2008.

¹⁰ The full category names are, respectively: “I.2.a Health, General”; “I.2.b Basic Health”; and “I.3 Population Pol./Progr. & Reproductive Health”. Note that we have followed the approach of including the latter category in total health, as used by the DAH database.

¹¹ The detailed sub-sectors for Basic Health include: ‘Basic health care’, ‘Basic health infrastructure’, ‘Basic nutrition’, ‘Infectious disease control’, ‘Health education’, ‘Malaria control’, ‘Tuberculosis control’, and ‘Health personnel development’. The sub-sectors included in General Health are: ‘Health policy & administrative management’, ‘Medical education/training’, ‘Medical research’, and ‘Medical services’. The sub-sectors included under Reproductive Health are: ‘Population policy & administrative management’, ‘Reproductive health care’, ‘Family planning’, ‘STD control including HIV/AIDS’, and ‘Personnel development for population & reproductive health’.

¹² Before 1995, most ‘Health’ ODA was not classified as either ‘Basic’ or ‘General’, and has been included here as ‘Health – Other’. After 1995, in some years a very small proportion of total ‘Health’ ODA was not classified as either ‘Basic’ or ‘General’, and is again included here as ‘Health – Other’.

Figure 3: Health-specific ODA funding by sub-sector



Source: OECD DAC

Table 1 presents the compound growth rates for these sub-categories of health, along with that for health ODA (and DAH, although this implies we are now comparing across datasets). The result presented above is further demonstrated through this data – reproductive health has grown faster than basic health, and in fact even faster than DAH and health ODA.

Table 1: Growth rates in donor funding

| Category | Growth rate (1995-2007) |
|---------------------|-------------------------|
| Basic health | 8.1% |
| Reproductive health | 17.4% |
| Total DAH | 9% |
| Total health ODA | 5.1% |

Source: OECD DAC; DAH database

Given the ‘noise’ in this data (i.e. immunisation forms just one part of total basic health spending, and so it is possible that the basic health trend is not representative of immunisation funding¹³), we have also examined a specific database on immunisation funding.¹⁴ However this database covers the period 2003-07 only, and does not include data from WHO.^{15 16} While we have circumvented this problem by obtaining immunisation funding data directly from WHO¹⁷, our view is that the time period for the database is still too short to put major weight on any of the conclusions.

¹³ Also, based on the coding applied by donors, it may be the case that not all immunisation funding is captured within this sub-category.

¹⁴ Greco et al (2008): “Countdown to 2015: assessment of donor assistance to maternal newborn and child health between 2003 and 2006”, Lancet and Greco et al (2006): “Countdown to 2015: tracking donor assistance to maternal newborn and child health”, Lancet.

¹⁵ Please see Annex 1 for details on the limitations of each of the databases used in the analysis.

¹⁶ This is because WHO does not report to the OECD DAC CRS database, which forms the basis of data collection for the immunisation funding database.

¹⁷ Please note that CEPA has obtained data from WHO IVB department which does not include polio.

Table 2 provides growth rates for different categories of health/ immunisation funding. As can be seen from the table:

- Immunisation funding (both total and non-polio only) exhibits greater year-by-year volatility as it is a narrower measure than DAH and ODA.
- However the compound growth rate over the period provides more comparable results – while total immunisation funding has grown slower than both the DAH and ODA measures, non-polio immunisation funding has grown at a comparable/ faster rate.

Table 2: Growth rates in donor funding

| Category | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2003-07 |
|--|---------|---------|---------|---------|---------|
| Total imm. funding (polio and non polio) ¹⁸ | -11% | 15% | -1% | 48% | 10.5% |
| Non-polio imm. Funding | -4% | 6% | -9% | 91% | 15.4% |
| Total DAH | 15% | 15% | 6% | 15% | 12.6% |
| Total health ODA | 13% | 14% | 24% | 11% | 15.3% |

Source: Immunisation funding database; DAH database; OECD DAC

¹⁸ Please note that as per the above footnote, this does not include WHO polio funding, which we can expect to be fairly large.

ANNEX 3: WHO AND UNICEF IMMUNISATION EXPENDITURE DATA

Table 1: Global expenditure of WHO non-polio immunisation 2000-09, per biennium (\$ '000)

| | 2000-01 | 2002-03 | 2004-05 | 2006-07 | 2008-09 |
|--|---------|---------|---------|---------|---------|
| WHO assessed contributions and core voluntary funds | 14,269 | 13,962 | 15,335 | 16,184 | 21,697 |
| GAVI MNT IFFIm | | | | | 1,071 |
| GAVI Work Plan funds excluding ADIP | | 315 | 6,999 | 22,536 | 39,553 |
| ADIP funds received through John Hopkins, PATH and GAVI Work Plan | | | 1,237 | 2,288 | 7,872 |
| Hib Initiative related funds received through John Hopkins | | | 612 | 1,887 | 3,883 |
| Bilateral contributions towards GAVI related activities ¹⁹ | 1,567 | 9,122 | 14,904 | 4,614 | |
| Measles Partnership funds for measles campaigns (includes IFFIm funds) | | | | 26,980 | 59,990 |
| Pandemic influenza funds | | | | 15,514 | 29,528 |
| Other voluntary contributions, including other earmarked bilateral funds | 58,064 | 85,806 | 96,521 | 104,251 | 94,335 |
| Total | 73,900 | 109,205 | 135,609 | 194,254 | 257,929 |

Source: Data provided by WHO

¹⁹ Bilateral funds provided to WHO by Denmark, Netherlands and Norway in support of GAVI activities.

Table 2: UNICEF immunisation funding by source (\$ '000)²⁰

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| UNICEF funds (regular and voluntary) | 138,158 | 233,707 | 259,893 | 260,147 | 292,812 | 316,702 | 257,440 | 288,831 | 247,395 | 260,776 |
| UNICEF procurement services | 51,678 | 69,729 | 85,628 | 131,731 | 182,824 | 196,388 | 308,429 | 296,786 | 237,626 | 292,855 |
| UNICEF procurement services for GAVI | 0 | 72,994 | 58,331 | 116,629 | 106,905 | 131,202 | 133,142 | 230,898 | 306,771 | 401,858 |
| GAVI work plan | 1,002 | 1,828 | 1,419 | 1,419 | 3,409 | 3,592 | 1,383 | 3,950 | 3,265 | 6,830 |
| Total | 190,838 | 378,258 | 405,271 | 509,926 | 585,950 | 647,884 | 699,011 | 816,515 | 791,792 | 955,489 |

Source: Data provided by UNICEF

²⁰ The UNICEF procurement services figures (both GAVI related and otherwise) do not include procurement fees.

ANNEX 4: REGRESSION ANALYSIS ON GLOBAL LEVEL FUNDING DISPLACEMENT

We have carried out simple regression analysis to assess whether funding to GAVI has resulted in a decline in funding for WHO and UNICEF in particular, and total health funding in general. This Annex contains the detailed approach and results underlying the summary provided as part of Section 3.5 in the SG3 report.

Approach

Given the short history of GAVI, any regression results need to be interpreted with real caution. Furthermore, the database of immunisation financing we use covers only 2003-07, giving too few data points for a rigorous analysis. We therefore focus our regression analysis on the assessment of any ‘displacement effect’ of funding to GAVI at the overall health level, and note that any conclusions we draw are only tentative.

We focus on two separate questions:

- *Channel specific displacement.* Had GAVI funding displaced funding for WHO/UNICEF specifically?
- *Net overall displacement.* Has GAVI funding displaced total resources for health?

Table 1 below summarises the variables used in the main regressions (detailed hypotheses are included in the sections below). We use data on WHO/UNICEF/GAVI disbursements as a proxy for funding, in the absence of complete data for the latter. For all the disbursement variables (including GAVI), data are taken from the DAH database for consistency (see Annex 1 for details on the DAH database).²¹ The time period covered in the analysis is 2000-07.

Table 1: Variables used in main regression analysis

| Category | Variable | Data source |
|---|---|-------------------|
| Dependent variables | Year-on-year dollar change in WHO health disbursements Year-on-year dollar change in UNICEF health disbursements Year-on-year dollar change in DAH disbursements (excluding GAVI) | DAH ²² |
| Explanatory variable | Year-on-year dollar change in GAVI disbursements | |
| Control variables (some specifications only) | Total ODA DAC country GNI GAVI-eligible country population Dummy for years post-2000 ²³ | World Bank |

²¹ However, we also present results using GAVI’s internal disbursement data in Annex 4.

²² The DAH database tracks disbursements by the final channel of delivery. WHO/ UNICEF disbursements represents direct expenditure by WHO/ UNICEF on health.

²³ The rationale for the inclusion of this variable is that there was a change in overall context around this time, with increased focus on the MDGs.

Given we use a relatively simple model specification, it is possible that we have omitted important explanatory variables, which would reduce the value of the analysis. For example, if funding to Global Fund (GFATM) has displaced WHO or UNICEF funding but is positively correlated with changes in GAVI funding, then we could mistakenly interpret the evidence as reflecting displacement by GAVI. To improve the validity of our conclusions we therefore also test for some relationships of this kind.

Because of data limitations, we do not claim to have developed a fully-specified model (with hypotheses about causality). Rather, we present below a series of associations. In addition, given the short history of GAVI (and therefore relatively few data points), the regression results below need to be interpreted with real caution. The technique we use is a simple OLS regression, with robust standard errors²⁴.

The following sections contain our main results tables. In reading these tables, the columns indicate different model specifications and the rows different explanatory variables. For each explanatory variable, coefficients are presented on the same line as the variable name, with standard errors in parentheses on the row beneath. The dependent variable differs from table to table; it is noted in the text and also in the notes to each table. Finally, the lower panel in each table indicates whether each control variable was included. For simplicity, coefficients for these control variables are not presented here as they are not the focus of this section (but are included in the detailed results in Tables 6 to 9).

The full set of more detailed results tables (including alternative models using data on GAVI disbursement as provided by the GAVI Secretariat rather than the DAH database) are available at the end of this Annex.

Displacement from specific channels

Our first regressions address the question of whether GAVI funding has displaced funding through the two specific channels most closely related to immunisation: WHO and UNICEF.

In these results, a negative and significant coefficient on GAVI funding is consistent with some degree of displacement. By contrast, a positive and significant coefficient is more consistent with GAVI having ‘crowded in’ additional resources. As noted above, however, any associations presented here – even if statistically significant – are insufficient on their own to draw any strong conclusions regarding causality.

Tables 2 and 3 present the results for WHO and UNICEF respectively. In Table 2 the dependent variable is the year-on-year dollar change in WHO disbursements. In Table 3 the dependent variable is the year-on-year dollar change in UNICEF disbursements.

²⁴ Formally, we use Huber-White standard errors to correct for general forms of heteroskedasticity. While we recognise that more complex and sophisticated time series techniques are available, our aim here is simply to highlight high-level associations and so we favour the ease of interpretation given by this approach.

Table 2: Results of regressions of Δ WHO disbursements on Δ GAVI disbursements

| Model specification: | (1) | (2) | (3) | (4) | (5) |
|-----------------------------|-----------------|------------------|--------------------|------------------|-------------------|
| GAVI disbursements | -0.15 (0.09) | -0.12 (0.08) | -0.40** (0.17) | -0.30* (0.16) | -0.40** (0.15) |
| Constant | 33.95 (29.6) | -40.25 (45.0) | 546.36* (261.5) | 13.72 (34.6) | 0.85 (875.7) |
| Control variables included: | | | | | |
| DAC country GNI | | Yes | | | Yes |
| GAVI country population | | | Yes | | Yes |
| Post-2000 dummy | | | | Yes | Yes |
| Observations | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in WHO disbursements

Robust standard errors below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Results of regressions of Δ UNICEF disbursements on Δ GAVI disbursements

| Model specification: | (1) | (2) | (3) | (4) | (5) |
|-------------------------|-------------------|-------------------|-------------------|------------------|-------------------|
| GAVI disbursements | -0.14** (0.06) | -0.14** (0.06) | -0.25* (0.13) | -0.25* (0.14) | -0.26 (0.16) |
| Constant | 28.14 (16.3) | 54.08* (29.7) | 249.27 (202.1) | 13.6 (13.6) | 148.01 (472.0) |
| Control variables: | | | | | |
| DAC country GNI | | Yes | | | Yes |
| GAVI country population | | | Yes | | Yes |
| Post-2000 dummy | | | | Yes | Yes |
| Observations | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in UNICEF disbursements

Robust standard errors below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In all model specifications the coefficient on GAVI funding is negative, which implies that an increase in GAVI funding is associated with a decrease in funding to WHO and UNICEF. Including control variables generally has the effect of lowering the coefficient on GAVI funding – suggesting, for example, that the years post-2000 are associated with larger increases in both WHO/UNICEF and GAVI funding. When including the full set of control variables the coefficient is significant (at the 5% level) for WHO funding, but not for UNICEF funding.²⁵

As noted above this evidence, though it is consistent with some degree of displacement, is not strong enough to draw robust conclusions. For example, the negative coefficient on GAVI funding could be capturing the displacement effect of other channels, such as the Global Fund.

To test whether this could be the case, Table 4 below contains the results of a series of checks on this analysis. In these models, the dependent variable is the year-on-year dollar change in either WHO, UNICEF or GAVI disbursements, as indicated by the column title. The source for all data used is the DAH database.

²⁵ However, we note that with only 17 observations and four explanatory variables there are relatively few degrees of freedom remaining, and hence the likelihood of detecting individually significant coefficients is reduced. It is noteworthy that the coefficient on GAVI funding is significant in all other specifications.

Table 4: Results of regressions of Δ WHO/UNICEF/GAVI disbursements on Δ Global Fund/bilateral disbursements

| Model specification: | WHO | | UNICEF | | GAVI | |
|---------------------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| | (1) | (2) | (1) | (2) | (1) | (2) |
| Global Fund disbursements | 0.14 (0.18) | | 0.08 (0.13) | | 0.36 (0.25) | |
| Bilateral disbursements | | 0 (0.04) | | -0.01 (0.02) | | 0.17* (0.09) |
| Constant | 11.08 (27.8) | 27.1 (31.8) | 12.56 (12.2) | 23.25 (15.9) | 16.06 (12.9) | 5.79 (18.4) |
| Observations | 17 | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in WHO/UNICEF/GAVI disbursements (as indicated by model group title)

Robust standard errors below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

There is no evidence in these models of a statistically significant relationship between WHO/UNICEF funding and either Global Fund or bilateral funding. In addition, there is only weak evidence of a relationship between GAVI funding and bilateral funding, and no significant evidence of a relationship between GAVI funding and Global Fund funding. This is not consistent with the existence of a confounding effect of either the Global Fund or bilateral donors.

These results strengthen our tentative conclusions based on Table 2 and Table 3. However, we note that we have examined just two of potentially many omitted factors, and consequently those conclusions remain relatively weak.

Displacement of total health funding

We also attempt to address the question of whether GAVI has had a displacement effect on overall resources for health. To do this, we estimate a similar set of regressions, with the year-on-year dollar change in DAH (excluding GAVI) as the dependent variable.

The hypothesis being tested, and the interpretation of the coefficients, is similar to that explained above. However, by using the aggregate data excluding GAVI we are effectively testing the net displacement effect of GAVI funding across all other channels. A positive and significant coefficient could indicate GAVI crowding in resources through other channels; a negative and significant coefficient could reflect displacement. An insignificant coefficient would suggest that GAVI has had no net impact on funding through other channels – though this could of course include a mixture of displacing resources through some channels and crowding in resources through others.

Table 5 presents the results from these regressions. The dependent variable is the year-on-year dollar change in DAH (excluding GAVI).

Table 5: Results of regressions of ΔDAH on $\Delta GAVI$ disbursements

| Model specification: | (1) | (2) | (3) | (4) |
|-----------------------------|----------------------|-----------------------|----------------------|---------------------|
| GAVI disbursements | 2.72*** (0.80) | 0.81 (1.52) | 0.9 (1.40) | 0.5 (1.82) |
| Constant | 751.84*** (188.3) | 4764.93** (1737.7) | 510.23*** (144.8) | 2080.93 (5027.5) |
| Control variables included: | | | | |
| Total ODA | | Yes | | Yes |
| DAC country GNI | | Yes | | Yes |
| GAVI country population | | Yes | | Yes |
| Post-2000 dummy | | | Yes | Yes |
| Observations | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in total DAH

Robust standard errors below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The results for Model (1), excluding control variables, suggest a strong positive relationship between GAVI funding and DAH across all other channels. However, the significance and magnitude of this relationship is weaker when other influences on DAH are included. We did not find strong evidence that the control variables had a significant effect on total DAH.

To conclude that GAVI has crowded in resources for DAH from these results would be too strong, as the coefficients once control variables are included are not significantly different from zero. Instead, we draw the weaker conclusion that this evidence is not consistent with GAVI displacing resources from DAH overall.

Conclusions

Given the specific limitations of this regression analysis ((i) the absence of a reasonably long time series of data; (ii) the use of expenditure data as a proxy for funding; (iii) the use of health instead of immunisation funding data; and (iv) the possibility of omitting other relevant variables), we are not able to place too excessive weight on it in our overall conclusions.

However, our main findings are as follows:

- Looking at the two specific channels (WHO and UNICEF) most closely related to GAVI, the evidence suggests a negative relationship between funding for GAVI and funding for WHO/ UNICEF. We have investigated further, and found no similar relationship between WHO/ UNICEF funding and funding from GFATM and bilateral donors. It is therefore possible that these results do indeed indicate some degree of displacement (although we may have omitted other relevant variables). However, the size of this effect is relatively low – of the order of \$0.30 to \$0.40 reduction in WHO expenditure for every \$1 increase in GAVI expenditure (note that as mentioned in the approach section upfront, we are using expenditure as a proxy for funding).
- The regression results using total donor health aid as the dependent variable suggest that little or no discernable relationship exists between GAVI disbursements and DAH across all other channels. To an extent this is expected given the small magnitude of GAVI funding compared with total DAH, and given the relatively small number of data points.

It is also consistent with GAVI crowding in resources for health through some channels (e.g. bilateral donors) and displacing resources through others (e.g. WHO/UNICEF), such that its net effect is close to zero.

Detailed results tables

Table 6: Detailed results of regressions of Δ WHO disbursements on Δ GAVI disbursements

| Model specification: | Using DAH data for GAVI | | | | | Using GAVI's own disbursements data | | | | |
|-------------------------|-------------------------|------------------|-----------------------|------------------|-------------------|-------------------------------------|------------------|-------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| GAVI disbursements | -0.15 (0.09) | -0.12 (0.08) | -0.40** (0.17) | -0.30* (0.16) | -0.40** (0.15) | 0.07 (0.47) | 0.2 (0.57) | -0.33 (0.45) | -0.14 (0.40) | -0.22 (0.55) |
| Constant | 33.95 (29.6) | -40.25 (45.0) | 546.36* (261.5) | 13.72 (34.6) | 0.85 (875.7) | 24.3 (26.2) | -66.25 (50.2) | 369.44 (226.1) | 13.64 (34.6) | -74.45 (1000.2) |
| DAC country GNI | 2608.21 (2063) | | | | 5432.12 (4551) | 3131.76 (2234) | | | | 4914.36 (5557) |
| GAVI country population | | | -32649.68* (16097) | | | -9655.17 (44779) | | | -21984.5 (13816) | -4092.76 (50335) |
| Post-2000 dummy | | | | | 69.13 (64) | 102.78 (199) | | | 38.13 (53) | 74.87 (225) |
| N | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in WHO disbursements

Robust standard errors below coefficients. * p<0.10, ** p<0.05, *** p<0.01

Table 7: Detailed results of regressions of Δ UNICEF disbursements on Δ GAVI disbursements

| Model specification: | Using DAH data for GAVI | | | | | Using GAVI's own disbursements data | | | | |
|-------------------------|-------------------------|-------------------|---------------------|------------------|-------------------|-------------------------------------|-----------------|-----------------|-------------------|---------------------|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| GAVI disbursements | -0.14** (0.06) | -0.14** (0.06) | -0.25* (0.13) | -0.25* (0.14) | -0.26 (0.16) | 0.14 (0.34) | 0.12 (0.37) | 0.08 (0.34) | 0.06 (0.34) | 0.05 (0.36) |
| Constant | 28.14 (16.3) | 54.08* (29.7) | 249.27 (202.1) | 13.6 (13.6) | 148.01 (472.0) | 17.53 (12.4) | 30.95 (40.5) | 67.4 (152.6) | 13.54 (13.5) | 71.92 (604.3) |
| DAC country GNI | -911.92 (1063) | | | | -151.16 (4106) | -464.2 (1424) | | | | -426.12 (4627) |
| GAVI country population | | | -14090.3 (12434) | | | -7873.44 (21410) | | | -3176.3 (9430) | -2727.24 (28311) |
| Post-2000 dummy | | | | | 49.66 (41) | 27.32 (134) | | | 14.29 (34) | 2.69 (148) |
| N | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in UNICEF disbursements

Robust standard errors below coefficients. * p<0.10, ** p<0.05, *** p<0.01

Table 8: Results of regressions of Δ WHO/UNICEF/GAVI disbursements on Δ GFATM/bilateral disbursements

| Model specification: | WHO | | UNICEF | | GAVI | |
|---------------------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| | (1) | (2) | (1) | (2) | (1) | (2) |
| Global Fund disbursements | 0.14 (0.18) | | 0.08 (0.13) | | 0.36 (0.25) | |
| Bilateral disbursements | | 0 (0.04) | | -0.01 (0.02) | | 0.17* (0.09) |
| Constant | 11.08 (27.8) | 27.1 (31.8) | 12.56 (12.2) | 23.25 (15.9) | 16.06 (12.9) | 5.79 (18.4) |
| Observations | 17 | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in WHO/UNICEF/GAVI disbursements
(as indicated by model group title)

Robust standard errors below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Detailed results of regressions of Δ DAH disbursements on Δ GAVI disbursements

| Model specification: | Using DAH data for GAVI | | | | Using GAVI's own disbursements data | | | |
|-------------------------|-------------------------|-------------------------|----------------------|---------------------|-------------------------------------|---------------------|----------------------|---------------------|
| | (1) | (2) | (3) | (4) | (1) | (2) | (3) | (4) |
| GAVI disbursements | 2.72*** (0.80) | 0.81 (1.52) | 0.9 (1.40) | 0.5 (1.82) | 8.63*** (2.07) | 6.59** (2.81) | 5 (3.68) | 6.40* (2.95) |
| Constant | 751.84*** (188.3) | 4764.93** (1737.7) | 510.23*** (144.8) | 2080.93 (5027.5) | 693.32*** (191.8) | 3116.71 (2122.5) | 510.48*** (144.9) | 2521.78 (4333.1) |
| Total ODA | | 970.93 (2018) | | 346.96 (2685) | | 2266.78 (2490) | | 2117.06 (2571) |
| DAC country GNI | | 945.26 (23291) | | 17387.62 (47291) | | 8985.19 (22205) | | 12539.24 (34945) |
| GAVI country population | | -259160.00** (91988) | | -128796 (222409) | | -175207 (111762) | | -146138 (211089) |
| Post-2000 dummy | | | 825.57* (390) | 641.63 (1210) | | | 654.43 (500) | 144.14 (822) |
| N | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |

Dependent variable is year-on-year change in DAH

Robust standard errors below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

ANNEX 5: ANALYSIS OF VOLATILITY IN FUNDING FLOWS

This section aims to assess the volatility of GAVI funding (as an indication of predictability) in comparison with overall immunisation and health funding as well as with the Global Fund. The objective of the analysis is to see if funding to GAVI has been more or less volatile.

Table 1 presents these metrics for a range of different indicators. Please note that all of these indicators are disbursements (used as a proxy in the absence of comparable information on funding levels for each category). The results presented in this table thus need to be interpreted with caution.

Table 1: *Volatility of resource flows*

| Category | Standard deviation of yearly percentage changes | | Coefficient of variation of yearly percentage changes | |
|---|---|---------|---|---------|
| | 1990-99 | 2000-08 | 1990-99 | 2000-08 |
| Total DAH | 6.4% | 4.9% | 0.97 | 0.46 |
| Health ODA | 16.9% | 12.3% | 5.73 | 0.85 |
| Social infrastructure & services ODA | 9.0% | 6.8% | 30.34 ²⁶ | 0.69 |
| Total ODA | 6.6% | 13.1% | -1.85 | 1.66 |
| Immunisation funding | | 26.0% | | 2.06 |
| Immunisation funding excluding GAVI | | 29.1% | | 3.62 |
| GAVI (from the immunisation funding database) | | 36.5% | | 1.16 |

Source: DAH database; OECD DAC; Immunisation funding database

²⁶ 'Social services and infrastructure ODA' grew at only 0.3% over this period. Since the coefficient of variation is highly sensitive to small values for the mean, we give little credence to this number. This is also the case, but to a lesser extent, for 'Health ODA' and 'Total ODA' over the period 1990-9.

The following are the main conclusions from the data presented in the table above:

- First, evidence from the ODA and DAH databases suggests that volatility of resource flows for health (although not for ODA in general) was lower after 2000 than before.
- Results for immunisation funding and GAVI suggest that resource flows for these specific areas have been relatively more volatile. To an extent, this is expected: the narrower the measure of resource flows and shorter the time period of data considered, the more volatile it will appear.²⁷
- Finally, the coefficients of variation suggest that conclusions based on standard deviations may in some cases be overstating the differences in volatility between the broad measures of ODA and DAH, and the narrower indicators. This is because the narrower indicators, as well as being more volatile, have also tended to grow more quickly (which naturally tends to inflate the standard deviation).

²⁷ We note, of course, that reducing volatility is not necessarily desirable, since accelerating the growth rate of resources will also increase volatility.

ANNEX 6: A TIMELINE OF EVENTS/ ACTIVITIES RELATING TO FINANCIAL SUSTAINABILITY

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---|-----|--|--|--|---|---|-----|---|-----|--|---|
| 1999 | | | | | | | Financing Taskforce (FTF) established at GAVI proto-board meeting | | | | | |
| 2000 | | | | | | | | | Work on WHO immunisation financing database started | | | |
| 2001 | | | | | | Consensus reached on definition of financial sustainability | | | | | FTF meeting on scope of the financing database | |
| 2002 | TOR for financing database review team completed and work beginning | | | | Guidelines for preparing FSPs published by the FTF | Geneva meeting on FSPs with partners and a selection of countries | FSP training workshops in Kenya and Senegal | | | | Dakar declaration on financial sustainability | |
| 2003 | | | | Consultants training on FSPs, Geneva | FSP training workshop, Cameroon and Uganda | FSP training workshop, Russia | | | | | | |
| 2004 | | | FSP implementation on consultation, Botswana and Kenya | WHO regional focal points for FSPs started to be recruited | FSP training workshops, Thailand, Nepal and South Africa | FSP training workshop, Egypt | FSP workshop, Benin | | | | | GAVI Board requests investment case on Bridge Financing |
| 2005 | | | | FSP implementation | | Bridge Financing | | | | | Guidelines for cMYPs | Co-financing policy |

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---|--|---|---------------------|-----|--|-----|-----|-----|-----|-----------|---|
| | | | | on workshop, Geneva | | Investment case published | | | | | published | approved by the Board |
| 2006 | Letters on Bridge Financing sent to Ministers of Health of GAVI supported countries | | Brief on Bridge Financing sent to all countries receiving new vaccine support | | | FTF dissolved | | | | | | Board endorses that applications should follow cMYPs |
| 2007 | | Working group approved co-financing levels | | | | | | | | | | |
| 2008 | Co-financing started | | | | | Board approves co-financing default policy | | | | | | |
| 2009 | | | | | | | | | | | | |
| 2010 | | Co-financing Policy Revision Task Team established | | | | | | | | | | Revision of co-financing policy for decision by the Board |

ANNEX 7: GAVI APPROACHES TO FINANCIAL SUSTAINABILITY

1. Introduction

In this annex, we provide a brief background on the main GAVI task teams/ working groups that have led GAVI's work on financing since inception. We then set out the assessment of the GAVI policies/ tools aimed at supporting financial sustainability – the FSPs / cMYPs, Bridge Financing and co-financing.

2. GAVI task teams

The three main task forces that have led GAVI's work on financing since its inception are discussed in brief below.

- The most significant of these was the Financing Task Force (FTF). This was one of the task forces established at GAVI's inception and continued its work until it was dissolved in June 2006. The members of the FTF included representatives from WHO, UNICEF, the World Bank, Gates Foundation and USAID, amongst others²⁸. Its terms of reference were as follows:²⁹
 - to increase the understanding of the financing of immunisation services within the health sector and in the poorest countries;
 - to identify strategies which will improve the capacity of governments, donor partners, and development banks to finance program needs; and
 - to identify financial strategies to stimulate research and development and production of affordable, priority vaccines
- The Immunisation Financing and Sustainability (IF&S) Task Team was established in 2007 with a mandate to develop GAVI's policy on co-financing and financial sustainability. As a time limited task team it was set up for the duration of the current Strategy (i.e. through to 31 December 2010)
- The Co-financing Policy Revision (CFPR) Task Team was recently formed (February 2010) and is responsible for the planned revision of the current co-financing policy.

3. FSPs and cMYPs

Review of documentation and structured interviews

In this section we provide a discussion of the developments and experience with the Financial Sustainability Plans (FSPs) and comprehensive Multi-Year Plans (cMYPs).

²⁸ Many of the members of the FTF also served on the subsequent groups.

²⁹ Source: <http://www.gavialliance.org/about/governance/boards/taskteams/index.php?thetype=former>

Between 2002 and 2006 all GAVI supported countries were required to prepare an FSP two years after commencement of support.³⁰ The FSPs had to contain estimates of immunisation program costs and statements on how the country planned to finance the additional vaccine costs in the future. The FSPs had to be approved by the GAVI Independent Review Committee (IRC).

Before each IRC review, the FSPs were pre-reviewed by WHO to analyse the quality, completeness and consistency of the data. These pre-review reports were submitted to the IRC and after each round, an analysis was done to look at the overall quality of the plans. If an FSP was found to be of low quality, the country was asked by the IRC to improve the document and resubmit it. However, GAVI support was not contingent on an FSP, although our understanding is that in reality most countries were not fully aware of this. No funding decisions were taken based on the FSP and no funding was stopped if an FSP was not submitted or was of low quality.

The FTF undertook numerous activities related to the FSPs. Guidelines and costing tools on how to prepare a FSP were developed, consultants were trained in developing FSPs, officers were employed in WHO regional offices to co-ordinate the development of the FSPs, and nine regional training workshops were organised with the aim of bringing together representatives from Ministries of Health, Planning and Finance and their technical partners to increase the understanding of what an FSP entails. By the end of 2006, a total of 56 countries had completed FSPs.

A review of the FSPs identified a number of positive and negative lessons:³¹

- *Positive lessons from the FSPs:* The FSPs provided a systematic approach to launching financial sustainability planning amongst countries. They helped provide a clear picture of the financing of the immunisation program, and helped countries deal with the consequences of their decisions. In particular, the FSPs improved the ability of Ministers of Health to negotiate with Ministers of Finance on the immunisation budget. The FSP guidelines formed the basis of the subsequent guidelines developed for the cMYPs.
- *Negative lessons from the FSPs:* One of the main lessons from the experience of the FSPs was that financial sustainability planning came too late in the GAVI cycle. The FSPs could not be used for decision making on new vaccines as they were required after a country's original application for funding. Also, national multi-year plans were drawn up more than two years before the FSPs, resulting in two separate documents in each country, and there was limited integration with broader plans. Other problems included: limited support for implementation of the FSPs and follow up; use of consultants to write high quality documents, but not necessarily engaging the decision makers; gaps in data such as future vaccine prices, inconsistencies with regards to allocation of shared costs, etc; poor coordination of FSPs with broader health and donor practices/financing; amongst others.

³⁰ The exceptions to this requirement were countries which only received INS support and the three large countries; China, Indonesia and India.

³¹ GAVI (2008): "Financial Sustainability for immunisation in the poorest countries: Lessons from GAVI 2000-06".

In summary, the FSP process generated an important focus on immunisation costs and financing, and contributed to a greater understanding of the financial implications for countries when introducing new vaccines. However, since the FSP was a separate document from the national multi-year plan, it did not allow for integration with the broader strategic planning and budgeting of the health sector. Hence, the FSP led to duplication of effort, high transaction costs and lack of alignment with national systems. By the end of 2005, there was no evidence that any of the FSPs has been integrated into multi-year plans. This acknowledgement is the main reason why FSPs were transitioned to cMYPs in GAVI Phase II.

The cMYP guidelines were published by WHO in November 2005. The objective of the cMYPs was to streamline immunisation planning processes into a single comprehensive and costed plan. The costing and financing exercise required for the cMYP builds on the FSP costing tools and methodologies. In December 2006, the Board approved that GAVI applications should start following the cMYPs. A condition for approval of new vaccine support is therefore that the vaccine is planned for in the cMYP and the support is only approved until the end of the cMYP. When the cMYP expires, countries can apply for continued support for the new vaccine by enclosing a new cMYP in their Annual Progress Report to GAVI. Thus the cMYPs aim to tackle some of the relative weaknesses of FSPs.

Country visit feedback on the cMYPs

Discussions with stakeholders in Nigeria suggests that while a multi-year plan was being prepared before the advent of GAVI, making it a pre-requisite for the application for new vaccines has prompted the format of the cMYP to be re-aligned to conform to international standards. The development of the cMYP has been inclusive, involving development agencies and other relevant stakeholders. Thus the cMYP presents an improvement over previous plans – however stakeholders note that the main issue is not planning, but implementation of the plans.

A similar point was also noted in Uzbekistan – stakeholders suggested that the planning process and development of cMYP worked well, however the issue was in the implementation of the plan.

4. The Bridge Financing concept

Review of documentation

At the end of Phase I, it was clear that countries would not be able to finance their immunisation programs, as had been initially assumed under the GAVI model. Vaccine prices had not declined as anticipated, and governments had not been able to mobilise sufficient funding for immunisation over the five year period. In 2004, there was therefore an immediate problem, as support was running out for the early adopting countries.

In response, the FTF developed the “Bridge Financing” concept, an investment case for which was completed in June 2005. A total of 26 countries, which were early adopters of combination vaccines, were the target for Bridge Financing, and the GAVI Secretariat and FTF began working with these countries to implement the Bridge Financing system.

The overall objective of Bridge Financing was to provide countries with more time to identify the necessary financing and to allow for vaccine prices to decline. The intention was thus that

countries should transition to full self-financing, but GAVI would provide a “bridge” to ensure that this happened gradually. The components of Bridge Financing were as follows:

- The first principle was that GAVI support would continue as it was until the end of 2007 for countries with support ending in 2005 and 2006 (called the ‘flat-line’).
- The second principle was that from 2008, GAVI would commit to subsidising the price of the vaccines to an agreed level. This level was meant to be based on what GAVI predicted the mature price of the vaccine would be in the future.
- The third essential component was that all countries should commit to co-financing an increasing proportion of the subsidised price.

However, we understand that Bridge Financing was never implemented – even though letters were sent to the 26 countries requesting them to comply with Bridge Financing if they wanted to continue receiving support (which was even accepted by several of the countries). Instead, the GAVI Board approved the principle of co-financing in December 2005. We understand that this caused considerable uncertainty amongst country partners.

5. The co-financing policy

GAVI started implementing its co-financing policy at the start of 2008.

The aim of Bridge Financing (as far as we understand it) was to support the process by which countries took over full financing of their vaccines within a specified time. In contrast the co-financing policy requires countries to pay a relatively small amount of the total value of the vaccine (although this is increasing over time). The relative generosity of the co-financing, reflected a change in the policy objective from ‘financial sustainability’ to ‘improved decision making and ownership’.

The features of GAVI’s current co-financing policy in summary are as follows:³²

- The objective of the policy is to enhance evidence-based decision making and help countries achieve financial sustainability for their national immunisation programs. An additional objective is to enhance country ownership.
- Countries are divided into four groups based on their income levels, fragile state, etc.
- Co-financing levels differ for these four groups, with highest levels in the least poor group and lowest levels in the group of fragile states. Levels also differ according to whether the vaccine is the 1st, 2nd or 3rd vaccine received during GAVI Phase II.³³
- In order to build national capacity (and also since it is not possible for GAVI to receive cash payments from countries), countries need to procure the co-financed doses themselves (either through UNICEF or handling the procurement themselves). Countries have fulfilled their co-financing commitments when they have procured, with non-GAVI funds, the calculated number of vaccine doses as indicated by GAVI in the decision letter to the country.

³² GAVI Alliance new vaccine co-financing policy, Policy Brief.

³³ The first vaccine has a higher co-financing level than subsequent vaccines.

- There is a ‘default policy’ that states that a country enters into default if it does not fulfil its co-financing commitment by 31 December of the relevant year.³⁴ If a country remains in default for more than one year the GAVI Board may decide to suspend support for the concerned vaccine until the co-financed vaccines are procured in full with non-GAVI funds.

The co-financing policy took six Board papers to define between 2005 and 2008. Some points to note in the development of its current form include:

- A version of the co-financing policy was in fact approved in 2006, but had to be revised due to the Board approval of rotavirus and pneumococcal vaccines, which were not included in this version of the policy.
- An earlier version of the policy was vaccine specific, but it was subsequently changed to be the current non-vaccine specific policy.
- When the final policy was approved, it was stated that the co-financing levels were likely to be revised upwards in 2010, but this has now been postponed. A Co-financing Policy Revision Task Team has been established to help revise the co-financing policy. Their recommendations will be available at the end of 2010.

According to a GAVI Board paper³⁵, the number of countries in default at the end of the 2008 calendar year was nine (out of a total of 32 countries required to co-finance). This has dropped to five (out of 51) by the end of 2009.³⁶ Thus while 28% of countries were in default in 2008, this declined to about 9% in 2009. The Board paper also notes that:

- all countries in default in 2008 have paid the arrears in 2009; and
- of the five countries in default in 2009, as of May 2010, two countries have now met co-financing requirements, and a further two have co-financed part of their requirements.

While general feedback from consultees (including especially from country-level government consultees) suggested that stakeholders believe that the co-financing policy is a step in the right direction, a number of issues with the design and implementation of the policy have also been identified. These are discussed in detail in the main report (Section 5.3).

Box 1 describes the implications of GAVI’s recent rejection of its pentavalent and pneumococcal vaccine on the potential for co-financing in the future.

³⁴ The Secretariat must remind defaulting countries to undertake the necessary procurement early on in the following year and the country then has 30 days to respond in writing with the reasons for its default.

³⁵ GAVI Alliance Program and Policy Committee meeting, 18-19 May 2010, Doc #5 –Co-financing revision.

³⁶ We understand that Uzbekistan is one of the defaulting countries in 2009. Discussions with country stakeholders during the field visit suggest that it faced overall budgetary difficulties as a result of the financial crisis and was hence unable to meet its co-financing requirements. Stakeholders informed us that Uzbekistan has now procured about a third of its co-financing requirement, and will procure the rest later in the year. Stakeholders however noted the additional pressure on the government budget in the current year, as it needs to pay for both its co-financed doses for 2009 and 2010.

Box 1: Case study on Nigeria

Nigeria is not required to provide any co-financing for its vaccine support to date, however the rejection of its recent application for pentavalent and pneumococcal vaccine has had critical implications for its ability to co-finance in the future.

In anticipation of the vaccine support, the national immunisation department (the NPHCDA – National Primary Health Care Development Agency) lobbied hard with the federal government to secure N0.6bn to meet its impending co-financing requirement. The funding has been earmarked for the current spending round. However with the rejection of Nigeria’s application, the immunisation department notes that it would be highly unlikely to be released again in the next spending round. The NPHCDA noted that their credibility with the federal government has diminished, which has jeopardised its ability to secure future funding in support of GAVI initiatives.

ANNEX 8: REVIEW OF OTHER DONOR APPROACHES TO FINANCIAL SUSTAINABILITY

This annex provides a discussion of the approaches of two other health funding agencies on country financial sustainability – the Global Fund and PEPFAR. These agencies have been selected as they provide large amounts of funding for health products to countries, as against technical assistance type support, and hence the issue of financial sustainability of their funding support is relevant, as is the case for GAVI.

This review is based on desk research – we have not consulted with these organisations to understand the development of their thinking on financial sustainability. In particular, we are not aware of any recent developments that may be in discussion at present, as there is limited information available on their websites.

Global Fund

One of the guiding principles for Global Fund support is to make available ‘large sums of money which neither replace nor reduce other resources to fight AIDS, TB and malaria’ and finance programs that ‘complement those of other donors, and...use its own grants to stimulate further investment by both donors and recipients.’³⁷ Thus, encouraging contributions from both own and other external sources, as well as ensuring additionality of funding, are important objectives for Global Fund support to countries.

These principles are translated into the following country eligibility and cost sharing requirements for Global Fund support to countries (see Figure 1 as well for complete details):

- For ‘low income countries’³⁸, up to 100% of the national disease program may be funded by the Global Fund;
- For ‘low-middle income countries’ and ‘upper-middle income countries’ up to 65% and 35% of the national disease program may be funded by the Global Fund.
- As country income levels improve and they move into the next income category level, they are provided with a one year grace period for funding (i.e. the previous year’s income level is treated as valid for determining the next year’s support as well), except for countries in the upper middle income group that graduate to high income countries.³⁹

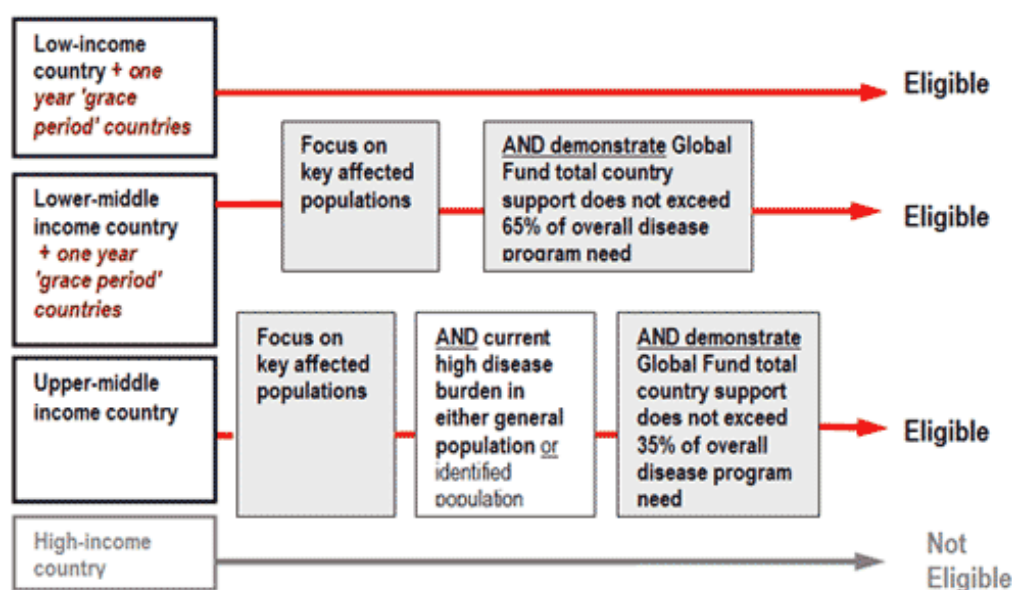
The stated objectives of these eligibility and cost sharing criteria are to ensure national ownership of programs and their longer-term sustainability, as well as to ensure sufficient funds are available to lower-income countries.

³⁷ <http://www.theglobalfund.org/en/how/?lang=en#2>

³⁸ These country classifications are as per the World Bank data.

³⁹ The Secretariat makes available income level eligibility determinations in July of each year, following the release of data from the World Bank. The revised income eligibility determinations are effective for all calls for application to the Global Fund for funding from 1 January to 31 December of the next calendar year. In cases where a country moves up from one income category to another, a one-year grace period applies, except for those countries moving from the upper middle income to high income category.

Figure 1: Global Fund country eligibility and cost sharing requirements



It is important to note that these ceilings on the Global Fund contributions by country category relate to the ‘funding gap’ as against the total cost of the national program. That is, countries are required to provide information in their proposals on the total cost of the disease program as well as domestic financing (national budget plus domestic civil society and private sector contribution) and available or planned external resources (borrowing, including soft loans, grants and contributions from bilateral and multilateral donors) for the period covered by the funding request. The funding gap is calculated on the basis of this information, with the Global Fund contributing up to the ceiling limits mentioned above.

However, we understand that despite this requirement for countries to provide the necessary information on available funding in their proposals, the Global Fund does not track this funding from other sources in a consistent and sustained manner. As noted by the Global Fund: “In line with the Paris Declaration on aid effectiveness and in an attempt to avoid imposing specific further reporting requirements, it has not been the practice to request middle income countries to identify specific program components that they will fund. It is recognised that data in this domain needs to be strengthened and systematically collected and the Secretariat will explore ways in which to do that with technical partners in a manner that is consistent with aid effectiveness principles.”⁴⁰ We understand that the Global Fund is looking to develop its approach in this regard, as part of the reform of the Global Fund business model (‘the architecture review’).

PEPFAR

The US PEPFAR program is currently in its second phase, where it will focus on transitioning from an emergency response to promoting sustainable country programs. The emphasis on sustainable programs is based on providing support that is country-owned and country driven, addresses the HIV/AIDS issue within the broader health sector development, and increases

⁴⁰ Global Fund to fight AIDS, TB and Malaria, “Trends in Development Assistance and Domestic Financing for Health in Implementing Countries”, Documents for the Third Replenishment (2011-13).

efficiencies.⁴¹ PEPFAR is establishing Partnership Frameworks with countries, which aim to help ensure that the national response to the HIV/AIDS epidemic is moving toward sustainability, while sustaining or improving quality, with the country government developing the capacity to support all relevant components.

However PEPFAR notes clearly that while its objective is to help countries move up on the path of sustainability (both in terms of capacity and financial resources), it recognises that different countries are at different points on the continuum of sustainability and that resource constraints imply that partner countries will continue to use donor resources to support their health systems.⁴² Thus it appears that at present, PEPFAR has not introduced any direct approach to encouraging financial sustainability of its support to countries.

Discussion

This limited review of the approaches followed by the Global Fund and PEPFAR suggest the following:

- **GAVI's approach of co-financing requirements for low-income countries may be considered as an innovative/ unique approach.** Other major health funding agencies have not yet introduced funding requirements from countries. PEPFAR does not explicitly require countries to fund a portion of their requirements, and the Global Fund's approach is to require this only of middle income countries i.e. not low income countries. Thus GAVI is somewhat of a pioneer in this regard.⁴³
- The Global Fund's approach to country graduation appears to be more 'gradual' than that of GAVI. Our view is that this is the case because:
 - In the case of the Global Fund, if a country improves its income level, it may still be eligible for financial support from the Global Fund, albeit of a lesser amount (only low income countries are eligible for 100% of support). Thus as a country transitions from low to lower-middle to upper-middle income, it is still eligible for funding from the Global Fund.
 - However, under the GAVI approach, there has been a clear income threshold level (previously \$1,000 per capita in 2003, and now proposed to be \$1,500 per capita in 2011), with countries becoming in-eligible for any new approvals if they cross this threshold.⁴⁴ While GAVI has committed to honour all existing vaccine support until 2015, this may translate into a few years of continued support only for some countries (say for example, if a country becomes ineligible for further support in 2014).

Thus, while the Global Fund approach may increase complexity, it may also create better incentives that promote sustainability, as it would be eligible for

⁴¹ <http://www.pepfar.gov/about/index.htm>

⁴² <http://www.pepfar.gov/guidance/framework/120513.htm>

⁴³ Note that we do not comment on whether GAVI's approach is 'preferred' to that of these other agencies.

⁴⁴ As per the GAVI Board paper on the proposed graduation procedures, "GAVI will honour all existing multi-year commitments to countries in the graduation process for the duration of current multi-year plans, and at a minimum up to 2015 for NVS."

some support in the short/ medium term (i.e. until it qualifies as a ‘high-income’ country).

Discussions during the structured interviews with Board members, other donors, GHPs, etc as well as with country-level stakeholders during the field visits highlighted the innovativeness of GAVI through its Co-financing policy. While there may be specific criticisms/ issues with the policy per se (as highlighted in Section 5.3 of the main SG3 report), most stakeholders noted that with the establishment of this policy, GAVI has been at the forefront of the donor community in introducing a “direct approach” to encouraging financial sustainability.

A recent GAVI Board paper also reaches a similar conclusion.⁴⁵ They have reviewed a larger set of multilateral organisations/ programs and note that some organisations like UNFPA may have cost-sharing arrangements with certain governments, but no defined policy, while other organisations such as the Global Drug Facility requires countries to co-finance, but in reality does not enforce the condition. The review conclude that “GAVI is one of the few organisations that have an explicit co-financing policy for commodities, and likely the only one requiring co-financing from poor countries.”

⁴⁵ GAVI Alliance Program and Policy Committee Meeting, 18-19 May 2010, Doc #5 – Co-financing revision.

ANNEX 9: ANALYSIS OF GAVI SUPPORT AS A PROPORTION OF GOVERNMENT HEALTH EXPENDITURE

This annex supports the analysis provided in Section 5.4.1 of the main report (SG3.3) on the total value of GAVI support as a percentage of total government expenditure on health.

1. Data sources/ methodology

The data sources include:

- Data on total GAVI support from the GAVI Secretariat;
- Data on government health expenditures (“General government expenditure on health as % of total expenditure on health” and “Total expenditure on health as % of GDP”) from the WHO National Health Accounts (NHA)^{46 47}; and
- GDP data in current \$ were collected from the World Bank.⁴⁸

It must be emphasised that there is considerable uncertainty in the accuracy of WHO NHA data, as explained in a recent article by Lu et al.^{49 50} The analysis should therefore be viewed mainly as an indication of the main trends as against focusing on the individual data points.

2. Average GAVI disbursements as a proportion of total government health expenditure

Figure 1 illustrates the average GAVI disbursement as a percentage of total health expenditure for low and lower-middle income countries.⁵¹ As can be seen from the figure, there is considerable difference between the two income groups. Apart from 2001, GAVI funding as a percentage of total government health expenditure has been above 2.5% for low-income countries, but below 1% for lower-middle income countries in all years. Since 2007 in particular, the percentage has been above 5% (reaching a peak of 6.4% in 2009) for low income countries.

⁴⁶ www.who.int/nha/country/en/

⁴⁷ Cuba, Korea DPR, Myanmar and Somalia are not included due to missing data on Government health expenditures in these countries.

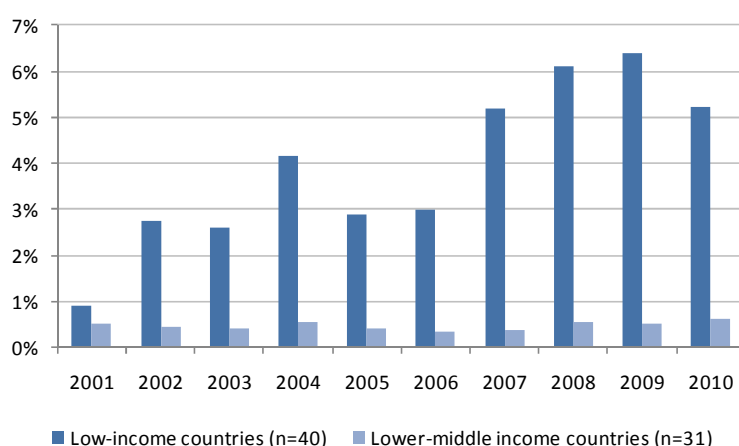
⁴⁸ Missing GDP values for 2008-2010 were extrapolated by assuming similar annual growth rates as between 2007-2008.

⁴⁹ Chunling Lu, Matthew T Schneider, Paul Gubbins, Katherine Leach-Kemon, Dean Jamison, Christopher J L Murray, Public financing of health in developing countries: a cross-national systematic analysis, *Lancet*, April 9, 2010

⁵⁰ Note that we have not used the metric developed by Lu et al on ‘Government expenditure as a source’ as against ‘as an agent’ as there was incomplete data for all countries.

⁵¹ We have followed the World Bank classification of countries based on 2008 data: low-income countries are those with GNI per capita of less than \$975; lower-middle income countries have a GNI per capita between \$976 and \$3,855; and upper middle income countries have GNI per capita between \$3,856 and \$11,905. There was one GAVI upper-middle income country in 2008 – Bosnia and Herzegovina with a GNI per capita of \$4,520 (currently GAVI-ineligible). For simplicity we have included this country in the lower-middle income category.

Figure 1: Average GAVI disbursement as a percentage of total government expenditure on health

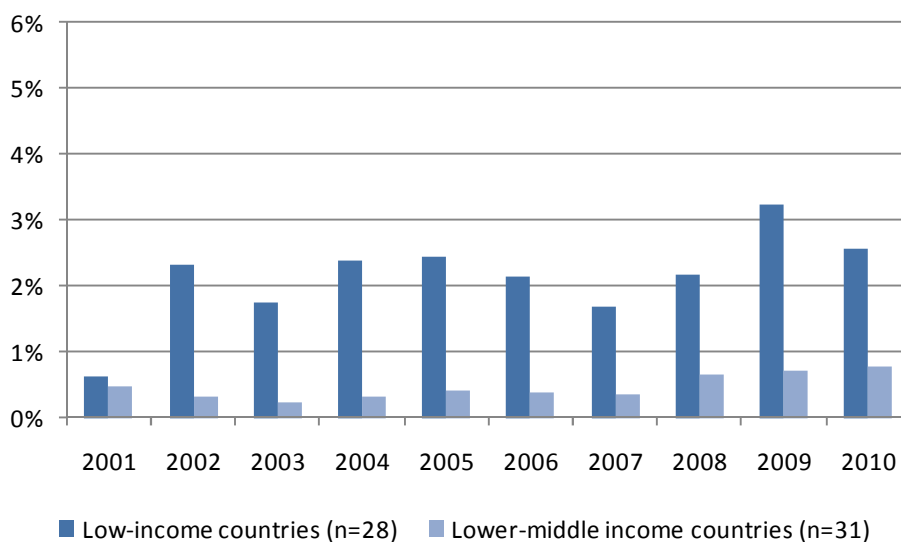


Source: GAVI Secretariat; WHO NHA; World Bank

It is important to note that a wide variation is seen in GAVI disbursements as a percent of total government health expenditures. The lowest percentage was 0.003% for Ukraine in 2009 and the highest was 40.7% for the Democratic Republic of Congo in 2008.⁵²

3. Average GAVI vaccine disbursements as a proportion of total government health expenditure, adjusting for outliers

Figure 2: Average GAVI vaccine disbursements as a proportion of total government health expenditure, adjusting for 11 outliers from low-income group



Source: GAVI Secretariat; WHO NHA; World Bank

⁵² Ukraine received its final year of support for monovalent hepatitis B vaccine in 2009, amounting to \$55,000. The Democratic Republic of Congo received seven different types of support in 2008, amounting to a total of \$48.6 million. HSS comprised almost half of the support (\$20.1 million) and pentavalent vaccine a third of the support (\$15.5 million). The remaining support was for CSO, vaccine introduction grant, yellow fever vaccine, and a relatively small amount of HepB-DTP vaccine. Government health expenditures were only \$119.5 million in 2008, while total health expenditures were \$573.7 million. Hence, in percent of total health expenditures in the Democratic Republic of Congo, GAVI support was 8% in 2008.

ANNEX 10: ANALYSIS OF DATA IN THE cMYPs

1. Methodology

We analyse data from 42 countries' cMYPs.⁵³ Countries report six years of expenditure and finance data, including a single baseline year of actual data and five years of forecast data.⁵⁴ Trends are analysed by plan year (Year 1, Year 2, etc.) rather than calendar year, to maximise the number of data points as the cMYP period differs from country to country.⁵⁵

The expenditure variable is annual expenditure per surviving infant⁵⁶ on routine immunisation. In Year 1 this is actual expenditure, while in Years 2-6 it is planned expenditure. We exclude spending on non-routine immunisation (i.e. campaigns)⁵⁷ and costs that are shared between the immunisation sector and the wider health budget (i.e. only specific costs are included).

The financing variable represents sources of finance per surviving infant for routine immunisation. Sources include national governments, GAVI, multilateral and bilateral donors, and other sources (a small category that includes NGOs and private sources). Planned finance is divided further into "secure" and "probable" finance. Where appropriate we compare analysis including all finance with analysis including only secure finance.

Furthermore, expenditure data is available by type of expenditure. We have aggregated this data into four types: (i) new vaccines⁵⁸; (ii) traditional vaccines⁵⁹; (iii) injection supplies; and (iv) immunisation systems expenditure (representing all other costs included in the cMYP which are related to systems, including salaries and other service delivery costs, cold chain equipment and maintenance, outreach activities, etc.).⁶⁰ In addition, finance data is available by source of finance within each type of expenditure.

For this analysis we also divide countries into groups based on region and income level. Regional groups are based on WHO regions (note however that our sample of countries covers only four

⁵³ We have access to a cMYP database provided by WHO for 47 countries; however data for five countries is not complete and these countries were excluded. Guinea-Bissau and Congo did not provide finance details for the final year of their cMYP, and Niger did not provide expenditure or finance details for the final year of its cMYP. Data for Sudan were split between Sudan (North) and Sudan (South), and the time periods did not overlap. Finally, Mongolia's cMYP extends only to 2009 as compared to 2010/11/12 for other countries.

The DRC was included in the sample despite unexpected or out of date projections for expenditure on new vaccines. Despite total approvals under NVS of \$25m in 2010 and \$101m in 2011, the cMYP does not include any GAVI finance for those years, and spending on new vaccines is consequently forecast to be zero.

⁵⁴ Note there is often a gap of 1-2 years between the baseline year and the first forecast year.

⁵⁵ The baseline year, first forecast year and final year all varied. Baseline years spanned 2004-06; first forecast years spanned 2005-08; and final years spanned 2010-12. Analysis by calendar year would mean: (a) analysing data for a much smaller group of countries which share a sample period; or (b) allowing sample composition to differ from year to year, and mixing actual and forecast data within some years; or (c) analysing data for a shorter time period for which data is available for all countries.

⁵⁶ Number of (surviving) infants based on UN Population Division data for birth rate less infant mortality.

⁵⁷ Nearly all (97%) of GAVI finance recorded in the cMYPs relates to routine immunisation. The remaining 3% relates to campaigns, and is almost entirely accounted for by Yellow Fever campaigns. In addition, negligible amounts are accounted for by finance for Measles, MNT and Polio campaigns.

⁵⁸ Includes vaccines such as yellow fever, HepB, Hib, etc

⁵⁹ Includes vaccines such as DTP, TT, BCG, measles, etc.

⁶⁰ Please note that we have included surveillance expenditure as a part of systems, to avoid creating a separate category for the item.

WHO regions (AFRO, EMRO, EURO and SEARO), and PAHO and WPRO are thus excluded from the analysis).⁶¹ Income groups are based on 2008 GDP per capita.⁶²

There are some caveats regarding the data:

- Costs are expressed in nominal terms taking into account a rate of inflation selected by the countries themselves. Low rates of growth may therefore indicate flat or declining spending in real terms.
- On many dimensions the data has almost certainly not been recorded consistently across countries. The chosen rate of inflation is one such area (though a rate of 2% is suggested in the cMYP guidance); another is the categorisation of sources of finance as “secure” or “probable”.

In addition, the following are the caveats with regards to our methodology, and hence the interpretation of the analysis:

- Trends over time need to be interpreted with caution, given the lag of about 2-3 years for some countries between their actual data (i.e. Year 1 data) and first year of forecast data (i.e. Year 2 data).
- We calculate average expenditure and finance per surviving infant, without excluding any outliers. This implicitly weights our figures by the number of infants, so that our results are representative of an average infant rather than an average country.

2. Planned expenditure

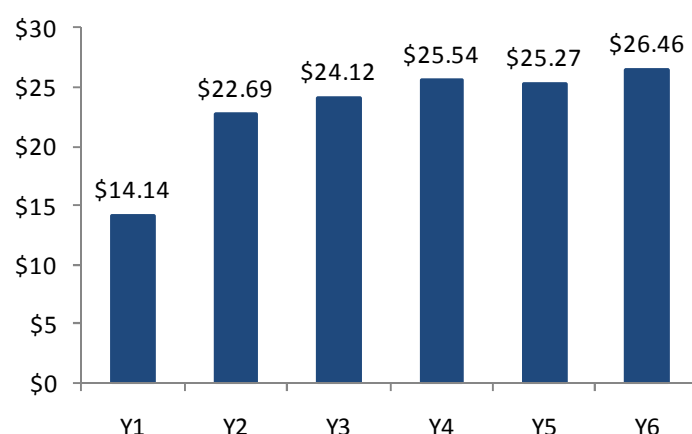
Collectively the countries analysed exhibited substantial increases in planned expenditure per surviving infant (see Figure 1 below). Average expenditure per surviving infant across all countries rises from \$14.14 in Year 1 to \$22.69 in Year 2, a jump of 61%.⁶³ It then grows at an annual rate of 3.9%, reaching \$26.46 by Year 6.

⁶¹ As noted in the previous similar exercise on the FSPs carried out by Lydon et al (Vaccine, 2008), given that not all countries in each of these WHO regions are included in this analysis, the results should not be interpreted as representative for those regions as a whole. Note that data were available for one WPRO country (Mongolia) but as its cMYP period differed from other countries it was excluded from the analysis.

⁶² Source of data is the World Bank. GDP data were unavailable for Korea DPR and Myanmar. These countries were assigned to the lowest income group (GDP per capita <\$1 per day).

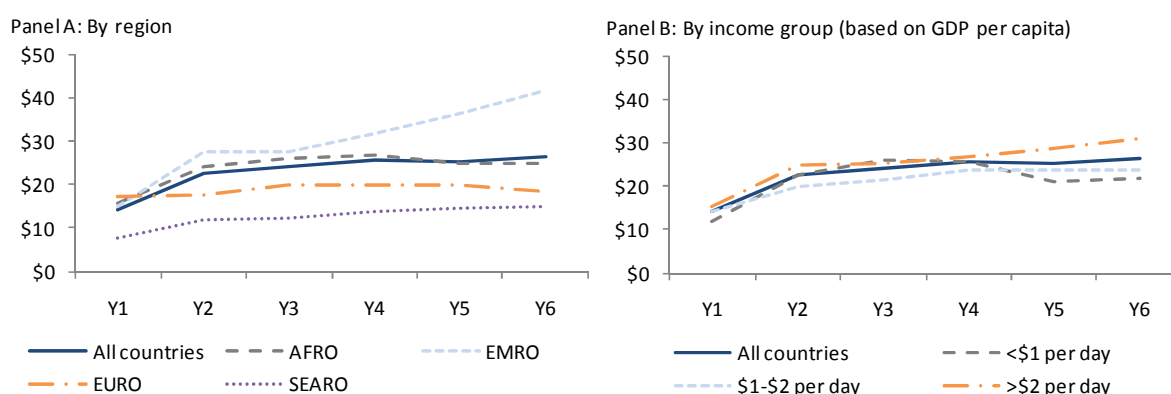
⁶³ Note that for most countries this increase is phased over two or three years.

Figure 1: Planned routine immunisation expenditure per surviving infant



However the aggregate picture conceals some variations in trend by region and income group (see Figure 2).

Figure 2: Planned routine immunisation expenditure per surviving infant by region and by income group



Key points to note from the figure are:

- *Some dispersion in expenditure between regions.* Growth rates in expenditure per surviving infant from Year 2 to Year 6 vary significantly by region, from around 1% in AFRO and EURO countries to 10.9% in EMRO countries. As a result, by the end of the plan period EMRO countries are planning to spend 182% more than SEARO countries. However, we note that our sample includes only a subset of countries for each region, so these patterns are more representative of the extent of variation across countries than of differences between regions.
- *Little dispersion between income groups.* By contrast, there is little difference in the trajectory of total planned expenditure per surviving infant between income groups, particularly over the first four years.⁶⁴

Figures 3, 4 and 5 present expenditure by type of spend: in total, by region and by income group respectively.

⁶⁴ Years 5 and 6 are affected by data for the DRC, which has zero projected expenditure (and GAVI finance) for new vaccines in these years. This accounts for the divergence of the trend for the low income countries.

Figure 3: Breakdown of planned routine immunisation expenditure per surviving infant by type of spend

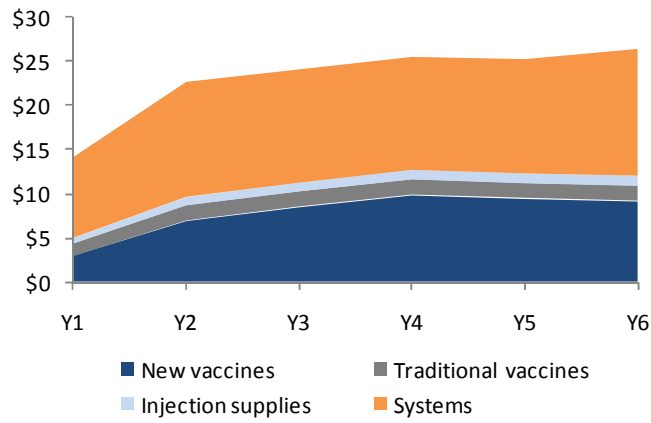
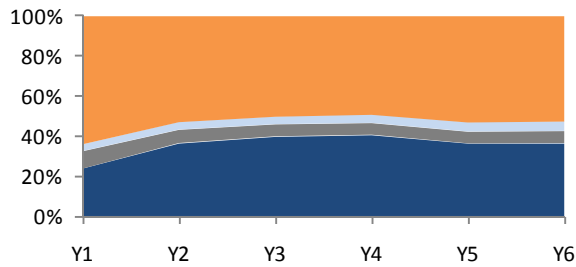
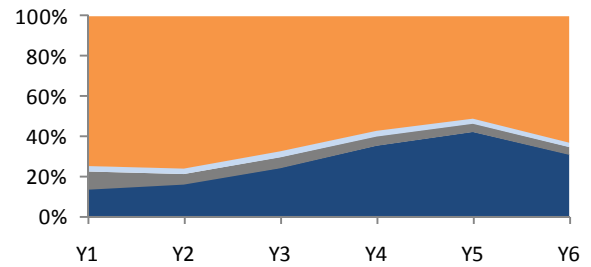


Figure 4: Share of planned routine immunisation expenditure per surviving infant by region

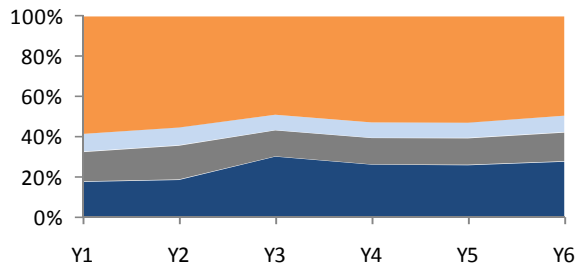
Panel A: AFRO



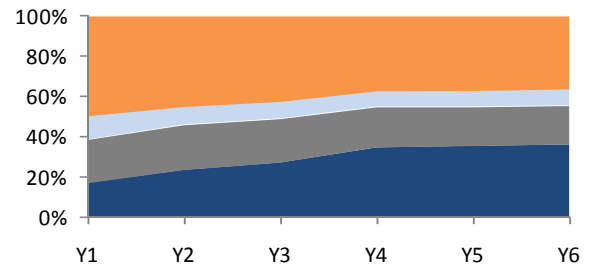
Panel B: EMRO



Panel C: EURO

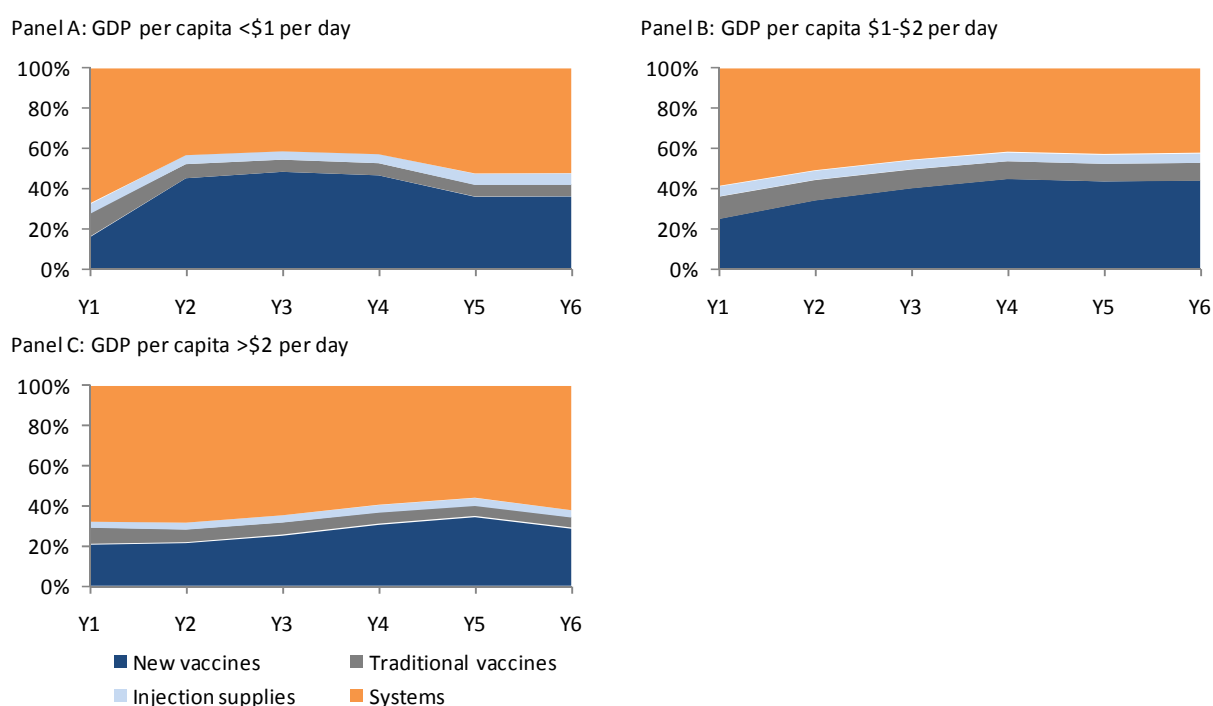


Panel D: SEARO



Legend for Figure 4:
 ■ New vaccines
 ■ Traditional vaccines
 ■ Injection supplies
 ■ Systems

Figure 5: Share of planned routine immunisation expenditure per surviving infant by income group



The main points regarding the different expenditure types are:

- *Expenditure on routine immunisation is dominated by systems expenditure.* Planned expenditure is the highest category of all types of routine immunisation, on average for all countries, for each region and for each income group of countries.
- *Expenditure growth is driven by new vaccines.* While expenditure plans are dominated by spending on immunisation systems, in terms of growth, the main driver of increases in total expenditure per surviving infant is new vaccines, which grows at an annual rate of 7.2% across all countries between Year 2 and Year 6, and accounts for around half of the overall increase in expenditure per surviving infant over the period. By contrast, expenditure on systems is forecast to grow at an annual rate of only 2.5% between Year 2 and Year 6, and its share of overall expenditure falls over the period.
- *There is substantial variation in systems expenditure per surviving infant by region and income group.* Expenditure per surviving infant on systems is expected to reach only 36% of the total (\$5.38) in Year 6 in SEARO countries as compared to 63% (\$26.29) in EMRO countries. Similarly, expenditure per surviving infant on systems in Year 6 is only 53% of expenditure (\$11.44) in the poorest countries as compared to 62% (\$19.29) in the richest.
- *There are limited planned increases in expenditure on traditional vaccines.* Although average planned expenditure per surviving infant on traditional vaccines rises from \$1.39 in Year 1 to \$1.73 in Year 2, it then falls to \$1.69 in Year 6.

As noted above, planned expenditure increases over the whole period are generally aggressive, although most of this increase comes in the first plan year. The issue of sustainability, however, rests on the ability of countries to finance these increases, which is the subject of the following section.

3. Financing of expenditure plans

We consider in this and following sub-sections the various sources of finance as a proportion of expenditure. We refer to the “funding gap” as the difference between planned expenditure and total planned finance (which may include both secure and probable finance or only secure finance – this is indicated as appropriate).

Overall

Initial baseline expenditure (which is actual data) is essentially fully funded. Forecast expenditure, however, is subject to a widening funding gap⁶⁵, which reaches 23% in Year 6 if both secure and probable sources are included.⁶⁶ Figures 6 and 7 below present a summary of sources of finance.

Figure 6: Financing of total planned expenditure per surviving infant on routine immunisation

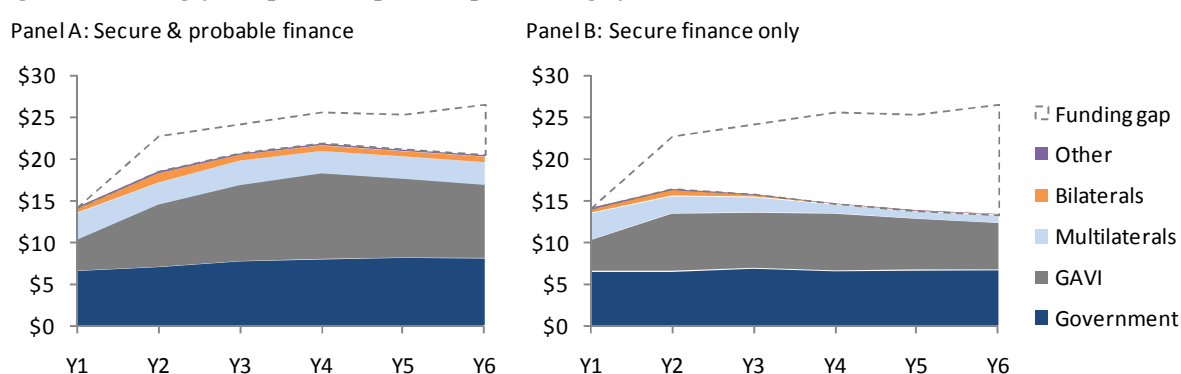
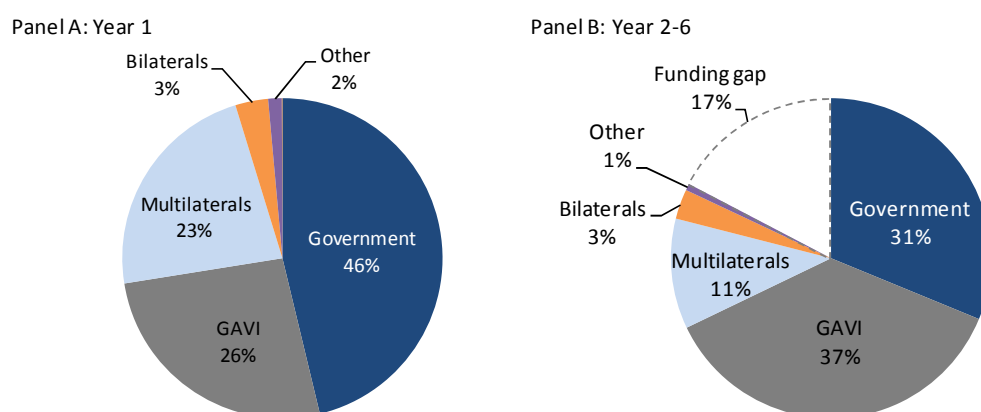


Figure 7: Summary of financing of total planned expenditure per surviving infant on routine immunisation in Year 1 and Years 2-6



The overall trends are as follows:

- *Emerging funding gap, particularly when only secure finance is considered.* Over the period of projected expenditure and finance, there is a total funding gap of 17%. The gap in Year 6 is 23% if all finance is included but 49% if only secure finance is included. The majority

⁶⁵ Defined as the difference between expenditure and finance from all sources. Unless otherwise stated this includes both ‘secure’ and ‘probable’ sources of finance.

⁶⁶ All subsequent figures refer to finance including both secure and probable sources unless otherwise stated.

of government finance (83% in Year 6) and GAVI finance (64%) is considered secure, but only 28% of Year 6 bilateral and multilateral funding receives the same rating.⁶⁷

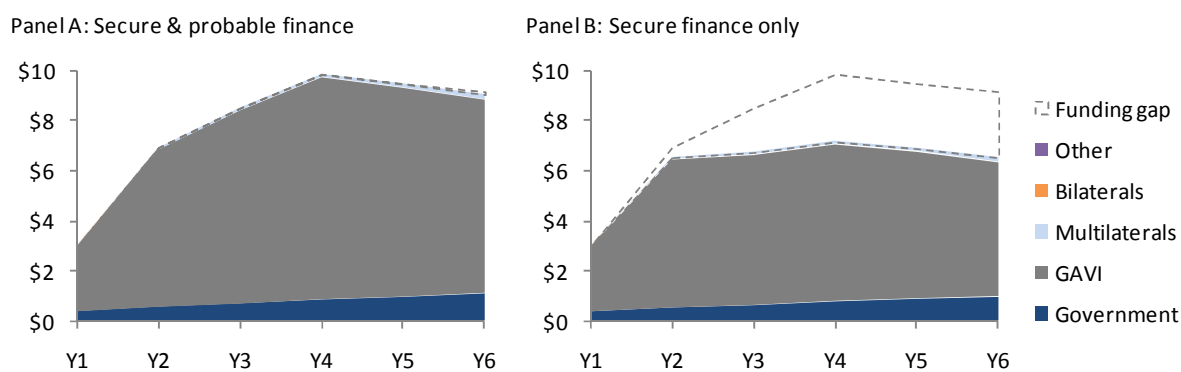
- *Decreasing share of government finance.* Although in dollar terms government finance grows from \$6.53 per surviving infant to \$8.06 per surviving infant, this growth does not keep pace with planned expenditure. Government finance therefore falls from 46% of expenditure in Year 1 to 30-32% in subsequent years. For eight countries (Cameroon, Lesotho, Madagascar, Mozambique, Nigeria, Rwanda, Senegal and Tanzania) government finance per surviving infant (both secure and probable) actually falls from Year 1 to Year 6.
- *Increasing share of GAVI finance.* From a base of 26% of expenditure in Year 1 it peaks at 41% of expenditure in Year 4 and remains high at 34% in Year 6. Over the forecast period GAVI is expected to be the most important source of routine immunisation financing, and with 64% of Year 6 GAVI finance rated secure, it is also considered a more secure source than multilaterals (33% secure) or bilaterals (7%).

However, this aggregate picture conceals important variations by expenditure type and by country group, which are discussed in turn below.

By expenditure type

Figures 8, 9, 10 and 11 below present financing data by expenditure type – new vaccines, traditional vaccines, injection supplies and systems, respectively.

Figure 8: Financing of total planned expenditure per surviving infant on new vaccines for routine immunisation



⁶⁷ This clearly reflects the inability of bilateral donors in particular to make commitments over a year..

Figure 9: Financing of total planned expenditure per surviving infant on traditional vaccines for routine immunisation

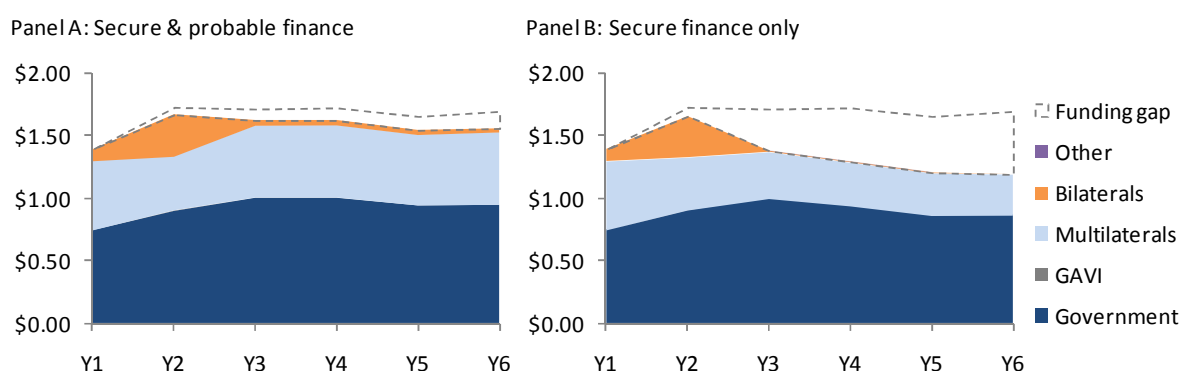


Figure 10: Financing of total planned expenditure per surviving infant on injection supplies for routine immunisation

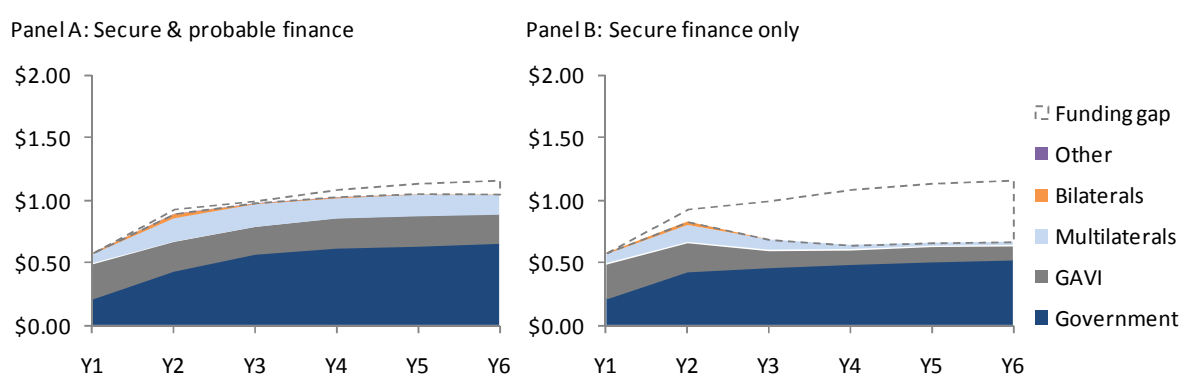
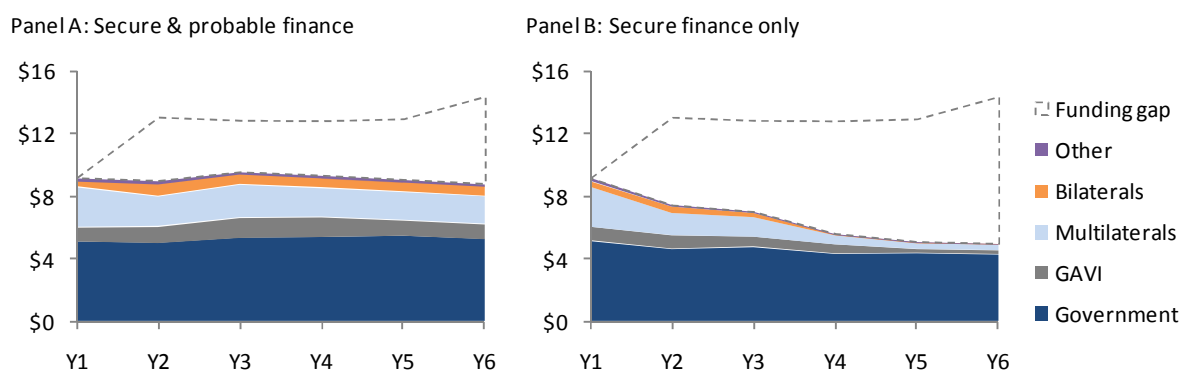


Figure 11: Financing of total planned expenditure per surviving infant on systems for routine immunisation



As can be seen from the figures, financing patterns differ sharply depending on the type of expenditure:

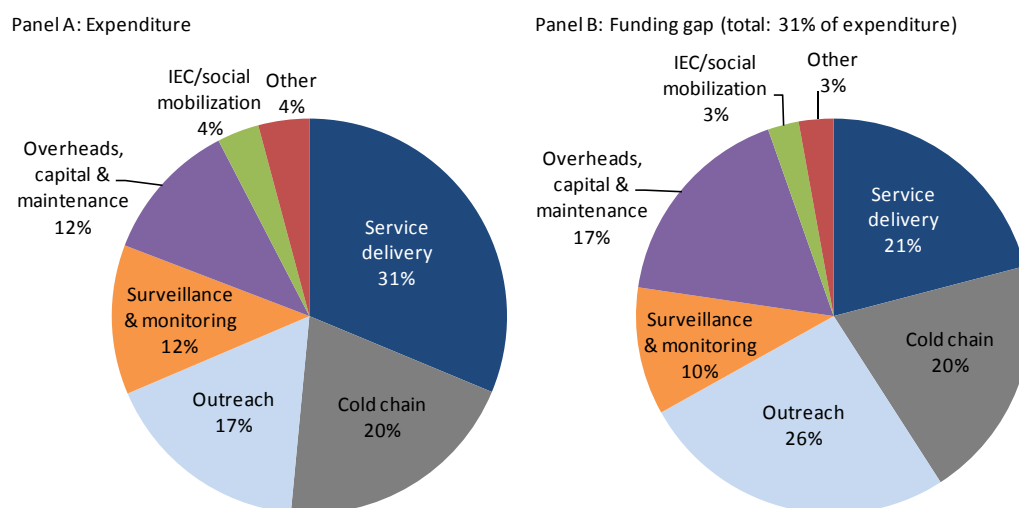
- *GAVI is the main source of finance for new vaccines.* GAVI finance accounts for 84% of new vaccines expenditure in Year 6, providing an average of \$7.70 per surviving infant. The remaining expenditure is primarily accounted for by government finance (12% of expenditure, similar to the Year 1 proportion of 13%). The funding gap is therefore small, around 1%.
- *Significant funding gaps exist for systems expenditure.* The average funding gap in Year 6 for systems expenditure is 39%, or 66% if only secure finance is included. This is far greater

than for the other expenditure categories. GAVI finance is relatively insignificant here, accounting for only 6% of expenditure, and government finance reaches only 37% of expenditure.

- *Funding gaps for traditional vaccines and injection supplies are relatively minor.* At \$0.14 and \$0.11 per surviving infant respectively, the funding gaps for traditional vaccines and injection supplies are small compared with the average gap of \$5.63 per surviving infant for systems. GAVI finance contributes 20% of expenditure on injection supplies, which probably represents GAVI’s ‘bundled support’ approach for vaccines, although INS support to most countries has been completed.

Figure 12 below presents the component parts that comprise systems spending, both in terms of planned expenditure over Year 2-6 (Panel A) and the funding gap for each item of expenditure (Panel B).

Figure 12: Routine immunisation systems expenditure and funding gap, Year 2-6



As can be seen from the figure, systems expenditure is dominated by three areas: ‘service delivery’, ‘cold chain equipment and maintenance’, and ‘outreach activities’. In terms of the funding gap, ‘outreach activities’ and ‘service delivery’ have the largest shortfall.

By region

Figures 13 to 16 below present breakdowns of financing for each of the four expenditure categories by region.

Figure 13: Financing of planned expenditure per surviving infant on new vaccines for routine immunisation by region⁶⁸

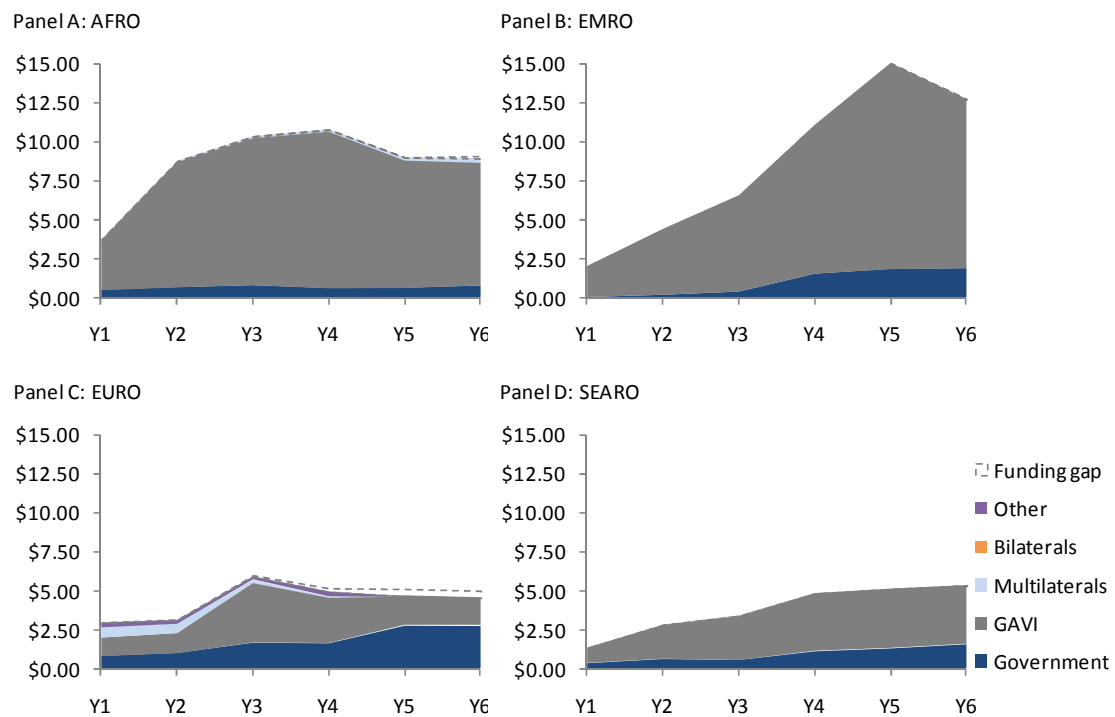
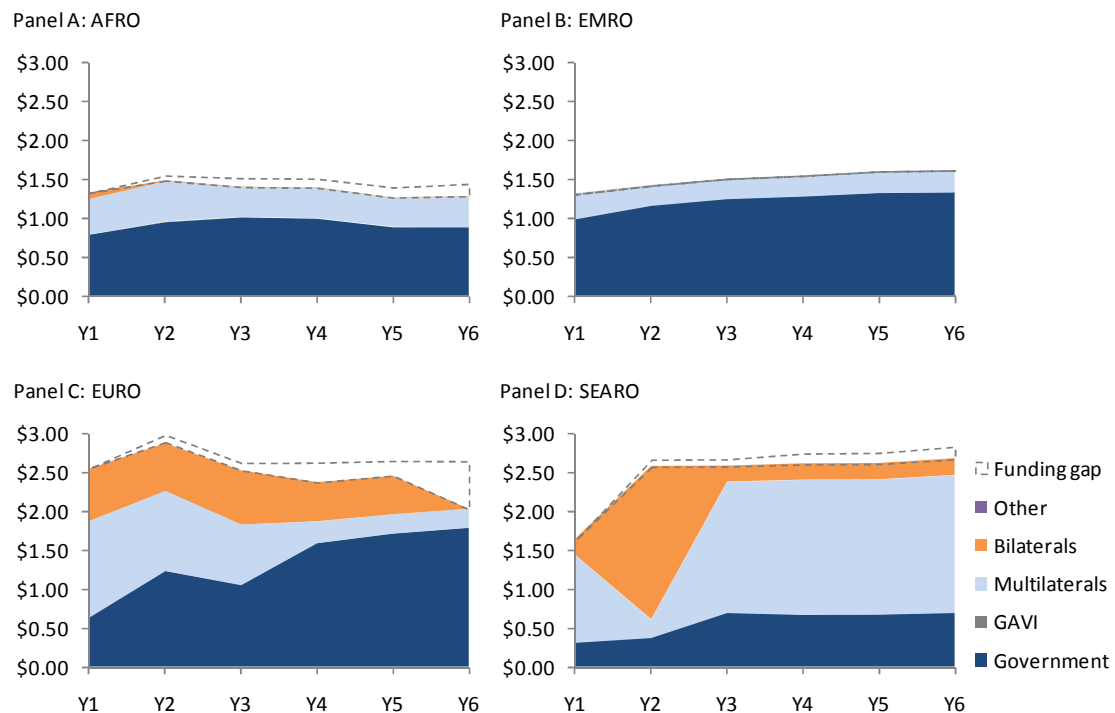


Figure 14: Financing of total planned expenditure per surviving infant on traditional vaccines for routine immunisation by region



⁶⁸ For the AFRO region, Years 5 and 6 are affected by data for the DRC, which has zero projected expenditure (and GAVI finance) for new vaccines in these years.

Figure 15: Financing of total planned expenditure per surviving infant on injection supplies for routine immunisation by region

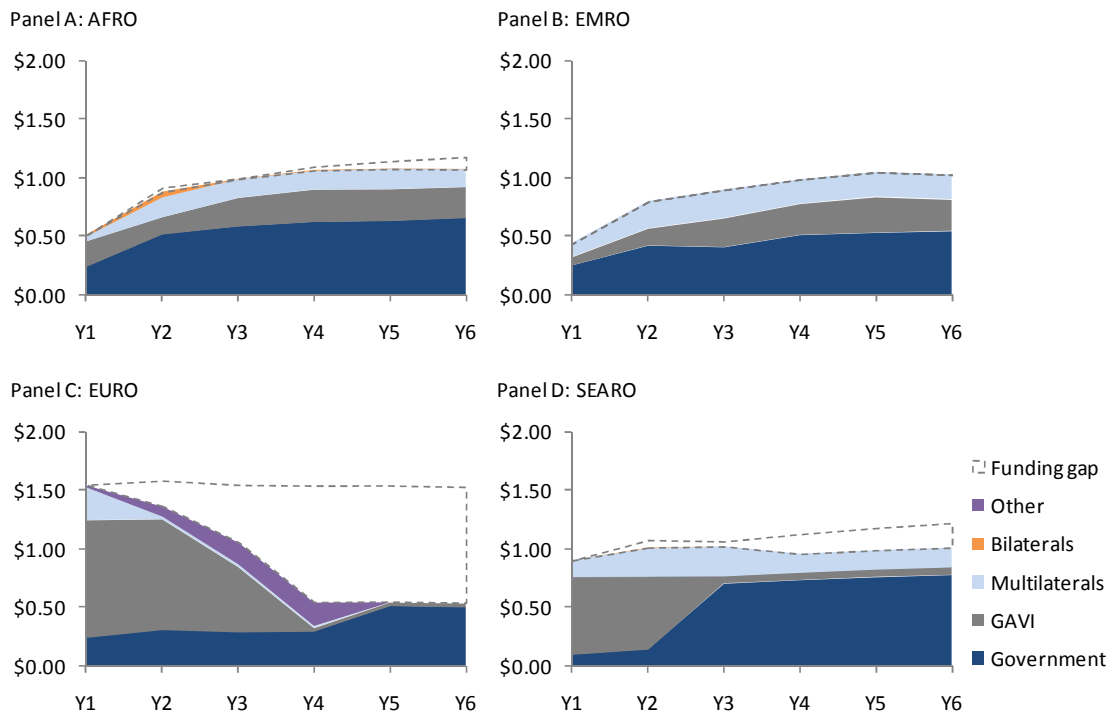
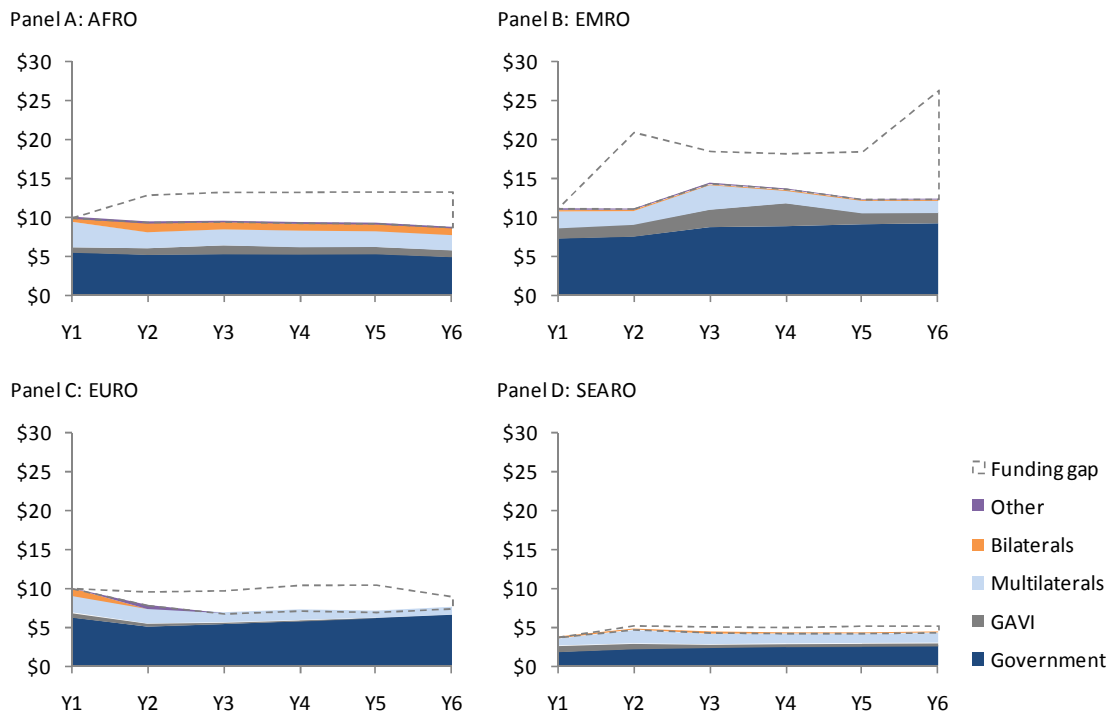


Figure 16: Financing of total planned expenditure per surviving infant on systems for routine immunisation by region



Differences in the forecasted finance for each expenditure category often appear to drive differences in expenditure per surviving infant:

- *Large variations in expenditure per surviving infant and GAVI finance for new vaccines.* Planned expenditure in the EMRO region in Year 6 (\$12.75) is over twice as high as in EURO or SEARO countries (\$5.01 and \$5.35). This is primarily a consequence of higher GAVI

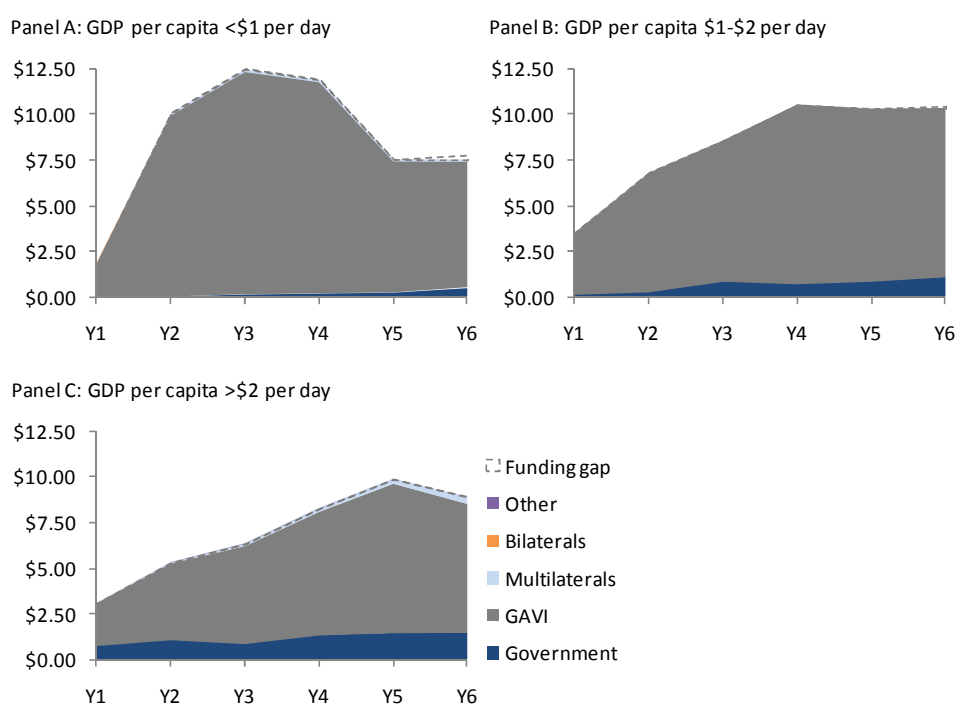
support to those regions, and is despite EURO countries having higher government finance per surviving infant (\$2.80 compared with \$1.85 in EMRO).

- *Large variations in expenditure per surviving infant and government finance for systems.* Planned expenditure in Year 6 ranges from \$5.38 in the SEARO region to \$26.29 in EMRO, although the funding gap for the latter region is 53%. This primarily reflects differences in government finance, which ranges from \$2.63 in SEARO to \$9.17 in EMRO. To a lesser extent the provision of GAVI finance follows a similar pattern.
- *Low government finance for traditional vaccines in SEARO region.* Government finance in Year 6 for traditional vaccines is only \$0.70 (25% of expenditure) in SEARO, the lowest of all regions. By contrast, in the other three regions government finance covers the majority of planned expenditure.
- *Large funding gap for injection supplies in EURO region.* While the other regions have relatively modest funding gaps for injection supplies, the EURO region countries forecast a relatively large funding gap. The data shows a substantial decline in funding from GAVI (about \$1.00 per surviving infant of GAVI finance from Year 1).

By GDP per capita

There are also variations by income group (see Figures 17 to 20 below).

Figure 17: Financing of total planned expenditure per surviving infant on new vaccines for routine immunisation by income group⁶⁹



⁶⁹ For the low income group, Years 5 and 6 are affected by data for the DRC, which has zero projected expenditure (and GAVI finance) for new vaccines in these years.

Figure 18: Financing of total planned expenditure per surviving infant on traditional vaccines for routine immunisation by income group

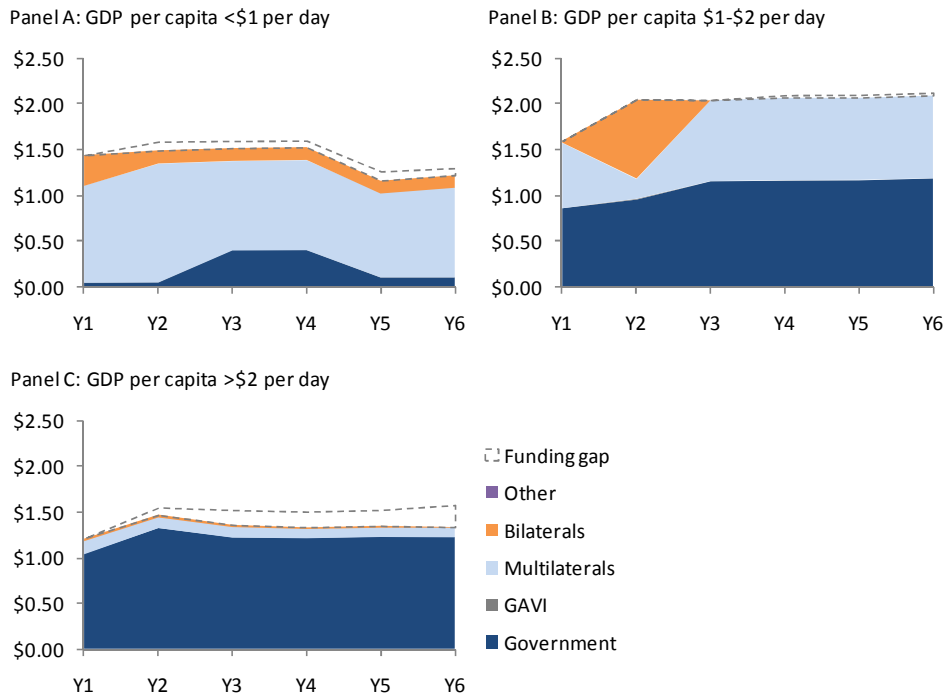


Figure 19: Financing of total planned expenditure per surviving infant on injection supplies for routine immunisation by income group

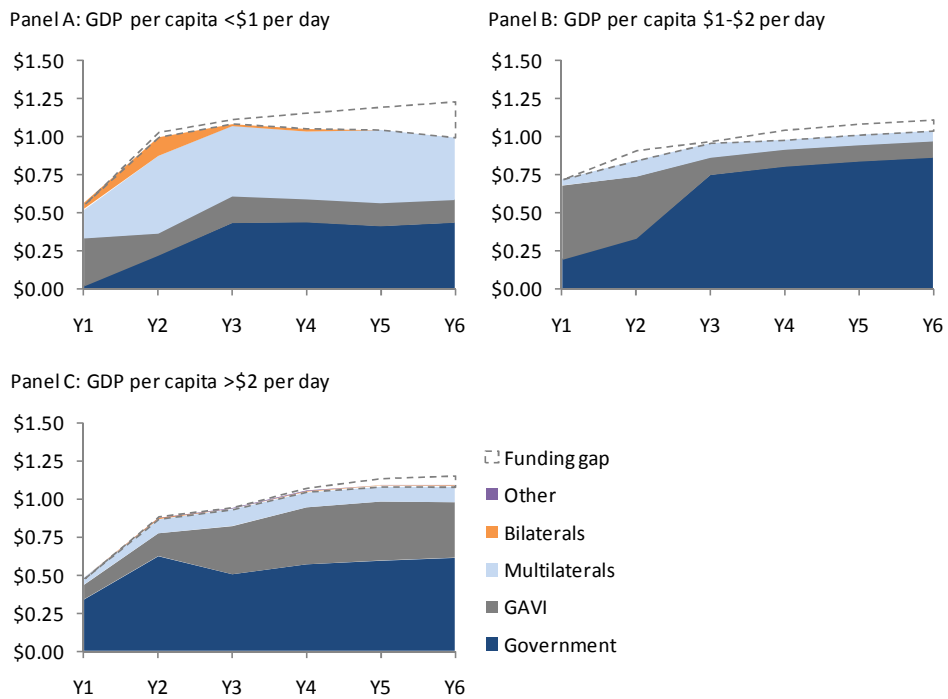
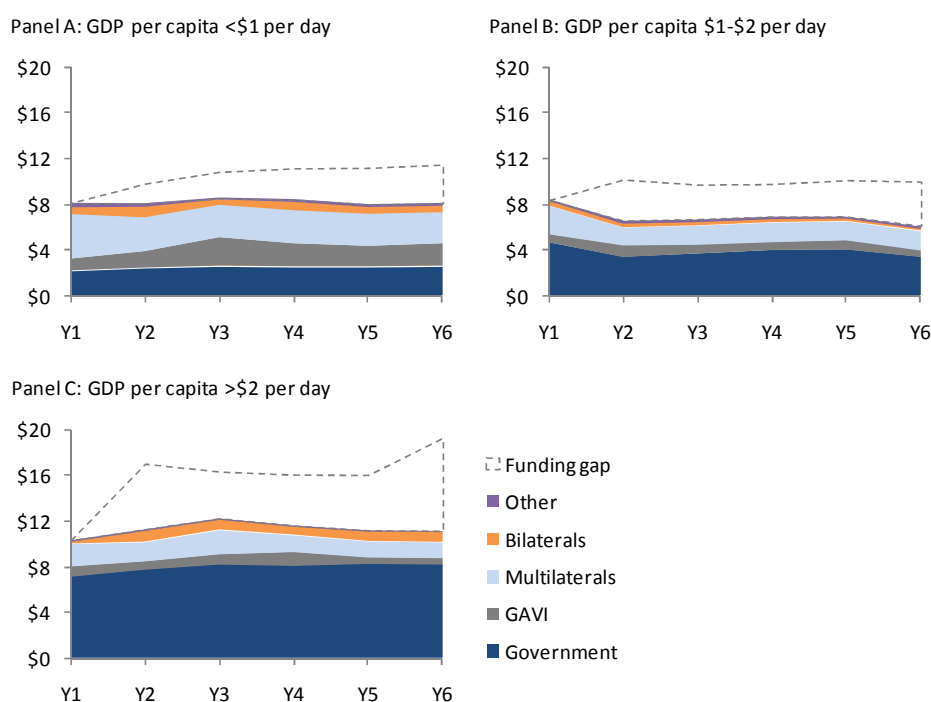


Figure 20: Financing of total planned expenditure per surviving infant on systems for routine immunisation by income group



As might be expected, the availability of government finance varies by income group. For the richest countries (those with GDP per capita >\$2 per day), total government finance for routine immunisation is \$11.53 in Year 6, compared with only \$3.63 for the poorest countries (those with GDP per capita <\$1 per day). This, and the extent to which donor support compensates, drives the main patterns by income group:

- *Government finance for new vaccines in the highest income countries cannot compensate for lack of GAVI funding.* Across all income groups, government finance for new vaccines as a proportion of expenditure is low (average 9% in Year 4), although it is higher for the richest group (17%) than for the poorest (7%). However, planned expenditure per surviving infant is actually higher in the poorest group, at \$11.90, compared with \$8.29 for the richest, suggesting that the richest countries may be unable to bridge the gap between GAVI finance per surviving infant they receive (\$6.70) and that received by the poorest group (\$11.55).⁷⁰
- *Systems expenditure appears to be driven by availability of government finance.* Planned expenditure per surviving infant in Year 6 is nearly twice as high in the richest countries as in the poorest, with planned government finance being over three times as high (\$8.20 as compared to \$2.59). Donor support from GAVI and multilaterals counters this, comprising 41% of expenditure in the poorest countries but only 10% in the richest. As noted above, all countries have a substantial funding gap for systems expenditure, ranging from 29% in the poorest countries to 42% in the richest.

⁷⁰ We focus on Year 4 here because the data for the poorest countries in Year 5 and Year 6 are strongly affected by the cMYP for the DRC, which includes no expenditure on new vaccines in those years.

- *Multilateral finance compensates for lack of government finance for traditional vaccines.* Government finance for traditional vaccines is almost non-existent for the poorest countries, but expenditure differences per surviving infant are relatively small due to forecasted multilateral finance, which comprises 77% of expenditure in Year 6.
- *GAVI finance for injection supplies is most significant in the richer countries.* As a proportion of expenditure in Year 6, GAVI finance is higher in the richest countries (32%) than in the two poorer groups (10%-13%). However, due to larger forecasted government finance (in the middle group of countries) or multilateral support (in the poorest), the differences in expenditure per surviving infant between all groups of countries are minimal.

For new vaccines expenditure per surviving infant actually appears to vary inversely with income. This is largely a consequence of the pattern of GAVI funding. In other areas, the main determinant of expenditure appears to be the availability of government finance.

By country

Within regions and income groups there is a wide range of outcomes by country. Though we do not analyse each country individually in full, Tables 1 to 4 below present the top and bottom five countries on four key dimensions, as reported in the cMYPs:

- expenditure per surviving infant;
- funding gap between total planned expenditure and available financing on routine immunisation;
- government finance; and
- GAVI finance as a proportion of expenditure.

Data presented here are based on averages of planned annual expenditure and finance from Year 2 to Year 6.

Table 1: Top and bottom countries by expenditure per surviving infant on routine immunisation

| Country | Region | Income group (GDP per capita) | Expenditure |
|--------------------------|--------|-------------------------------|-------------|
| <i>Top 5</i> | | | |
| Republic of Moldova | EURO | >\$2 per day | \$86.78 |
| Bhutan | SEARO | >\$2 per day | \$62.82 |
| Central African Republic | AFRO | \$1-\$2 per day | \$56.07 |
| Comoros | AFRO | >\$2 per day | \$51.51 |
| Djibouti | EMRO | >\$2 per day | \$50.69 |
| <i>Bottom 5</i> | | | |
| Rwanda | AFRO | \$1-\$2 per day | \$17.86 |
| Tajikistan | EURO | >\$2 per day | \$8.85 |
| Myanmar | SEARO | <\$1 per day | \$8.73 |
| Kyrgyzstan | EURO | >\$2 per day | \$8.71 |
| Bangladesh | SEARO | \$1-\$2 per day | \$8.40 |

Table 2: Top and bottom countries by funding gap (between total planned expenditure and available financing on routine immunisation) as a proportion of expenditure on routine immunisation

| Country | Region | Income group (GDP per capita) | Funding gap |
|-----------------|--------|-------------------------------|-------------|
| <i>Top 5</i> | | | |
| Afghanistan | EMRO | \$1-\$2 per day | 0.3% |
| Bangladesh | SEARO | \$1-\$2 per day | 0.4% |
| Comoros | AFRO | >\$2 per day | 0.6% |
| Burkina Faso | AFRO | \$1-\$2 per day | 2.1% |
| Côte d'Ivoire | AFRO | >\$2 per day | 2.2% |
| <i>Bottom 5</i> | | | |
| Pakistan | EMRO | >\$2 per day | 30.6% |
| Lesotho | AFRO | >\$2 per day | 37.3% |
| Tanzania | AFRO | \$1-\$2 per day | 40.6% |
| Tajikistan | EURO | >\$2 per day | 44.7% |
| Gambia | AFRO | \$1-\$2 per day | 47.7% |

Table 3: Top and bottom countries by government finance as a proportion of expenditure on routine immunisation

| Country | Region | Income group (GDP per capita) | Govt. finance |
|---------------------|--------|-------------------------------|---------------|
| <i>Top 5</i> | | | |
| Kyrgyzstan | EURO | >\$2 per day | 66.1% |
| Yemen | EMRO | >\$2 per day | 64.3% |
| Republic of Moldova | EURO | >\$2 per day | 63.8% |
| Bhutan | SEARO | >\$2 per day | 62.2% |
| Nigeria | AFRO | >\$2 per day | 58.2% |
| <i>Bottom 5</i> | | | |
| Tajikistan | EURO | >\$2 per day | 8.2% |
| Liberia | AFRO | <\$1 per day | 7.2% |
| Cameroon | AFRO | >\$2 per day | 7.0% |
| Burundi | AFRO | <\$1 per day | 5.9% |
| Ethiopia | AFRO | <\$1 per day | 1.3% |

Table 4: Top and bottom countries by GAVI finance as a proportion of expenditure on routine immunisation

| Country | Region | Income group (GDP per capita) | Govt. finance |
|-----------------|--------|-------------------------------|---------------|
| <i>Top 5</i> | | | |
| Kyrgyzstan | EURO | >\$2 per day | 1.1% |
| Armenia | EURO | >\$2 per day | 1.7% |
| Nigeria | AFRO | >\$2 per day | 5.9% |
| Tajikistan | EURO | >\$2 per day | 11.8% |
| Myanmar | SEARO | <\$1 per day | 17.2% |
| <i>Bottom 5</i> | | | |
| Uganda | AFRO | \$1-\$2 per day | 57.2% |
| Afghanistan | EMRO | \$1-\$2 per day | 58.2% |
| Rwanda | AFRO | \$1-\$2 per day | 62.4% |
| Burundi | AFRO | <\$1 per day | 66.6% |
| Ethiopia | AFRO | <\$1 per day | 71.4% |

Key results include:

- *Wide range of outcomes within regions and income groups.* On each dimension, the best and worst performing countries come from a range of regions and income groups (although the proportion of expenditure accounted for by government finance – in which the top five countries are all in the highest income group – is an exception).
- *No ‘star performers’.* No country is able to combine high expenditure with high government finance, a low funding gap and low reliance on GAVI support. Bhutan appears arguably the best placed, with planned expenditure of \$62.82 per child financed 62% by government, but even here the funding gap from Year 2 to Year 6 is 7.7% of planned expenditure.

Additionally, we analysed expenditure and sources of finance for countries that could potentially graduate.⁷¹ These countries have relatively high expenditure per surviving infant, at \$34.36 in Year 6 30% higher than other countries. Potential graduates on average also have higher government finance as a proportion of planned expenditure (at 58% compared with 30% in other countries) and lower funding gaps (7% compared with 23%). Nevertheless, government finance still comprises only 58% of planned Year 6 expenditure for potential graduates.

Overall, although the potentially graduating countries are relatively better placed, the evidence suggests that even these countries will face challenges in sustaining higher expenditure on routine immunisation.

⁷¹ We analysed four particular countries, Armenia, Bhutan, Moldova and Sri Lanka, that could become eligible to graduate based on their GDP per capita of >\$1,500 in 2008.

4. Conclusions

Based on the above presented data, our key conclusions are summarised below.

Expenditure per surviving infant on routine immunisation is rising. Across all countries, actual expenditure in Year 1 is \$14.14; by Year 6 it is forecast to have reached \$26.46⁷² (see Figure 1). Substantial increases are planned across all country income groups. Note that this represents a further increase on the average expenditure of \$17.50 based on Lydon et al's analysis of 50 countries' FSPs.⁷³

Growth in expenditure is driven primarily by new vaccines. Of the \$12.32 additional planned expenditure per surviving infant around half (\$6.19) is accounted for by new vaccines. This represents an initial increase of 133% from Year 1 to Year 2 followed by average yearly growth of 7.2% - growing faster than all other expenditure categories. Systems-related expenditure accounts for an increase of \$5.25, and remains the single largest category despite its share of total expenditure falling from 65% in Year 1 to 55% in Year 6.

There are small declines in planned expenditure per surviving infant on traditional vaccines. Average planned expenditure per surviving infant on traditional vaccines falls from \$1.73 in Year 2 to \$1.69 in Year 6 (albeit after initial rising from \$1.39 in Year 1). Following Lydon et al's conclusion on the FSP data, this may suggest some reduction in spending on DTP by governments, given GAVI funding of pentavalent – however we note that it is not possible to confirm/ verify this with the available data, and also the decline in the level of spend is not very significant.

There is a widening funding gap for routine immunisation, as sources of finance as a whole do not keep pace with expenditure growth. While average expenditure per surviving infant rises by \$12.32, average finance rises by only \$6.33. This results in a funding gap of 23% of expenditure in Year 6 – 49% if only secure finance is included. The growing funding gap may be due to the slow rise in government financing as well as some declines in multilateral/ bilateral funding.

Government finance for routine immunisation is rising slowly. Average government finance per surviving infant rises from \$6.53 in Year 1 to \$8.06 in Year 6. To maintain its share of expenditure at 46% as in Year 1 however, it would have had to rise to \$12.22. Although levels of government finance are higher in the richest group of countries, the overall rate of increase is actually smaller. Although most countries see an increase in government finance over the cMYP period, eight do not.^{74 75}

⁷² Average expenditure per surviving infant across all countries rises from \$14.14 in Year 1 to \$22.69 in Year 2, a jump of 61%. It then grows at an annual rate of 3.9%, reaching \$26.46 by Year 6.

⁷³ Note that Lydon et al's figure of \$17.50 is the average for the period 2005-10.

⁷⁴ These are: Cameroon, Lesotho, Madagascar, Mozambique, Nigeria, Rwanda, Senegal and Tanzania.

⁷⁵ Lu et al's 2010 paper analyses data on total government expenditure on health as an agent and DAH. They investigate whether government spending is supplanted, rather than supplemented, by donor funding. To do this, they: (a) infer the amount of domestically-financed government expenditure by subtracting DAH from total government expenditure; and (b) analyse the relationship between domestic government expenditure and DAH, controlling for other influences. They find that although total public finance for health increased dramatically (by 100% on average), there was some evidence of a negative and significant effect of DAH to governments on domestic government expenditure. On average, they estimate that to increase government health spending by \$1

Some evidence of declining multilateral and bilateral finance for routine immunisation. Average finance per surviving infant from both multilateral and bilateral donors as a whole is projected to fall over the cMYP period, from \$3.69 in Year 1 to \$3.40 in Year 6 (including both secure and probable finance). Finance from bilateral donors alone rises from \$0.47 in Year 1 to \$1.14 in Year 2, before falling to \$0.66 in Year 6. This may, however, reflect the inability of bilateral donors to make multi-year commitments rather than their withdrawal from immunisation funding. Finance from multilateral donors also falls from \$3.22 in Year 1 to \$2.62 in Year 2, then remains relatively flat, reaching \$2.73 in Year 6.⁷⁶ Overall, we conclude that it is likely that the trend in bilateral finance from Year 2 onwards is driven by their inability to make multi-year commitments. However, the falling multilateral finance from Year 1 to Year 2 suggests there may be some degree of withdrawal from the sector.

GAVI represents the largest source of immunisation finance and all countries are dependent on GAVI finance for new vaccines expenditure. Across all countries and expenditure types, GAVI finance rises as a proportion of total immunisation expenditure, from 26% in Year 1 to 34% in Year 6, becoming the largest source of finance in the process (Lydon et al's analysis of FSPs suggested that GAVI represented the second largest source during 2005-10, after government financing). This increase is mainly due to funding for new vaccines. GAVI is almost the sole source of finance in this area, comprising 84% of expenditure overall and 78% even in the highest income group. Although government finance per surviving infant for new vaccines does rise over the period, there is little prospect of it reaching the level required for sustainability.

Financial sustainability of new vaccines in the short term appears weak even for the relatively higher income countries of all GAVI-eligible countries. Average planned expenditure per surviving child on new vaccines is lower for countries in the highest income group than for those in the lowest. Despite this, government finance in the richest countries remains low as a proportion of new vaccine expenditure (although this proportion is higher than is the case for low-income countries). This suggests that even the richest GAVI-eligible countries may not be able to sustain funding for new vaccines.

Finally, limited financing of routine immunisation systems expenditure may also pose a challenge to sustainable delivery of vaccines. Across all countries, funding gaps for systems expenditure are larger than for other expenditure types, reaching an average of 39% of expenditure in Year 6. To the extent that systems expenditure is necessary for vaccine delivery this is suggestive of a further sustainability problems, since continuing delivery of new vaccines may require additional finance both for the vaccines themselves and for immunisation systems.

Overall, the above results suggest that sustainability presents a major challenge for all countries. In particular:

- For new vaccines, there seems little prospect of replacing the average finance provided by GAVI to countries in Year 6 (\$7.70 per surviving infant), given that government

donors would have to provide governments with \$1.75 of DAH. However, when DAH was provided to the non-government sector, this opposite effect was identified.

⁷⁶ If only secure finance is included, finance from these sources falls to \$0.95 per surviving infant in Year 6, of which only \$0.05 comes from bilateral donors.

finance in that year is forecast to be just \$1.14 (which represents 12% of planned expenditure on new vaccines)

- For the poorest countries, government finance covers only 17% of total planned Year 6 expenditure on routine immunisation (and only 7% of planned expenditure on new vaccines), and hence donor support is likely to play a significant role for the foreseeable future.

ANNEX 11: BACKGROUND INFORMATION ON IFFIM

1. Introduction and contributing donors

As against the traditional approach of donor funding for development, IFFIm is an innovative financing mechanism that uses long term pledges from donor governments to issue bonds in the capital markets. The resources raised through the bonds are used to fund activities today i.e. IFFIm frontloads future commitments to make available funding today.

The IFF concept was developed in the early 2000s by the UK government. In 2006, IFFIm was established, using the IFF concept for immunisation through GAVI. Along with the UK government, IFFIm is also supported by the governments of France, Italy, Norway, Spain, Sweden (these six donors are the original donors for IFFIm), as well as South Africa and the Netherlands. Together, these donors have pledged to contribute \$5.3bn to IFFIm over 20 years.⁷⁷ As is noted in a recent GAVI document: “IFFIm has, however, proven to be more than just a frontloading mechanism, redefining the concept of long-term predictable aid, launching the concept of ‘innovative finance’ for development, and fundamentally changing the relationship between GAVI and its donors...”⁷⁸

The strong financial base (through legally binding grants from its sovereign sponsors) enables IFFIm to have a triple-A rating from the three major rating agencies.

2. IFFIm disbursements to GAVI/ immunisation

A total of \$1.4bn has been disbursed as of March 2010, with Figure 1 providing details on the areas funded by IFFIm.

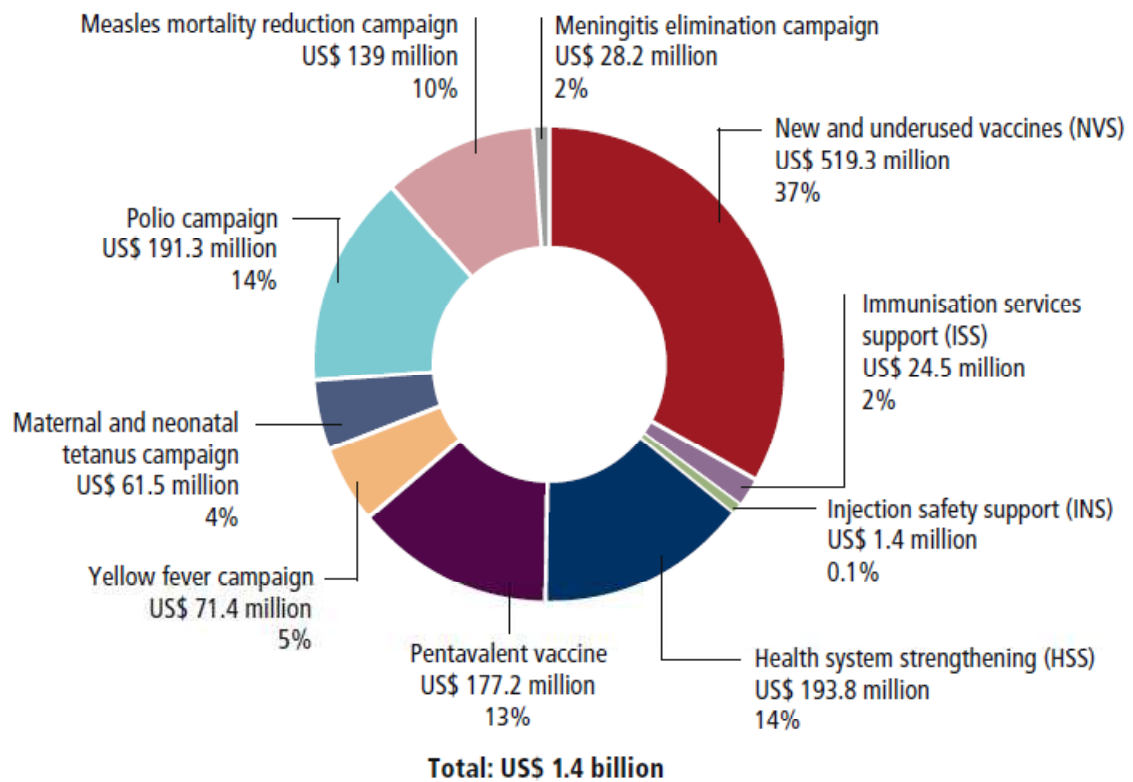
In 2006, four tactical investment cases were funded by the Board, specifically to be funded with money raised by the IFFIm. These investment cases are disease-specific, mainly use supplementary immunisation activities (e.g. campaigns) as the mode of vaccine delivery and are implemented by WHO and UNICEF.

In 2008, two additional investment cases were funded – one was a continuation of Yellow Fever activities (which was one of the cases funded in 2006) and the other was a Meningitis investment case.

⁷⁷ United Kingdom has committed a total of £1,380,000,000 over 20 years; France has committed €372,800,000 over 15 years and an additional €867,160,000 over 19 years; Italy has committed a total of €473,450,000 over 20 years; Spain has committed a total of €189,500,000 over 20 years; Sweden has committed a total of SEK 276,150,000 over 15 years; Norway has committed a total of \$27,000,000 over 5 years; South Africa has committed a total of \$20,000,000 over 20 years; The Netherlands has committed a total of €80 million over eight years

⁷⁸ GAVI (2010): “The Value of IFFIm as a Funding Tool for GAVI”.

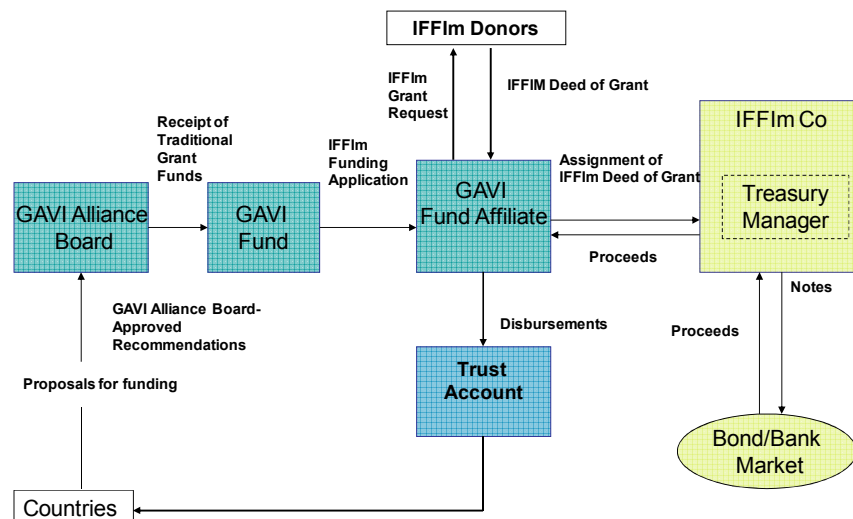
Figure 1: Use of IFFIm funds by GAVI as of March 2010⁷⁹



3. Structure, governance and management

Figure 2 describes the IFFIm structure.

Figure 2: IFFIm structure



5

⁷⁹ GAVI (2010).

IFFIm is managed by its board of directors, and has no employees. IFFIm has outsourced its principal activities to two organisations:

- all administrative support functions are provided by GAVI; and
- all treasury functions and related accounting services are provided by the International Bank for Reconstruction and Development (or the World Bank), in its capacity as IFFIm's Treasury Manager.

GAVI is responsible for the operational activities related to the immunisation, health systems strengthening and vaccine procurement programs for which IFFIm provides funding. The GAVI Secretariat provides support to two independent boards of directors: the IFFIm Board and the GAVI Fund Affiliate Board, which act on behalf of the two entities created to make IFFIm operational.

The main activities of the GAVI Fund Affiliate are: to enter into pledge agreements with sovereign IFFIm donors; to assign these pledges to the IFFIm Company so that they can be securitised; and to approve funding of programs with the IFFIm proceeds.

The purpose of the IFFIm Company is to provide front-loaded resources to the GAVI Fund Affiliate for GAVI programs. This will be achieved via the securitisation of long-term donor pledges assigned from the GAVI Fund Affiliate to IFFIm. The IFFIm Board is responsible for the management of the IFFIm Company.⁸⁰

⁸⁰ While theoretically the IFFIm could be established in a number of jurisdictions, the UK was chosen due to the willingness of the Charities Commission to grant the IFFIm full charitable status, eliminating any tax loss from the structure.

ANNEX 12: BACKGROUND INFORMATION ON THE AMC

1. Introduction and objectives

AMCs are designed to stimulate the development and manufacture of vaccines for developing countries, by encouraging the development and production of affordable vaccines tailored to the needs of developing countries

Donors commit money to guarantee the price of vaccines once they have been developed, thus creating the potential for a viable future market. Through this forward-looking contract, AMCs provide vaccine makers with the incentive they need to invest the considerable sums required to conduct research, train staff and build facilities in order build manufacturing capacity for urgently needed vaccines.

The binding contract guarantees a pre-agreed price for the first doses of vaccines sold to developing countries, so that companies can recoup their investment costs. In exchange, participating companies must guarantee to supply vaccines for the long term, after the donor funds made available for the initial fixed price are used up, at a pre-agreed sustainably low price that developing countries can afford.

Ultimately, developing country governments are able to budget and plan for immunisation programs, knowing that vaccines will be available in sufficient quantity, at a price they can afford, for the long term.

2. Development timeline

The publication entitled “Making markets for vaccines” by the Center for Global Development, stimulated the interest of donors such that the AMC was discussed by the G7 Finance Ministers in June 2005. In December 2005, the Government of Italy, with the support of the World Bank, presented a report to the G8 Finance Ministers outlining how such a scheme could move forward.

Following this meeting, the World Bank and the GAVI Alliance were asked to co-lead a project to design a pilot AMC. A Disease Expert Committee comprising developing and industrial country experts in public health, epidemiology, industry economics, vaccine development and law was convened to provide an independent recommendation on which vaccine would be most suitable for the AMC pilot. In February 2006, the Expert Committee recommended pneumococcal vaccines as the target for a pilot late-stage AMC. The pneumococcal AMC pilot was then announced in February 2007 in Rome by the donors who collectively pledged a total of \$ 1.5 billion to fund the program.

As a first step, the AMC donors convened an independent advisory body, the Economic Expert Group, to review and assess key AMC terms to provide guidance on the principal design features of the pneumococcal pilot. The group brought together experts in public health, health economics and contract law. In March 2008, the Expert Group recommended a number of enhancements to the structure of the AMC and suggested follow up work to refine key terms. Subsequently, the AMC donors created the Implementation Working Group to make specific recommendations for key terms and features of the AMC. Selected representatives from the

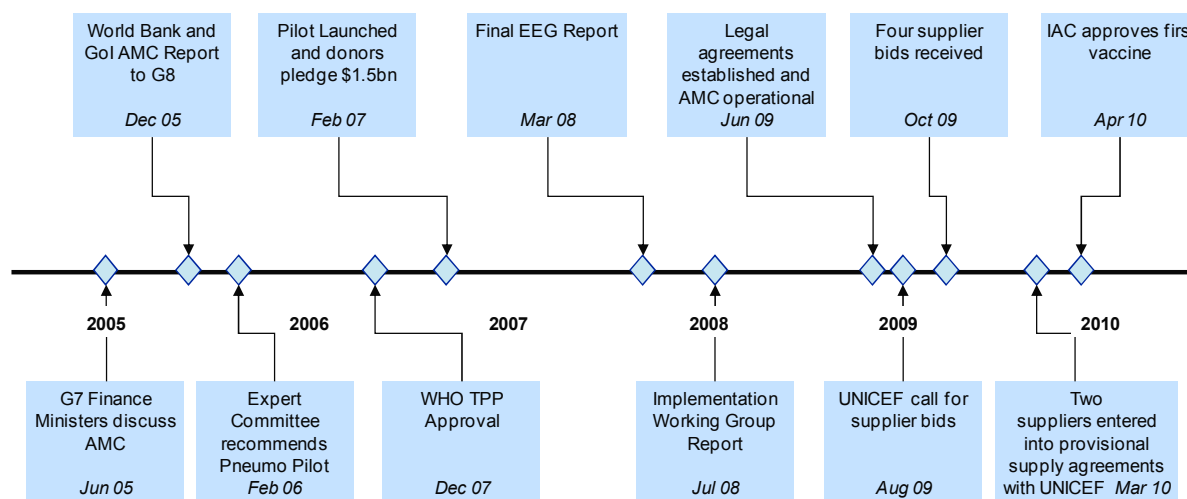
GAVI Secretariat, the World Bank, UNICEF Supply Division and the Economic Expert Group constituted this group. The work of the Implementation Working Group was concluded and published in July 2008.

At the same time, a basic Target Product Profile (TPP) for pneumococcal vaccines was developed by an ad hoc group set up by WHO and approved in December 2007 by the WHO Director- General after endorsement by WHO’s Strategic Advisory Group of Experts (SAGE). The Target Product Profile defines the minimal technical criteria that pneumococcal vaccines must meet in order to be eligible for AMC funding.

A final phase was dedicated to setting up the required governance structures, such as the AMC Secretariat and the Independent Assessment Committee (IAC), to establishing a monitoring and evaluation plan for the program, and to translating detailed terms into appropriate legal agreements. The agreements were executed in Lecce, Italy, on 12 June 2009, on the eve of the meeting of the G8 Finance Ministers.

UNICEF published the tender notice in August 2009. Of the four bids received, two suppliers were selected in March 2010. The first vaccine was approved by the IAC in May 2010. The key milestones in the development of the AMC are outlined in Figure 1 below.

Figure 1: AMC available and committed funds

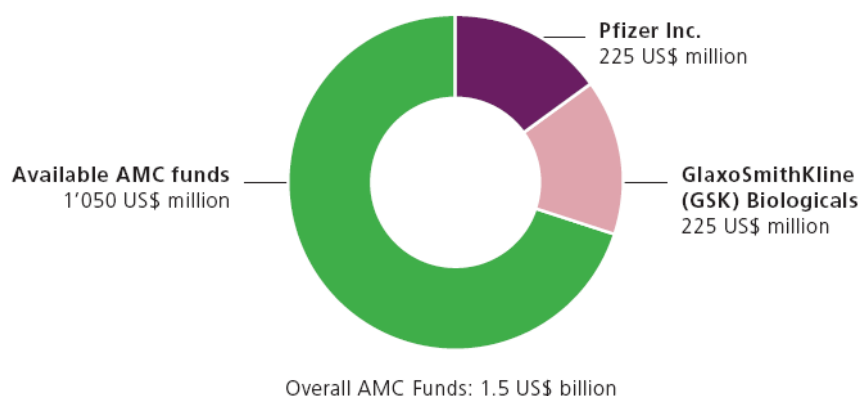


3. AMC disbursements to immunisation

AMC donors are the Governments of Italy, the United Kingdom, Canada, the Russian Federation, Norway and the Bill and Melinda Gates Foundation, which collectively pledged a total of \$1.5 billion to fund the program.

Figure 2 summarises the amount of funding guaranteed by donors for the pilot AMC and funding committed to suppliers up to present.

Figure 2: AMC available and committed funds



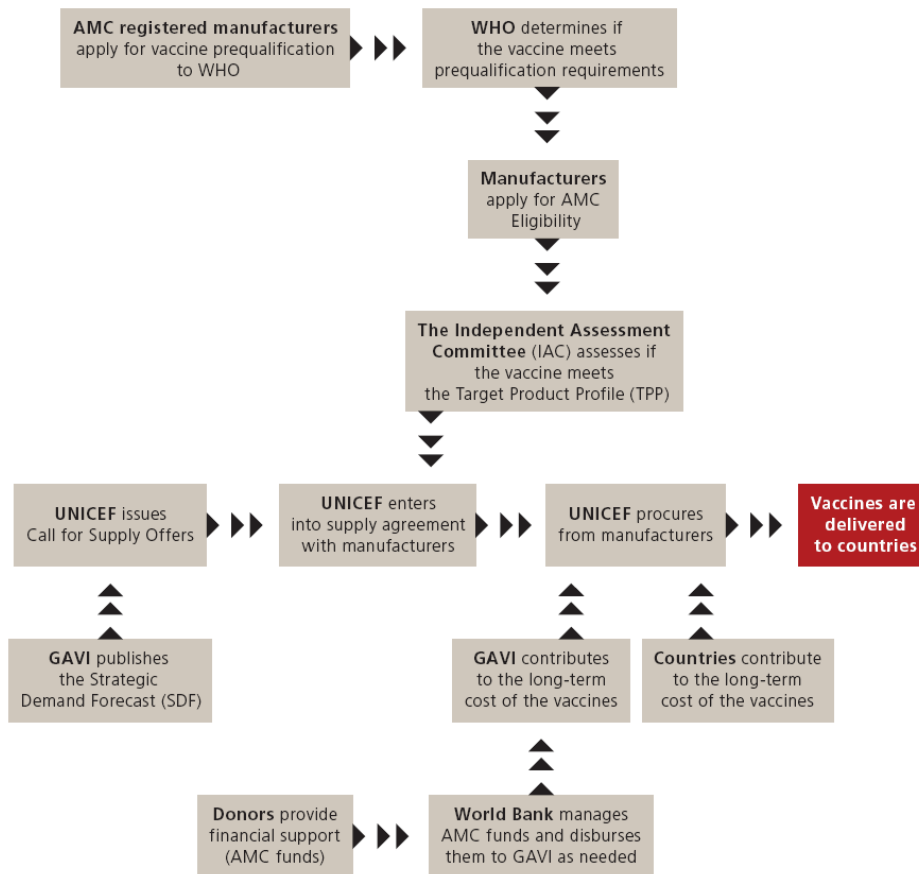
4. Structure and roles

GAVI hosts the AMC Secretariat. The Secretariat is supplemented with support from the World Bank, UNICEF, the AMC Donor Committee, IAC and WHO. Roles of the different organizations are defined as follows:

- GAVI: Hosts the Secretariat, and manages programmatic and operational functions
- World Bank: Provides financial and fiduciary administration, and manages donor commitments and AMC disbursements
- UNICEF: Serves as the procurement agency
- AMC Donor Committee: Assures funding commitments and guides and monitor implementation and progress
- Independent Assessment Committee: Establishes TPP, determines vaccine eligibility, resolve disputes, and monitors and reports on progress
- WHO: Provides regulatory role/ prequalification, provides technical assistant and promotes country demand

Figure 3 provides an overview of the AMC process that stakeholders are required to follow in relation to roles and responsibilities as set by legal agreements.

Figure 3: AMC process for pneumococcal vaccine pilot



ANNEX 13: ELECTRONIC SURVEY FEEDBACK

This section of the annex presents an examination of the quantitative and qualitative responses to five statements in the electronic survey:

- ‘The global level of funding for immunisation by donors would have been substantially lower in the absence of GAVI’;
- ‘GAVI has added value by mobilising longer-term, more predictable and sustainable donor support for immunisation’;
- ‘GAVI has displaced global immunisation funding through traditional channels such as the multilaterals (i.e. GAVI resources do not represent truly additional funds)’;
- ‘The GAVI Alliance has not contributed significantly to promoting financial sustainability of immunisation at the country level’; and
- ‘GAVI has been instrumental in designing and implementing innovative financing mechanisms such as IFFIm and AMC’.

Table 1 below presents an examination of responses to the electronic survey statement, ‘The global level of funding for immunisation by donors would have been substantially lower in the absence of GAVI’, by stakeholder category.

Table 1: E-survey responses to question 16 by responder constituency – ‘The global level of funding for immunisation by donors would have been substantially lower in the absence of GAVI’

| Responses by constituency | Blank | Not aware/no view | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Total |
|---|-----------------|--------------------------|--------------------------|-----------------|-----------------------------------|-----------------|-----------------------|-------------------|
| Multilaterals | 9% (7) | 5% (4) | 3% (2) | 7% (5) | 11% (8) | 30% (22) | 35% (26) | 26% (74) |
| Donor/ Foundation | 6% (1) | 0% (0) | 6% (1) | 0% (0) | 6% (1) | 53% (9) | 29% (5) | 6% (17) |
| Developing country government | 10% (5) | 2% (1) | 2% (1) | 4% (2) | 8% (4) | 26% (13) | 48% (24) | 18% (50) |
| Vaccine industry developing countries | 17% (1) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 67% (4) | 17% (1) | 2% (6) |
| Vaccine industry industrialised countries | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 100% (3) | 0% (0) | 1% (3) |
| CSOs | 11% (3) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 22% (6) | 67% (18) | 10% (27) |
| Research and Technical Health Institutes | 7% (1) | 0% (0) | 0% (0) | 0% (0) | 14% (2) | 29% (4) | 50% (7) | 5% (14) |
| Not applicable | 11% (5) | 4% (2) | 0% (0) | 4% (2) | 2% (1) | 37% (17) | 41% (19) | 16% (46) |
| Blank | 9% (4) | 2% (1) | 0% (0) | 2% (1) | 4% (2) | 27% (12) | 56% (25) | 16% (45) |
| Total | 10% (27) | 3% (8) | 1% (4) | 4% (10) | 6% (18) | 32% (90) | 44% (125) | 100% (282) |

Table 2 below presents the key qualitative response themes to the electronic survey statement, ‘The global level of funding for immunisation by donors would have been substantially lower in the absence of GAVI’.

Table 2: E-survey qualitative response feedback themes for question 16 – ‘The global level of funding for immunisation by donors would have been substantially lower in the absence of GAVI’

| Response Theme | Responses |
|---|------------------|
| GAVI is critical to supporting and advocating immunisation | 13 |
| GAVI has been pivotal to the increased levels of global funding, particularly via innovative financing and BMGF | 11 |
| GAVI has not increased the level of global funding, it has only created a centralised pool for channelling funds. Funding was likely to increase without GAVI, GAVI only accelerated this | 6 |
| Other donor funding, particularly at country level, has fallen as a result of GAVI | 4 |
| GAVI funds only certain aspects of immunisation, support for the wider immunisation sector has decreased | 3 |
| GAVI has made available new vaccines at affordable prices which would not have happened otherwise | 3 |
| Equity of fund distribution would have been an issue without GAVI | 2 |

Table 3 below presents an examination of responses to the electronic survey statement, ‘GAVI has added value by mobilising longer-term, more predictable and sustainable donor support for immunisation’, by stakeholder category.

Table 3: E-survey responses to question 17 by responder constituency – ‘GAVI has added value by mobilising longer-term, more predictable and sustainable donor support for immunisation’

| Responses by constituency | Blank | Not aware/no view | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Total |
|---|-----------------|--------------------------|--------------------------|-----------------|-----------------------------------|------------------|-----------------------|-------------------|
| Multilaterals | 9% (7) | 1% (1) | 3% (2) | 5% (4) | 8% (6) | 49% (36) | 24% (18) | 26% (74) |
| Donor/ Foundation | 6% (1) | 0% (0) | 0% (0) | 0% (0) | 6% (1) | 47% (8) | 41% (7) | 6% (17) |
| Developing country government | 12% (6) | 2% (1) | 2% (1) | 0% (0) | 2% (1) | 32% (16) | 50% (25) | 18% (50) |
| Vaccine industry developing countries | 17% (1) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 67% (4) | 17% (1) | 2% (6) |
| Vaccine industry industrialised countries | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 33% (1) | 33% (1) | 33% (1) | 1% (3) |
| CSOs | 11% (3) | 0% (0) | 0% (0) | 0% (0) | 4% (1) | 22% (6) | 63% (17) | 10% (27) |
| Research and Technical Health Institutes | 7% (1) | 0% (0) | 0% (0) | 7% (1) | 7% (1) | 43% (6) | 36% (5) | 5% (14) |
| Not applicable | 11% (5) | 7% (3) | 0% (0) | 0% (0) | 2% (1) | 46% (21) | 35% (16) | 16% (46) |
| Blank | 7% (3) | 2% (1) | 2% (1) | 4% (2) | 4% (2) | 42% (19) | 38% (17) | 16% (45) |
| Total | 10% (27) | 2% (6) | 1% (4) | 2% (7) | 5% (14) | 41% (117) | 38% (107) | 100% (282) |

Table 4 below presents the key qualitative response themes to the electronic survey statement, ‘GAVI has added value by mobilising longer-term, more predictable and sustainable donor support for immunisation’.

Table 4: E-survey qualitative response feedback themes for question 17 – ‘GAVI has added value by mobilising longer-term, more predictable and sustainable donor support for immunisation’

| Response Theme | Responses |
|--|------------------|
| GAVI has added value by mobilising support from different donors in order to influence the market | 11 |
| GAVI has created high expectations for funding that would be difficult to sustain after GAVI support ends (particularly in current economic climate) | 8 |
| GAVI has added value by introducing FSPs and cMYPs | 6 |
| Current support is not predictable/sustainable e.g. some countries are no longer eligible/ delays in disbursements | 3 |
| GAVI has added value by bringing immunisation to the attention of countries and global organisations via advocacy | 2 |
| GAVI has added value through funding over a longer-term horizon e.g. offering 5-10yr financing to countries, assurance of vaccine availability | 2 |
| One weakness of GAVI is its dependence on BMGF, number of donors should be increased, particularly with regards to developing world financial organisations to cascade financial mobilisation to regional/local levels | 1 |

Table 5 below presents an examination of responses to the electronic survey statement, ‘GAVI has displaced global immunisation funding through traditional channels such as the multilaterals (i.e. GAVI resources do not represent truly additional funds)’, by stakeholder category.

Table 5: E-survey responses to question 18 by responder constituency – ‘GAVI has displaced global immunisation funding through traditional channels such as the multilaterals (i.e. GAVI resources do not represent truly additional funds)’

| Responses by constituency | Blank | Not aware/no view | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Total |
|---|-----------------|--------------------------|--------------------------|-----------------|-----------------------------------|-----------------|-----------------------|-------------------|
| Multilaterals | 11% (8) | 4% (3) | 3% (2) | 26% (19) | 16% (12) | 34% (25) | 7% (5) | 26% (74) |
| Donor/ Foundation | 6% (1) | 12% (2) | 6% (1) | 29% (5) | 29% (5) | 6% (1) | 12% (2) | 6% (17) |
| Developing country government | 10% (5) | 18% (9) | 4% (2) | 28% (14) | 16% (8) | 20% (10) | 4% (2) | 18% (50) |
| Vaccine industry developing countries | 17% (1) | 17% (1) | 0% (0) | 0% (0) | 17% (1) | 50% (3) | 0% (0) | 2% (6) |
| Vaccine industry industrialised countries | 0% (0) | 0% (0) | 0% (0) | 67% (2) | 33% (1) | 0% (0) | 0% (0) | 1% (3) |
| CSOs | 15% (4) | 11% (3) | 0% (0) | 37% (10) | 19% (5) | 15% (4) | 4% (1) | 10% (27) |
| Research and Technical Health Institutes | 7% (1) | 14% (2) | 7% (1) | 36% (5) | 7% (1) | 7% (1) | 21% (3) | 5% (14) |
| Not applicable | 13% (6) | 13% (6) | 0% (0) | 41% (19) | 11% (5) | 15% (7) | 7% (3) | 16% (46) |
| Blank | 13% (6) | 4% (2) | 2% (1) | 24% (11) | 16% (7) | 29% (13) | 11% (5) | 16% (45) |
| Total | 11% (32) | 10% (28) | 2% (7) | 30% (85) | 16% (45) | 23% (64) | 7% (21) | 100% (282) |

Table 6 below presents the key qualitative response themes to the electronic survey statement, ‘GAVI has displaced global immunisation funding through traditional channels such as the multilaterals (i.e. GAVI resources do not represent truly additional funds)’.

Table 6: E-survey qualitative response feedback themes for question 18 – ‘GAVI has displaced global immunisation funding through traditional channels such as the multilaterals (i.e. GAVI resources do not represent truly additional funds)’

| Response Theme | Responses |
|--|------------------|
| Limited data/information from which to make informed judgement | 9 |
| GAVI has displaced some funding but there has been an overall net increase in funding | 8 |
| Benefits include reducing duplicate resource/waste and more predictable/organised channelling of funds | 6 |
| Displacement in some areas of support may not have been offset by increases e.g. bilateral/ multilateral assistance, un-earmarked resources may not be allocated to immunisation, system strengthening, non-priority vaccines and wider immunisation | 6 |
| Displacement effects only particular countries | 5 |
| Countries need more partners | 1 |
| GAVI has created new bureaucracies and led to an increase in costs of external support mechanisms | 1 |

Table 7 below presents an examination of responses to the electronic survey statement, ‘The GAVI Alliance has not contributed significantly to promoting financial sustainability of immunisation at the country level’, by stakeholder category.

Table 7: E-survey responses to question 19 by responder constituency – ‘The GAVI Alliance has not contributed significantly to promoting financial sustainability of immunisation at the country level’

| Responses by constituency | Blank | Not aware/no view | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Total |
|---|-----------------|--------------------------|--------------------------|------------------|-----------------------------------|-----------------|-----------------------|-------------------|
| Multilaterals | 11% (8) | 0% (0) | 7% (5) | 42% (31) | 18% (13) | 23% (17) | 0% (0) | 26% (74) |
| Donor/ Foundation | 6% (1) | 0% (0) | 6% (1) | 59% (10) | 12% (2) | 12% (2) | 6% (1) | 6% (17) |
| Developing country government | 10% (5) | 6% (3) | 16% (8) | 40% (20) | 4% (2) | 20% (10) | 4% (2) | 18% (50) |
| Vaccine industry developing countries | 17% (1) | 0% (0) | 0% (0) | 33% (2) | 17% (1) | 17% (1) | 17% (1) | 2% (6) |
| Vaccine industry industrialised countries | 0% (0) | 0% (0) | 0% (0) | 33% (1) | 67% (2) | 0% (0) | 0% (0) | 1% (3) |
| CSOs | 11% (3) | 0% (0) | 19% (5) | 26% (7) | 7% (2) | 30% (8) | 7% (2) | 10% (27) |
| Research and Technical Health Institutes | 7% (1) | 14% (2) | 14% (2) | 29% (4) | 14% (2) | 14% (2) | 7% (1) | 5% (14) |
| Not applicable | 17% (8) | 4% (2) | 9% (4) | 50% (23) | 4% (2) | 13% (6) | 2% (1) | 16% (46) |
| Blank | 13% (6) | 4% (2) | 11% (5) | 24% (11) | 20% (9) | 24% (11) | 2% (1) | 16% (45) |
| Total | 12% (33) | 3% (9) | 11% (30) | 39% (109) | 12% (35) | 20% (57) | 3% (9) | 100% (282) |

Table 8 below presents the key qualitative response themes to the electronic survey statement, ‘The GAVI Alliance has not contributed significantly to promoting financial sustainability of immunisation at the country level’.

Table 8: E-survey qualitative response feedback themes for question 19 – ‘GAVI has displaced global immunisation funding through traditional channels such as the multilaterals (i.e. GAVI resources do not represent truly additional funds)’

| Response Theme | Responses |
|--|------------------|
| Co-financing has played a key role in promoting financial sustainability at country level | 11 |
| GAVI has made substantial efforts to improving planning/financial planning through introduction of cMYPs, which can also strengthen ties between MOH and MOF | 10 |
| Increased allocation at country level e.g. through inclusion of ‘immunisation’ budget lines | 8 |
| Decreased/stagnant level of country commitments due to increased dependency on GAVI support/copayments | 5 |
| More work is required to decrease funding gap and increase country level commitment | 4 |
| Through advocacy, GAVI has successfully brought immunisation to country level agendas | 3 |
| Copayments are too low to contribute to sustainability | 3 |
| GAVI has increased costs by introducing expensive vaccines | 2 |

Table 9 below presents an examination of responses to the electronic survey statement, ‘GAVI has been instrumental in designing and implementing innovative financing mechanisms such as IIFIm and AMC’, by stakeholder category.

Table 9: E-survey responses to question 20 by responder constituency – ‘GAVI has been instrumental in designing and implementing innovative financing mechanisms such as IIFIm and AMC’

| Responses by constituency | Blank | Not aware/no view | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Total |
|---|----------|-------------------|-------------------|----------|----------------------------|-----------|----------------|------------|
| Multilaterals | 11% (8) | 9% (7) | 0% (0) | 0% (0) | 14% (10) | 49% (36) | 18% (13) | 26% (74) |
| Donor/ Foundation | 6% (1) | 6% (1) | 0% (0) | 6% (1) | 0% (0) | 53% (9) | 29% (5) | 6% (17) |
| Developing country government | 10% (5) | 22% (11) | 0% (0) | 4% (2) | 10% (5) | 32% (16) | 22% (11) | 18% (50) |
| Vaccine industry developing countries | 17% (1) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 33% (2) | 50% (3) | 2% (6) |
| Vaccine industry industrialised countries | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 100% (3) | 0% (0) | 1% (3) |
| CSOs | 19% (5) | 11% (3) | 0% (0) | 0% (0) | 7% (2) | 33% (9) | 30% (8) | 10% (27) |
| Research and Technical Health Institutes | 7% (1) | 0% (0) | 0% (0) | 0% (0) | 14% (2) | 43% (6) | 36% (5) | 5% (14) |
| Not applicable | 11% (5) | 15% (7) | 0% (0) | 0% (0) | 11% (5) | 39% (18) | 24% (11) | 16% (46) |
| Blank | 16% (7) | 7% (3) | 0% (0) | 2% (1) | 16% (7) | 27% (12) | 33% (15) | 16% (45) |
| Total | 12% (33) | 11% (32) | 0% (0) | 1% (4) | 11% (31) | 39% (111) | 25% (71) | 100% (282) |

Table 10: below presents the key qualitative response themes to the electronic survey statement, ‘GAVI has been instrumental in designing and implementing innovative financing mechanisms such as IIFIm and AMC’.

Table 10: E-survey qualitative response feedback themes for question 20 – ‘GAVI has been instrumental in designing and implementing innovative financing mechanisms such as IIFIm and AMC’

| Response Theme | Responses |
|--|------------------|
| GAVI Alliance partners have played a critical technical role | 8 |
| GAVI’s leadership and advocacy have driven work in this area | 7 |
| The instruments have limitations e.g. country applicability, success and impact | 7 |
| Not sure what the AMC/IIFIm are | 2 |
| GAVI should build on this work e.g. by rolling out into other fields/ exploring opportunities for further cost reduction | 2 |