Evaluation of the International Finance Facility for Immunisation (IFFIm)

EXECUTIVE SUMMARY

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1. Introduction

1- Background

This evaluation was commissioned by the GAVI Secretariat, on behalf of the IFFIm Board, to assess the extent to which the IFFIm has been an effective financing mechanism to raise money for immunisation and health systems in GAVI eligible countries

By the late 1990s, there was a growing consensus in the international community that *more* aid, but also better aid, was required to encourage more rapid development in low income countries. The establishment of the MDGs gave this process further impetus, setting clear and ambitious development targets. It also recognised the key role that improved health, which accounted for three of the eight MDGs, could play. The Zedillo Report of 2002 estimated that an additional $50bn was required to achieve the MDGs.

The IFF– developed by the UK Treasury and Goldman Sachs – was one proposal that emerged from the ensuing debate on innovative financing. Although it did not prove possible to implement the IFF in its full scale – some $40bn per annum – agreement was reached at the 2004 World Health Assembly to pilot the approach as IFFIm. GAVI, for its part, was seen as a credible implementing partner, able to scale up access to immunisation rapidly but lacking the resources to do so, open to new ideas and also willing to implement the pilot.

IFFIm was thus established as a proof of concept for a larger IFF which, it was intended, would come later if the pilot proved successful. Other alternatives were considered at the time, including working through the multilateral development banks (MDBs), but these gained little traction because they either offered insufficient leverage, lacked support within the MDBs or were, quite simply, not seen as new concepts.

IFFIm raises money by issuing bonds on international capital markets. The financial strength of IFFIm to repay the bonds is based on legally binding donor payments made to IFFIm over a period of up to 20 years. This arrangement effectively allows donors to “buy now but pay later” increasing aid flows significantly over a 5-7 year period but paying back over a 20 year period. IFFIm delivers these frontloaded funds to the GAVI Alliance which is then responsible for the management and utilisation of the funds.

The main rationale for IFFIm is that it offers the potential to frontload resources (by raising funds on international capital markets), and provides funds in a predictable manner (given that it can rely on legally binding commitments). It aims to provide resources in a form which could be used to generate benefits which outweigh any additional costs incurred. Immunisation was seen as a particularly attractive candidate for the pilot on the grounds that:

- it offered highly cost-effective interventions, with significant externalities (through herd immunity) which could be delivered earlier than would otherwise be the case;
- more children will grow up healthier which will promote economic growth and social development which will increase country capacity to sustain immunisation programmes in the long term;
- it offers the potential to influence vaccine markets, encouraging new producers to the market, allowing larger scale production and ensuring stable supplies at lower cost.

In order to get off the ground, the model had to meet a number of key donor requirements. It had to:

- raise funds at competitive rates (at levels close to where the donors could raise funds themselves);
- ensure that donor commitments could be accounted for off budget so as not to increase their budget deficits. This was seen as an attractive way of boosting aid spending by those donors spending less than the UN target of 0.7% of GDP ;
- allow donors sufficient control over how, and when, the funds were spent to enable them to make long term commitments;
- ensure that running costs were low by keeping institutional arrangements "lean and mean" and making the best use of existing organisations and;
- ensure that any new financing arrangements would not jeopardise GAVI's US tax exempt status.

These requirements played a key role in shaping the design and subsequent implementation of IFFIm. The first highlighted the importance of ensuring than IFFIm attained supranational status which, in turn, required the adoption of effective, and also highly conservative, financial and risk management policies and AAA credit ratings. This essentially restricted the choice of treasury manager to a multilateral development bank of comparable credit strength.

Off budget financing required a Eurostat ruling for which IFFIm independence and conditionality of donor payments (the High Level Financing Condition (HLFC)) were critical; the compelling GAVI mandate was also instrumental. The third and fourth requirements responded to donor concerns and led to IFFIm being established as an entity without staff and with its key functions outsourced. This was also done for cost and efficiency reasons including avoiding duplication of treasury and administrative functions. Operational aspects are managed by GAVI and the treasury management functions were outsourced to the World Bank (after a tender process in which the World Bank was the only complete bidder). Restrictions were placed on how, and how quickly, funds could be used.

Finally, the GAVI Fund Affiliate (GFA) was established to accept funds on the donor's behalf. This was done to keep IFFIm independent from the donors and also to safeguard GAVI's tax-exempt status. The structure may appear complex to a development audience but is fairly simple by financial market standards. Although governance and treasury management costs are not insignificant – just over $23.2m[1] to the end of 2009 - they largely reflect the structure and associated costs imposed on the model. They are modest in terms of IFFIm's overall borrowing accounting for just 0.6% of the present value of donor pledges to October 2010. Based on current expenditure levels we estimate IFFIm is likely to incur governance and treasury management costs of at most $150-$170m over its lifetime – some 4.1 to 4.6% of the present value of current pledges.

A critical requirement during the design of IFFIm was that it would raise funds efficiently and that whilst it should operate in the 'image and likeness' of the principal sovereign donors the IFFIm Board was expected to have operational independence.

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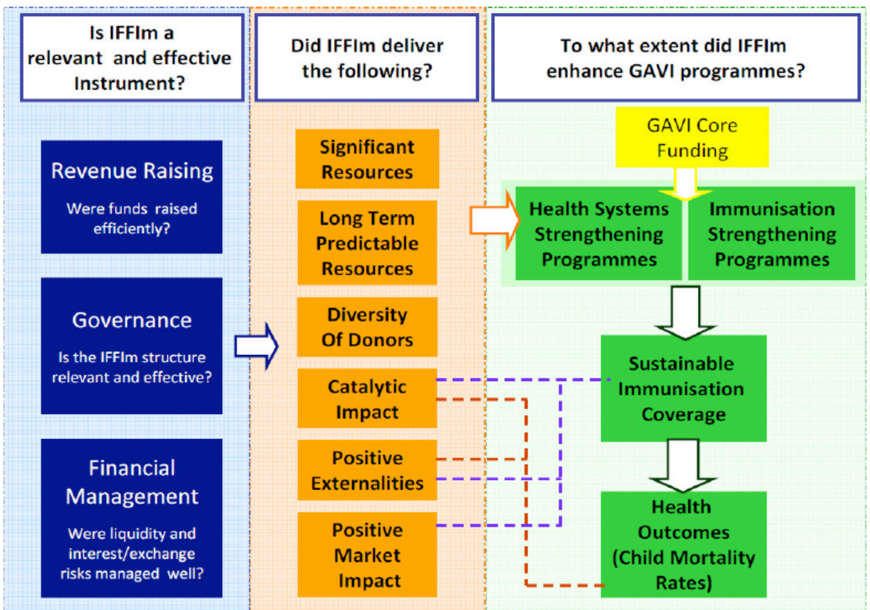
1 based on IFFIm and GFA Board accounts.

IFFIm is recognised as a multilateral development institution but incorporated as a private company limited by guarantee and registered as a Charity in England and Wales. The GAVI-GFA-IFFIm-World Bank-donor relationships are governed by the Finance Framework Agreement (FFA). Procedural and support agreements define the operational requirements and provide guidance to the different entities, whilst the IFFIm Articles of Association set out the legal status of the Board and their powers, duties and responsibilities. IFFIm is accountable to the UK Charities Commission (which provides donors with a further level of regulatory oversight) but also to other entities in relation to its different functions. The GAVI Alliance is the sole member of IFFIm.

2- Purpose of the Evaluation



The key questions addressed by this evaluation are whether the IFF concept, as a whole, is proven, and whether the IFFIm pilot, in particular, has worked. Specifically, “did the IFFIm mechanism work?” …and “did the IFFIm -funded investments offer value for money?” The team looked at the alternative models that were considered at the time, but also at how the IFFIm pilot, as it was actually constituted, operated. The evaluation framework used – and the key evaluation questions - are shown in the figure.

Evaluation methods included interviews with key stakeholders, analysis of market and financial data, a questionnaire issued to bond dealers and some health impact modelling. The team developed a number of counterfactuals to assess the “without IFFIm” case.

2. Progress to Date

1- What was IFFIm expected to deliver?

There is no agreed framework against which IFFIm performance can be measured. There is also a lack of consensus on some of the key IFFIm objectives – for example, whether market shaping was an explicit objective or not. This partly reflects the politically driven nature of the approach, as well as the speed with which it was introduced. In terms of the IFFIm proposal presented to the GAVI Board the only explicit targets relate to the $4bn that was expected to be raised and the 5 million lives it was expected to save.

DFID – a key champion of IFFIm – did set out a series of indicators, and these were used by the evaluation team, alongside the indicators which evolved as IFFIm developed, to form a judgment on performance. Indicators which currently enjoy broad acceptance – and are now reported on routinely in a quarterly report provided by the Treasury Manager – include:

- borrowing costs (specifically the IFFIm borrowing cost in relation to the weighted average of the borrowing cost of IFFIm donors);
- cost of carry (the relationship between the interest IFFIm earns on its liquidity compared to the interest it pays on its borrowing) and, related to this, investment returns compared to suitable benchmarks and;
- costs of running IFFIm.

2- Revenue Mobilisation: To what extent did IFFIm raise the necessary funds?

To date IFFIm has grant commitments from donors of $6.2bn in the form of legally binding pledges. This amounts to some $3.9bn in September 2006 value terms. This should enable IFFIm to disburse up to $4.3bn by 2026 (around ~92% of original expectations). The current ratio between programme disbursements and receipts from donors is 3.3. This clearly demonstrates the fact that IFFIm has allowed the frontloading of resources. The scope for frontloading has been restricted by the financial cushion IFFIm needs to retain to reassure bondholders they will be repaid, annual ceilings on expenditures which were imposed by donors (under the Finance Framework Agreement) and by GAVI's ability to utilise frontloaded resources.

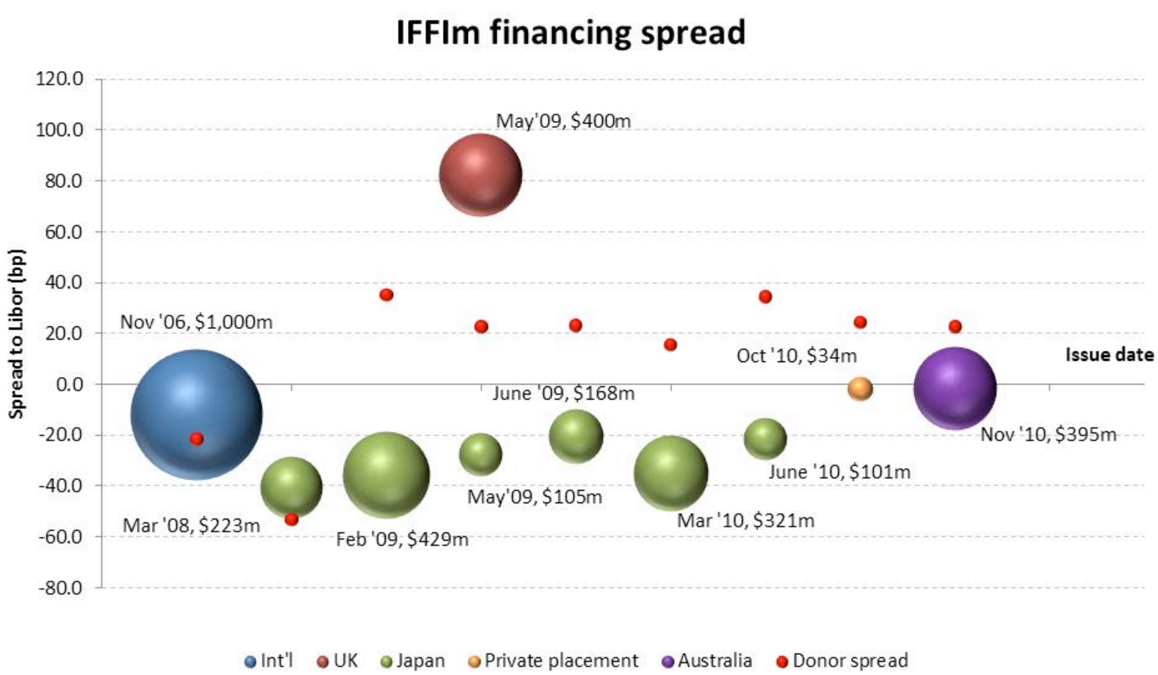
IFFIm has undertaken 18 bond issues on 10 occasions in 5 markets, raising $3.2bn to date (this has now increased to $3.4bn following the March 2011 issue). The majority of this has been used to support GAVI programmes and allow IFFIm to meet its agreed liquidity targets ($1.2bn has been for refinancing purposes).

Diversity in pledges has increased with the recent addition of the Netherlands (in 2009) and Australia (in 2011). There are currently 9 donors (including Australia) but IFFIm is still heavily dependent upon the UK and France – which account for 47.8% and 27.6% (March 2011) of current pledges respectively - for its funding.

3- Financial Efficiency: To what extent did IFFIm raise funds efficiently?

IFFIm has unique characteristics, combining features of three types of established securities: supranational, Collateralised Debt Obligations (CDO) and Asset Backed Securities (ABS). Although access to the AAA marketplace has been important, it does not guarantee low borrowing costs as spreads[2] within the AAA market can still be extremely wide. Achieving a zero-risk weighting and MDB status have been critical in enabling IFFIm to access low cost funds within the AAA group. The presence of the World Bank as Treasury Manager in the IFFIm structure has conveyed instant credibility and enabled bond underwriters to position IFFIm as a World Bank surrogate.

In terms of its funding policy IFFIm has managed to balance the need to diversify its funding sources and achieve financial efficiency with other objectives such as raising awareness of GAVI and issuing bonds in donor markets - but only where this did not compromise the primary objectives. The World Bank as Treasury Manager has enabled IFFIm to enjoy an extremely low cost borrowing programme. The figure below shows that IFFIm's all-in cost of borrowing has usually been below the weighted average of IFFIm donors' borrowing costs[3].



As IFFIm has achieved supranational status this has given it the comfort of stable access to the market and enabled it to focus on achieving the lowest possible borrowing costs.

Overall, IFFIm has traded at a small premium to the World Bank and, in recent times, below the spread for the EIB and KfW – an impressive achievement. Its current average borrowing cost is

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2 the difference between the actual cost of borrowing and the risk free cost of borrowing

3 The figure shows all in borrowing cost issue by issue. The size of the bubble reflects the size of the IFFIm issue. For each issue the corresponding weighted average donor cost is presented.

far less than initial expectations[4] (and slightly less than the weighted cost of borrowing of the IFFIm donors (a benchmark subsequently adopted by the IFFIm Board). In most cases IFFIm has priced inside the weighted average donor spread[5] and on average has achieved pricing 12.4bp lower.

The table below shows savings achieved by IFFIm for each issue compared to various alternatives over the life of each bond issue thus providing an indication of the value added by IFFIm's funding programme. The total column on the right presents the cumulative savings to date. It shows, for example, that, at present, IFFIm's cost of raising funds has been some $13.1m less than that of the weighted donor basket. It has cost over $37.3m less than an original DFID expectation of raising funds at UK government bonds +35bp. Shaded cells reflect cases where IFFIm was more expensive than the comparator and shows clearly that IFFIm's relative performance has improved over time.

Estimates of Cost Savings due to IFFIm Financial Efficiency in relation to comparators

Cumulati ve US$ cost diff erenti al vs selected comparables

IFFIm funding (US$m) vs	Nov '06	Mar '08	Feb '09	May '09	May '09	Jun '09	Jun '09	Jun '09	Mar '10	Jun '10	Jun '10	Oct '10	Nov '10	Total ($m)
Size (US$m)	1,000	223	429	400	105	38	85	45	321	71	30	34	395	
Tenor (yrs)	5	2	3	5	3	3	4	15	3	4	10	5	5	
Donors	4.8	0.6	-9.1	11.3	-1.8	-0.5	-1.4	-3.3	-4.9	-1.5	-2.0	-0.4	-4.8	-13.1
UK	6.1	1.6	-6.9	18.9	-1.5	-0.4	-0.3	-1.9	-4.7	-0.7	-1.4	-0.1	1.8	10.6
IBRD	4.1	0.0	0.1	1.2	0.0	0.0	0.0	1.1	0.0	0.0	0.3	0.1	1.2	8.2
EIB	3.1	-0.2	-4.6	0.3	-0.9	-0.3	-1.0	-1.9	-1.9	-0.4	-0.4	-0.3	-3.0	-11.3
KfW	2.1	-0.2	-4.6	-1.3	-0.9	-0.3	-1.0	-1.9	-1.9	-0.4	-0.4	-0.2	-2.2	-13.1
AfDB	-3.4	-0.2	-4.6	-2.2	-0.9	-0.3	-1.0	-1.9	-1.9	-0.4	-0.4	0.0	-0.3	-17.5
US$ benchmark*	NA	-1.3	-11.0	4.2	-2.0	-0.6	-2.2	-7.6	-3.9	-1.1	-1.2	-0.1	-1.3	-28.3
vs UK+35bp	-11.4	0.1	-11.4	12.4	-2.6	-0.8	-1.5	-4.2	-8.1	-1.7	-2.5	-0.7	-5.1	-37.3
vs L+10bp	-10.9	-2.2	-5.9	13.4	-1.2	-0.4	-1.3	-0.5	-4.3	-1.0	-0.5	-0.2	-2.3	-17.4
v Libor fl at	-5.9	-1.8	-4.6	15.2	-0.9	-0.3	-1.0	0.1	-3.3	-0.8	-0.2	0.0	-0.3	-3.7

* World Bank esti mate of spread IFFIm could have achieved in the US$ benchmark market (min $1bn issue)

This success has been driven largely by access to the Japanese Uridashi market which has offered extremely low spreads. We estimate that, to date, access to the Uridashi market has resulted in cost savings of over $25m compared to IFFIm's next best funding alternative. Whilst IFFIm probably could have used this source exclusively it was decided to issue in a number of other low cost markets to protect it against a possible loss of access to the Uridashi market.

In short, funds have been accessed at exceptionally low rates despite the need to trade off the cost of funding with the need to ensure greater diversity in funding. Furthermore, IFFIm's performance in terms of borrowing costs has improved over time in relation to its peers. Cost

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4 DFID anticipated IFFIm would borrow at 35bps over UK risk free with other benchmarks considered as LIBOR +10bp or the weighted average donor cost of borrowing)

5 In order to be consistent in comparing IFFIm's spreads to the donors, in most cases local currency sovereign debt spreads have been swapped into US$ Libor (US$ benchmarks are rare for European issuers) to normalise for yield curve differentials. The US$ spread to Libor may not always be close to the local currency swap spread (margin below domestic Libor at which the government can borrow) e.g. in March '08 the UK's US$ swapped spread was L-77 but the local currency swap spread was L-110. If donors compare IFFIm's cost of borrowing to their local currency swap spread they will get a different result.

savings have partially or fully offset IFFIm running costs depending on the assumptions used[6]. We also estimate that the savings achieved through the World Bank's ability to place IFFIm in the Uridashi market exceeds total treasury management fees paid to date.

One risk with this strategy is the focus on relatively short dated instruments given the lower spreads this entails. Initial expectations were of fewer, larger bonds being issued on the grounds that numerous, short dated offering have higher issuance and related costs. In practice, the lower cost of funding on the short end has more than offset underwriter's fees and fewer, longer-dated offerings would have been significantly costlier. The IFFIm Board has challenged the World Bank to explore longer dated funding alternatives and whilst some progress has been made, due to the significant cost premium in raising long-dated funds, the bulk of the financings have been in maturities of five years or less.

Surprisingly the main risk to IFFIm's AAA status has proved not to be related to the credit ratings of recipient countries but the credit ratings of the key donors – notably its vulnerability to a possible UK downgrade.

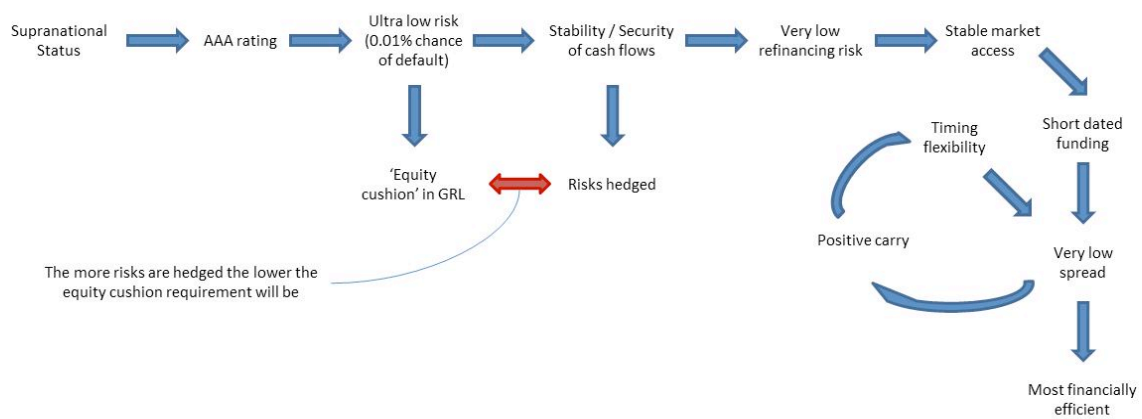
Essentially, IFFIm has paid the upfront costs of gaining access to important funding markets but has been unable to fully utilise those markets because it does not have a sufficiently large funding programme. IFFIm could be scaled up significantly in size without paying much more in marketing and other costs and still be able to access spreads which are attractive. Diversification of funding sources would also be easier because IFFIm would not be constrained by the minimum size requirements of the benchmark market.

[6] Total IFFIm running costs to end of 2009 amounted to some $23.2m – and are likely to be in the region of $30m by end 2010 (accounts not currently available). Cost savings compared to initial DFID expectations of $37.3m exceed this – cost savings compared to the donor average of $13.1m amount to some 43.7% of the estimated $30m figure

4- Financial and Risk Management: To what extent were liquidity and risks well managed?

IFFIm has implemented sound financial and risk management policies consistent with maintaining its AAA status. The figure below illustrates the key links between sound financial management and credibility and access to low cost funds on a regular basis.

The Virtuous Cycle of Financial Efficiency



This evaluation judges IFFIm's liquidity policy to be fully effective in meeting the requirements of investors and the rating agencies. IFFIm is required to hold at least 12 months worth of debt service repayments. Despite its conservative investment policy IFFIm has achieved a positive carry of some $7.5m on its liquidity holdings since inception (due, in large part, to its low borrowing costs). Early concerns from some donors related to IFFIm holding excess liquidity and receiving funds in advance of need have, as a result, largely been assuaged. IFFIm has rarely held funds in excess of its minimum needs (taking into account estimated programme disbursement requirements). Managing liquidity is particularly challenging with IFFIm faced on one side by market uncertainty and, on the other, by the fact that GAVI faces considerable uncertainty in assessing its own funding needs (given the country demand led nature of its business).

IFFIm has followed the World Bank's conservative approach to investment management. The fact that IFFIm is able to fund itself at sub-Libor rates is primarily due to these extremely conservative, risk averse policies and the management of its liquid assets is a key part of those policies. Such policies inevitably leave IFFIm open to the accusation (usually with the benefit of hindsight) that it is foregoing almost assured higher returns. Foregoing potentially higher but more risky, and potentially volatile, returns is nevertheless a price to be paid for ensuring continued supranational funding levels. The World Bank's investment management has outperformed against the relevant benchmarks. This has, in turn, contributed to IFFIm's positive carry and ensured that IFFIm suffered only minor negative returns during the financial crisis when other MDBs – such as the Inter American Development Bank (IADB) - suffered significant losses as a result of employing more adventurous investment strategies. IFFIm's conservative approach to investment management has also supported its AAA rating.

In terms of risk management an effective hedging strategy is essential in order to protect the value of IFFIm's assets, and hence its AAA rating. In particular, IFFIm has needed to hedge its interest rate and currency exposure as comprehensively as possible. Not all of the risks faced by IFFIm are hedgable but where options have been available IFFIm has chosen the alternatives which provided the greatest degree of certainty at reasonable cost. The HLFC poses a particular challenge7 but in practice, the hedging policy implemented by IFFIm has proven to be effective due to the stable and low number of GAVI eligible countries in IMF arrears (though there is no guarantee that this will continue). The widespread, but necessary, use of hedges and derivatives to manage risks has made accounting especially challenging. IFFIm has strived to address this as far as possible by increasing the transparency of its accounts whilst recognising that complexity is an inherent feature of its business.

Under the terms of the Treasury Management Agreement (TMA) the World Bank has developed and maintained a gearing ratio limit model which is reviewed annually and the gearing ratio limit recalculated on a quarterly basis. The gearing ratio sets the maximum leverage IFFIm can incur consistent with the default probability for AAA ratings; the limit is currently 69.7% thus requiring IFFIm to retain an asset cushion of 30.3% which cannot be tapped until sufficient donor payments are received that bonds can be repaid. The model was originally intended to have a far greater influence on IFFIm's credit rating but, in practice, more emphasis has been placed on political commitment and the major donors' credit ratings. The model is intended to mitigate the risk to IFFIm's credit rating originating from the HLFC, and it continues to serve this purpose. However, IFFIm's credit rating is also exposed to the large weighting of two donors versus IFFIm's total capital, their political commitment and their credit ratings. This is difficult to mitigate without further pledges from other AAA rated donors that would lower IFFIm's dependency on the UK and France.

5- Were costs reasonable and justified?

Operational costs (including the Treasury Manager's costs) amounted to some $22.1m from IFFIm's inception in late 2006 to the end of 2009. In 2009 IFFIm governance costs ran at just under $3m – of which the GAVI administrative support fee and legal fees accounted for $0.8-$0.9m each. The Treasury Manager's fee added just under $2m and GFA costs amounted to just under $1.3m in 2009.

[7] Donor funding is dependant upon the HLFC which is based on the number of GAVI eligible countries in protracted arrears. As this figure is uncertain IFFIm does not know how the amounts it needs to hedge

This represents an estimated 0.60% of the present value of pledges. There are no obvious comparators to assess whether this figure it reasonable. Total costs amounted to some 0.95% of bond proceeds (to end 2009) whilst costs as a share of outstanding debt declined from 0.52% in 2006 to 0.30% in 2009.

IFFIm Running Costs – compared to donor pledges

$000	2006	2007	2008	2009	Total
IFFIm Board	1,595	2,160	2,786	2,985	9,526
GFA	1,707	1,398	1,288	1,279*	5,672
Treasury Management Fee	1,904	1,298	1,779	1,965	6,946
Total	5,206	4,856	5,853	6,229	22,144
% of PV of Pledges**	0.14	0.13	0.16	0.17	0.60

* excludes a $1.1m procurement fee for the purchase of meningitis and yellow fever vaccines paid by the GAVI Alliance to UNICEF which is included in GFA accounts as both income and expenditure

**$3,673m as at October 2009

Costs are now increasingly captured in the accounts though there is still a substantial "uncharged" component (e.g. reduced fee rates from the legal teams; World Bank subsidies of the systems development costs and the use of the World Bank's swap credit lines) and funds are not necessarily transferred (the GAVI Secretariat estimates costs and then provides its support as a donation). Such transparency is welcome. Including such costs would make the true costs of running IFFIm somewhat higher (at most $26m since inception depending upon the assumptions made). Bond issuance costs amounted to a further $13.8m to the end of 2009.

6- Governance: Were arrangements relevant and effective?

1. IFFIm Structure

IFFIm operates as UK based charitable company within an elaborate legal framework defined by a series of founding documents: the Master Definitions Agreement, Finance Framework Agreement (FFA), Procedures Memorandum, Treasury Management Agreement (TMA) and Administrative Support Agreements. These provide a sound governance and legal framework for the operation of IFFIm consistent with good practice principle.

Designing the IFFIm governance arrangements required a large investment of time and resources as did the completion of the FFA. The structure was a tailored solution to meet multiple donor objectives and the FFA has provided well defined legal obligations and procedural mechanisms for the various entities involved. As a result the mutual obligations and responsibilities between IFFIm, GFA, the World Bank and the GAVI Fund were very clear at the outset.

The evaluation finds that the structure has proved robust and generally worked well with major adjustment to the founding documents only being required to accommodate the new status of the GAVI Alliance as a Swiss Foundation (and not due to shortcomings in the actual FFA). New grantor donors have been easily accommodated. It is a significant achievement that most of the tax, accounting, regulatory, credit rating, legal and market requirements that were required could be built around these four entities and their relationships with the grantor donors.

The number of entities and transactions makes the structure appear complex but the underlying decision making process and the primary relationship between the principals within the Governance structures are relatively straightforward. The evaluation suggests that the structure looks more complex than it actually is. There are substantial transaction and operational costs associated with it but these are a necessary consequence of a governance structure required to ensure that the multiple objectives of the grantor donors could be met. There may be scope for streamlining – for example through the removal of GFA which is currently under discussion - but there are risks associated with this and costs and benefits of such action need to be carefully weighed.

IFFIm has met its reporting obligations to the UK Charity Commission and has produced audited accounts as required. There is an ongoing challenge to ensure that the complex financial transactions can be presented more transparently for non specialists. Where appropriate, the annual donor meetings could benefit from more involvement from donors' Treasury colleagues.

The GAVI Board does not have oversight of IFFIm but there is a regular flow of information to the GAVI Board about IFFIm's performance and activities. The IFFIm Board briefs the senior executives of the GAVI Alliance who, in turn, brief GAVI Board members. From time to time the IFFIm Chair has also presented to the GAVI Alliance Board. These arrangements could be more structured and formalised to ensure a more systematic information flow to all GAVI Board members. A more substantial change could involve the IFFIm Chair becoming a member of the GAVI Board. However, there may be legal implications if the two organisations are more closely linked and this would need careful consideration. Stronger links between the GAVI Audit Committee and the IFFIm Audit Committee would further strengthen accountability.

2. The IFFIm Board

The structure has been set up to require an active decision making role by the IFFIm Board in policy approval and funding decisions. The Board are also required to manage the affairs of IFFIm and to demonstrate diligence as trustees of the Charity. Donors have emphasised the important role of an independent Board in overseeing the financial policies and setting the parameters for bond issuance.

The need for IFFIm to have a Board was established in the Founding documents and GAVI appointed a Board using best practice approaches. The IFFIm Board has met just under 50 times in five years which is higher than the initially planned four meetings per year. Interviews confirmed that the earlier expectations of the workload were underestimated.

Feedback from grantor donors and other stakeholders is positive about the role played by the Board and the level of professionalism and personal commitment shown. The Board is considered to be well led and the contribution to the successful establishment and operation of IFFIm is fully recognised. There are a number of ways in which the IFFIm Board has made operations more effective. Improving awareness in the financial community of GAVI's mandate has, for example, been greatly assisted by Board members engaging more substantially in raising awareness of GAVI and IFFIm.

The Treasury Management Agreement sets out the legal relationship between the IFFIm Board and the World Bank in relation to policy and Treasury Management functions. Under the TMA, the role of the IFFIm Board is to review, amend and approve policy and strategy proposals put forward by the Treasury Manager including the Funding strategy, Risk Management strategy and the Investment Management and Liquidity Policy. Discussions with the Board, examination of the IFFIm Board minutes and interviews with Bank and Secretariat staff, indicate that the IFFIm Board have fulfilled the requirements of the FFA and TMA by close scrutiny of policy submissions and by approving each bond issue. The policy making process has evolved into the World Bank preparing proposals (draft papers containing scenarios and options) for Board discussion and further development.

This approach has resulted in an effective policy debate and scrutiny of the Treasury Management functions by IFFIm. However, it has also meant that the World Bank has been providing more inputs for advice and information than was initially anticipated.

There are several explanatory factors. Firstly, there was limited experience as to how the policy process would work at the outset and the approach has been established over time and through experience. Secondly, the IFFIm Board requires to be fully informed before it makes decisions and on occasion this has meant a significant amount of background information being provided by the World Bank. A third explanatory factor has been a difference in view over the extent of delegation that should be made under the TMA.

IFFIm legal advisers told the evaluation team that the TMA provides the flexibility to allow delegation of bond issues but does not *require* such delegation. In their view, as a matter of contractual authority, the IFFIm Board can delegate decision making about individual funding transactions and bond issues but in practice it has chosen not to do so. The IFFIm Board has closely scrutinised and approved the terms of each bond issue but, depending on the situation, it may well give more discretion in an actual execution to the Treasury Manager. Board minutes indicate that this was the case for the Uridashi recent issue. As a matter of course all proposals for future transactions get reviewed on a quarterly basis in the light of Treasury Management reports provided by the World Bank.

The World Bank view is that the TMA is not operating as initially envisaged in some respects. In their view whilst it is clear that the Board is responsible for setting policy the TMA provides for the World Bank annually to present the IFFIm Board with a strategy. If approved the World Bank should then have the authority to execute the strategy including all individual transactions[8].

The professional and business relationships between the IFFIm Board and the World Bank and the GAVI Secretariat are nevertheless effective and the partnership between the IFFIm Board and the World Bank has evolved onto a firm footing. There have been differences of opinion and "creative tension", especially in the initial stages, but these have been dealt with through debate and discussion through an active learning process. Examples include:

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[8] In the 2009 Treasury Manager's review of Financial Policies it recommended that "the IFFIm Board move from a case-by-case assessment of funding transactions, to consideration of an annual funding framework, as envisioned in the TMA, while maintaining a regular process for Board consultation and input over the course of each year."

- World Bank advice: Dialogue about market access for Uridashi bonds and the World Bank's own issuance led to an IFFIm bond programme in Australian $ and the issuance of longer dated maturity Uridashi bonds.
- World Bank fees: There was a discussion of possible cost reductions at the outset; the Bank's Board requires it to operate on a cost recovery basis. Oversight by the IFFIm Board has ensured greater awareness of the costs incurred.
- Liquidity Management: Dialogue relating to alternative ways of investing IFFIm's liquidity.

Better forecasting of costs, less ad hoc reporting and reliance on streamlined regular reporting and the provision of dedicated GAVI and World Bank staff to help service the relationship have considerably strengthened the partnership.

Given the difference of view on how the TMA should operate and the fact that the current arrangement ends in September 2011 it would be valuable to review the experience to date and how the arrangements are working in practice.

3. IFFIm Policies

The finance, investment, liquidity and risk management policies adopted by the IFFIm Board have been conservative and in line with donor expectations. The evaluation has also assessed the policy framework to be consistent with good practice of MDBs generally and with the operating principles, guidelines and practice of the World Bank.

During the evaluation we consulted with donors who confirmed that the governance structure had been established to minimise their engagement in policy. However, they expected to be consulted if there was any major change in direction. The evaluation has not found any such cases where this would be warranted but the recent IFFIm Board decision to execute a swap overlay[9] does raises interesting questions such as how to judge to whether the degree of risk being adopted by IFFIm remains consistent with donor wishes, what triggers should be used to inform donors of policy changes and the conditions under which discussions on these issues might take place.

7- To what extent did key stakeholders add value?

Both the World Bank and the IFFIm Board have added significant value in different ways. For example, the World Bank intervened at a late stage of the IFFIm design process, adopting an honest broker role based on their understanding of both the donor environment and financial markets, to engineer important amendments to the FFA. These included a shift from a "just in time" financing model to one which provided legally binding, long term commitments and also a streamlining of the Relevant Events (which allow donors to halt payments) to ensure the

[9] The swap overlay involved IFFIm taking on a limited degree of financial risk in investing its liquid assets The IFFIm Board asked the World Bank early in 2010 to look at investment options for its 12 month liquidity. The Board formed an independent view to undertake a swap overlay after considering the World Bank advice and options presented in December 2010. The issue is discussed in more detail in section 5 and in annex 14.

markets did not perceive the arrangements as signalling a lack of donor commitment. The Bank has also lent huge credibility to IFFIm in its role as Treasury Manager and introduced IFFIm to the Uridashi market which afforded it considerable protection during the financial crisis. Having the World Bank as Treasury Manager has been one of the most important factors in IFFIm's success to date; indeed IFFIm may not be possible at all without the World Bank's participation.

The IFFIm Board has carried out an effective scrutiny role – requesting the Treasury Manager to prepare and present new or modified financing options. For example, though the Board challenged the case for going into the Uridashi market the Board had sufficient breadth of expertise to acknowledge its merits. They also subsequently pushed for longer dated maturities – not a typical feature of the Uridashi market – which has happened to a limited extent. The Board has also pushed for more transparent reporting which has resulted in a refined quarterly monitoring report and they also supported the development of an Explanatory Note which has been well received by donors.

8- What were donors' objectives, expectations and perceptions?

Donors supported IFFIm for a range of reasons – largely based around the views that both innovative financing and GAVI as an organisation had key roles to play in accelerating progress towards the MDGs. Our interviews suggested that some were broadly interested in supporting the innovative financing agenda – often for largely political reasons. Some, though still supporting IFFIm, also had reservations about the frontloading concept and how IFFIm fit into the overall vision for financing GAVI going forward.

For some countries – such as the UK – the need to get development spending up quickly was seen as important. For some of the funders – the Dutch and Nordics – who were already exceeding the 0.7% target, this was not an issue.

Donors placed different emphasis on costs – some were rather more willing to accept higher borrowing costs as a price to pay for a new finance model which could be justified if returns were acceptable. Other donors were more sensitive about the cost implications.

There was no common donor position on how they felt IFFIm had performed. In general, donors seemed to be largely satisfied with IFFIm's performance. They were generally highly complimentary about the Board and the Treasury Manager performance. Some suggested that whilst they initially expected a rather less hands on Board they were happy about current arrangements. The IFFIm donor meeting was seen as being helpful – but some donors thought the attendees did not have the right technical background to challenge the Board more effectively. The majority of donors expressed the need for a low risk approach characterised by the conservative World Bank financial management and risk policies but, at the same time, some also suggested a willingness to test more adventurous investment approaches.

9- What impact did the financial crisis have?

Ostensibly, the financial crisis has had little direct impact on IFFIm. It has had continuous access to the market at an affordable cost and IFFIm's conservative liquidity policies meant that it has not been forced into the market on an emergency basis. IFFIm has experienced some increase in spreads but is still largely perceived as a World Bank surrogate. Alternative approaches, had they been allowed, such as using a private sector Treasury Manager adopting different, less risk averse, financial and risk policies could have severely undermined IFFIm's performance. Although spreads have widened IFFIm has been largely shielded from this by issuing into the Uridashi market and by the relative spread improvement in relation to its peers.

The main impacts of the financial crisis have been indirect. A key concern was the potential effect of a UK downgrade on IFFIm's status (despite the fact that, in theory, the gearing ratio limit incorporates this risk) which, to date, has not materialised. There have also been far broader effects – in terms of impact on overall donor funding levels – and the increased challenge GAVI faces in attracting funds from a smaller pot of development assistance than might otherwise have been the case. The financial crisis is also likely to have affected country capacity to provide domestic funds for immunisation though such effects are difficult to quantify.

10- What are IFFIm's tipping points?

Key tipping points which could undermine IFFIm would include the losses of AAA and supranational status and the loss of the World Bank as Treasury Manager or any events which make this more likely. IFFIm's close association to the World Bank is only achieved through a contract (the TMA) and a loss of confidence in the bond market could see IFFIm fall out of the "virtuous cycle" described earlier. The removal of the World Bank as TMA or, to a lesser extent, even adoption of policies not considered by investors to be consistent with the World Bank's conservative policies might also contribute to this. The recent swap overlay will be of interest to investors as it is the first case in which the Board has not chosen to accept the World Bank's preferred option. Though the World Bank considered the choice made by the IFFIm Board as relatively low-risk there is a possibility that such instances may start to send adverse signals to investors and donors if repeated and involving transactions which imply a higher degree of risk. The IFFIm Board have reiterated their commitment to do nothing to jeopardise the credit risk of IFFIm.

Other tipping points – beyond IFFIm's control - might include the downgrading of key donors' credit ratings or even outright default and the resurgence of recipient country IMF arrears. The shift from raising new funds to refinancing existing debt may make it difficult to use "the GAVI story" to raise money and may make it difficult to attract investors at the same spread levels which IFFIm has enjoyed to date.

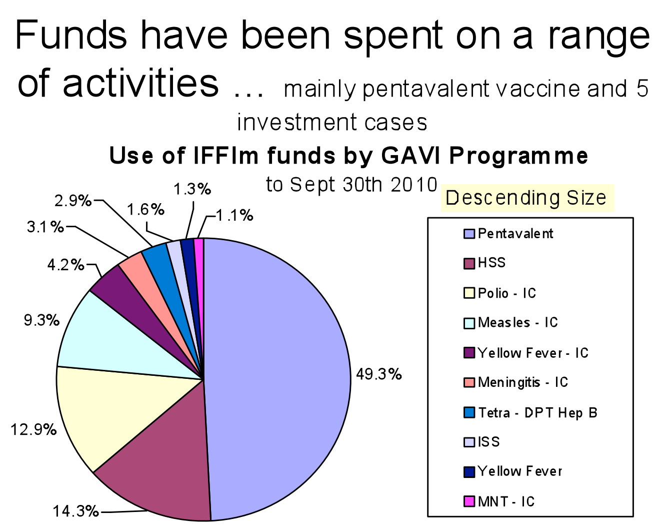
11- Has IFFIm produced any externalities?

IFFIm has certainly achieved impacts beyond those specifically targeted for immunisation. The Measles Initiative – supported by IFFIm – has provided a channel through which other health benefits can be delivered such as bed nets to protect against malaria, de-worming medicine, and vitamin A supplements. The Global Polio Eradication initiative has also been used as a channel for supporting Vitamin A supplementation as well as other services. Although much of GAVI's support for health system strengthening has been rather immunisation specific strengthened health systems can provide a platform for the delivery of health services as a whole. Within immunisation increased access, supported by IFFIm funds, has brought many countries to coverage levels where herd immunity can be expected to protect those un-immunised – though the level of impact this might have had is difficult to tell as the evidence base is, in general, very weak.

12- What have the implications of IFFIm been for GAVI?

1. Use of Funds and Impact on GAVI Spend

IFFIm has had a huge impact on GAVI's spending power. Since 2006 IFFIm has accounted for some 64.0% of GAVI spend and it has accounted for 49.2% of total spend since GAVI's inception. It has enabled GAVI to move from being a niche player – spending less than $200m a year – towards its ideal 'cruising altitude' of over $1bn per annum. However, future funding from IFFIm - based on current donor pledges - is now in decline just as GAVI is embarking on a very ambitious programme. This raises major concerns about financial sustainability for GAVI.



IFFIm funds appear to have been almost completely additional for GAVI (i.e. they have not been at the expense of core funding). Concerns that the easy availability of IFFIm funds might cause GAVI to slacken its efforts to raise funds from other sources are not borne out by the evidence.

To date (end September 2010), GAVI has spent just over $1.5bn of IFFIm funds. Around half of this has been spent on the pentavalent vaccine (DPT3-Hib3-HepB) which has allowed significant increases in access.

IFFIm spending was frontloaded - largely through a series of investment cases (polio, measles, yellow fever, maternal and neonatal tetanus (MNT), meningitis A) which have been implemented by other partners such as UNICEF and WHO.

2. Effects on Predictability

IFFIm has provided GAVI with predictable funding. The FFA sets out the maximum amount that can be drawn down annually. Within these constraints GAVI sets out its requirements for IFFIm funds on a regular basis. Discussions with key finance staff in GAVI makes clear the importance they place on the *quality* of IFFIm funds as opposed to just its *quantity*. The flexibility of IFFIm funds and the ability to "time shift" (providing funding to GAVI as and when needed) in addition to frontloading it has delivered has provided a useful counterweight to less predictable core funding. It has meant, for example, that GAVI has not had to use its reserves which would have affected its investment income. In some cases GAVI's projections of needs have proved optimistic resulting in IFFIm providing some excess liquidity. This is an inevitable reflection of the demand led nature of GAVI's business and the positive carry has meant it has not been an issue.

There is a further important question of whether predictability for GAVI is translated into predictability where it really matters – at the country level. The GAVI phase II evaluation found that "recipient countries consider GAVI to be a relatively stable and predictable source of finance for routine immunisation expenditure" although the HSS evaluation found some evidence that funds were not always provided to countries in a predictable manner. Finally, there is the issue of whether GAVI actually *uses* the predictability the IFFIm funds provide to achieve its mandate particularly in terms of achieving its market shaping objectives. In short, predictability has been useful for GAVI but active steps need to be taken to make sure its potential is better utilised.

13- Vaccine Market Impact

IFFIm funds were expected to have an impact on vaccine markets through frontloading funds - thereby accelerating demand and volumes purchased – essentially accelerating market maturity. The other anticipated means of impact was via advance contracting, made possible by the predictability and assurance of the IFFIm funds. More detailed specifics of market needs for specific vaccines, and the question of how frontloading and advance contracts would improve the market situation for relevant vaccines, were not elaborated in the IFFIm proposal. "Advance contracting" can take many different forms and the specific form envisaged was not spelt out. There was also little detail on expected results, although one donor did expect a 30% reduction in the cost of the pentavalent vaccine by 2015.

We focused our analysis on four markets: measles, polio, and maternal and neonatal tetanus (MNT) were covered as they were not assessing in the GAVI Phase II evaluation. Pentavalent was assessed as 50% of IFFIm funds were spent on this vaccine category and the original IFFIm proposal had specific intent to influence this market. In addition to this the pentavalent market had changed since the GAVI Phase II evaluation. Health systems strengthening however, this was not covered as a "product category" though it should be recognised that investment in health systems can have catalytic effects by facilitating new vaccine use thus promoting demand/uptake and, in doing so, indirectly accelerating market maturity of the vaccine lifecycle.

In the polio vaccine market, IFFIm funds were used to develop, test and monitor use of monovalent oral polio vaccine-(mOPV) and bivalent (bOPV) products. This has contributed to enhanced security of mOPV , bOPV and trivalent oral polio vaccine (tOPV) supplies as evidenced by new supplier entry. IFFIm also funded eradication programmes and this played a key role in the intensification of the initiative. It is reasonable to assume that this had an indirect impact on maintaining supply security. The market impact of the IFFIm funds set aside for the stockpile is already evident, even though the stockpile has not yet been drawn upon due to delays in achieving key eradication milestones. Having funds dedicated to this use has enabled specific and concrete discussions to take place with manufacturers related to the structure of the stockpile and related arrangements. Knowledge of the stockpile investment has played a significant role in sustaining the supply of tOPV needed to maintain eradication and routine immunisation activities with this product, despite the increasingly short lifespan for OPV products. IFFIm investment was also critical to the rapid development and licensure of the new bOPV vaccine in 2009 which has been central to the striking progress towards eradication in 2010.

For measles, IFFIm funds directly raised the volumes needed for immunisation by 70 million doses to 260 million in 2007 (the extra amount needed for catch up campaigns to vaccinate 1 to 15 year olds in 47 countries). IFFIm paid for the expensive part (catch up immunization of 1 to 15 year olds) and now countries only need to vaccinate the cohort born after every campaign, which they can do more sustainably now. IFFIm raised the volumes of measles vaccines procured not only through funding the “catch up” campaigns in 2007 but also by influencing other markets; “catch up” campaigns were introduced in India and China after seeing the success in IFFIm funded countries. This has increased measles vaccine demand and has therefore maintained incentives for producers to remain in the market.

IFFIm’s MNT investment case was intended to “rapidly achieve and sustain MNT elimination in 36 Vaccine Fund-eligible countries.” The rationale for the MNT project was not based on market impact, but solely on frontloaded health impact.

It is clear that IFFIm funding changed the pentavalent market size substantially and it is no coincidence that supply dynamics changed alongside. Other factors were also influential in increasing demand and market size, e.g. the 2006 WHO Strategic Advisory Group of Experts (SAGE) on Immunization recommendation. IFFIm strengthened the signal and gave additional confidence to countries to take up the vaccine and to producers to invest. Economic modelling and producer interviews reveal that the incremental demand financed by IFFIm funding was what enabled the market to support more than two producers. Price reductions only came once the market could support more than two producers and price reductions are now ahead of at least one donor’s specific expectations. It is possible that IFFIm’s impact could have been stronger if the additional financing had come with explicit communication or rules about how the money would be allocated, e.g. which products would be purchased and in what quantities and over what timeframe.

Although there was an intention to use IFFIm funds to enable “advance contracting”, the IFFIm proposal was not clear whether this would be different from UNICEF’s usual contracting model - “good faith agreements” over three years with intent to buy specific quantities from specific producers. UNICEF did enter into less traditional “firm commitments” for the pentavalent vaccine both pre and post IFFIm. The firm commitment to buy with IFFIm funds was for half of the awarded volume but a small proportion of overall demand, and it resulted in a small price discount, which was valid for the entire quantity purchased from the supplier.. By the time IFFIm funds were available, the market had become a duopoly and competition was on the near term horizon, therefore advance “firm contracting” of a longer duration or for more significant volumes might have had limited static access benefits but would have risked dynamic market efficiency.

In summary, the incremental funding provided by IFFIm allowed the market to support more producers than would otherwise have been the case. This resulted in greater competition and reduced prices. Expert interviews suggest that many middle-income countries are now considered more likely to adopt the pentavalent vaccine now that its price is headed below US$3 per dose for the poorest countries and hence IFFIm's funding may therefore have benefits beyond the GAVI-eligible countries.

14- Have advocacy and communications efforts been appropriate?

IFFIm's advocacy and communication efforts have brought demonstrable added value in a number of key areas including by having clear messages on innovative, socially responsible investment in a single development purpose; raising awareness around bond issuances; ensuring development messages reach new audiences; communication and advocacy efforts by the IFFIm Board and Board Chair in particular; the association with the World Bank; and donor advocacy and communication. However, management arrangements need to be improved ensuring communication is central to IFFIm strategy, a more robust approach needs to be taken for communication planning and measurement, and increased efforts need to be made to communicate both to donors and investors as IFFIm moves into a new or expanded phase of operation.

15- Expected Results and Health Impact

As GAVI appears to have spent the IFFIm funds on additional activities (and not substituted for core funding) the question of how IFFIm has changed GAVI's results is basically down to the results achieved by the IFFIm funded investments.

The health impact of IFFIm funded investments is difficult to measure. Beyond measuring impact there are also questions about the extent to which benefits achieved by programmes which IFFIm co-finances with others - some of which were established well before IFFIm was established - should be attributed to IFFIm.

GAVI relies on its partners to estimate the health impact of the interventions it supports. Measurement of the impact of its regular programmes can be carried out using a number of approaches including peer review models for its core windows of support. Each of the methods used has weaknesses but new models are being currently being developed and we understand there will be a rapid improvement in the quality of models over the next 12 to 18 months. It will be important to reassess impact estimates when these models become available.

Current approaches include:

- an annual assessment carried out by WHO which estimates future deaths averted based on estimated coverage rates using peer reviewed models;
- the Long Range Cost and Impact Model (LRC&I) which is generally used as a forward planning tool and uses simple coefficients of deaths averted by vaccine to project impact;

- the LiST (Lives Saved Tool) model developed by the Johns Hopkins School of Public Health and.
- investment case specific estimates made by implementing parties.

Figures derived from the WHO model suggest that IFFIm will have averted some 2.08m future deaths[10] by the end of 2011 (of the 5 million future deaths averted by GAVI as a whole). We estimate this by attributing benefits in proportion to the IFFIm share of spend on the various GAVI programmes. The LRC&I model suggests that IFFIm may have averted just over 1.3m future deaths by the end of 2010 and is likely to avert a total of between 2.5 and 3.5m future deaths over its lifetime. We estimate the longer term benefits based on a range of scenarios using different assumptions on how remaining IFFIm funds might allocate its funds between programmes – pentavalent, pneumococcal and rotavirus and programmes where there is no definite, measurable direct impact such as health systems strengthening. Using the LiST tool we estimate that if 60% of future resources are spent on the pentavalent vaccine IFFIm is likely to save around 1.6m lives by 2030 (this is actual deaths rather than future deaths but excludes Hepatitis B (Hep B) which accounts for around 60% of future deaths averted according to the WHO model). In short, though the models differ the results are broadly consistent.

Overview of Estimates and Projections of Deaths Averted

Programme	**Model /Investment**	**Estimated deaths averted**	**Coverage/Notes**
Core GAVI Programmes	WHO	2.08m future deaths by end 2011 (1.73m end 2010)	pertussis, Hib, Hep B, rotavirus and pneumococcal
	LRC&I Model	1.3m future deaths by end 2010	as above
	LiST	1.6m actual deaths averted by 2030/0.25m actual deaths by 2010	excludes Hep B
Investment Cases	Measles	0.86m	Based on assessments by relevant programmes and original investment case estimates (adjusted as necessary)
	Polio	0.04m	
	Yellow Fever	0.687m	
	MNT	0.171m	
	Meningitis	0.022m	

For health system strengthening we make the conservative assumption that the investments do not add *additional* benefits but are required to enable the benefits outlined above to be achieved.

The investment cases raise further questions about impact and attribution. The evidence base for the impact of some of the investment cases is extremely weak though efforts are often underway by WHO and UNICEF to improve them. Peer reviewed models are generally not available. It is particularly difficult to estimate impact of efforts to combat yellow fever; the estimates of deaths averted by the Measles Initiative are heavily dependent on the initial estimate of measles deaths which is open to considerable uncertainty. We also note that investment cases in particular make little reference to country contributions to costs in attributing results which has the potential to provide a misleading picture. Country contributions are not

10 The number of deaths which will eventually be averted form the cohort immunised in the year in question. i.e. future deaths in 2010 will include deaths that would have actually taken place in 2011, 2012, 2013 etc.

routinely measured but can be substantial (spending by Nigeria on measles was cited as an example). It is often assumed that programmes can be scaled up at marginal cost by donors. In practice, this is unlikely to be the case. The Immunisation Services Support (ISS) evaluation, for example, found that unit costs rise significantly as coverage rates rise.

Overall we adopt a very conservative approach to estimating and projecting health impact and assume that the investment cases avert, at a minimum, 250,000 future deaths which is well below figures currently cited. Given the considerable uncertainty relating to these figures we consider it sensible to use assumptions which we can be reasonably confident do not exceed the real figures. We would suggest GAVI encourages efforts by partners including WHO and UNICEF to improve their assessment of impact and takes a cautious approach to attributing results.

We also note that some of the diseases targeted in the investment cases are nearing the elimination or eradication stages meaning that health benefits are far less important than other benefits. Cost savings in GAVI eligible countries from polio eradication (if it is achieved) are comparable, and may exceed (depending on country policies post-eradication) expected levels of total GAVI funding over the next decade. The release of these donor funds represents a considerable opportunity for GAVI. (Meningitis and measles also offer some potential for eradication in the medium to long term). We would therefore caution GAVI against placing too much focus on deaths averted which - although a clear, simple concept - ignores other important benefits. We would also highlight the potential for GAVI to try and secure part of any “eradication dividend” by persuading donors who previously contributed to the Global Polio Eradication Initiative, and will no longer need to do, so to transfer funding to GAVI.

We also note that some of the investment cases are particularly well suited to frontloaded funding. Investing in global public goods - such as eradication of a disease, for example, is an excellent fit for frontloaded funds (you buy now so you don’t have to pay later). Support for stockpiles to safeguard against, and deal with disease outbreaks, is also a particularly appropriate use for IFFIm funding. In such cases IFFIm provides a form of insurance policy and flexibility is more important than frontloading.

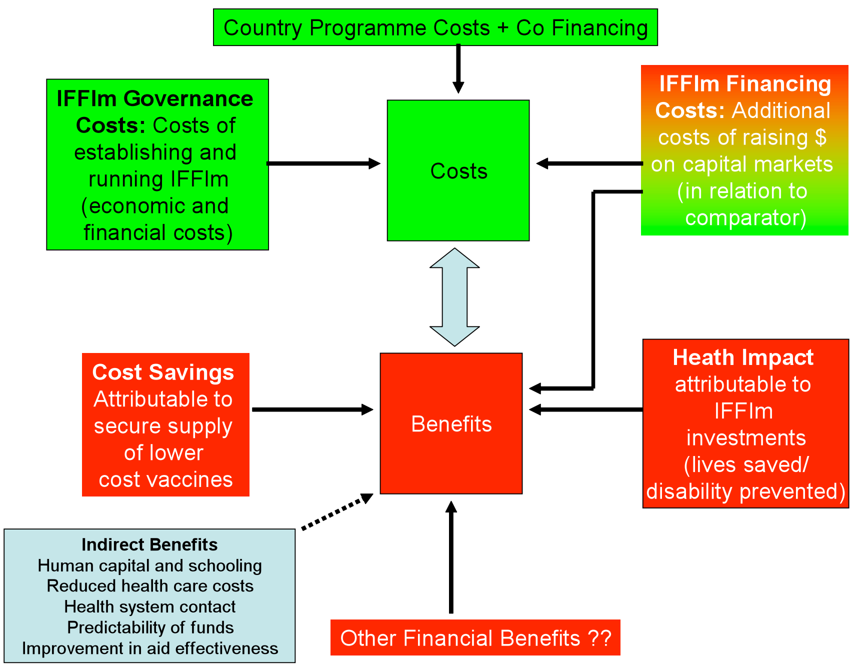
For the purposes of the overall cost benefit analysis (see below) we assume that at least 2.75m future deaths averted can be attributed to IFFIm (2.5m, the lowest figure resulting from the scenarios run using the LRC&I model on GAVI’s New and Underused Vaccines (NVS) programmes plus a minimum of 0.25m from the investment cases as outlined above).

a. Overall Cost – Benefit Assessment: what is our overall assessment?

In terms of assessing the overall impact of IFFIm funded investments one key question is to identify the appropriate counterfactual. Should the IFFIm results be compared so a situation in which there would otherwise have been no additional funding for GAVI or should we assume that in the absence of IFFIm, GAVI would have spent similar amounts of money but spread over a longer period of time?.

Our assessment is that we should use the former given that IFFIm funding appears to have been largely additional. We do, however, look at the latter as part of our analysis.

Schematic: Costs and Benefits associated with IFFIm



A fully accurate cost benefit analysis is not possible as detailed data on some costs, such as country costs, are not available. The analysis also excludes indirect benefits such as treatment costs averted, productivity and fiscal benefits (though evidence of their existence is available, is documented in some of the investment cases and the impact can be substantial).

We estimate total costs to be of the order of $6bn set out as follows. Operational costs are estimated at some $7m per annum (including the value of pro bono support and subsidies) totalling $150-170m over IFFIm's lifetime. Investment costs are estimated at $3.9bn to which an arbitrary $2bn is added to cover country level costs. Additional costs associated with raising revenue (related to IFFIm's financial efficiency) are negligible in terms of the overall analysis.

We estimate the value of health benefits - based on at least 2.75 million deaths averted and valuing each disability adjusted life year (DALY) saved at $500, - as being at least $20.9 bn. This implies a benefit cost ratio of just under 3.5:1. In practice, the actual figure is likely to be far higher. As such we conclude that the IFFIm funded investments appear likely to help generate extremely good returns even using very conservative assumptions.

The table below shows the estimated benefit cost ratio for different levels of deaths averted based on different assumptions about how deaths averted are translated into DALYs. It shows, for example, that if 3 million deaths are averted, DALYs are discounted at 3% per annum and valued at $500 per DALY benefits exceed costs by a factor of 3.8:1[11].

Estimated Benefit Cost Ratios – based on different ways of valuing health benefits

	Undiscounted DALYs		Discounted DALYs	
	per capita income		per capita income	
m deaths averted	500	1000	500	1000
0.2	0.71	1.42	0.25	0.51
0.4	1.42	2.83	0.51	1.01
0.6	2.13	4.25	0.76	1.52
0.8	2.83	5.67	1.01	2.03
1	3.54	7.08	1.27	2.54
2	7.08	14.17	2.54	5.07
2.75	9.74	19.48	3.49	6.97
3	10.63	21.25	3.80	7.61
3.75	13.28	26.56	4.75	9.51
4	14.17	28.33	5.07	10.14
5	17.71	35.42	6.34	12.68

Red – costs exceed benefits. Green – likely range of results
Methods for translating lives saved into DALYs are outlined in the main report

In order to "break even" we estimate that IFFIm funds would need to avert around 800,000 deaths. Even our lowest estimates suggest that health impact is likely to far exceed this. IFFIm funds has almost certainly already more than achieved the benefits necessary to justify the total costs in terms of *future* deaths averted (and probably gone a long way to averting the necessary number of *actual* deaths).

The main reason for these results is the huge benefit associated with the proposed investments. The costs of running IFFIm and the efficiency with which IFFIm operates are largely irrelevant in terms of the overall cost-benefit equation. This is not to suggest that efforts to reduce running costs and improve efficiency of IFFIm are not important – just that they have very little effect on the overall cost-benefit results.

We also note that the usual methodology used for valuing health benefits – in which a DALY is valued at the recipient country's average per capita income –unfairly penalises GAVI. This is because GAVI focuses its resources on the poorest countries much more than other donors. Ideally, GAVI should get *additional* credit for achieving results in extremely difficult settings. If

[11] This further assumes 1 death averted saved 70 DALYs and that DALYs are not age weighted

one were to value DALYs at $1,000 and use undiscounted DALYs – perfectly reasonable assumptions - the benefit cost ratio for 2.75m deaths averted would increase to 19.5:1.

3. Key Lessons

The key strengths of IFFIm's structure and operating characteristics are that it has:

- successfully demonstrated a proof of concept;
- proven to be financially efficient having achieved a very low cost of financing and a diversified funding base;
- achieved and sustained supranational status in the capital markets;
- been a robust, flexible model in a very challenging environment;
- delegated responsibilities in line with partners' comparative advantage and benefited particularly from the credibility/authority brought by the World Bank as Treasury Manager as well as its efficient financial and risk management;
- attracted committed and highly effective people onto the Board;
- provided good publicity and advocacy opportunities for GAVI.

The key weaknesses of the model and approach adopted are that:

- it has not fully utilised the potential the model offers in terms of frontloading and predictability;
- it has incurred relatively high start-up costs for its current size (though much of this has been covered through pro bono contributions) and has not been able to take advantage of potential economies of scale (due to the funding constraints posed by limited donor pledges);
- it is not easily replicated;
- is not easily understood by governments/development community;
- only 70% of the funds are available to be frontloaded (due to the need to retain a financial cushion);
- poses significant sustainability challenges especially for an organisation such as GAVI which is expanding its activities rapidly.
- it is difficult to present the accounts in a clear, simple manner (given the need for hedging and use of derivatives and the ways in which they are accounted for under international accounting standards);
- it has been highly dependent upon a small number of donors;
- uses a structure that combines a pro active Board and a conservative World Bank managed approach – ensuring an appropriate balance can be difficult to get right and can cause friction;

The current model - as it stands - may not be directly replicable but does offer major lessons:

If the intention is to test a proof of concept it is important to clearly set out, at the outset, precisely what the model is expected to deliver. Whilst IFFIm does seem to have worked it would have been helpful to have set out a short, clear list of performance indicators at the outset.

The model has been shown to be extremely powerful. However, GAVI has only been able to harness part of IFFIm's potential. The potential uses available to GAVI did not permit it to fully utilise the potential to frontload (although, as noted earlier, some of the investment cases were well suited to frontloading). In short, the model, though well used, was “over-powered” for GAVI – a reflection of the power of the model rather than any shortcomings in the implementation of IFFIm. Other development applications could, in principle, make greater use of the model’s power by using the maximum amount of frontloading allowed by any GRL immediately. Increased scale would also allow for greater efficiency as it would allow fairly fixed costs are spread more widely. Whilst not infinitely scaleable the model could certainly be scaled to deliver $40bn per annum as envisaged in the IFF.

As shown in the figure – whilst IFFIm operates close to the frontier of what is possible (segment B in the figure) only part of the power of the IFF concept is being tapped. An IFF approach could deliver more if it were larger and resources were put to a use which was better able to utilise the potential to frontload. An IFFIm type model is perhaps best suited to institutions which are at a mature stage of their development or where the investment is of a “one off” nature. Employing it during/before a growth phase does not create, but will magnify, the funding/sustainability challenges.

An institution receiving frontloaded funding should not reduce its efforts to raise funds from other sources. It should also prioritise activities which serve to reduce any long term financial implications and thus improve likely sustainability. In this respect GAVI appears to have performed well in terms of raising core funds. Rather than specifically earmark funds (with the exception of the investment cases) it has tended to put IFFIm funds into the general pot. Whilst this has given GAVI flexibility it has meant that funds have not been directed to activities which help assure sustainability.

IFFIm is likely to be particularly suitable for uses which have inbuilt sustainability features (i.e. uses which reduce or even remove ongoing recurrent costs). These might include diseases for which eradication is a possibility (where ongoing costs will fall dramatically after eradication), where recipient country income is growing rapidly (and countries are able to take on the financial burden themselves) or where the magnitude of funding requirements is known but the timing of funding needs is uncertain (e.g. emergencies such as dealing with disease outbreaks) when an IFFIm model can hold resources in an efficient manner and time shift funds as needed.

More generally, IFFIm type arrangements can be especially helpful for organisations where alternative funding channels are unpredictable (i.e. many organisations) and those where needs are driven by country demands (such as GAVI) and where predictable funds can be used to smooth funding patterns.

The model - as it stands - has a limited pool of potential funders - it is not attractive or feasible for some donors. Related to this the approach can appear complex – and difficult to understand. It is, therefore, difficult to sell such concepts to taxpayers – especially given concerns about dangers of financial engineering.

There is more freedom to make changes in the use of funds than in the structures required to deliver the funds. For the latter the structure is largely dictated by the system requirements. However, the two cannot necessarily be separated – the GAVI mandate was important in achieving the Eurostat ruling.

The small details can make a big difference. For example, the conditionality requirements significantly reduce the scope for frontloading. In the case of GAVI frontloading was further constrained by the annual spending limits. In practice, this has not been a major constraint as

GAVI was not in great need of frontloading having had to generate a series of investment cases to utilise the revenue from the initial bond. Experience from IFFIm would suggest that with sound governance arrangements and selection of Board members the need to impose spending restrictions declines. At the same time the conditionality requirements will still constrain the ability of the model to frontload.

The IFFIm model only provides predictable funding to the implementing partner (GAVI in the case of IFFIm) but this does not *guarantee* predicable funding for the ultimate beneficiary (GAVI eligible countries in this case). Efforts need to be made to ensure that mechanisms are in place to ensure that this is the case. The evidence suggests that GAVI has performed well in this respect; this issue would, however, require close attention were an IFF- type model to be replicated for other uses.

The model has had unexpected benefits to the recipient which can go beyond just frontloading. GAVI finds the ability to "time shift" particularly useful and the flexibility of funds extremely helpful in terms of its financial management. The flexibility offered by IFFIm funds, which allowed polio funds to be re-programmed to respond to changing events, also proved to be highly beneficial.

A new approach such as IFFIm is costly to set up. It is important to get it right to avoid costs down the line (FFA). Original expectations are often unrealistic (cost of services/narrow mandate/passive Board) and may need to be revisited at an early stage.

Key <u>success factors</u> have included:

- the vision of the UK Government and the political commitment of sufficient members of the donor community to make it work;
- a rigorous design process including the various iterations and considering various options;
- particularly significant technical inputs from the UK Treasury, Goldman Sachs, the World Bank, the GAVI Secretariat and the various legal advisors;
- the key honest broker role played by the World Bank;
- the strong partnership between the key operational players (IFFIm Board, World Bank and GAVI) and their respective leadership and commitment;
- flexibility and ability to deal with tensions which could have, and could still, undermine the model;
- the ability to attract and retain MDB status, zero risk weighting and AAA ratings;
- the exceptional quality of the underwriting banks and funding programme.

The flexibility required to make a complex undertaking such as IFFIm work leaves issues open for interpretation. It is important to identify and resolve such issues early and begin to fill in the gaps as you go along.