

Chapter III

Existing mechanisms of innovative financing for development

Summary

- ◆ In general, existing innovative development financing mechanisms have been successful in fulfilling specific purposes, such as front-loading disbursements of official development assistance, mitigating risks and incentivizing the commercialization of new vaccines. However, they are relatively limited in scale, and generally do not provide additional resources.
- ◆ The International Finance Facility for Immunisation (IFFIm) has raised \$3.6 billion for vaccine programmes since 2006 by front-loading ODA flows. Replication and scaling up are technically feasible, and may be useful where financing needs are temporary or investments are self-financing in the medium term; but prospects may be limited by fiscal constraints in donor countries and the recent downgrading of the IFFIm credit rating.
- ◆ While advance market commitments and the Affordable Medicines Facility - malaria are still at an early stage, initial results of the pilot projects appear promising. There may be potential for replication so as to induce technological innovation in renewable energy and/or sustainable agriculture, but scalability of this type of initiative may be limited by resource availability.
- ◆ The Caribbean Catastrophe Risk Insurance Facility has proved effective as a risk-pooling mechanism for member countries, with significant advantages over conventional insurance and with the potential for replication in some other regions.
- ◆ While resources mobilized through Product Red are additional to ODA, and may prove more predictable, the amounts raised have been small.

Introduction

The traditional view of innovative development financing (IDF) envisages mechanisms aiming primarily at generating substantial and predictable resources for development additional to traditional official development assistance (ODA). However, the development of such mechanisms has proved politically problematic, and achieving greater stability by avoiding dependence on discretionary donor budgets has become a daunting challenge. Consequently, the mechanisms that have been developed under the rubric of IDF have been of a very different nature and are broadly of three types:

- Mechanisms that aim to transform the time profile of development finance through the “securitization” of future ODA flows or the conversion of outstanding debts

- Mechanisms that seek to mitigate risk, either by providing guarantees or through insurance mechanisms
- Mechanisms that seek to harness additional voluntary contributions from the private sector to supplement official flows

The first section of the present chapter assesses two mechanisms of the first type: the International Finance Facility for Immunisation (IFFIm) and debt conversion schemes. The second section considers two guarantee mechanisms, advance market commitments (AMCs) and the Affordable Medicines Facility - malaria (AMFm), and one insurance mechanism, the Caribbean Catastrophe Risk Insurance Facility (CCRIF). The third section discusses two mechanisms for securing voluntary private contributions: Product Red and the short-lived MassiveGood voluntary solidarity contribution on air travel.

Mechanisms to transform the time profile of development finance

International Finance Facility for Immunisation

IFFIm is a mechanism for front-loading ODA...

The International Finance Facility for Immunisation (IFFIm), a mechanism for front-loading aid disbursements, was initiated in 2006 to accelerate the availability of funds for immunization. It converts binding pledges by donors over a long period into immediate financial resources by securitizing part of future ODA budgets: IFFIm issues bonds in the international capital markets, to be serviced and repaid from ODA allocations earmarked in advance for this purpose. This allows development finance to be increased in the medium term at the expense of a reduction in the longer term. The resources generated are used to support immunization programmes through the GAVI Alliance. The structure of IFFIm is presented in figure III.1.

Ten countries have so far contributed to IFFIm (the United Kingdom of Great Britain and Northern Ireland, France, the Netherlands, Sweden, Japan, Norway, Italy, Spain, Brazil and South Africa), and have pledged a total of \$6.2 billion for periods of between 5 and 23 years. The United Kingdom and France account for 72.4 per cent of the total amount pledged. On the basis of these pledges, IFFIm has undertaken 19 bond issues in five markets, raising nearly \$3.6 billion, of which \$1.9 billion had been disbursed in 70 low-income countries by the end of 2010 (GAVI Alliance and World Bank, 2012). This represents 49.2 per cent of the total disbursements of the GAVI Alliance since its establishment in 2000, and 64 per cent since the establishment of IFFIm in 2006 (Pearson and others, 2011).

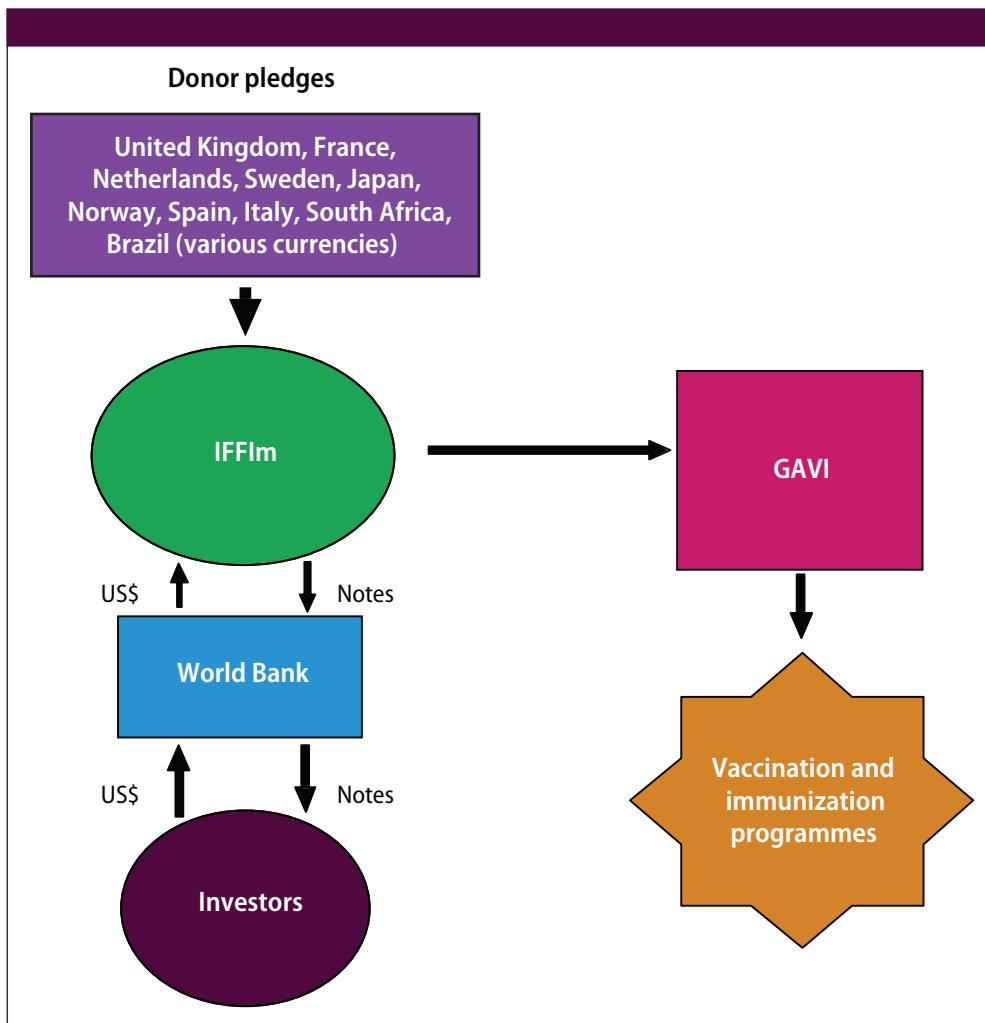
The World Bank has supported IFFIm by executing its capital-raising programme and managing the proceeds of bond sales to ensure the maintenance of sufficient liquidity for timely debt-servicing and to meet funding commitments. Several legal and banking entities have also provided pro bono legal and investment banking services. An independent evaluation of IFFIm found it to have been highly successful in keeping both borrowing and administrative costs low, the former being considerably below donors' original expectations (*ibid.*). It has also managed its liquidity well in the face of the unpredictability of its funding requirements associated with market uncertainty and the country demand-led nature of GAVI Alliance activities. While start-up costs were relatively high, this is largely a reflection of the innovative nature of the mechanism.

Initially, the resources generated by IFFIm were devoted to six “investment cases”: projects with a particular need for front-loading, which were developed specifically to use the proceeds of the first \$1 billion IFFIm bond issue. Subsequently, funds have been used in parallel with other GAVI resources for general immunization programmes, mostly for pentavalent vaccine¹ since 2008. Up to September 2010, IFFIm provided about two thirds of total GAVI resources for health system strengthening programmes, and half of its resources for pentavalent vaccine, the latter accounting for 51.4 per cent of total IFFIm funding (see figure III.2). In other areas, IFFIm funding has been up to one quarter of total GAVI funding (Pearson and others, 2011).

IFFIm funding has unquestionably added to the substantial contribution of GAVI to increasing vaccination coverage in low-income countries. Overall, it is estimated that IFFIm-funded programmes up to end-2011 will eventually save some 2 million future lives (Pearson and others, 2011).

...and has contributed substantially to the success of the GAVI Alliance

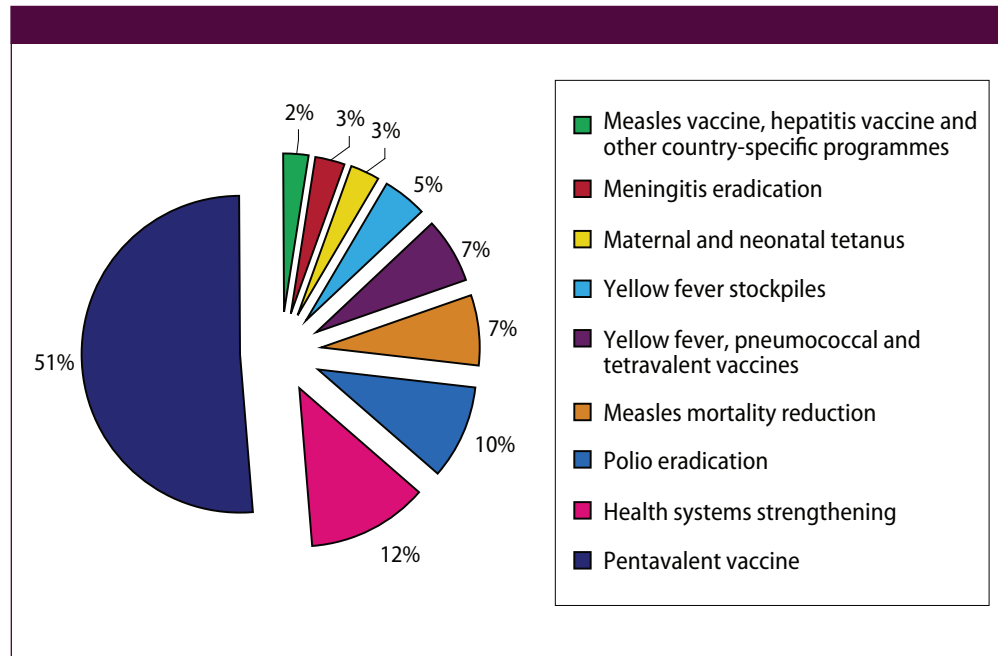
Figure III.1
Structure of IFFIm



Source: GAVI Alliance (2011a).

¹ Pentavalent vaccine combines vaccines for diphtheria, pertussis (whooping cough) and tetanus (DPT3) with those for hepatitis B and *Haemophilus influenzae type B* (Hib) disease. It is recommended by the World Health Organization (WHO) in preference to the individual vaccines.

Figure III.2
GAVI disbursements of IFFIm funds as of December 2011



Source: UN/DESA, based on GAVI Alliance and World Bank (2012).

Additionality, front-loading and predictability

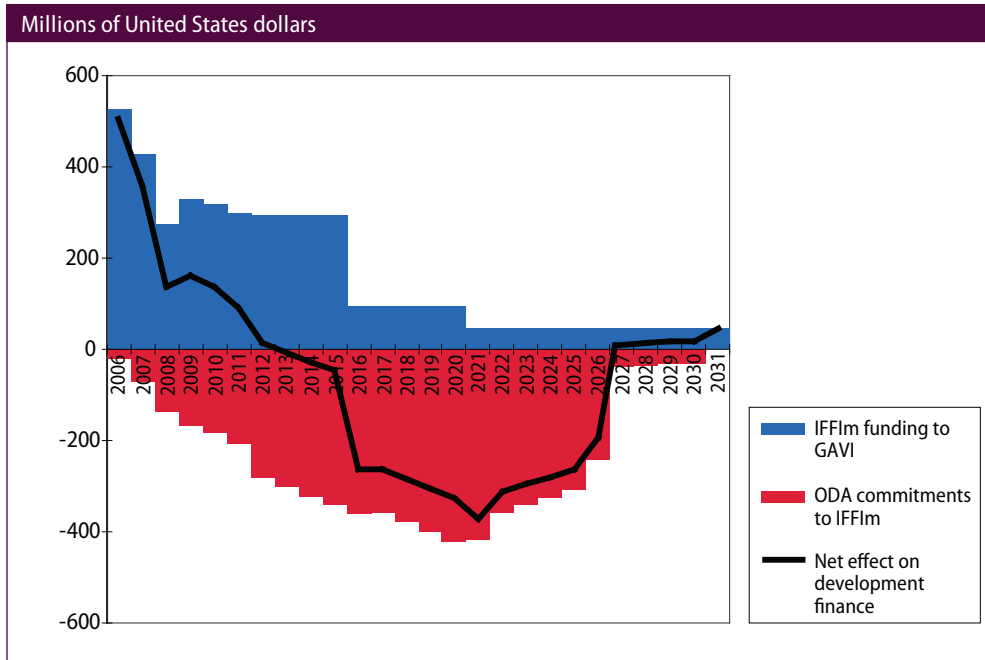
IFFIm increases development finance now, but reduces future ODA flows

While IFFIm provides a net increase in funding in the medium term, this is offset by the diversion of future ODA budgets in later years, which means that it does not provide additional resources in the long term (see figure III.3). Its justification is thus based on front-loading a given stream of financing rather than on increasing funding. Thus far, payments to the GAVI Alliance have exceeded ODA commitments to IFFIm; but from around 2013, in the absence of further bond issues, the annual cost to ODA budgets of servicing IFFIm bonds will exceed the resources that IFFIm provides to the GAVI Alliance, so that the net effect on development finance will be negative. The negative balance will become substantial (\$194 billion-\$372 billion per year) from 2016 to 2026, becoming marginally positive again only in 2027-2031 as IFFIm winds down its liquidity. This is a matter of potential concern in light of the growing funding gap of the GAVI Alliance (Pearson and others, 2011, figure 39).

Even without additionality, such front-loading may still be beneficial in particular cases. In the case of immunization, for example, the rationale is based on the concept of “herd immunity”. Immunization protects each individual directly, but with a high enough vaccination rate the risk of contracting a disease is also reduced for those not vaccinated, as there will be fewer infected people. When immunization coverage rates reach a threshold level (estimated at between 75 and 95 per cent for different diseases, according to their particular characteristics) a herd immunity effect is achieved, effectively interrupting transmission of the disease. If sustained, this can greatly increase the effectiveness of immunization programmes in reducing disease prevalence.

This phenomenon provides a strong rationale for front-loading resources for investment in rapidly expanding immunization coverage, particularly by vaccinating older

Figure III.3
ODA Commitments to IFFIm and IFFIm funding of the GAVI Alliance, 2006-2031



Sources: Data (to 2011) and projections (2012-2031) are based on GAVI Alliance (2012b; 2012c). Projections for IFFIm funding to the GAVI Alliance are available only as averages for 2011-2015, 2016-2020 and 2021-2031.

children who were not vaccinated at the usual age, although the case for front-loading is less clear in the case of routine immunization programmes, which need to be sustained over a prolonged period to have lasting benefits.

In practice, however, the extent of front-loading under IFFIm has been restricted by the Treasury Management Agreement with the World Bank, which requires IFFIm to retain 30.3 per cent of its resources as a financial cushion in order to maintain its credit rating. This leaves only 69.7 per cent of resources raised available for disbursement, with further limits resulting from annual ceilings on IFFIm disbursements imposed by donors under the Finance Framework Agreement, which sets the parameters for their financial participation. These constraints, together with the limited capacity of the GAVI Alliance to use front-loaded resources, have led to the failure of IFFIm to realize its full potential for front-loading (Pearson and others, 2011), giving rise to a substantial difference between the funds generated by IFFIm and the resources provided to the GAVI Alliance.

Predictability of disbursements, as well as front-loading, has been presented as an advantage of IFFIm (GAVI Alliance, 2011a): by increasing demand and making it more predictable, the availability of stable and predictable financing for vaccination over the medium term allows a reduction in vaccine prices. A prospective study (Barder and Yeh, 2006) estimated the benefits of predictability to be of a similar order of magnitude to those of front-loading. However, large and variable (20–45 per cent) shortfalls of actual disbursements (GAVI Alliance, 2012b) as against those anticipated in that study between 2007 and 2012 raise some questions as to whether the anticipated level of predictability was in fact achieved. Setting aside the issue of front-loading, IFFIm reliance on financial markets means that its disbursements are inevitably less predictable than the stream of legally binding future ODA commitments on which they are based, as the resources generated depend on market conditions at the time of bond issues.

There are limits to the front-loading and predictability of IFFIm financing

Risks and challenges

IFFIm required reconciliation of market needs with fiscal rules

The IFFIm model depends on the issuance of bonds by IFFIm itself rather than by individual Governments. Without this feature, it would amount to no more than a source of temporary increases in ODA, funded by government borrowing. Part of the motivation for structuring IFFIm as an intergovernmental body was to enable it to borrow at lower cost than that available to individual Governments and without contributing to budget deficits.

However, this structure gives rise to the issue of a potential tension between the financial needs of markets and the fiscal rules of Governments. For future aid disbursements to be securitized, financial markets need to be certain that they will be made, which means that they must be legally binding on Governments. In most donor countries, however, public sector accounting rules require that such binding commitments should be treated as expenditures in the year in which the commitment is made rather than in the year in which the cost is incurred. This would give rise to serious fiscal constraints on IFFIm commitments.

To get around the problem, a “high-level financing condition” was introduced in funding commitments to IFFIm, reducing payments in proportion to the number of GAVI-recipient countries with protracted arrears (longer than six months) to the International Monetary Fund (IMF). This essentially arbitrary condition introduced sufficient uncertainty into funding commitments to enable Eurostat (Statistical Office of the European Union) to allow the commitments to be accounted in the year in which they were due to be paid rather than in the year in which they were made. However, the likelihood of there being enough GAVI-recipient countries with protracted arrears to IMF to affect the ability of IFFIm to service its debts under this clause was sufficiently remote to ensure that investor confidence was not significantly weakened (Moody’s Investors Service, 2011).

Financial market conditions and fiscal constraints cloud the prospects for IFFIm

In the event, however, subsequent occurrences in the financial market have posed a greater risk to the credit rating of IFFIm. At its inception, IFFIm had a AAA rating, founded upon four factors: its status as an intergovernmental body; the fact that AAA-rated Governments accounted for almost 85 per cent of total pledges; the politically compelling nature of the use of funds (child vaccination in low-income countries), which bolstered confidence in continued political commitment; and the choice of the World Bank as treasurer.

Since the financial crisis, three IFFIm donors accounting for some 41.3 per cent of pledges (France, Italy and Spain) have lost their AAA credit ratings with one or more ratings agencies, and the possibility has emerged of a similar downgrade for the United Kingdom of Great Britain and Northern Ireland (accounting for a further 47.5 per cent of pledges). Declining confidence in the financial position of funders contributed to Moody’s downgrading of the IFFIm credit rating from AAA to Aaa in December 2011 and to Standard and Poor’s downgrade from AAA to AA+ in January 2012 (Moody’s Investors Service, 2011; Standard and Poor’s Ratings Services, 2012). This could limit the ability of IFFIm to generate additional funds through further bond issuance, and/or increase its borrowing costs, particularly if other ratings agencies follow suit. Ketkar (2012) proposes third-party guarantees or excess coverage as a means by which the IFFIm could regain its AAA credit ratings, although these approaches would also increase costs.

Budgetary pressures in all IFFIm contributor countries also pose a risk, limiting the prospects of further pledges of future ODA. For euro-area countries in particular, the requirement under the Stability and Growth Pact of maintaining budget deficits below 3 per cent of gross domestic product (GDP) and gross public debt below 60 per cent of

GDP, implies a strong focus on expenditure reduction in the coming years, potentially putting significant pressure on future ODA budgets.

Scalability and replicability

Replicability of IFFIm—the possibility of an international financial facility (IFF) for other uses—is limited by its nature as a mechanism for front-loading resources rather than for generating additional resources over the long term. While this may be beneficial for some aspects of immunization, it is not appropriate for the many other development-related undertakings that require more sustained financial support. In the context of education, for example, an international financial facility could finance investment in building schools and training additional teachers, but this would provide little long-term benefit, without additional funding for recurrent costs such as teachers' salaries, teaching and learning materials, maintenance of buildings and equipment and ongoing training (Ketkar, 2012).

Nonetheless, there may be some contexts in which such a mechanism would be useful—primarily where there is a temporary need for capital investment, and where associated recurrent costs are minimal or essentially self-financing. Examples might include investments in a transition to renewable energy, climate change adaptation and some infrastructure projects.

Since such uses would require substantially greater resources than those for immunization, the question of replicability is closely related to that of scalability. Pearson and others (2011) are optimistic on the subject of scalability of the IFF mechanism, suggesting that it could comfortably be increased to the size originally envisaged (\$40 billion) and arguing that the scale of IFFIm has been constrained by donor preferences rather than by technical constraints. It should be noted, however, that a much larger IFFIm would require commensurately larger ODA commitments, which may be problematic at a time of fiscal austerity, as well as magnify the effect on future ODA disbursements for other purposes. The scale of commitments required would be further increased substantially if interest costs were higher, as a result either of higher market rates or of higher spreads. The downgrading of the IFFIm credit rating (which post-dates the Pearson evaluation) may also make donors more cautious about developing new IFFs.

In sum, the international financial facility is potentially replicable as a mechanism, and there is no technical obstacle to its being replicated on a substantially larger scale. However, current economic and market conditions make it unlikely that IFF-type mechanisms could operate on a larger scale than IFFIm for the foreseeable future; and the potential usefulness of the mechanism is limited to contexts where the primary need is the front-loading of funds. Where the primary need is for stable, sustainable and predictable financing, this could more satisfactorily be achieved by channelling binding pledges of future ODA directly to recipient countries rather than by securitizing them through financial markets so as to concentrate resources in a more limited period. As Pearson and others (2011, p. 5) observe, IFFIm represents only “a very efficient second-best solution” to the problem of how to effect fulfilment by donors of their international aid commitments.

Debt-conversion mechanisms

Debt conversion entails the cancellation by one or more creditors of part of a country's debt in order to enable the release of funds which would otherwise have been used for debt-servicing, for use instead in social or environmental projects. Where debt is converted at a discount with respect to its face value, only part of the proceeds fund the projects,

IFFIm is replicable, but suitable only for some purposes...

...and its scalability may be limited in the coming years

Debt conversion can generate resources for developmental and environmental projects...

the remainder reducing the external debt burden, typically as part of a broader debt restructuring.

While early debt swaps entailed the conversion of commercial bank debt purchased at a discount on the secondary market, often by non-governmental organizations, swaps of bilateral debts owed to Governments have predominated since 1991, when the Paris Club of bilateral official creditors introduced a framework for debt conversion into its rescheduling agreements. Discounts under such transactions vary between creditors: Germany, for example, applies a discount of between 50 and 80 per cent (Buckley, 2011b), while Spain applies a discount of 60 per cent for countries qualifying for the Heavily-Indebted Poor Countries (HIPC) Initiative, but converts debt at face value for other countries (United Nations Educational, Scientific and Cultural Organization, 2011).

Debt *cancellation* (for example, under the HIPC Initiative or the Multilateral Debt Reduction Initiative) does not represent innovative development financing, as discussed in chapter I, but rather recognition by creditors that their past loans are not recoverable. Debt *conversion*, by contrast, does qualify as IDF, to the extent that it diverts resources to development purposes that would otherwise have been devoted to debt servicing. However, this effect is limited to the conversion of debts that would otherwise have been serviced. As discussed in box III.1, this makes estimation of the IDF component of debt conversion very difficult.

...but not all debt conversion qualifies as innovative development finance

Debt-for-nature swaps

Debt-for-nature swaps date back to the 1980s...

Debt conversion first emerged, in the guise of debt-for-nature swaps, during the 1980s debt crisis, following an opinion article by Thomas Lovejoy, then Executive Vice-President of the World Wildlife Fund (WWF), in the *New York Times* in 1984. Lovejoy argued that a developing country's external debt could be reduced (also providing tax relief to participating creditor banks) in exchange for the country's taking measures to address environmental challenges. Estimates based on Sheikh (2010) and Buckley, ed. (2011) suggest that between \$1.1 billion and \$1.5 billion of debt has been exchanged through debt-for-nature swaps since the mid-1980s, although it is not possible to assess how much of this constitutes IDF, for the reasons discussed in box III.1.

There have been two basic forms of debt-for-nature exchanges (Buckley and Freeland, 2011). In the first, part of a country's external debt is purchased by an environmental non-governmental organization and offered to the debtor for cancellation in exchange for a commitment to protect a particular area of land. Such transactions occurred mainly in the late 1980s and 1990s and were generally relatively small-scale. An early example was a 1987 deal under which Conservation International, a Washington, D.C.-based environmental non-governmental organization, bought \$650,000 of the commercial bank debt of Bolivia (now Plurinational State of Bolivia) in the secondary market for \$100,000, and exchanged this for shares in a company established to preserve 3.7 million acres of forest and grassland surrounding the Beni Biosphere Reserve in the north-east part of the country.

In the second form, debt is exchanged for local currency (often at a discount), which is then used by local conservation groups or government agencies to fund projects in the debtor country. Swaps of this kind are generally much larger, and have predominated since the 1990s. The largest such swap came in 1991, when a group of bilateral creditors agreed to channel principal and interest payments of \$473 million (in local currency) into Poland's Ecofund set up to finance projects designed to counter environmental deterioration. The EcoFund financed 1,500 programmes between 1992 and 2007, providing grants

Box III.1

When is debt-conversion IDF?

Debt conversion for developmental purposes only provides additional resources for development, and thus only qualifies as IDF (as defined in this present publication), in cases where the debts converted would not otherwise have been cancelled. This is clear-cut in the case of the conversion of bilateral debts (either under Paris Club agreements or through Debt2Health) owed by countries not eligible for debt cancellation. Because the debt would otherwise have been serviced in full, all proceeds from the conversion can be considered IDF.

In other cases, however, the issue is more problematic. Where debt is converted as part of a debt restructuring which would otherwise have resulted in partial cancellation of the debt, only that part of the funds generated that would otherwise not have been cancelled can be considered IDF. For example, if a debt is converted at a discount rate of 50 per cent, but would otherwise have been reduced by 75 per cent in net present value terms, it is only the part corresponding to the uncanceled part of the debt that qualifies (that is, 25 per cent of the value of the debt, or half of the funds generated). The remainder is, in effect, additional financing provided by the debtor from its own resources as a counterpart to the creditor's contribution. This introduces a serious complication in respect of estimating the contribution of debt conversion to IDF.

Still more complex is the case of conversion of commercial debts purchased on the secondary market. These debts were not, in general, converted as part of an overall debt restructuring agreement; neither were they eligible for reduction or conversion at the time of conversion. In many cases, however, they would have been included in subsequent commercial debt restructurings (for instance, under the 1989 Brady Initiative) or debt buy-backs, which would have reduced the debt if it had not previously been converted. In the former case, the effective debt reduction (and hence the IDF component of debt conversion in each case) would also depend on the specific restructuring option chosen by the individual creditor whose debt was converted. This makes estimation of IDF provided by this type of debt conversion virtually impossible.

Source: UN/DESA.

for conservation projects relating to cross-border air pollution, climate change, biological diversity and the clean-up of the Baltic Sea (Buckley and Freeland, 2011).

However, most debt-for-nature swaps have been much smaller, so that the funds generated are generally limited relative to environmental financing needs, providing funding, instead, for individual projects. Critics also argue that monitoring mechanisms are often insufficient to ensure that debtor countries fulfil their environmental obligations, and that swaps may be detrimental to national sovereignty in cases where they result in the transfer of landownership to foreign entities. In view of the latter concern, conservation organizations involved in three-way swaps (involving the debtor Government, the creditor and a third party) often refrain from buying land directly with funds generated by swaps (Sheikh, 2010).

...but their scale has generally been limited

Debt2Health

Since the development of debt swaps in the 1980s, there has been a diversification of their uses to encompass social projects, most recently in the area of health under the Debt2Health initiative, which was launched by the Global Fund to Fight AIDS, Tuberculosis and Malaria in 2007 to harness additional resources for its programmes. Under Debt2Health, a donor country agrees to reduce part of a loan ineligible for debt relief under global initiatives such as the HIPC and Multilateral Debt Reduction Initiatives, in exchange for a commitment by the debtor to invest (in local currency) half of the nominal value of the debt in programmes approved by the Global Fund. The Global Fund is committed to

Debt2Health provides innovative financing for the Global Fund

devoting all of the funds thus generated to financing programmes in the country rather than overhead costs (Buckley, 2011c).

Germany was the first donor country to participate in the Debt2Health programme, cancelling €50 million of its debt with Indonesia to provide €25 million of funding for Global Fund activities in that country over a five-year period from 2008. In total, Pakistan and Côte d'Ivoire have received a further €59 million of debt relief from Germany, generating €29.5 million for Global Fund projects; and Australia has cancelled €54.6 million of bilateral debt with Indonesia, generating €27.3 million (Leading Group on Innovative Financing for Development, 2012). In June 2011, in a new type of “triangular” agreement, Germany also agreed to write off €6.6 million of Egypt's debt, in return for Egypt's contribution of half of that amount to Global Fund anti-malaria programmes in Ethiopia (see table III.1) (Buckley, 2011b).

Other debt swaps: debt-for-development and debt-for-education

Debt conversion has multiple uses...

In addition to the uses described above, debt swaps have also been successfully implemented for education and development.² Clear delineation among the various types of swaps is often problematic, however, as debt-for-development swaps typically provide funding for environmental, health and/or education projects.

Based on Buckley, ed. (2011), the cumulative amount of debt-for-development and debt-for-education swaps appears to be in the order of \$3 billion, including 18 debt-for-education swaps in 14 countries since 1998, the proceeds of which were in most cases directed to funding for local schools (Buckley, 2011c). Again, however, the proportion of this total that has provided additional funding—and may therefore be considered to constitute IDF—cannot readily be estimated. In particular, \$865 million of the \$3 billion total represents Debt Reduction-Development Contracts with the Agence Française de Développement, covering debts arising from past ODA loans from France which would otherwise be eligible for cancellation under multilateral debt reduction programmes such as the HIPC Initiative. Although nominally debt-conversion operations, these Contracts stipulate that debtor countries are to continue to service these debts in full, while receiving, however, an equivalent amount of new ODA grants tied to specific programmes when they do so (Agence Française de Développement, n.d.). Thus, resources are not redirected from debt servicing to other uses; rather, potential fiscal savings from debt-service reduction are forgone, the resources instead being directed to specific uses (Buckley, 2011a). These transactions thus cannot be considered to constitute IDF.

Some other debt-for-development programmes, such as that of Germany, more clearly qualify as IDF, and the Government of Germany has earmarked €150 million of bilateral debt for conversion per year since 2008 (including for debt-for-nature and Debt2Health) (Buckley, 2011b).

Potential and challenges

...but has generated limited additional resources

Debt conversion has existed as a means of funding development and environmental projects for some 25 years, and has evolved considerably during this period. While relatively few

² Similar mechanisms have also been widely used for commercial debt-for-equity swaps, although these do not fit the definition of IDF.

cases have generated substantial resources, the cumulative amount is significant. However, debt conversion does not generally provide additional resources for development, to the extent that the cancellation of bilateral debts (on which most debt swaps are now based) is generally classified as ODA; and the scale of those resources that *are* provided remains insufficient to make a meaningful contribution to solving the debt problems of developing countries or improving their creditworthiness. In the case of Debt2Health, there are also potentially significant cash-flow implications for recipient Governments, in that the financing of Global Fund projects occurs within a shorter time frame than that of the payments profile of the debt that is converted. This also reduces the real value of the debt relief (Cassimon, Renard and Verbeke, 2008).

Debt swaps have shown great malleability as regards replication in different sectors. The evolution of debt conversion demonstrates the considerable flexibility associated with its use, the main limitation being that the funds generated are in local currency rather than foreign exchange, which effectively limits use to activities of a domestic nature. However, the relative maturity of debt conversion as a financing mechanism suggests that the potential for further scaling up (with the possible exception of Debt2Health) is likely to be limited: constraints arise from factors such as the availability of debt not eligible for cancellation under existing multilateral mechanisms, the willingness of creditors to engage in debt swaps using such debt, and country eligibility criteria (particularly under Paris Club agreements), including the requirement of participation in an IMF Poverty Reduction and Growth Facility (PRGF) programme.

The funding generated by debt swaps is closely tied to their designated end use (although the effectiveness of this depends on monitoring mechanisms). While this effective earmarking of budgetary funds indicates a trade-off with policy space, the debt relief provided by converting debt at a discount (where the debt would otherwise have been serviced) releases resources for use in accordance with national priorities. However, the exclusion of relevant ministries and limited civil society participation in the design and implementation processes may undermine coherence with medium-term national development strategies.

As can be seen from the examples cited above, the scale of debt swaps is highly variable, ranging from less than \$1 million (particularly in the case of non-governmental organization-intermediated swaps of commercial debt) to hundreds of millions in the case of some swaps involving bilateral debts. This is an important consideration, as administrative costs are significant, indicating the importance of economies of scale. Thus, large-scale swaps, such as that involving the \$473 million multi-country EcoFund in Poland (where operational costs were further reduced by coordination among donors), are likely to be much more cost-effective than smaller projects.

Overall, debt swaps may be expected to continue making a modest contribution to development finance. Their impact could be enhanced if creditor countries: provided higher discount rates (at least equivalent to the extent of debt cancellation that would otherwise be applicable); widened eligibility criteria and increased their transparency; improved the alignment of the programmes supported with national development priorities; and strengthened coordination through the use of multilateral funds such as the EcoFund in Poland.

Debt conversion is replicable, but the potential for scaling up may be limited

Risk-mitigation mechanisms

Pull mechanisms

Pull mechanisms are designed to overcome market failures and promote innovation by rewarding successful innovations *ex post*. By providing assured public funding for goods that embody socially beneficial technologies for which private demand is inadequate (for example, vaccines, pharmaceuticals and renewable energy technologies), they aim to turn notional into effective demand, thus allowing investors to capture more fully the social value of their research and investments. Predictability of funding is a key factor: ensuring a specified level of demand greatly reduces risk and uncertainty, making socially beneficial investments more commercially viable.

Pull mechanisms can also help to reduce adverse effects of oligopolistic markets by decreasing entry barriers: substantially increasing the scale of a market can draw in new producers, increasing competition and lowering prices. A patent buyout for the purpose of making certain intellectual property available to a wide range of producers may have a similar effect.

While this chapter focuses on advance market commitments, three other pull mechanisms should also be noted:

- **Standard prizes**, which reward achievements in a technology development contest. They may be designed as a winner-takes-all prize or may also reward runners-up.
- **Proportional prize structures**, which reward innovations in proportion to their impact, offering a fixed per-unit reward proportional to the total benefits achieved, while the overall size of the award is variable.³
- **Patent buyouts**, which are a direct form of the pull mechanism, under which the public sector pays private holders of an existing patent to transfer ownership to the public domain.

Advance market commitments

Advance market commitments aim to make socially beneficial technologies profitable

The function of advance market commitments is to offer a time-limited public subsidy for goods and services that the intended beneficiaries want to buy so as to increase market size and make returns more certain for producers, while requiring a commitment from producers to provide the product at a viable long-term price for an agreed period after public support ends. The concept of global AMCs was developed by Kremer (2000) as a response to market failure in research and development (R&D) for new vaccines against malaria, tuberculosis and the strains of HIV common in Africa, although similar mechanisms had previously been deployed at the national level for other purposes in a number of developing countries (Department for International Development, 2009).

An advance market commitment represents a legally binding contract guaranteeing a specified level of demand at a specified price for a specified period to producers that develop and bring to the marketplace a new product meeting previously agreed product specifications. While producers still bear the risk that their R&D efforts will fail to generate a product that meets those specifications, AMCs guarantee that, if they succeed, a viable market will be available for a known period.

³ An example is the Haiti Mobile Money Initiative (HMMI), a partnership between the Bill and Melinda Gates Foundation and USAID, which will award \$6 million to participating mobile operators once 5 million mobile money transactions have been executed in Haiti. The prize money will be distributed according to the relative contribution of each operator to the total number of transactions.

The pneumococcal vaccine AMC

Thus far, advance market commitments have mainly been used to accelerate access to new vaccines in developing countries, which is often delayed by a decade or more after their arrival on the market owing to their high costs (Cernuschi and others, 2011). In 2007, five donor Governments (Canada, Italy, Norway, the Russian Federation, and the United Kingdom) joined with the Bill and Melinda Gates Foundation to commit \$1.5 billion to the commercialization of new pneumococcal vaccines for use in low-income countries, leading to the establishment of a pilot AMC programme for pneumococcal vaccine in 2009, with co-financing (of up to \$6.3 billion) from the GAVI Alliance. The GAVI Alliance also acts as the secretariat of the AMC, co-leading both the design of the pilot (with the World Bank) and its implementation (with the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO)).

The choice of pneumococcal vaccine to test the viability of the AMC concept was based on consideration of two factors: the considerable potential health benefits to target populations and the existence of vaccines in advanced stages of development providing the potential for rapid results (Cernuschi and others, 2011). Pneumococcal disease is the largest single vaccine-preventable cause of death among young children globally, killing more than 800,000 under-fives every year, with more than 80 per cent of these deaths occurring in GAVI-eligible countries (Snyder, Begor and Berndt, 2011).

The pricing structure under the AMC for pneumococcal vaccine is shown in figure III.4. Based on demand forecasts, a target was set of providing 200 million doses of vaccines annually by 2015, and participating manufacturers are required to make a 10-year supply commitment to contributing an agreed proportion of this target level. Vaccine in the first 20 per cent of each manufacturer's supply is priced at \$7 per dose, to make AMC participation more attractive and allow rapid recovery of a proportion of R&D costs. The remaining 80 per cent is purchased at a "tail price" of \$3.50 per dose, close to the marginal cost of production (ibid.). The difference between the price of \$7 per dose and the tail price is met through donor commitments under the AMC; the tail price (and the corresponding part of the \$7/dose price) is shared between the GAVI Alliance and the recipient country throughout the AMC period, the level and rate of increase of each country's share varying according to its per capita income.

Two pharmaceutical companies, GlaxoSmithKline and Pfizer, each agreed in March 2010 to provide 30 million doses of pneumococcal vaccines annually for 10 years to GAVI-eligible countries, with each company receiving a pro rata (15 per cent) share of the available funding (\$225 million of \$1.5 billion). These commitments represent 30 per cent of the target level, leaving 70 per cent of the funding available for further commitments (Cernuschi and others, 2011). As of December 2011, a total of 37 countries had been approved to receive funding for the vaccines, and 16 countries had introduced them with GAVI support (GAVI Alliance, 2012a).

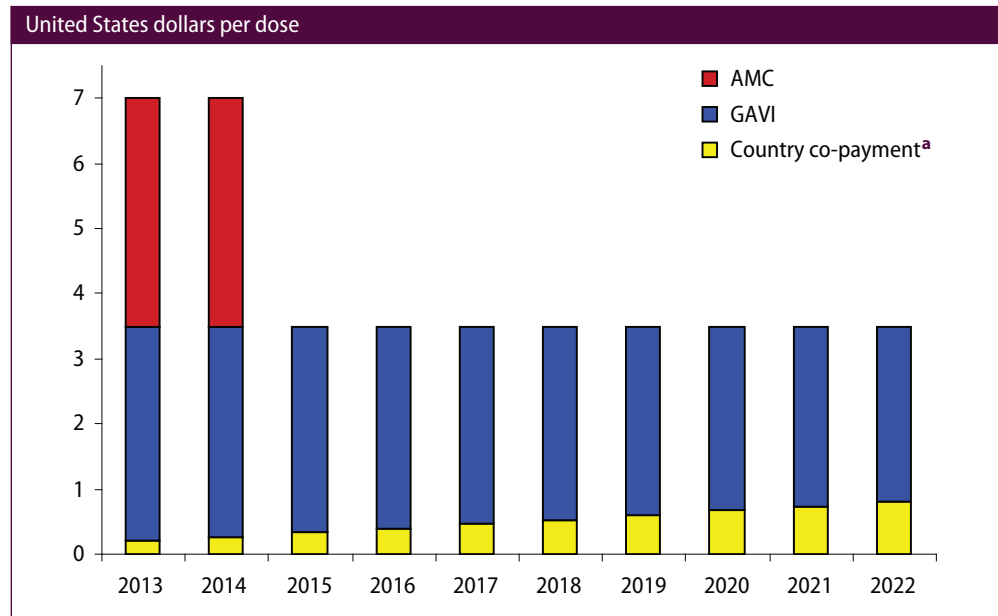
Risks and challenges

Risks and challenges associated with AMCs arise on the levels of funders, producers and recipient countries. For funders, the key issue is the need for assured payments over a prolonged period. In the case of pneumococcal vaccine, the problem is relatively limited for the AMC funders themselves, since their commitment covers only the first two years of supply by each funder; but even here, payments from GAVI need to be maintained over the whole 10-year period, which is potentially more problematic.

A pilot AMC programme is under way for pneumococcal vaccines

Advance market commitments require assured financing and demand

Figure III.4
Price structure of the pneumococcal vaccine AMC, 2013-2022



Source: Snyder, Begor and Berndt (2011).

^a The country co-payment represents a weighted average, taking account of differential terms according to income levels.

From the producers' perspective, while AMCs can provide predictable funding for the purchase of products after their development, they do not provide funding to support R&D expenditures or product development. This may represent a major obstacle to participation by smaller companies and for products at an earlier stage of the R&D process.

Producer uptake of the AMC for pneumococcal vaccine has so far been relatively limited, with commitments to date reaching only 30 per cent of the target level. However, this may in part reflect potential demand constraints. Besides co-payments by often resource-constrained recipient countries (and their need to bear additional costs, for example, for cold chains and other distribution-related factors), full operation of the AMC would require \$6.3 billion of funding from GAVI over the next 10 years, in addition to the \$1.5 billion of funding for the AMC itself. Lack of demand has been identified by pharmaceutical companies and non-governmental organizations as a major concern in relation to participation in the AMC. To allay these concerns, UNICEF has agreed to purchase 20 per cent of supply commitments for the first year, 15 per cent for the second and 10 per cent for the third (Snyder, Begor and Berndt, 2011).

Notwithstanding these issues, the AMC has been successful in accelerating the availability of pneumococcal vaccine in low-income countries, possibly by as much as 10 years, although, as yet, on a more limited scale than was originally envisaged; and the health benefits accruing therefrom are clearly considerable. The GAVI Alliance estimates that acceleration in the production and distribution of pneumococcal vaccine could avert 650,000 future deaths by 2015 (GAVI Alliance Secretariat, 2011). The cost per disability-adjusted life year (DALY)⁴—a measure of cost-effectiveness of medical interventions—is expected to be in the order of \$33–\$36, well below the threshold value of \$100/DALY used by the World Bank to define highly cost-effective medical interventions (Department for International Development, 2009).

⁴ The disability-adjusted life year (DALY) is a measure of the number of years lost due to ill health, disability or early death. It extends the concept of potential years of life lost due to premature death by including, with a lesser weight, years spent in poor health or disability.

The pilot AMC programme has brought significant health benefits

Replicability

In some respects, vaccines (and, to a lesser extent, pharmaceuticals) represent a relatively straightforward case for AMCs. This is partly because (as in the case of the IFFIm) the strong political support for vaccination programmes generates greater faith in the long-term donor pledges that are required to give producers confidence. At least as important, however, is the specificity of the product, the relatively straightforward nature of product specification and the readily quantifiable nature of benefits. In the case of vaccines, it is simple to specify that a qualifying vaccine should provide a specified degree of immunization against a specified disease; and estimating the feasible level of coverage at a given price and the health benefits of this level of coverage is relatively straightforward. While this may also be feasible in the case of improvements to some existing technologies (for example, more efficient or lower-cost solar panels), for wholly new technologies (for example, in agriculture and other productive sectors), the exercise may be considerably more complex. It is noteworthy that pull mechanisms currently under development by the World Bank rely on prize mechanisms, rather than on advance market commitments, with the exception of one project involving the development of a vaccine for livestock (see box III.2).

Even in the field of vaccines, however, some caution is needed in extrapolating the experience of pneumococcal vaccine to other disease contexts. While AMCs were originally envisaged as a means of promoting research into new technologies, the pneumococcal vaccines being supplied under the AMC had already been in late stages of development in 2003, six years before the AMC itself was initiated (Snyder, Begor and Berndt, 2011). It therefore remains to be seen how successful this type of mechanism could be for products at earlier stages of the R&D process, when uncertainty regarding development costs and the prospects of fulfilling product specification requirements can generate potentially important additional disincentives to participation.

Further lessons applicable to global advance market commitments may be drawn from experiences of similar programmes at the national level. A report of the Department for International Development (2009) calls attention to three key points in this regard:

(a) The demand created by AMCs will stimulate investment only if suppliers respond to the changed market conditions. If there are constraints or bottlenecks in respect of accessing inputs, AMCs may lead merely to higher prices and the creation of rents with no developmental benefit;

(b) Investors require a degree of certainty that the policy will not be reversed. A less ambitious—but credible—policy is therefore more likely to promote investment than more ambitious policies that are perceived to be unsustainable;

(c) Since AMCs are by nature temporary, lasting benefits require additional action to remove the longer-term barriers to widespread diffusion of the technologies promoted.

Such barriers may include, for example, inadequacy of the resources needed to finance public goods at the national level, and perverse incentives arising from the international intellectual property regime in relation to technologies providing primarily social rather than commercial benefits.

Affordable Medicines Facility - malaria

The Affordable Medicines Facility - malaria (AMFm) is an initiative of the Global Fund to Fight AIDS, Tuberculosis and Malaria aimed at reducing the prices of artemisinin-based combination therapies (ACTs) as paid by end-users. ACTs constitute a recently developed

Advance market commitments are replicable, but other applications may be more complex

AMFm seeks to reduce the cost of artemisinin-based combination therapies for malaria

treatment for malaria which is significantly more effective than the alternatives; but prices are higher, and ACTs continue to be underused in many low-income countries. In only 2 of 13 countries with survey-based data on ACT coverage for 2007–2008 were more than 15 per cent of children under age 5 with fever treated with ACTs (World Health Organization, 2009a). A more recent study found treatment rates of between 3 and 10 per cent in four of six malaria-endemic African countries in 2008–2010 (Littrell and others, 2011).

To increase access to quality-assured ACT and minimize the threat of parasite resistance (thus prolonging the lifespan of the treatment), AMFm negotiates with manufacturers to reduce ACT prices for private and public sector users, while also making a co-payment on behalf of first-line buyers. The aim is to reduce the price per treatment from \$6–\$10 to \$0.50 (Matowe and Adeyi, 2010), in order to make ACTs competitive against other, less effective anti-malarial treatments.

Funding for the programme has come from UNITAID, the United Kingdom and the Bill and Melinda Gates Foundation. As of April 2012, a total of \$312.1 million had been pledged, of which \$243.6 million had been received by the Global Fund (Global Fund, n.d.b). This has financed a pilot project, scheduled to extend from 2010 to 2012, covering eight countries: Cambodia, Ghana, Kenya, Madagascar, the Niger, Nigeria, Uganda and the United Republic of Tanzania. A decision is expected in December 2012 on whether to continue, accelerate, expand or terminate the programme, based in part on an independent evaluation (Sabot and others, 2011).

Subsidization of ACTs was proposed as long ago as 2004, and is justified on the basis of the perverse incentives and adverse public-health implications of high prices for ACTs relative to less effective alternatives (Institute of Medicine of the National Academies, 2004). The long delay before the establishment of AMFm partly reflects the impact of a number of controversies about the modalities of such a programme, particularly surrounding subsidization of supplies to the private-for-profit sector. While the private sector is a major source of supply of antimalarials in many developing countries, concerns included the risk that subsidized ACTs would be purchased by people without malaria, and that the benefits of the subsidy would be captured by middlemen rather than reflected in a reduction of end prices (Sabot and others, 2011).

While it is too early to assess the effects of AMFm, most ACT subsidy programmes and pilot schemes have had broadly positive effects, contributing to wider availability of ACTs relative to other antimalarial treatments at the desired price level, with significantly greater market share (Schäferhoff and Yamey, 2011). Early results of price-tracking surveys in six African countries commissioned by the Global Fund and undertaken to provide continuous information on the impact of AMFm also indicate that AMFm-subsidized medicines are sold at prices much lower than those of non-AMFm anti-malarial treatments (Health Action International, 2012). Nonetheless, concerns regarding the role of the private sector are not without justification: in Zanzibar (United Republic of Tanzania), for example, private buyers have ordered 150,000 subsidized doses of ACTs, compared with an average of 2,000 cases of malaria treated in the private sector annually (Sabot and others, 2011).

There are also questions whether results could be improved, for example, by prioritizing ACT subsidies in high-incidence areas, where cost-effectiveness is greater, while placing greater emphasis on diagnosis in low-incidence areas, where subsidized ACTs are otherwise more likely to go to people without malaria, particularly in the private sector (*ibid.*).

It has taken time to achieve the subsidization of ACTs

Early results of the AMFm pilot programme appear promising

Any definitive judgement on the merits of AMFm must await the independent evaluation scheduled for 2012.

Caribbean Catastrophe Risk Insurance Facility

The Caribbean Catastrophe Risk Insurance Facility (CCRIF), created in 2007 by the members of the Caribbean Community (CARICOM) with the assistance of the World Bank and financial support from Japan, is the first multi-country catastrophe insurance pool. The Facility is capitalized through a multi-donor trust fund financed by the European Union, the World Bank, the Caribbean Development Bank and the Governments of Bermuda, Canada, France, Ireland, and the United Kingdom, in addition to receiving the premiums paid by the 16 participating countries and territories.⁵ CCRIF provides rapid financial support to Governments in the event of a catastrophe arising from an earthquake or hurricane,⁶ principally to support the re-establishment of basic government functions.

Such insurance is of particular importance in the Caribbean region, where countries are prone to common risks associated with earthquakes and hurricanes, and the small size of national economies means that their impact typically exceeds an individual country's ability to deal with them. A major hurricane occurs in the region on average every two years, typically affecting between one and three countries. The experience of Hurricane Ivan in 2004, which caused losses approaching 200 per cent of GDP in both Grenada and the Cayman Islands (United Nations, 2008), was a major motivation for the establishment of CCRIF.

CCRIF enables member countries to purchase insurance coverage under which payments of up to \$100 million are triggered by a once-in-15-year hurricane or a once-in-20-year earthquake. Payouts are determined according to a formula applied to data from the National Hurricane Center (Miami, Florida) (for hurricanes) and the United States Geological Survey (for earthquakes). This allows for immediate payment and eliminates the wait for detailed impact assessments and costings. Payment is intended to approximate 20 per cent of the costs to Governments arising from damage to Government buildings and infrastructure, loss of tax revenue and relief expenditures.

Each country's premiums are determined by the amount of coverage it decides to take, the deductible for that coverage, and its risk profile. Since each country thus pays in proportion to the amount of risk it transfers to CCRIF, there is no cross-subsidization among members. Country premiums range between \$200,000 and \$4 million per year (United Nations, 2008); and eight payouts totalling \$32.2 million were made to seven countries and territories between 2007 and 2010 (Caribbean Catastrophe Risk Insurance Facility, 2011c).

By pooling risks among the member countries, CCRIF allows them to secure insurance at about half the cost that would be incurred if each country accessed the re-insurance market individually. CCRIF retains part of the risk, and keeps a minimum of \$20 million in reserve to allow immediate payouts, while contracting commercial reinsurance for a further tranche (\$132.5 million in 2009–2010). A catastrophe swap between CCRIF and the World Bank Treasury covers \$30 million of the top layer of risk (Caribbean Catastrophe Risk Insurance Facility, 2010).

The Caribbean Catastrophe Risk Insurance Facility allows Caribbean countries to pool disaster-related risks

CCRIF reduces insurance costs substantially...

⁵ The members of CCRIF are Anguilla, Antigua and Barbuda, the Bahamas, Barbados, Belize, Bermuda, the Cayman Islands, Dominica, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago and Turks and Caicos Islands.

⁶ Beginning in 2012, CCRIF plans to offer coverage also for excess rainfall (Caribbean Catastrophe Risk Insurance Facility, 2011c).

Box III.2

Proposals for pull mechanisms

Apart from their involvement with the pilots for AMCs and the Affordable Medicines Facility - malaria, some donors are seeking to develop pull mechanisms to tackle other development-related challenges, such as climate change and food insecurity, by encouraging investment in renewable energy and agricultural technology.

The World Bank is currently developing agricultural projects based on pull mechanisms through the Agricultural Pull Mechanism (AGPM) initiative, with the objectives of increasing production, reducing losses and enhancing food security for small farmers. There are six pilot programmes currently being developed, which are expected to be launched in June 2012. Their objectives are:

- To develop distribution networks for bio-fortified crop varieties (high pro-vitamin A cassava, maize and sweet potato, and high in iron beans) in Africa
- To promote the development and use of new hybrid rice varieties in South Asia
- To develop improved fertilizers and fertilizer production processes
- To promote adoption of improved post-harvest storage technologies
- To incentivize the use of biocontrol mechanisms against aflatoxin contamination of crops
- To promote development and use of a vaccine against *peste des petits ruminants* in livestock in Africa

Only the pilot with the last-mentioned goal is based on an AMC-type mechanism (a purchase guarantee linked to the distribution of vaccines), all the others relying on various combinations of differently structured prizes.

The Department for International Development (DFID) of the United Kingdom, one of the funders of the pneumococcal vaccine AMC, has also taken a lead role in exploring how AMCs could be used to drive private sector investment in low-carbon and climate-resilient technologies, such as renewable energy (Department for International Development, 2009). Projects currently under consideration encompass, inter alia, medium-scale deployment of biogas for schools and hospitals; assistance in rolling out mini-grids in remote areas of India with limited prospects for connection to the central electricity grid; and the offer of guarantees to private developers of large-scale grid-connected renewable energy projects in the United Republic of Tanzania (based on a proposal of the Private Infrastructure Development Group) (Department for International Development, 2010a; 2010b). Elliot (2010) has proposed the use of AMCs to engage the private sector in the development of new technologies to deal with problems of land and water scarcity, climate change, and declining crop yields.

Source: Department for International Development (2009) and World Bank (2011).

In addition to providing insurance, CCRIF has also been active in assessing climate change adaptation (Caribbean Catastrophe Risk Insurance Facility, 2010), through allocation of resources for the development of a quantitative knowledge base to assist in the reduction of climate change risks and enhance adaptation strategies across the region (Caribbean Catastrophe Risk Insurance Facility, 2011b). This includes regional implementation of the Economics of Climate Adaptation methodology developed by Swiss Re and McKinsey and Company, with the support of key regional partners including the Caribbean Community Climate Change Centre and the Economic Commission for Latin America and the Caribbean (ECLAC).

...and allows for much faster payouts

The Caribbean Catastrophe Risk Insurance Facility offers two advantages to its members over individual insurance on a commercial basis: it provides substantial financial savings and allows for much faster payouts in the event of hurricanes or earthquakes, so that assistance is received quickly, before other relief funds are available. Haiti, for example, received \$7.75 million just 14 days after having been struck by the devastating 2010 earthquake (Caribbean Catastrophe Risk Insurance Facility, 2011a).

CCRIF has also shown some flexibility in adjusting to the needs of its members. In 2007, heavy rainfall and a tropical storm surge due to Hurricane Dean, a hurricane with Category 5 status, caused significant damage in Jamaica, Dominica, Saint Lucia, Antigua and Saint Kitts and Nevis. However, the losses were insufficient to trigger payouts to any of these Governments, partly because of the high deductible for hurricanes, and partly because the main impact was on the agricultural sector (which is not covered by CCRIF, as damage to that sector does not entail a cost to the Government). This pointed to the desirability of an extension of CCRIF coverage to include excess rainfall. Such coverage has since been developed, and is expected to become available to member countries in 2012.

Replicability

Risk-pooling and insurance are of particular importance to small countries (which do not have the potential for risk-pooling at the national level), especially in regions prone to natural disasters. The regional basis of such a scheme is not ideal, as there is a higher level of correlation among the risks faced by the countries concerned; but inasmuch as the islands of the Caribbean are spread across a sufficiently wide area, and the impacts of the risks covered are sufficiently localized, this joint risk appears to be manageable.

These factors would need to be taken into account in any attempt to replicate CCRIF in other regions, particularly for other risks. A similar mechanism might be beneficial for earthquakes and/or tropical storms among the smaller Pacific islands, for example; but insurance against tsunamis is likely to be less viable, because of their potentially much wider geographical scope. Similarly, drought insurance could be beneficial for many countries in sub-Saharan Africa, but a risk-pooling scheme would almost certainly need to be region-wide rather than subregional, owing to the high correlation of risk within subregions.

Nonetheless, given an appropriate combination of geographical scope and risk coverage, there would seem to be some potential for replicating CCRIF in other regions; and the need for such mechanisms might be expected to increase over time as a result of climate change. If the Risk Insurance Facility were replicated more widely, risk-pooling between similar mechanisms across different regions could help to lower costs further.

Similar mechanisms may be beneficial in other regions

Private voluntary contributions

Product Red

Product Red was founded in 2006 by the singer Bono and Bobby Shriver to provide a sustained flow of funds from the private sector to the Global Fund to Fight AIDS, Tuberculosis and Malaria, for support of HIV/AIDS programmes in Africa, while also raising awareness of the issue. Product Red is a brand licensed to several private companies, each of which creates a product with the Product Red logo, and donates a portion of the profits made from selling this product to the Global Fund. Participating companies include Nike, American Express UK, Apple, Starbucks, Converse, Bugaboo, Gap, Hallmark (United States) and Dell.

At the time of writing (April 2012), the initiative had raised \$189.6 million for AIDS-related activities of the Global Fund in six countries in Africa: Ghana, Lesotho, Rwanda, South Africa, Swaziland and Zambia⁷ (Global Fund, n.d.a; n.d.b). While this

Product Red provides genuinely additional resources...

⁷ See www.theglobalfund.org/en/privatesector/red/ (accessed 10 January 2012).

Table III.1
Summary of mechanisms for innovative international financing

Source	Description	Donors; partnerships	Funds committed (estimated)	Resource mobilization	Predictability	Scalability	Replicability	Additionality to ODA
<i>Mechanisms that transform time profile of development finance</i>								
International Finance Facility for Immunisation (2006-2011)	Securitization of long-term ODA commitments of donor countries, to front-load resources, proceeds being allocated to the GAVI Alliance	United Kingdom, France, Netherlands, Sweden, Japan, Norway, Italy, Spain, Brazil, South Africa	\$6.2 billion over 5-23 years	Raised: \$3.6 billion Disbursed: \$1.9 billion	Yes	Yes, in principle; currently uncertain in practice	Yes where front-loading is appropriate (that is, where recurrent costs are minimal or self-financing)	No (financed from future ODA budgets)
Debt-for-nature (1984-2011)	Cancellation of payments on one or more foreign currency loans, part or all of the associated debt-service payments being used (in local currency) to fund public and/or non-governmental environmental projects (<i>note</i> : only payments corresponding with that part of the debt which would not otherwise have been cancelled qualifies as IDF)	Examples: Netherlands/Costa Rica, 1989 (\$9.9 million); Sweden/Costa Rica, 1989 (\$3.5 million); multiple bilateral creditors/Poland, 1992 (\$473 million); Italy/Egypt, 2001 (\$149 million); Italy/Kenya, 2006 (€44 million); Germany/Madagascar, 2003; (€13.8 million); Germany/Indonesia, 2006 (€6.25 million); Switzerland with Bulgaria in 1995 (Sw F 20 million); France/Madagascar, 2008 (\$20 million); France/Cameroon, 2002 (\$25 million); United States/Peru, 2002 (\$40 million); United States/Indonesia, 2009 (\$19.6 million)	–	\$1.1 billion - \$1.5 billion	No	Yes, but constrained by availability of debt not eligible for cancellation	Yes	No (counted as ODA)
Debt2Health (2007-2011)	Cancellation of payments on one or more bilateral official loans, 50 per cent of the associated debt service being used (in local currency) to finance projects of the Global Fund to Fight HIV, Tuberculosis and Malaria	Germany/Indonesia (€50 million); Germany/Pakistan (€40 million); Germany/Côte d'Ivoire (€19 million); Germany/Egypt (€6.6 million); Australia/Indonesia (€54.6mill) (amounts of debt, of which 50 per cent goes to the Global Fund programmes)	–	\$107 million	No	Yes, but constrained by availability of debt not eligible for cancellation	Yes	No (counted as ODA)

(cont'd)

Table III.1 (cont'd)

Source	Description	Donors; partnerships	Funds committed (estimated)	Resource mobilization	Predictability	Scalability	Replicability	Additionality to ODA
<i>Mechanisms to mitigate risk</i>								
Advance market commitments (2007-2011)	Temporary public subsidy to technology-intensive products to incentivize research and development, subject to a negotiated price. Pilot programme for pneumococcal vaccine	Canada, Italy, Norway, Russian Federation, United Kingdom and Bill and Melinda Gates Foundation	\$1.5 billion	\$450 million	Predictable payments to suppliers	Potentially scalable, but pilot constrained by the GAVI Alliance co-financing capacity	Yes	No (funded from ODA budgets and philanthropic sources)
Affordable Medicines Facility - malaria (AMFm) (2010-2011)	Subsidy to suppliers of artemisinin combination therapy in the form of a co-payment on behalf of purchasers, subject to a negotiated price. Pilot stage	UNITAID, United Kingdom, and Bill & Melinda Gates Foundation	\$312 million	\$243.6 million	Predictable payments to suppliers	Yes	Uncertain, pending outcome of pilot programme	No (funded from ODA budgets, philanthropic sources and IDF; but IDF component counted elsewhere)
Caribbean Catastrophe Risk Insurance Facility (2007-2012)	Provides fast-disbursing financial assistance to Governments in the event of a catastrophe following earthquakes or hurricanes, to re-establish basic Government functions	Partnership of 16 Caribbean countries and territories: Anguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago and Turks and Caicos Islands	\$67.5 million	\$67.5 million	Yes	Yes	Potentially replicable for some risks in some regions	No (capitalized from donor funds, including ODA; recurrent finance from members)
<i>Mechanism to harness voluntary contributions</i>								
Product Red (2006-2012)	Brand that may be licensed by suppliers for specific products in return for allocation of a proportion of the profits on those products to the Global Fund to Fight HIV, Tuberculosis and Malaria	Nike, American Express UK, Apple, Starbucks, Converse, Bugaboo, Gap, Hallmark (US), Dell, Penguin Classics (UK and International) and Emporio Armani	\$190 million	\$190 million	Moderate	Dependent on demand	Potentially (but there is risk of competition among alternative brands)	Yes

Source: UN/DESA.

represented only about 1.2 per cent of total contributions received by the Global Fund since Product Red's establishment in 2006, the Global Fund estimates that the programmes financed have reached more than 7.5 million people, for example, providing antiretroviral therapy (ART) to more than 122,000 people living with HIV in Rwanda and Lesotho, including more than 50,000 pregnant women (thereby reducing the risk of mother-to-child transmission) (Global Fund to Fight AIDS, Tuberculosis and Malaria, 2011a).

Product Red has been criticized for being less efficient and less transparent than direct charitable contributions by the companies concerned (Yuvraj, 2009). While this may indeed be the case, the financial value provided to participating companies by the brand offers an additional motivation for contributions. Thus, unlike most other existing forms of IDF, Product Red has the advantage of providing genuinely additional resources which would not otherwise have gone to development or related uses.

Product Red also has some potential for both scalability and replicability. However, it is reasonable to assume that its current scale is a reflection of the current level of demand (although this may well grow over time); and the benefits of widespread replication could be substantially reduced by the effects of competition among alternative "social responsibility" brands.

...and has some potential for replication and scaling up

MassiveGood

In 2010, the Millennium Foundation for Innovative Finance for Health (a non-profit foundation created by UNITAID in 2008) launched MassiveGood, a voluntary counterpart to the airline ticket levy. The objective was to seek voluntary micro-contributions of \$2 or more from people purchasing travel reservations in order to raise funds for UNITAID (Millennium Foundation, n.d.a). Like Product Red, this mechanism generates resources independently of traditional aid, which would not otherwise have been used for development purposes.

A pilot scheme was launched in Spain, jointly with the Spanish Red Cross; but attempts to replicate this in other countries proved problematic, and MassiveGood was formally abandoned in November 2011. The Millennium Foundation attributed this failure to the effects of the financial crisis, which occurred in the period between the conceptualization of the scheme and its implementation. However, the technology behind MassiveGood remains potentially available for future use (Millennium Foundation, n.d.b).

...but a voluntary levy on air ticket sales proved unsuccessful

Conclusion

Existing IDF mechanisms have generally been successful in fulfilling their specific purposes, such as front-loading ODA disbursements, mitigating risks and incentivizing the commercialization of new vaccines. However, they have generated few genuinely additional resources for development, primarily bringing forward ODA from later years or diverting it from alternative uses. While some of the mechanisms have potential for expansion or replication, the additional resources generated would remain limited in quantitative terms. Table III.1 summarizes the main mechanisms, their current and potential scale and their key features.

The issue of additionality is critical to any evaluation of these mechanisms; but it also makes such evaluation seriously problematic. Where innovative financing mechanisms harness current or future ODA (as exemplified by AMCs and IFFIm, respectively),

IDF mechanisms have achieved specific financial objectives but have generated few additional resources

Where ODA is diverted, benefits of IDF must be set against opportunity costs

their direct benefits will be at least partly offset by the opportunity cost to development of the alternative uses from which ODA is diverted. Even where aid is diverted contemporaneously, identifying which activities are reduced and evaluating the opportunity cost they represent would require considerable research; in the case of future aid, it will be possible only retrospectively.

The relatively limited potential of existing mechanisms to generate additional resources, together with the limited prospects for further major increases in ODA and the political obstacles to the implementation of larger-scale IDF mechanisms such as those as discussed in chapter II, limits in turn the likely increase in overall financing for development in the near future. This has led to increased attention to other options such as growth-indexed bonds; efforts to harness remittances and diaspora resources for development; and tax coordination (see box III.3).

Box III.3

Other mechanisms for harnessing resources for development

The need for additional resources for development has led to increased attention to a number of other potential sources of financing, in addition to the mechanisms discussed in the main text of this publication. While these sources do not strictly meet the criteria for IDF as set out in chapter I, they are nevertheless sometimes included in discussions of IDF.

Growth-indexed bonds are bonds on which the interest rate in any given year is adjusted according to the issuing country's rate of economic growth in that year. For example, a country with a trend growth rate of 5 per cent per year which can borrow in the market at 10 per cent per year might issue bonds paying 1 per cent above or below 9 per cent for every 1 per cent by which growth exceeds or falls short of 5 per cent. The yield thus varies systematically with the gap between the actual and trend growth: payments decline when growth is slow, but increase when it is faster, so that payments have a counter-cyclical effect (Griffith-Jones and Sharma, 2006). If a sufficient proportion of a country's debt were indexed to GDP in this way, it could also reduce the risk of default or problems in debt servicing.

While the idea of growth-indexed bonds has been implemented only to a limited extent, in the context of debt restructurings (notably in Argentina and Greece, but also under the 1989 Brady Initiative), it gained impetus following the financial crisis of the late 1990s; and the current crisis has again focused attention on possible counter-cyclical financing instruments. However, growth-indexed bonds do not qualify as IDF in themselves: rather, they are a commercial instrument through which Governments with access to international financial markets could borrow, without any need for external official support.

Similarly, **diaspora bonds** have been proposed as a potential source of funding for developing-country Government bonds (although these also do not qualify as IDF, for similar reasons). However, while such bonds have in the past been issued successfully by Israel and India, it is far from clear that the conditions that allowed this success—large, well-established and relatively high-income diasporas, with a relatively positive attitude towards, and a high level of trust in, their respective Governments—are replicated widely enough for this to be a major source of funding for more than a handful of countries. Nonetheless, Ethiopia has recently launched a second diaspora bond, despite the failure of its first attempt in 2009, while Kenya and Nigeria are receiving support from the World Bank for pilot bond issues, despite the former's unsuccessful attempts to promote diaspora participation in an infrastructure bond issue in 2010. Nigeria is also receiving support from the African Development Bank, as is Rwanda; and Uganda is planning to issue a diaspora bond in 2013 (This is Africa, 2012).

Other means of **tapping diaspora resources** may have more potential, although mainly for funding of small-scale private investment rather than for the public sector. While occasionally

(cont'd)

Box III.3 (cont'd)

included in discussions of IDF, migrants' remittances clearly do not qualify as such: they have existed for centuries, and are private transactions between individuals for their own personal purposes, generally with little or no development dimension.

Nonetheless, national diasporas represent a potentially significant source of financing for many developing countries. Multilateral development institutions and national development banks could help to tap these resources for development by facilitating investment in productive activities by members of the diaspora^a and/or remittance recipients. This could provide a source of small-scale foreign direct investment (FDI), whose developmental benefits would be enhanced (relative to more conventional FDI) by being more deeply rooted in local economies.

Some regional development institutions have already undertaken such projects. For example, the Multilateral Investment Fund (MIF), an organ of the Inter-American Development Bank, has, since 2000, offered grants, primarily for technical cooperation, to projects designed to increase remittances and channel them towards development goals. The programme has focused on housing, policy and regulatory frameworks, banking the unbanked, productive investments, financial education, entrepreneurship training, and research and knowledge dissemination (Inter-American Development Bank, 2010).

There is also significant potential to increase developing countries' own public revenues through **international tax cooperation**. This would have the advantages of sustainability, not creating liabilities, and maintaining policy space and alignment with national priorities and strategies. An important first step could be achieved through information exchange between jurisdictions so as to allow the full application of existing tax codes, which would not require new institutions (other than for norm-setting and monitoring) or tax rate coordination.

Based on data for the mid-2000s, the potential tax gain for developing countries has been estimated to be in the order of \$200 billion–\$250 billion per year. However, the distribution of these resources varies broadly in line with levels of economic activity, so that the primary benefits would accrue to emerging market economies, while relatively few benefits would accrue to low-income and least developed countries. Nonetheless, the potential gain to sub-Saharan Africa (estimated at \$6 billion–\$11 billion per year) would represent a substantial benefit^b (FitzGerald, 2012). The benefits to development could be greatly enhanced if developed countries were to devote some part of their gains from international tax cooperation (estimated at some \$475 billion) to development finance (ibid.).

Information exchange is central to tax cooperation, and more comprehensive information exchange under existing treaties would be an essential component. However, the effectiveness of such measures would be undermined by the use of offshore centres both for tax avoidance and as transfer pricing points (Organization for Economic Cooperation and Development, 1977).

Source: UN/DESA.

a Investment by members of the diaspora (nationals resident in other countries) strictly speaking constitute capital flows, although they may in practice be misclassified as remittances.

b These estimates are based on a very conservative methodology using mid-2000s data and are therefore likely to constitute a significant underestimate.