RESULTS FOR DEVELOPMENT

FINAL REPORT ON

Buying Down Loans for Education

TO THE GLOBAL PARTNERSHIP FOR EDUCATION

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Results for Development Institute

Results for Development Institute (R4D) is a non-profit organization whose mission is to unlock solutions to tough development challenges that prevent people in low- and middle-income countries from realizing their full potential. Using multiple approaches in multiple sectors, including Global Education, Global Health, Governance and Market Dynamics, R4D supports the discovery and implementation of new ideas for reducing poverty and improving lives around the world.

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Abbreviations

ABD	Asian Development Bank
AfDB	African Development Bank
AfDF	African Development Fund
AFD	Agence Française de Développement
BMGF	Bill and Melinda Gates Foundation
KfW	Kreditanstalt für Wiederaufbau
DAC	Development Assistance Committee
DSA	Debt Sustainability Analysis
EBRD	European Bank for Reconstruction and Development
FSO	Fund for Special Operations
FY	Fiscal Year
GMR	Global Monitoring Report
GNI	Gross National Income
GNP	Gross National Product
GPE	Global Partnership for Education
GPEF	Global Partnership for Education Fund
HIPC	Heavily Indebted Poor Country
IBRD	International Bank for Reconstruction and Development
IDA	nternational Development Association
IDB	Inter-American Development Bank
IEG	World Bank Independent Evaluation Group
IFC	International Finance Corporation
IMF	International Monetary Fund
IsDB	Islamic Development Bank
LIC	Low-Income Country
MDBs	Multilateral Development Banks
MDGs	Millennium Development Goals
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
R4D	Results for Development Institute
WBG	World Bank Group

Executive Summary

Global Partnership for Education (GPE) buy-downs of other organizations' loans could be one mechanism among others to increase funding to support basic education sector programs agreed with GPE and to improve sectoral performance. Buy-downs have the potential to "crowd in" resources for basic education, especially for those countries on both sides of the IDA/IBRD graduation threshold that have serious basic education challenges and the ability to take on some debt. However, there are many unknowns, very little experience to draw on, and some significant risks. We therefore recommend that GPE's next step be a pilot program with a learning agenda, consulting potential borrowers, lenders and funders of buy-downs and testing a small number of buy-downs designed deliberately to resolve many of the unknown questions.

Buy-downs are an arrangement whereby a third party buys down all, or a part of, either or both of the interest and the principal of a loan between a country and a lending organization, thereby releasing the borrowing country from all or some of its future repayment obligations.

Buy-downs have some real potential advantages. Limited experience so far (mainly in the health sector, and when global interest rates were higher than today) indicates that their potential will be greatest when they induce a country that would not otherwise borrow to seek a loan and when the triggers for the buy-down are results or monitorable reforms that might not otherwise be achieved. Buy-downs can thus encourage more lending – and so more investment – for basic education, thereby "crowding in" extra resources. This experience now becomes much more relevant as grant aid declines and as aid terms harden, both in general and for basic education. Buy- downs can help to keep education "competitive" with other sectors, all of which will try to adapt to the new harder aid environment. Buy-downs may also permit more resources to be made available to large countries, currently capped by GPE at $100 million.

The immediate potential seems greatest with regard to lending by the World Bank Group (both non-concessional IBRD and concessional IDA) and the Islamic Development Bank (mainly non-concessional) and especially for countries on both sides of the IDA/IBRD graduation threshold that still have major basic education challenges. This includes countries such as Angola, Bangladesh, India, Nigeria, Pakistan and Sri Lanka. It is important to note that concessional lending is not recorded as debt by the IMF. Another possible category would include low-income countries unable to take on more debt but in serious need of external support for basic education, such as Afghanistan, Burundi, Chad, Democratic Republic of Congo and Tajikistan. As these countries are not creditworthy, any buy-downs for them would have to be to grant or near-grant terms.

Buy-downs could encourage an increase in lending and run the risk of discouraging grants, reversing the trend of recent decades towards more grant funding of basic education. There are also many practical issues that will need to be resolved in order to implement buy-downs for basic education, such as how to ensure that bought- down loans support sectoral programs that meet GPE standards. This is why we recommend that GPE approach buy-downs very systematically with a pilot program involving consultations and testing. Such a program could not only provide answers to some of the unknowns surrounding buy-downs but could also prepare GPE well, both for the increasingly difficult aid environment and for the possibility that the demand for buy- downs from market to concessional terms may increase if global interest rates increase.

1. Introduction

This report assesses the business case for the Global Partnership for Education's (GPE) use of debt buy-downs as one instrument to use, according to country circumstances, to meet its objective of increased funding to ensure inclusive access and improved learning in basic education.

This assessment first provides as background necessary contextual information on GPE and its functioning; the basic education needs of low- and middle-income countries; trends and prospects in aid and concessional finance for basic education; and the basic mechanics of buy-downs, along with a description of the limited experience of their actual use in various sectors, especially health. It then considers key design issues in GPE supporting buy-downs, including the selection of appropriate beneficiary countries, linking buy-downs to results in basic education, assuring additionality, preserving equal access to GPE funding among its partners, and the current interest rate environment.

The report draws on recent evidence, a literature review and interviews with experts (Annex A). It does not provide technical detail on the specific design of a buy- down program, nor does it assess likely support for such a program among international funders of basic education (both lenders and those who might provide funds for buy-downs) or among potential beneficiary countries.

2. Background

I. The Global Partnership for Education

This section focuses on those features that are most salient for a consideration of loan buy-downs. GPE's strategic goals for 2012-15 are to increase basic education access and learning for all children, with a focus on girls, reach every child especially in fragile and conflict-ridden states, and build national systems that have the capacity to support and deliver quality education for all children in the future. GPE's annual disbursement has been between $300-400 million in grants (GPEF 2013). This is a relatively small share of total annual aid for basic education of around $6 billion. GPE is crucially important however, in that it is the only multilateral source of aid exclusively for basic education and, as such, can and does act as a central forum and catalyst for international efforts to support basic education in developing countries.

GPE does not make grants to developing countries directly. The World Bank Group (WBG) is the trustee for the GPE fund (GPEF) which receives contributions from donors, invests liquid assets, and transfers funds to supervising and managing entities. These entities are multilateral and bilateral donors which sign agreements with developing countries (based on agreed sector programs), disburse the grant funds to them, and monitor government implementation of basic education programs. Though a sector program is the basis for these grants, most agreements have been to support specific investments in basic education; less than 10% has been to provide budget and program support, in part reflecting supervising entities' limited capacity to monitor broad sectoral developments. Supervising and managing entities have included both multilateral (IDA, UNICEF, UNESCO, and IBRD) and bilateral donors (AFD, Belgium, DFID, Netherlands, and SIDA). The WBG dominates as the supervising agency for around 59% of all GPE commitments (FY 12) (GPEF 2013). Currently, GPE has 59 member countries that are allocated funds according to a needs and performance index that is presently under review; a further 10 countries are presently eligible for GPE membership but have yet to join. Large countries' allocations are capped at $100 million regardless of need, although countries can request exceptions to this cap. Decisions about grants are made by the GPE Board, following recommendations from its Local Education Groups and their approval of government basic education sector plans. The countries receiving the largest GPE grants in FY12 were Ghana, Madagascar, Vietnam, Burkina Faso, Burundi, Democratic Republic of Congo, Sudan and Yemen (GPEF 2013). GPE has in recent years devoted significantly more attention to decision-making on grants than it has to subsequent basic education sector developments in its grant-receiving partner countries. There is a general consensus that this imbalance should be redressed.

II. Basic Education Needs

The Millennium Development Goals (MDGs) and the Education for All (EFA) goals call for universal primary education and for gender parity in enrollment by 2015. Despite enormous progress since 2000, however, these goals will not be achieved, in terms of access, completion, and learning. Ten percent of all children are still not enrolled in primary school and a quarter of those in primary school are not acquiring basic competencies.

There are 575 million children of primary school age in developing countries. Globally 57 million of them are out of primary school, principally in sub-Saharan Africa and South Asia, and about half of them will never set foot in a classroom. Twenty-nine countries have 10 or more percent of the relevant age group not enrolled in primary school (Table 3, Annex B). Over half the total out-of-school children (OOSC) are found in just 14 countries. There are still only 95 girls enrolled in primary school for every 100 boys in low-income countries; the income gap in primary education attendance and learning is even wider than the gender gap, with those from the poorest households least likely to be enrolled and, if enrolled, least likely to learn. Even among the 518 million enrolled in primary school, 130 million are not learning even basic competencies. Pupil/teacher ratios, which are the only indicator of education quality that is available for most countries-- and used by the EFA Global Monitoring Report -- improved globally from 1999 to 2010 but worsened in sub-Saharan Africa and South Asia. There is also a wealth of evidence that learning is generally not of high standard in most developing countries, whether assessed by measuring early grade reading and numeracy or by the various regional assessment exercises such as SACMEQ, PASEC, Laboratorio, etc.

These huge needs in terms of both access and learning remain, despite major efforts by developing countries to increase spending on education. Between 2002 and 2013, government expenditures for education in GPE countries increased from 17.0 to 19.4% of national budgets and from 3.8 to 5.8% of GDP overall, though with substantial country variation. While at least ten countries spend over

10% of their total budget on primary education, there are ten that spend 1% or less of GDP on primary education (sections (f) & (g) in Table 3, Annex B). Two aspects of this overview of basic education needs are striking. First, how great these needs remain, despite major progress and major increases in domestic spending. Second, how there is a very significant overlap among countries facing the greatest challenges in basic education, projected need for financing, and political commitment to basic education.

We have conducted a technical analysis (Annex B) that defines countries with outstanding challenges as those that performed at least one standard deviation worse than the average for all countries listed in the UNESCO Institute for Statistics database in at least one of the indicators noted (out of school children, gender parity, pupil/teacher ratio), political commitment as spending at least more than one standard deviation than the average as a share of government expenditure, and financing need as spending at least one standard deviation less on primary education as a share of GDP than the average. This then identifies countries with strong needs that are committed to basic education, but are also fiscally constrained by their overall tax effort (ratio of taxes to GDP).

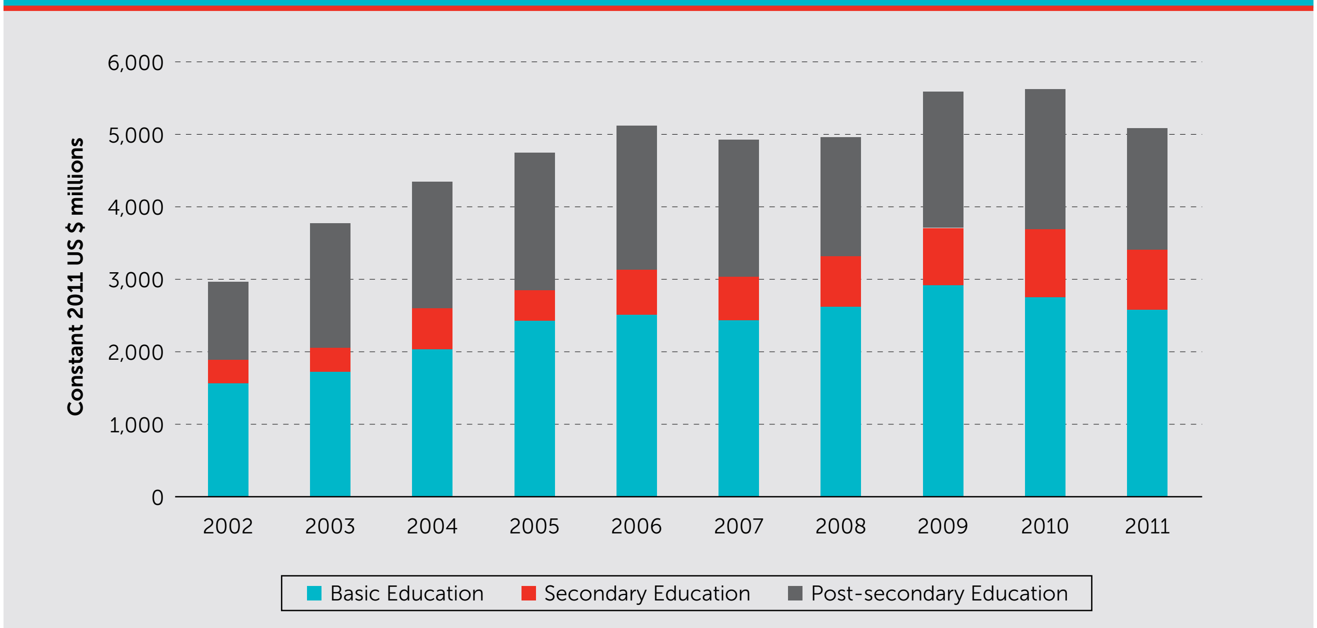
This analysis shows that most of the countries facing the most severe education challenges are already receiving GPE funding. However, 21 of them are expected to graduate from IDA in the next eight years. In addition, several GPE members not currently receiving funding and several non-member countries also face outstanding challenges in primary education and will also likely graduate from IDA in the next eight years (namely India, Sri Lanka, Bangladesh, Nigeria, Angola and Pakistan). IDA graduation is very significant as it means these countries will not generally be considered eligible for concessional financing and will have to borrow at IBRD and market rates in the future to meet their external financing needs.

Aid for Basic Education

Overall concessional aid is declining and its terms are hardening, as a result of the global economic situation and fiscal deficits among traditional donor countries. Aid for education and for basic education is declining even more rapidly than aid in general. Note that the term "aid" here refers to "official development assistance" (ODA) and includes concessional lending e.g. on IDA terms as well as grants.

Total aid reported by the OECD DAC fell by 2% in 2011 and a further 4% in 2012. As Figure 1 shows, the aid to low-income countries for education fell by 10% and to basic education by 5%, from 2010-11. This is included in the overall decline in aid for basic education from $6.2 billion to $5.8 million. Of the eleven major bilateral donors to basic education, seven reduced aid to basic education from 2010 to 2011 (Canada by 21%, France by 25%, Japan by 30%, Spain by 31%, Netherlands by 36%, Norway by 4% and the USA by 13%); aid to basic education from all eleven has declined by 3.8% from 2008 to 2011, with France cutting its education support by $255 million from 2010 to 2011. Particularly significant is the decision of the Netherlands to phase out its education programs, as the Netherlands was one of the major supporters of basic

Figure 1: Total education aid disbursements to low-income countries, US$ million, 2002-11.



(Source: OECD Creditor Reporting System) education and funders of GPE. Research by the World Bank suggests that the negative trend in ODA could well be prolonged (Dang, Knack and Rogers, forthcoming).

Data on the hardening of aid terms are limited, but interviews reveal that this is beginning to happen, though not yet specifically for education. According to the DAC, France, Germany and the European Investment Bank are seeking to have the DAC count unsubsidized loans as ODA in order to meet their Official Development Assistance targets (DAC 2013). Others, even those still increasing their grant aid such as DFID, are moving to have a portion of it be what DFID refers to as "returnable capital." There is thus a general reversal in the trend of the past few decades toward grant financing of aid and in particular of aid for basic education.

Concessional lending for education is also declining, in terms of both dollar volume and country eligibility. IDA is the largest source of concessional lending for education with currently all GPE countries belonging to IDA, except for Albania. The share of basic education in IDA's total support for education declined from an average of 63 percent in 2002–04 to 55 percent in 2009–11 (Brookings Institution 2013).

Furthermore, some 36 countries are likely to graduate from IDA by 2021, including those that are home to nearly 40% of all the current out of school children (CGD 2012). In terms of World Bank Group lending, these countries will then become eligible over a certain period of time for market-rate IBRD non-concessional loans.

Regional bank concessional lending for basic education is relatively limited in terms of both overlap with GPE countries and regional bank priorities. The African Development Bank (AfDB), for example, has a major overlap of 38 countries with GPE but is focused on vocational and higher education, not on basic education, and is not considering any change in its sub-sector focus. The Asian Development Bank (ADB) has a 14 country overlap with GPE but has the same education focus as the AfDB. Interviews with ADB staff, however, indicate they could be interested in exploring debt buy-downs for education with GPE if GPE were to recognize their vocational secondary education lending as an element of basic education. The Inter-American Development Bank (IDB) does support basic education but only has an overlap of 4 countries with GPE.

Other than IDA, the Islamic Development Bank (IsDB) has the most potential overlap with GPE, with 27 common countries, mainly in Africa, South Asia and Central Asia. The IsDB does not charge interest but does collect an administrative markup that amounts to about 20-30% of the face value of its loans. This markup, while not formally interest, has an equivalent effect in determining countries' ability to borrow from the IsDB, meaning that it is not currently able to lend to most low-income countries, especially those that are debt-distressed. The Islamic Bank has not to date, however, funded any recurrent costs or program or budget support though it does support basic education. A table showing the overlap with GPE member and eligible countries with the major multilateral development banks is available in Annex C.

There is also bilateral lending, both concessional and market-rate, for education. France, Germany and Japan currently do such lending, largely for vocational and higher education and education sector support. In this paper we do not explore the possibility of GPE buying down such bilateral debt, on the grounds that its political feasibility seems remote – what GPE donor would be willing to buy down another's bilateral debt?

III. The Mechanics of Loan Buy-Downs

A loan buy-down is a financial transaction in which a third-party pays down part of a loan (by softening the terms of the loan or reducing the principal outstanding) for the borrowing country on behalf of the lending organization. By reducing the financial burden of the loan, the third-party donor generates fiscal room-for-maneuver, which the borrower can (or is mandated to) use to fund domestic development projects.

In terms of debt servicing capacity and its link to public finance, a buy-down has potential to add value by releasing the borrower from a stream of future debt repayments. Because the present value of a dollar falls the farther in the future it is paid, the stream of future debt repayments are greater in face value than the payment the third-party must make today to compensate the lender for that future stream of payments. The buy-down creates budgetary savings that can be earmarked for development projects. This potentially makes lending for basic education more attractive to both borrowers and lenders.

More important in the present context, however, is that buy-downs can help overcome countries' reluctance to borrow for basic education, especially in the tightening aid and concessional finance environment, and can provide useful incentives for countries to focus more on results in an effort to qualify for buy-downs.

The third-party donor can buy-down the loan in two ways: 1) it can buy-down the principal (thus reducing future total payments through both the interest and principal channels); or 2) it can buy-down the interest rate (reducing the burden of future interest payments, but leaving the schedule of principal repayment untouched). In both

Table 1: Illustrative Costs of Buy-downs under different scenarios				
Total cost of buy-down		**Principal buy-down**		
		0%	**50%**	**100%**
Interest rate buy-down	2% to 1%	$7.9 million	$34.8 million	$61.7 million
	2% to 0%	$15.8 million	$42.7 million	$69.6 million
Assumes $100 million face value loans with 25-year maturity, and 4% annual principal repayment. No service charges or front-end fees.				

cases, a buy-down increases the concessionality of the loan, as the financial burden on the borrower is alleviated and re-distributed between the third-party donor and the lending organization. Also in both cases, the buy-down alters the flow of funds to the lender (it becomes more front-loaded), although this could in principle readily be changed by having the third party donor buy a financial instrument that would meet debt servicing in the future as it becomes due.

Table 1 illustrates the third party's cost of buying down both interest and principal under various scenarios. For example, the interest on a $100 million loan could be bought down from 2% to 1% for $7.9 million and the entire loan could be bought down to a grant for $69.6 million.

IV. Experience with Loan Buy-Downs

There has been limited experience to date with loan buy-downs, with only one buy-down so far in education that involved DFID buying down an IBRD loan to China to IDA terms in 2003; the project was evaluated by an independent group as satisfactory. Most other buy-downs have been in the health sector, with the exception of a recent buy- down by Australia of an ADB electric power loan to Samoa. The lenders have been multilateral banks and the buy-downs have been provided by bilateral agencies or the Bill and Melinda Gates Foundation (BMGF). Table 2 details previous buy-downs.

Table 2: Buy-downs since 2003

Buy-down	Financing Agency	External donor	Loan/Credit (US$ million)	Status	Buy-down (US$ million)	Term shift	Trigger
Pakistan Polio	IDA	BMGF[1]	138.3 [2]	Ongoing	NPV of Credit.	Credit to grant.	Independent results audit
Pakistan Polio	IsDB	BMGF	227.0	Ongoing	Fees and mark-up, estimated at $3.6m p.a.	Repayment of principal only	Past performance
Nigeria Polio	IDA	BMGF	138.7[3]	Ongoing	NPV of Credit.[4]	Credit to grant	Independent results audit
China TB	IBRD	DFID	104.0	Closed	37.0	IBRD fixed to approx. 2%	No
China Education	IBRD	DfID	100.0	Closed	34.5	IBRD fixed to approx. 2%	No
China Rural Development	IBRD	DfID	100.0	Closed	32.4	IBRD fixed to approx. 2%	No
Botswana HIV	IBRD	EC	50.0	Ongoing	Euro 14.0.5	Loan to credit	Achieved
Samoa Power	ADF	Govt of Australia	26.6	Ongoing	4.0	Softening of Loan terms	No

[1] The final buy-down was funded by a trust fund financed by the BMGF, Rotary International and the UN foundation. The same applied to the IDA buy-down in Nigeria.

[2] Comprised three loans in 2003, 2005 and 2009 of $20.0m, $46.7m and $74.7m respectively, with additional financing of $24m approved in 2012.

[3] Comprised three loans in 2003, 2005 and 2011 of $28.7m, $50m and $60m respectively.

[4] It appears that the NPV of the first loan was $60m and the second was $70m.

[5] Paid directly to Government of Botswana.

It is possible to discern a number of discrete objectives in these buy-downs to date. In the case of the China buy-downs, it appears that the objective was to encourage China to continue a generally highly successful collaboration with the World Bank on health and education in poor provinces, at a time when China could no longer access IDA, and was reluctant to borrow from IBRD for the social sectors. In the case of Pakistan and Nigeria, both IDA eligible, the IDA and IsDB buy-downs leveraged additional resources that would not have been accepted on IDA terms, and the buy-downs appear to have incentivized good performance in implementing the national polio eradication program. The buy-downs have accordingly been designed with different degrees of conditionality triggering the buy-down. In the case of the China buy-downs, the DFID grants were used to prepay, at regular intervals, a fixed percentage of the principal amount of the IBRD loans which were disbursed and outstanding, in order to reduce the amount owing from China by the end of the implementation period. For example in the case of the TB control project, the principal amount owing was reduced from $104m to $67m by the end of the implementation period, such that the $104m loan had an effective interest rate of 2% per annum. The China project agreements contained no specific performance triggers for the disbursement of grant tranches beyond the general results framework included in the project appraisal documents.

In Pakistan and Nigeria, starting in 2003, IDA financed, in a series of loans, procurement of polio vaccines. BMGF, along with the United Nations Foundation and Rotary International, and the U.S. Centers for Disease Control, covered all IDA service and commitment charges. A third party trust fund, funded by BMGF, UN foundation and Rotary, agreed to buy down the principal of the loan against verification by independent auditors that the countries had met agreed standards of vaccine provision. These projects have generally proceeded satisfactorily. For example, the World Bank Independent Evaluation Group (IEG) noted in its evaluation of the first Nigeria loan that the buy-down mechanism provided much-needed financing and a strong incentive for the country to achieve results. According to the IEG, the performance element needed to be better managed to ensure enforcement of buy-down conditions, and the targets needed to be evidence based, realistic and relevant given the country capacity to implement the necessary activities. In the case of Nigeria, the targets were optimistic, given the current state of the health sector, but somewhat arbitrary as the targets were neither controllable by the government nor critically linked to polio immunization days, which are crucial to crowding in masses for immunization

Performance in Pakistan has also been generally satisfactory and buy-downs have been triggered to date for the two out of the three polio loans. The same has occurred xwith the Nigeria loans. In 2012, BMGF entered into an agreement with the Islamic Development Bank (IsDB) to pay all the fees and mark-ups (approximately $3.3 million per annum) in advance on an IsDB loan for polio eradication in Pakistan. It does not appear that in this case that there are additional performance triggers.

In the ongoing Botswana HIV project, the EC funds of about $20m will have the financial impact of buying down the interest rate effectively to 0 percent and also contributing about $3m towards the principle repayment. Information generated from regular implementation monitoring and a mid-term review, including an independent consultant, would be used to enable the EC to take a decision on release of funds to the Government of Botswana (IDA is not directly involved in this process). It has been confirmed that the European Union's IBRD buy-down triggers were achieved in FY 13. As a result, the Government will be receiving the full €14 million (~US$20 million) grant allocation earmarked by the EU in support of this IBRD buy-down operation. Given the improvements in project performance over the past six months, the project's Implementation Performance rating of the project will be upgraded from its previously "Moderately Satisfactory" status to "Satisfactory."

Since many of the operations are still under implementation, it is still too early to reach firm conclusions about the effectiveness of buy-downs as a tool for leveraging improved performance and additional resources. However, a number of tentative conclusions can be drawn:

- Buy-downs have been successful in persuading countries to borrow for health (and, in one case, for education) when they might otherwise have been reluctant to borrow at IBRD terms.
- Triggers can be a useful tool to incentivize good performance.
- However, the triggers need to be carefully chosen to ensure a) their relevance to project outcomes; and b) that they can be easily monitored.
- Only a very limited number of lending agencies and third parties have so far been involved in buy-downs.

3. Possible GPE Buy-downs

The analysis in the Background section indicates that:

- Low- and middle-income countries still have major challenges of both access and learning in basic education.
- These countries have significantly increased domestic spending on education but face an increasingly difficult external aid environment.
- Though there is very little experience and firm lessons are hard to draw, buy- downs do seem to encourage borrowing for education and health from countries otherwise reluctant to borrow (e.g. China); and can also stimulate specific results if their triggers are appropriately specified (Nigeria, Pakistan and Samoa).
- All buy-downs so far have been of multilateral loans and all have been of new lending.
- Major multilaterals lending for basic education are the World Bank Group and the Islamic Development Bank.

We will therefore focus in this section mainly on possible GPE buy-downs of World Bank and IsDB lending. More work would be needed to explore other potential multilateral and bilateral lenders' suitability for buy-downs for basic education against a potential reluctance by countries to borrow, even if basic education produces high long-term economic and social gains. And, as there is no experience, we do not consider buying down existing debt for education[6].

The tentative business case for GPE enabling buy-downs is therefore that this could be one mechanism, among others, that could for some countries both (a) increase funding to support basic education sector programs agreed between countries and GPE, by overcoming countries' reluctance to borrow for basic education, especially in what will be an increasingly tight aid and concessional finance environment; and (b) improve sectoral performance by using buy-down triggers to focus more attention on results.

This section therefore explores which countries might have the appropriate combination of basic education needs and potential to take on some borrowing for basic education; then reviews how the triggers attached to buy-downs might stimulate improved education performance; and finally raises some operational issues should GPE decide to test buy-downs as one possible new instrument to achieve its goals.

I. Which Countries?

GPE funding, both in general and through buy-downs, can be directed towards three categories of country:

1. Low-income countries that are unable to borrow on non-concessional terms for education or for other development purposes. Such countries could, for instance, become eligible for Islamic Development Bank lending but only if its terms could be bought down to grant or near-grant, such as IDA Category 1.[7]
2. Creditworthy low- and middle-income countries that could absorb more debt on concessional terms and that could use this to create more fiscal space for basic education.
3. Middle-income IBRD borrowers, current and anticipated upon graduation from IDA, which could use increased current funding to tackle major continuing basic education challenges, but are reluctant to borrow for basic education on market terms such as those of IBRD.

Such countries could include current GPE recipients, GPE-member countries not currently receiving grants, and potentially some non-GPE members with major basic education challenges. In addition to countries still needing grant or highly concessional financing that could benefit if Islamic Development Bank funds were bought down to grant or IDA terms, a second particularly important group would be countries in the "sweet spot" –between being unable to take on even concessional debt and not needing concessional financing. These would be IDA 2 or IDA 3 blend countries, and also IDA countries that have recently graduated or are likely to graduate to IBRD terms. In this context, it is worth noting that IMF rules do not count concessional financing against countries' debt.

Annex B contains an illustrative exercise showing which countries could be eligible using a set of decision criteria, already described in section 2.II, involving basic education

6 In addition to looking at these questions, it will also be necessary in future to examine whether or not there is demand from countries for buy-downs, whether or not lenders are interested in having their loans bought down, and whether or not other funders would be willing to finance buy-downs.

7 IDA has three categories of borrower: IDA1 which are repayable over 40 years, with 10 years' grace and carry only a service charge of 0.75%; IDA 2 repayable over 25 years, with 5 years' grace, a service charge of 0.75% and an interest rate currently at 1.25%; and IDA 3, also repayable over 25 years with 5 years' grace, the same service charge and an interest rate currently at 1.40%. In addition, IDA makes 100% grant financing available to countries with a high risk of debt distress and 50% grant financing to those with a medium risk. Non-concessional Islamic Development Bank loans are for 20-30 years, with a 7-10 year grace period, and an administrative charge equivalent to 2.75%.

challenges, financing needs and demonstrated political commitment. It combines these indicators with IMF estimates of countries' risk of debt distress to identify the countries for which debt buy-downs could be most appropriate. Particularly important are several large countries likely to graduate from IDA soon (including India, Sri Lanka, Bangladesh, Nigeria, Angola and Pakistan) which could potentially be candidates for IBRD buy-downs to IDA terms. Another group could be low-income countries unable to take on more debt but needing increased grant funding for basic education, such as Afghanistan, Burundi, Chad, Democratic Republic of Congo and Tajikistan. These countries would have to continue to receive only grant or near-grant funding and so could be candidates for IDA and Islamic Development Bank buy-downs to grant or IDA 1 terms. Such buy-downs for large countries could also be one way to overcome the $100 million cap from regular GPE grants.

II. Linking to Results

Four sets of issues arise when considering the results that buy-downs could achieve. The first has to do with a difference between grants and loans; the second with the sectoral program that the loan supports; the third with the nature and timing of the specific triggers for the buy-downs; and the fourth with the combined impact of increased financing and more of a results-orientation.

Finance ministries. Generally speaking, grants are welcomed by finance ministries but may not attract their full attention. Loans, on the other hand, including concessional loans, are scrutinized and monitored by ministries of finance. Simply having loans with triggers attached may therefore attract broader government attention beyond the education ministry than will grants alone.

Sectoral programs. Current GPE programs have to be approved by the GPE Board and must meet certain standards. In addition the supervising entity has also to meet certain standards to be authorized to handle GPE funds. Presumably any use of GPE funds to buy-down others' debt will also have to be approved by the Board. More importantly, how will GPE exercise due diligence over loans extended by other organizations prior to GPE funds being used to buy them down? And will those organizations have to be held to the same standards GPE currently requires for managing entities? If such approvals are not in place, it is hard to see how the quality of loans that GPE may buy down can be kept to the standard of grants that GPE itself makes.

Triggers. The third question is the selection of triggers and the timing of the buy- downs. Buy-downs can be linked to policy reform as well as to such things as enrollment and learning outcomes -- or to results achieved over a specified implementation period, often related to the loan draw down period. Buy-downs can also be linked to up-front ex ante results or to results achieved over a specified implementation period, often related to the loan draw down period. Conditions precedent are very attractive as they can be clearly based on the specific achievement of a result, rather than subject to interpretation in the future, and these have been used for some debt swaps for education.[8] However, most of the very few buy-downs in other sectors have had triggers expressed in terms of future attainments. Such triggers, if carefully designed, can increase the incentive to obtain results; on the other hand, there is a risk that the triggers will not be met and the buy-down will not take place, thus reducing the predictability called for in the Paris- Busan process, reducing the incentive for countries to borrow for basic education, and risking increasing a country's indebtedness. Experience with program lending also indicates that there are very frequently complex and ambiguous conditions in which some triggers are met and others are not, resulting in very difficult decision-making about whether or not to implement the buy-down.

Logically, it is perfectly possible to combine the advantages of both ex ante and future triggers for buy-downs, by entering into a series of self-standing loans with conditions precedent, that in aggregate amount to future buy-downs but are not legally structured that way.

A further consideration has to do with who is to interpret when the triggers have been met. It could be GPE itself; it could be the supervising entity as now; it could be a separate auditing firm or body engaged by either; or it could be some combination of these. This is linked to the issue above of whether the lending agency meets GPE supervising entity standards; it may also be taken up as GPE considers how to improve the monitoring of sectoral results more generally.

In the context of possible buy-downs of World Bank Group and Islamic Development Bank lending, the World Bank Group is already the single largest GPE supervising entity. The IsDB, however, has no experience in this role and would presumably have to be evaluated by GPE, even though the role of a lender for education is not strictly the same as that of a supervising entity.

Funding plus Triggers. The experience of the health buy-downs seems to indicate that buy-downs encouraged countries to borrow when they may not have otherwise done so to achieve results that they might not have otherwise attempted. Are there minimum levels of additional funding that are needed in combination with appropriate triggers to generate sufficient country interest

[8] Debt swaps for education are extensively reviewed in UNESCO (2012).

in that funding? The answer to this is unknown, though it would seem logical that more money on softer terms would encourage more attention to sectoral performance. Other GPE mechanisms, to do with improved monitoring for example, might also lead to improved results.

III. Operational Issues

Several operational issues arise with regard to GPE possibly using loan buy- downs as one of its instruments:

a) **GPE Allocations.** Mechanisms would need to be found to ensure that GPE member countries currently receiving grants and not having an option of buy-downs would not lose – or perceive that they had lost -- their current access to GPE funding when others would have access to GPE-plus-bought-down-lending. The revision of the Needs and Performance Index could probably take account of multiple GPE instruments if buy-downs were to be added as one new instrument.

b) **Donor Issues.** GPE could do buy-downs out of a special fund or from its general resources. There is a strong case for doing so from general resources, as this would be consistent with the consolidation over recent years of its previous various funds into one fund. On the other hand, it might be that some current donors to GPE would not wish to support buy-downs and some potential new donors might wish only to support buy-downs; these groups might find it useful that there be a separate fund specifically for buy-downs. An earmarked fund would also make very clear that there was no substitution of donors' other commitments to GPE. The drawback of any earmarked fund, of course, is that it limits its uses when its resources are not fully used. A further problem could be that donors interested in buy-down support might allocate part of the funds to buy-downs that they would otherwise have contributed to the GPE regular grant funding, thereby possibly undermining that funding. Any future work on buy-downs should assess donor interest in funding them and whether this could be done out of general GPE support or would require a specific fund.

c) **Interest Rate Environment.** Past buy-downs in general took place when overall market interest rates including those of IBRD were significantly higher than concessional rates such as those of IDA credits. This is currently not the case and it is therefore feasible that countries graduating from IDA in today's low-interest environment may be less reluctant than in the past to borrow for basic education from IBRD, even though the overall repayment terms of course remain much more favorable with IDA credits. If interest rates rise again in the future, demand for buy-downs might again increase, permitting time now for the development of processes and the gaining of experience.

d) **IDA Reflows.** IDA is currently financed both from new donor contributions (about 64%) and from reflows (repayments from borrowers, about 30%) and the rest from transfers from the IBRD and IFC.[9] The way that IDA currently accounts, any IDA credit that is bought down to grant terms would be retired immediately. Thus, while there would be a net inflow in the short term at a rate discounted in present value terms, there would be no future reflows. Yet reflows are counted upon as a significant source of future IDA replenishments. Moreover, there has been more advance use of expected reflows in the last two IDA replenishments than had previously been the case. To the extent that the amounts involved in IDA buy-downs are relatively small, this is not a big issue. If buy-downs were to become significant, however, it would be useful to find a way to avoid reducing future reflows. It is in principle easy to do this: funds for the buy-down would be used to purchase a security to meet repayments to IDA as they become due. In practice, this would be much harder. For example, donors are likely to be reluctant to have their money sit for a long time in an account prior to actually being used. This could possibly be addressed if the security were purchased from a private financial institution. It would be valuable to explore this set of issues with the World Bank's Vice-Presidency for Concessional Finance and Global Partnerships.

[9] IDA Replenishments website, accessed 10/23/2013

4. Conclusion

Buying down loans appears to have some potential value as one instrument for GPE to stimulate both more funding and improved performance against agreed basic education sector plans. Buy-downs seem most promising for those countries on both sides of the IDA/IBRD graduation threshold that have serious basic education challenges and the ability to take on some debt. There are also possibilities for low-income countries that are not creditworthy if bought-down debt could provide them with increased grant or near-grant funding. However, there are many unknowns, very little experience to draw on, and some significant risks.

Buy-downs could encourage an increase in lending and run the risk of discouraging grants, reversing the trend of recent decades towards more grant funding of basic education. Given this and other challenges, we recommend that GPE assess the potential of loan buy-downs for education with a pilot program that will consult potential borrowers, lenders and funders of buy-downs and systematically test a small number of experimental buy-downs of both World Bank Group and the Islamic Development Bank. This pilot program could be designed to include a deliberate learning agenda.

Crucial here would be to determine:

1. Country interest in taking on bought-down loans and how much of a buy-down is needed to stimulate that interest.
2. Lender interest in making loans for basic education that would be bought down.
3. Donor interest in funding buy-downs.
4. Whether or not the combination of more funding and explicit triggers would, in fact, generate more education sectoral reform and progress.
5. Whether conditions precedent or future triggers would have the most impact – and the extent to which future triggers would have a disincentive effect on countries' desire to borrow.
6. Whether some of the apparent risks are real or not, especially whether or not grants for basic education would be discouraged.

Addendum

The GPE Board considered the draft version of this paper at its meeting in Addis Ababa on November 19, 2013. There was most interest in GPE exploring the buying down of loans from the Islamic Development Bank and from IBRD. Following the discussion, the Board adopted a resolution that the GPE secretariat should explore further the feasibility of loan buy-downs with the Islamic Development Bank. Outside the formal Board meeting, Honduras also expressed considerable interest in exploring how it might benefit from a loan buy-down for education.

Annex A: Interviewee List

List of experts consulted for the feasibility study on buy-downs

Name	Position	Organization
Abderrahmane Beddi	Head of Education Department	IsDB
Averil Besier	Policy Manager	AusAid
Chris Tinning	Minister Counselor at Australian Embassy	GPE Board Representative
Halsey Rogers	Lead Economist, Education	Human Development Network, WBG.
Jeffrey Lewis	Head of the International Policy & Partnerships Group	Poverty Reduction and Economic Management, WBG
Jesper Anderson	Counselor at Ministry of Foreign Affairs (MoFA), Denmark	GPE Alternate Board Member and MoFA, Denmark
Juouko Sarvi	Practice Leader Education Sector, Education Sector Community of Practice,	ADB
Kouassi Soman	Senior Monitoring and Evaluation Specialist	GPE Secretariat
Oliver Keetch	Deputy Head, International Financial Institutions	DFID
Padraig Power	Senior Financial Officer	GPE Secretariat
Paul Coustere	Head, Country Support Team	GPE Secretariat
Sally Waples	Policy and Programme Manager, Global Funds Department	DFID
Susan McAdams	Director, Multilateral and Innovative Financing Department	WBG

Annex B: Buy-Down Impact Opportunities

Identifying Opportunities for Impact: Debt Buy-downs

In selecting candidate countries to maximize the impact of a debt buy-down for education, a number of factors should be considered. The debt profile of the prospective recipient determines a buy-down's ability to generate fiscal space, and thus its potential to avail resources for education programs. Another major factor in assessing potential impact is the current state of education in the prospective countries, because the greatest impact on education can be achieved where the education challenges are the largest, and where there is the most political will to invest in education. With the MDG and EFA deadlines approaching, there are still major, pressing needs in primary education. In this section, we briefly discuss some of the main challenges in primary education, and use a set of determinants to map those challenges to the set of GPE eligible countries in order to identify where a debt buy-down could achieve the greatest impact in education.

1. Current state of Enrollment

Although significant strides toward achieving universal primary education have been made in the past decade, over 57 million children are out of school worldwide, and about half of them will never set foot in a classroom (UIS 2013). This problem is concentrated geographically in Sub-Saharan Africa (home to over half of the world's out- of-school children) and South Asia. Because out-of-school children (OOSC) are a problem that is highly concentrated in select countries - over half of the world's OOSC in 2011 were in 14 countries - enrollment rates should be a leading selection criterion for buy-downs. According to the UNESCO Institute for Statistics Data Centre, 29 countries had double-digit OOSC prevalence in 2010/2011 (see section (a) in Table 3).

2. Current state of Learning

Even in countries where enrollment rates are high, children that are participating in school may not be receiving a quality education. There are 575 million children of primary school age in developing countries – globally, 57 million children are out of school and 130 million are in school but failing to learn basic competencies (GMR 2012). The dire state of primary education in developing countries is evident in the wide gap in reading achievement scores between rich and poor countries. The average PIRLS country score (taken in upper-middle and high income countries) is roughly 20% higher than the average SACMEQ (Southern and Eastern African countries) country score (Prouty, 2013). Where curricula, physical infrastructure, teaching, and supplies are inadequate, students do not learn basic numeracy, literacy and life skills, and thus do not benefit from their time spent in primary education.

International learning assessment scores would be ideal for determining the quality of education in debt buy-down candidate countries but, for most internationally standardized tests like PISA, scores are only available for middle- to upper-income countries. Only 5 out of 59 GPE member countries have available baseline mathematics achievement data. Low rates of completion are another potential indicator of the quality of education, but the UIS dataset is incomplete for this. Pupil-teacher ratio is used in the GMR as an indicator of quality of education. This is a sensible proxy that reflects the strain that resources for education are under, and teachers are the most critical resource for improving learning (GMR 2012). Although pupil/teacher ratios improved globally from 1999 to 2010 (from 26:1 to 24:1), they worsened in South Asia and sub-Saharan Africa, which already suffered from high pupil/teacher ratios (section (c) in Table 3).

3. Current state of Inequality

This dimension is closely related to the first two. In addition to inadequate levels of enrollment and learning in primary education, there is significant inequality in education access and learning outcomes. Gender disparity in access is reflected in the demographic concentration of out-of-school children in girls. In 2011, there were 95 girls enrolled in primary school for every 100 boys in low-income countries, while the gender ratio was even in high-income countries (World Bank data). Although data on gender inequality in learning (proxied by schooling completion rates) is sparse, UIS data show notably low gender parity for Niger, Liberia, Guinea, Nigeria and Benin, all of which have 9 percentage points difference or greater between male and female primary school expected completion rates (section (d) in Table 3).

The income gap in primary education attendance is on average even wider than the gender gap (GMR 2012). Children from the poorest families are overwhelmingly overrepresented in out-of-school populations across countries, because the household costs of attending school are more prohibitive to the poor (section (e), Table 3). As with the gender gap in primary education, the income gap affects not only access to education, but learning outcomes as well. Based on DHS data, Delprato (2012) finds that inequality in primary education progression between the poorest and richest students is very large. For primary school expected completion rates, the World Inequality Database on Education (WIDE) shows notably large disparity between income groups for Nigeria, Mali, Benin, Guinea, Democratic Republic of Congo (DRC) and Uganda, with more than a 30 percentage point difference between the poorest and richest quintiles.

4. Political Commitment

In addition to existing education challenges, political commitment to primary education will be a key factor driving the impact of a potential debt buy-down. Government expenditures for education in GPE countries increased from 17% to 19.4% of budget and from 3.8% to 5.8% of GDP between 2002 and 2013, but there is substantial country-level variation in these figures.[10] In countries where the government devotes a large share of its resources to primary education, a debt buy-down is more likely to have high impact, due to synergies with domestic resources. Section (f) in Table 3 lists countries that have shown exceptional commitment to education through their allocation of government spending.

5. Need for financing in the near future

A final consideration is future availability of financing for countries. The first aspect of this is the availability of domestic financing. Some countries have pressing need for external assistance, perhaps because their federal government (or Ministry of Education) lacks the capacity to collect revenue and marshal it for primary education investments (suggestive list in section (g), Table 3). In these countries, a buy-down could be an essential source of creating fiscal space.

In addition, countries that will be unable to access concessional lending in the near future may have urgent need for the fiscal space that a debt buy-down would

Table 3: Top 10 countries with the highest unmet need in education according to different indicators

a) Percentage of primary school aged children out-of-school, 2011		b) Primary-aged OOSC, millions, 2011		c) Pupil-teacher ratio, 2010 or 2011		d) Percentage of female students, primary, 2011	
Eritrea	63	Nigeria	10.5	CAR	81	Afghanistan	40
Liberia	59	Pakistan	5.4	Malawi	76	CAR	42
Djibouti	48	Ethiopia	1.7	Zambia	63	Chad	43
Nigeria	42	India	1.7	Chad	63	Yemen	44
Equatorial Guinea	41	Burkina Faso	1.0	Rwanda	58	Pakistan	44
Burkina Faso	37	Niger	1.0	Mozambique	55	Niger	44
Niger	36	Yemen	0.9	Ethiopia	55	Angola	45
Mali	33	Mali	0.8	Burkina Faso	53	Eritrea	45
Central African Republic (CAR)	31	Ghana	0.6	Guinea-Bissau	52	Côte d'Ivoire	45
Gambia	31	Angola	0.5	Tanzania	51	Guinea	46

e) Point differential between the top and bottom wealth quintile in % of children age 7-16 who never entered school.		f) Public spending on primary education as a % of government expenditure, 2011		g) Public expenditure on primary education as a % of GDP, 2011	
Somalia	78	Ethiopia	16.51	Myanmar	0.39
Chad	63	Benin	14.66	Liberia	0.47
Nigeria	62	Solomon Islands	13.60	Sri Lanka	0.48
Burkina Faso	51	Gambia	12.59	CAR	0.64
Pakistan	46	Niger	12.21	Bermuda	0.82
Guinea	45	Burundi	11.98	DRC	0.84
Liberia	45	Burkina Faso	10.54	India	0.84
Niger	43	Nicaragua	10.51	Panama	0.96
Mali	42	Guatemala	10.29	Guyana	1.02
Central African Republic	41	Uganda	10.26	Cameroon	1.05

10 Ibid.

afford them. Thirty-six countries, home to nearly two-fifths of all out-of-school children (calculation based on UIS data for 2011), are projected by the Center for Global Development to graduate from IDA by 2021. These are countries (in addition to recent graduate Albania) where financial strain on primary education funding may rise in coming years as they lose IDA membership, making a debt buy-down for education particularly timely.

Implications for selection of debt buy-down countries

By providing resources to reach marginalized children and improve education facilities, buy-downs could have a significant impact in countries where primary enrollment remains low, where schooling is not providing quality education, and where there is disparity in education access and outcomes. Data shows that there is significant overlap in countries that face the greatest challenges in primary education, GPE membership/eligibility, projected need for financing, and political commitment to primary education. We have constructed a table to show those overlaps. Table 4 categorizes countries by GPE status, projected IDA status by 2021, and highlights countries with outstanding education challenges. We also look at countries' risk of debt distress, since a debt buy-down could fill the largest need in highly debt-burdened countries.

We define countries with outstanding education challenges as countries that performed at least one standard deviation worse than the average for all countries listed in the UIS database in at least one of the indicators we collected (shaded in red). Table 4 also identifies countries where public spending on primary education as a percentage of government expenditure exceeds the average by one standard deviation or more (signaling strong commitment to primary education, shaded in green), and countries where spending as a percentage of GDP is lower than the average by one standard deviation or more (signaling fiscal constraint, shaded in red). We recognize that the indicators we have selected are only proxies for capturing the extent of the true challenges that these countries face and that UIS data is incomplete for some countries with significant education challenges (such as Zimbabwe, Sudan and Haiti).

The IDA status categories in table 4 are further explained below:

1. Active IDA financed countries.
2. Blend countries: IDA-eligible but also creditworthy for some IBRD borrowing.
3. Small island economy exceptions: small islands (with less than 1.5 million people, significant vulnerability due to size and geography, and very limited credit-worthiness and financing options) have been granted exceptions in maintaining their eligibility.
4. Borrowing on blend terms: countries that access IDA financing only on blend credit terms.

This analysis shows that most of the countries facing the most severe education challenges are already receiving GPE funding. Twenty-one of them are expected to graduate from IDA in the next eight years, and eight of them devote an exceptional percentage of their federal budgets to public spending on primary education. Table 4 also reveals that a few GPE member non-recipients and GPE eligible non-members face outstanding challenges in primary education, and that some of those countries are expected to graduate from IDA in the next eight years, namely India, Sri Lanka, Bangladesh, Nigeria, Angola and Pakistan.

Table 4: Countries with outstanding education or financing challenges

Country	GPE Status	IDA Status	Risk of Debt Distress	Projected to graduate from IDA by 2021?	Public spending on primary education		Female primary students (%)	OOSC of primary school age (%)	Pupil-teacher ratio
					as % of GDP	as % of government expenditure			
Angola	GPE Eligible	4	Moderate	YES	no data	no data	44.74%	14.35%	45.59
Armenia	GPE Eligible	2		YES	no data	no data	46.64%	no data	no data
Bangladesh	GPE Eligible	1	Low	YES	no data	no data	50.42%	no data	40.21
Bolivia	GPE Eligible	2		YES	3.00%	9.71%	48.68%	8.65%	no data
Bosnia & Herzegovina	GPE Eligible	2		Yes	no data	no data	48.63%	10.12%	no data
Congo	GPE Eligible	4	Low	YES	1.93%	no data	48.29%	7.44%	no data
India	GPE Eligible	2		YES	0.84%	2.65%	47.78%	1.35%	no data
Myanmar	GPE Eligible	1	Low		0.39%	no data	no data	no data	no data
Samoa	GPE Eligible	3	High		no data	no data	48.58%	6.65%	no data
Solomon Islands	GPE Eligible	1	Moderate		2.91%	13.60%	47.68%	12.50%	24.89
Sri Lanka	GPE Eligible	2	Moderate	YES	0.48%	3.12%	no data	no data	no data
Tuvalu	GPE Eligible	3			no data	no data	47.73%	22.15%	42.77
Uzbekistan	GPE Eligible	2		YES	no data	no data	48.35%	7.21%	15.62
Afghanistan	Active GPE	1	High		no data	no data	39.87%	no data	44.74
Benin	Active GPE	1	Low	YES	2.82%	14.66%	46.55%	no data	44.20
Burkina Faso	Active GPE	1	Moderate		2.00%	10.54%	47.23%	36.83%	52.69
Burundi	Active GPE	1	High		3.02%	11.98%	50.10%	no data	48.31
Cambodia	Active GPE	1	Low	YES	1.09%	no data	47.64%	1.75%	47.29
Cameroon	Active GPE	1	Low	YES	1.05%	5.33%	46.17%	no data	45.44
CAR	Active GPE	1	Moderate		0.64%	6.41%	42.37%	31.11%	81.31
Chad	Active GPE	1	High		1.05%	4.80%	42.59%	no data	62.59
Cote d'Ivoire	Active GPE	1	Moderate	YES	no data	no data	45.32%	no data	48.85
Democratic Republic of Congo	Active GPE	1	High		0.84%	2.96%	46.26%	no data	37.37
Djibouti	Active GPE	4	High	YES	no data	no data	46.99%	47.98%	35.24
Ethiopia	Active GPE	1	Low		3.05%	16.51%	47.40%	12.57%	55.07
Gambia	Active GPE	1	Moderate		2.50%	12.59%	50.56%	30.45%	37.62
Ghana	Active GPE	4	Moderate	YES	1.71%	7.52%	48.73%	15.67%	31.04
Guinea	Active GPE	1	Moderate		1.08%	6.67%	45.60%	16.50%	44.08

Table 4: Countries with outstanding education or financing challenges (continued)

Country	GPE Status	IDA Status	Risk of Debt Distress	Projected to graduate from IDA by 2021?	Public spending on primary education		Female primary students (%)	OOSC of primary school age (%)	Pupil-teacher ratio
					as % of GDP	as % of government expenditure			
Guinea-Bissau	Active GPE	4	Moderate		no data	no data	48.34%	25.00%	51.93
Guyana	Active GPE	4	Moderate	YES	1.02%	3.85%	48.86%	17.31%	24.59
Kyrgyzstan	Active GPE	1	Moderate	YES	no data	no data	48.76%	3.94%	24.92
Laos	Active GPE	1	Moderate	YES	no data	no data	47.44%	2.65%	26.81
Lesotho	Active GPE	1	Moderate	YES	no data	no data	48.86%	25.00%	33.88
Liberia	Active GPE	1	Low		0.47%	no data	46.91%	58.90%	26.83
Madagascar	Active GPE	1	Low		1.31%	9.47%	49.37%	no data	43.24
Malawi	Active GPE	1	Moderate		1.85%	5.11%	50.51%	no data	76.07
Mali	Active GPE	1	Moderate		1.95%	7.50%	45.84%	32.81%	48.47
Mauritania	Active GPE	1	Moderate	YES	1.69%	6.64%	50.60%	24.68%	39.29
Moldova	Active GPE	4	Low	YES	1.62%	no data	no data	no data	no data
Mongolia	Active GPE	2	Low	YES	1.79%	3.88%	48.92%	1.21%	29.32
Mozambique	Active GPE	1	Moderate		no data	no data	47.43%	10.17%	55.42
Nicaragua	Active GPE	1	Moderate	YES	1.86%	10.51%	no data	no data	no data
Niger	Active GPE	1	Moderate		2.53%	12.21%	44.16%	36.27%	39.00
Papua New Guinea	Active GPE	2	Low	YES	no data	no data	no data	no data	no data
Rwanda	Active GPE	1	Moderate		1.52%	5.49%	50.87%	no data	58.09
Senegal	Active GPE	1	Low	YES	2.23%	no data	51.09%	21.14%	32.94
Sudan	Active GPE	1	Distress	YES	no data	no data	no data	no data	no data
Tajikistan	Active GPE	1	High	YES	no data	no data	no data	no data	no data
Tanzania	Active GPE	1	Low		no data	no data	50.08%	no data	50.76
Togo	Active GPE	1	Moderate		2.25%	6.99%	47.57%	no data	40.95
Vietnam	Active GPE	2	Low	YES	2.20%	no data	47.35%	0.58%	19.63
Yemen	Active GPE	1	Moderate	YES	no data	no data	43.94%	23.61%	30.25
Zambia	Active GPE	1	Low	YES	no data	no data	49.64%	2.75%	62.65
Albania	Inactive GPE	n/a	Moderate	2008 Graduate	no data	no data	47.42%	no data	19.87
Bhutan	Inactive GPE	4	Moderate	YES	1.47%	3.61%	49.68%	10.65%	25.38
Eritrea	Inactive GPE	1			no data	no data	44.78%	63.11%	40.46
Georgia	Inactive GPE	2	Moderate	YES	0.85%	no data	47.04%	1.56%	no data
Honduras	Inactive GPE	4	Low	YES	no data	no data	48.93%	2.74%	no data
Nigeria	Inactive GPE	4	Low	YES	no data	no data	46.59%	42.45%	36.03
Pakistan	Inactive GPE	2		YES	no data	no data	44.14%	27.85%	39.83
Uganda	Inactive GPE	1	Low		1.88%	10.26%	50.12%	6.14%	47.78
				Average	**1.64%**	**5.84%**	**48.09%**	**10.87%**	**26.08**
				Std Dev.	**0.75%**	**3.37%**	**1.56%**	**12.65%**	**14.78**
				Threshold	**<0.89%**	**>9.21%**	**<46.53%**	**>23.52%**	**>40.86**

Annex C: GPE Member Country Overlap

The following table maps the overlap between the current 59 countries which are members of the GPE by whether they are also members of the other major multilateral development banks.

Afghanistan - 1, 2, 4

Albania - 2

Angola – 1, 3

Benin - 1, 2, 3

Bhutan - 1, 4

Burkina Faso - 1, 2, 3

Burundi – 1, 3

Cambodia - 1, 4

Cameroon - 1, 2, 3

Central African Republic – 1, 3

Chad - 1, 2, 3

Comoros - 1, 2, 3

Congo DRC – 1, 3

Cote d'Ivoire - 1, 2, 3

Djibouti - 1, 2, 3

Eritrea – 1, 3

Ethiopia – 1, 3

Gambia - 1, 2, 3

Georgia - 1, 4

Ghana – 1, 3

Guinea - 1, 2, 3

Guinea-Bissau - 1, 2, 3

Guyana - 1, 5

Haiti - 1, 5

Honduras - 1, 5

Kenya – 1, 3

Kyrgyz Republic - 1, 2, 4

Lao PDR - 1, 4

Lesotho – 1, 3

Liberia – 1, 3

Madagascar – 1, 3

Malawi – 1, 3

Mali - 1, 2, 3

Mauritania - 1, 2, 3

Moldova – 1

Mongolia - 1, 4

Mozambique - 1, 2, 3

Nepal - 1, 4

Nicaragua - 1, 5

Niger - 1, 2, 3

Nigeria - 1, 2, 3

Pakistan - 1, 2, 4

Papua New Guinea - 1, 4

Rwanda – 1, 3

Sao Tome Principe – 1, 3

Senegal - 1, 2, 3

Sierra Leone - 1, 2, 3

Somalia - 1, 2, 3

South Sudan – 1, 3

Sudan - 1, 2, 3

Tajikistan - 1, 2, 4

Tanzania – 1, 3

Timor-Leste - 1, 4

Togo - 1, 2, 3

Uganda - 1, 2, 3

Vietnam - 1, 4

Yemen - 1, 2

Zambia – 1, 3

Zimbabwe – 1, 3

GPE Eligible Countries

Angola- 1

Bangladesh – 1, 2, 4

Congo Rep – 1, 3

Kiribati – 1, 4

Myanmar- 1, 4

Solomon Islands – 1, 4

Sri Lanka – 1, 4

Tonga -1, 4

Uzbekistan - 1, 2, 4

Vanuatu - 1, 4

Legend

IDA Countries: 1 | Islamic Development Bank: 2 | African Development Bank: 3 | Asian Development Bank: 4 | Inter-American Development Bank: 5

Annex D: Buy-Down Mechanics

Consider a country that is about to take out a $50 million loan on IDA blend terms (25-year maturity, 5-year grace period, 3.3% principal repayments in years 6-15, 6.7% principal repayment in years 16-25). For illustrative purposes, we abstract from buy- down triggers and fees (all IDA loans have a 0.75% service charge for credits). The upper half of Table 5 shows the structure of this stylized loan. Under these terms, the grant element of the loan is 42%.

A third-party donor steps in to buy down the interest rate to regular IDA terms (zero interest). In practice, a buy-down could be applied to principal only, interest-rate only,

Table 5: A hypothetical buy-down

Blend IDA Loan FV	50,000,000				
Year	**1**	**6**	**15**	**16**	**25**
Principal outstanding	50,000,000	48,350,000	33,500,000	30,150,000	0
Principal repayment share	0.0%	3.3%	3.3%	6.7%	6.7%
Principal repayment	0	1,650,000	1,650,000	3,350,000	3,350,000
Interest rate	1.25%	1.25%	1.25%	1.25%	1.25%
Interest payment	625,000	604,375	418,750	376,875	0
Present value of interest payments	**6,384,126**				
Total payment	625,000	2,254,375	2,068,750	3,726,875	3,350,000
Discount rate (WB 2013)	5.47%	5.47%	5.47%	5.47%	5.47%
Face value of interest payments	**10,125,000**				
Total present value of payments	28,796,402				
NPV of loan to lender	-21,203,598				
NPV of loan to borrower	21,203,598				
Grant element of loan	42.41%				
Cost of Buy-down to IDA-1 terms	6,384,126				
Change in interest rate	*-1.25%*				
Year	1	6	15	16	25
Principal	50,000,000				
Principal outstanding	50,000,000	48,350,000	33,500,000	30,150,000	0
Principal repayment share	0	3.3%	3.3%	6.7%	6.7%
Principal repayment	0	1,650,000	1,650,000	3,350,000	3,350,000
Bought-down interest rate	0.00%	0.00%	0.00%	0.00%	0.00%
Interest payment	0	0	0	0	0
Total payment	0	1,650,000	1,650,000	3,350,000	3,350,000
Discount rate	5.47%	5.47%	5.47%	5.47%	5.47%
Total Present Value of Payments	22,063,064				
NPV of Loan to borrower	27,936,936				
NPV of Loan to lender	-21,552,810				
NPV of Loan to third party	-6,384,126				
Grant Element of Loan	55.87%				

or both, but the principal repayment structure cannot be translated from blend IDA to regular IDA because they have different maturities (25 years vs. 40 years) and different grace periods (5 years vs. 10 years). Furthermore, the buy-down could be implemented at any stage over the life of a loan, but in this example we buy down a new loan. Due to these nuances, along with the omission of service charges, Table 5 should be interpreted as an approximation of the cost of buying down a loan from blend IDA terms to regular IDA terms. The bottom half of Table 5 shows how the debt servicing changes if a third-party buys down the interest rate from 1.25% to 0% (note that selected years are shown).

Because the net present value (NPV) of the scheduled interest payments associated with the original blend IDA loan is $6.4 million, this is the amount that the third-party donor must transfer to the lender in order to buy down the interest rate on the loan to 0%. Buying the debt down to regular IDA terms thus raises the NPV of the loan to the borrower by $6.4 million. The grant element of the loan rises from 42% to 56%. Note that while the third-party uses $6.4 million in resources, the NPV of savings to the borrowing country is $6.7 million. The remaining $0.3 million is loss absorbed by the lender.

By buying down the interest rate with $6.4 million today, the third-party donor releases the borrower from $10.1 million in future interest payments, which can now be diverted from debt servicing to development projects in the borrower's budget. The ratio of the FV of repayments to NPV of repayments (1.6) is significantly lower than the 2.5-3.0 ratio cited by the World Bank[11], which applies in cases where a higher share of debt repayments (i.e. some principal) is bought down. In this example, only the interest payments are bought down.

Buying down principal vs. buying down interest

In the case of this IDA softening buy-down example, an interest rate buy-down creates a larger grant element than a principal buy-down of equal NPV. For example, a $6.4 million principal buy-down results in a grant element of 51%, versus 56% if the interest rate was bought down as in Table 5. This difference is due to the 5-year grace period given for blend IDA borrowing. This is because interest rate payments are evenly distributed throughout the life of the loan but principal payments are back-loaded in these arrangements, so the borrower's savings associated with the latter are discounted more heavily.

[11] According to a World Bank article (2003), debt buy-downs "leverage funding so that $1 translates into $2.50-3.00 in development assistance." This statement appears to refer to the ratio of the cost of the buy-down (e.g. the figures in Table 1 in the text) to the sum of face value of future payments that the borrower is excused from due to the buy-down. Although this figure conflates economic and accounting values, it is useful in the context of potential GPE buy-downs for education because it looks at the buy-down in terms of the borrowing country's budget, and highlights the fiscal savings that can now be used for other projects (instead of servicing debt).

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