Policy briefing

Six development finance proposals to expand climate investment

Ilmi Granoff, Darius Nassiry, Neil Bird, Christopher Humphrey, Paddy Carter, Alberto Lemma and Annalisa Prizzon

Key messages

- This policy brief describes six promising finance proposals to support greater ambition for low-carbon development:

  1. Increase multilateral development bank (MDB) loan to capital ratios.
  2. Expand development finance institution (DFI) use of guarantees.
  3. Encourage DFIs to invest in clean technology deployment.
  4. Strengthen MDB support of national financial intermediaries.
  5. Scope a new Green Cities Development Bank.
  6. Deliver green debt reimbursement in low-income countries.

- In assessing these proposals in terms of their potential impact on climate investment, we highlight two points. First, there will be differences in the relative cost of political capital required to implement each proposal, which may vary over time and circumstance. Second, each proposal might enlarge the size of the development finance envelope generally or boost funding for climate-related investment more directly.
- Many of the proposed changes require better leveraging of existing resources, rather than new flows and will use existing resources more effectively. The proposals have also not been a significant part of climate finance discussions to date.
- These proposals have the potential for material, scalable impacts and are compatible with climate investment needs.

Acknowledgements

The authors gratefully acknowledge the comments and suggestions from peer reviewers James Alexander, Alan Miller, Andrew Rogerson and David Wheeler, as well as those from Shelagh Whitley.

The views presented in this paper are those of the authors and do not necessarily represent the views of ODI or the ClimateWorks Foundation, which supported the preparation of an earlier iteration of the paper.

Introduction

With the Paris Agreement having entered into force on 4 November 2016, the question turns to how the climate commitments made by national governments will be met. The global context is a challenging one, with many national economies only slowly recovering from the earlier financial crisis experienced by the industrialised nations, while emerging countries face uncertain prospects for growth. Yet the need to secure a low-carbon development pathway that charts a course significantly different to 'business as usual' is an imperative that cannot be ignored. Policy change, innovation and a commitment to the implementation of new approaches are all necessary steps to secure the de-carbonisation of the global economy.

Financing is playing – and will continue to play – an important part in the de-carbonisation strategy set out in the Paris Agreement. Finance, both public and private, is required at all levels in support of the development of national climate change-related investment programmes and project implementation. This will take many forms, including grant finance, concessional lending, equity investment and guarantee finance. This diversity of funding is necessary to secure all the investments required and yet also represents one of the challenges to be addressed: how can we bring together all the available finance and ensure that it leads to the greatest benefit at the least cost? The response to climate change raises an additional challenge compared to many other development needs, namely that carbon externalities are not yet priced in major investment programmes, such as those for energy supply and transport networks. This leads rational markets to under-finance such actions, requiring policy-based public intervention.

New international financial institutions are being established to complement existing global agencies. The Green Climate Fund has begun to play a significant role and this is expected to increase over time; the same applies to other financial institutions, such as the Asian Infrastructure Investment Bank and the New Development Bank. These new institutions will all have roles to play alongside the long established multilateral development banks (MDBs). The MDBs are key players in the global financial system and there is much opportunity for them to extend their leadership role in supporting countries' efforts to respond to climate change as part of broader institutional reforms (Ahluwalia et al., 2016).

This paper brings together six development finance proposals that offer the potential for material, scalable impact through low-carbon development finance. They are also compatible with climate investment needs and would make better use of existing resources. Some of these entail scaling-up development resources in ways that do not *per se* make them low-carbon: they present opportunities to free up resources at a scale that creates scope for greater ambition for low-emissions and climate-compatible development. Importantly, they have not been a significant part of the global climate finance discussions to date.

Any successful initiative will require political capital; in general, the broader and deeper the reform, the more political capital will be needed. Some of the proposals below expand overall development finance, while others change incentives or support structures within the existing budget envelope.

Proposal 1: Increase MDB loan to capital ratios

Multilateral development banks (MDBs) limit their loan portfolio to a set ratio in relation to their equity: the capital paid-in by member governments plus reserves accumulated during operations (Humphrey, 2015). How the ratio is set differs at each MDB, but all take a highly conservative approach that severely limits their ability to lend.[1] Most commercial banks maintain loan books roughly ten times the size of their shareholder equity, but the loan portfolios at MDB are half of that or even less—about four times equity for the World Bank, and only twice equity for the European Bank for Reconstruction and Development.

This restrictive financial management came about for many reasons, including pressure from wealthy shareholder countries and the need for MDBs to establish themselves in bond markets where they borrow much of their resources. However, it no longer fits with reality. MDBs are rock-solid financial institutions. Their unique relationship with borrowers means they are essentially always repaid. No MDB has ever missed a bond payment. MDBs also have the unique financial advantage that member governments commit callable capital to MDBs: though not paid-in, callable capital amounts to a financial guarantee that offers security and allows further leverage and portfolio growth. Ratings agencies undervalue these and other unique financial strengths, making the MDBs even more conservative to preserve their AAA credit ratings and attract bond buyers. As a result, MDBs are sitting on a stockpile of shareholder equity that could be put to much better use, helping finance the transition to a low-carbon economy (Humphrey, 2015).

Proposed change

The policies on how the major MDBs make use of their equity capital should be changed, and loan portfolios should be expanded to at least five to seven times equity. This would still represent very safe financial management compared to private commercial banks and while it would require commensurate expansions of their operational capacity, it would greatly increase lending volumes on the basis of existing callable and paid-in capital plus reserves.

MDB shareholders and bond investors could be made more comfortable by revising how third parties evaluate the financial strength of MDBs. The methodology currently used by rating agencies is extremely conservative and does not account for the MDBs' demonstrated financial strengths – failing to acknowledge MDBs never write-off loans and are nearly always paid back, and over-emphasising the fact that MDB loan portfolios are concentrated among fewer borrowers than private financial institutions. MDBs could further maximise their balance sheets by making better use of callable capital (perversely the reason MDBs act conservatively, as wealthy shareholders do not want a call on their capital). This is already a legal obligation of shareholders under international treaty and it is typically 10-20 times the amount donors pay in, but its value is not reflected in equity-to-loans ratios. To ease bond market concerns, shareholders could establish procedures by which such capital could be called, in the unlikely event it is ever needed.

Impact and scale

Increased lending volumes could put capital contributions by government shareholders to much better use without jeopardizing financial prudence, and justify much more ambitious climate action. If the World Bank and the four

1 Most MDBs now utilize risk-based approaches to capital adequacy, but the equity-to-loans ratio is still a common metric to evaluate how an MDB uses its equity capital.

major regional MDBs were to all increase their loan portfolios to five times equity – a level the World Bank itself already has deemed prudent – that would expand lending by $200 billion, based on 2015 numbers. A higher level of 7.5 times equity would still be considerably stronger than most private banks and very safe in light of the repayment record and callable capital of MDBs. This would increase lending capacity by $380 billion –more than doubling their existing loan portfolios without requiring any new capital contributions from shareholders.

Even more lending would be possible by making better use of callable capital, which totalled $638 billion at the World Bank and four major regional MDBs at end-2015. Not all callable capital can be treated the same as actual paid-in capital, but even if only the share committed by AAA-rated countries were included into capital adequacy measures, it could expand MDB loan portfolios by $1 trillion.[2]

Potential hurdles to overcome

None of these proposed reforms face major financial or technical difficulties; with political will, they could be enacted quickly. Institutional, cultural and political impediments may, however, be more difficult to address. Changes in gearing require the active approval of major MDB shareholder governments, but the existing structure has been perpetuated by the influence of a few powerful shareholders—most notably the US—who are reluctant to take any risks that could lead to an MDB bailout. As a result, restrictive policies have become embedded in MDB management culture.

2 The estimate stems from Standard & Poor's simulation of the effect of higher exposures on the risk-adjusted capital of 19 MDBs, assuming other factors are unchanged. Such an expansion would also require changing the 1:1 gearing ratio in the statutes of the World Bank and major MDBs—a vestige of the political negotiations when the MDBs were created that no longer has any basis in sound financial management and should be abolished (Standard and Poor's, 2016).

Proposal 2: Expand DFI use of guarantees

In principle, development finance institution (DFI) guarantees can help 'crowd in' private sector resources. They may be particularly useful in the context of low-carbon development finance because of their ability to partially underwrite risks, such as those related to technology or policy risks. The MDBs and other DFIs do not maximise them, partly because they often misprice guarantees, pitching them as loans and requiring capital reserves that cover the full value of the guarantee, instead of the 'expected loss' that is a fraction of that face value (Humphrey and Prizzon, 2014). Many DFIs lack the operational capacity to scale up their use, as they have often been established primarily to issue loans and DFI staff have limited incentives to issue guarantees. DFIs have the mandate to expand the range of financial instruments, but they are less comfortable issuing them. Donors have little incentive to encourage their use, since guarantees are perversely not counted as ODA unless actually called despite their de-risking function (Humphrey and Prizzon, 2014).

Proposed change

DFIs with the mandate to issue guarantees should change the equity capital allocation that backstops these guarantees to more accurately reflect expected losses; it is worth considering here that the International Finance Corporation (IFC) allocates equity reserves equal to 25 percent of the face value of its trade guarantees. Project guarantees may justify greater prudence, but expected losses from project financing will only be a fraction of the face value. Capital could also be allocated dynamically over the life of the guarantee, since the expected losses associated with a guarantee decrease over time. Without these changes, guarantees fail to leverage DFI equity capital and are priced too highly for many private investors. To fully reap the climate benefits of guarantee programmes, DFIs could explore improving targeting of guarantees for climate investment-related risk, such as those associated with clean technologies (see proposal 3 below).

Impact and scale

The above policy changes, along with similar ones, would lower the price of guarantees and make them more useful to private sector investors because, currently, their pricing is worth the credit enhancement they provide in only a narrow set of circumstances. This means DFIs could crowd in greater levels of private investment. Allowing some leverage of guarantees against equity capital also means that DFI capital reserves can go further. Non-trade guarantees amounted to $40 billion between 2004-2015, less than 4.4 percent of MDB financing approvals (Soopramanien, 2016). The majority of these were issued by the World Bank's agency dedicated to only issuing guarantees, MIGA. Changing the equity capital to guarantee ratio from 1:1 to 1:4, for example, would quadruple the issuing capacity for that allocation.

Potential hurdles to overcome

DFI treasuries have regarded changes to the equity capital allocations as financially imprudent, particularly in light of the recent financial crisis that was partly due to the vastly greater overleveraging of the commercial banking sector. Overcoming this will require technical support, political acumen and cultural change. Similar policy changes have previously failed because institutional incentives and capacity were not also improved. Staff members will need training and incentives, as capacity building is critical, not only to expand the use of guarantees, but also to ensure that they are issued carefully. Poor guarantee programme policies and operations can risk creating a 'moral hazard' for beneficiary investors, who then take inappropriate risks. DFIs will also require improved accounting methods to capture the value of guarantees, which are recorded as official development assistance only when they are called, as they do not generate a flow.[3]

3 To overcome this issue, the forthcoming international statistical measure of Total Official Support for Sustainable Development (TOSSD)—to be approved in early 2017—is expected to account for guarantees as well.

Proposal 3: Encourage DFIs to invest in clean energy technology deployment

We have a 10 to 15-year window of opportunity to fully leverage existing capabilities to deploy clean energy systems as quickly and efficiently as possible to prevent catastrophic climate change (Nature Climate Change, 2014). Accelerated deployment, at scale, of proven technologies and business models will be required, while new technologies and business models should be developed and tested as quickly as possible. Innovative technologies with the potential to transform the economics of clean energy systems – such as grid-scale energy storage – need to move from research and development (R&D) into widespread adoption, as this will enable investors to learn what works in different commercial settings and start to replicate and scale success. Knowledge in this area is an urgently needed public good, where the existence of positive externalities results in under-investment by investors motivated by private returns — a clear case for intervention. Rapidly demonstrating the commercial viability of new technologies and business models will help bring low-carbon development to scale faster.

DFIs are well positioned to catalyse the acceleration of deployment and market development of technologically proven, post R&D solutions. In many ways DFIs are the ideal players to act as venture capitalists for low-carbon, climate resilient technologies in developing economies, as they are particularly capable of:

- taking a long-term view on development priorities
- providing finance where the market will otherwise not
- mitigating political and policy risk and acting as 'anchor investors' to crowd-in others
- supporting efficient project design and implementation, including through grants.

DFIs have occasionally acted as early investors and accelerated the growth of low-carbon technologies.[4] However, DFIs are generally not set up to lose shareholders' money and are often only prepared to bear moderate technology or business model risk.

Proposed change

Increased awareness and capacity is required in the following areas:

1. highlighting the important role DFIs could play in investing in a) deployment and market development of clean energy technologies and b) business models in developing and emerging markets.
2. encouraging DFIs to commit to allocating a percentage of their investment portfolios in these early deployment (post R&D) stage opportunities.
3. identifying risk mitigation tools, such as guarantees, as DFIs could use these to attract private sector investment to this sector.

What is needed is an adjustment to institutional decision-making and investment that can pay dividends in alignment with stated institutional objectives. The IFC has already moved in this direction, by expanding its venture

4 In some cases these have had considerable success, such as the IFC's successful investment in efficient lighting retrofits (IFC, 2005; BNEF and Global Lighting, 2016). Other early investments have had more mixed results, as is the case with World Bank investments in concentrating solar power (World Bank, 2010).

capital portfolio from $500 million to $1 billion (IFC, 2016).

If DFIs find it difficult to shift into more early-stage venture funding in climate-related investments, a complementary strategy could include adjusting internal shadow pricing, mandating loan allocation shares, and providing staff incentives to encourage more investment in climate-friendly technologies that are lower-risk because they are already well down the learning curve. As the result of subsidized investment and economies of scale, numerous renewable technologies now fall into this category.[5]

A more ambitious proposal would be for philanthropic investors to share risks and potential losses that DFIs would incur from aggressively experimenting with technologies and business models that are commercially untested in developing economies. This would enable DFIs to make investments where the social returns exceed private ones or would otherwise not be possible within the confines of their existing business models. Such support could be provided through carefully designed loss-protection instruments that aim to preserve the incentives to build sustainable, commercially viable businesses. By offering DFIs support in taking on such pioneering investments, philanthropic investors would generate technical and commercial knowledge that would cascade through the clean energy industry, catalysing further investment that would benefit their core intended beneficiaries in developing countries.

Impact and scale

If successful, this proposal could have far-reaching, long-term impacts on the development and climate sector, thereby 'moving the needle' during a time when rapid progress is needed to help drive down technology deployment costs. It also offers the chance to exploit economies of scale, improve access to new technologies in developing countries and broaden the set of affordable mitigation options.

Potential hurdles to overcome

Encouraging a shift in portfolio allocation by mandating a percentage for early deployment stage technologies and business models may increase return volatility, with some projects failing or producing lower than expected financial returns. In turn, DFIs' management or shareholders may not readily accept these risks in exchange for potential climate benefits. DFI success is measured on investment returns, public reputation and development impact metrics (e.g. job creation, poverty reduction and private sector development). DFIs often face pressure from taxpayers and their owners not to put capital at undue risk or lose money, even at the project level, which sometimes biases DFIs to emphasise the first two measures at the cost of the third.

5 D. Wheeler (personal communication), 27 January 2017..

Proposal 4: Strengthen MDB support of national financial intermediaries

Access to finance remains one of the largest constraints to growth in developing countries, and the sectors without access to international financial markets are hit hardest. Investments in traditional commercial activities are difficult enough to finance through local banks, so climate investments create an even greater challenge. Investments in climate solutions like solar panels and energy efficiency improvements have significant long-term operational returns and generate substantial savings, but also involve high up-front costs. Local financial systems in lower-income countries are often weak, or have narrow experience in a limited number of sectors. Financing for climate beneficial investments often represents technologies or business models with a level of unfamiliarity that creates perceived risks. The problem is effectively a knowledge gap: domestic banks do not fully appreciate the potential benefits of climate investments or know how to operationalise lending to them.

Proposed change

The MDBs already help shape local financial systems. For example, the EBRD and ADB already carry out such efforts in their operational areas. They also channel financing through domestic financial institutions (FIs). The key, therefore, would be to widen existing MDB financial strengthening efforts, as these can leverage existing initiatives and include promotion of climate investment finance by FIs. This could be broadened to other DFIs, but MDBs generally have greater resource capacity and experience with FIs and this means the changes would need to mainly focus on them.

For smaller developing economies, unsubsidized climate-friendly investment may involve significantly higher up-front costs. Unless appropriate subsidies are provided, local financial institutions may pursue investments without assigning much weight to their global climate implications. Targeted assistance from the MDBs at subsidized rates may well be appropriate to support climate-friendly investments.

Safeguards remain critical to managing the risk of high-carbon investment, but they do not themselves promote low-carbon investment. For example, the Equator Principles adopted by a wide group of FIs determine and assess environmental and social risk so that they may be managed but do not consider climate change in their risk framework. Extending such risk management to include climate change would require the promotion of frameworks that reduce information gaps and uncertainty, build operational capacity and promote longer-term capital investments. MDBs can provide better information to FIs on the financial performance of climate investments, tailored capacity building and guaranteeing of bank credit lines meant to encourage longer-term investments (e.g. 'due diligence' procedures to help FIs evaluate the creditworthiness of energy efficiency projects, or the specific working capital needs of solar photovoltaic (PV) enterprises).

MDBs also could help by subsidizing the flow of information about cost-effective climate-friendly technologies, and subsidize appropriate training for the staff of local financial institutions. More complex interventions could include taking a systemic approach to national financial systems: support to central banks and the creation of (or strengthening of existing) credit rating agencies, along with the reform of financial regulation policies and institutions.

Impact and scale

Scale and depth of impact would largely depend on the exact types of changes made by the MDBs. Information sharing, operational capacity building and changes to credit lines should result in greater provision of climate

investment finance for MDB partner financial institutions. In the long term, when the viability of these investments permeates across the industry, non-partner FIs may also increase their engagement. Holistic reforms or structural changes to financial systems could have the largest impacts but these might be more diffused across all investment typologies, rather than just climate investments.

Potential hurdles to overcome

As with any large-scale reforms, especially for strategic sectors such as finance, creating consensus to promote systemic change can be a laborious process. Civil society has expressed concern about the lack of oversight and knowing what you get when you support FIs. Most of the MDBs are constrained by limited staff capacity and mandates that do not provide enough freedom to engage in such processes without an explicit backing from shareholder governments. Such a constraint is significantly more important for bilateral DFIs as they only engage with individual firms with limited interaction at the government level, hence the focus on the less (relatively) resource constrained MDBs. Political economy issues may also arise if vested interests block reforms to liberalise financial systems or induce greater investments in climate-related activities and sectors, as these may compete for scarce local financial capital with other sectors.

Proposal 5: Scope a new Green Cities Development Bank

Cities are an increasingly important focal point for climate change risk and investment, particularly for infrastructure (CCFLA, 2015; C40, 2016; Creutzig et al., 2016; Junghans and Dorsch, 2015; Gouldson et al., 2015a, 2015b; Sudmant et al., 2016). Urban areas accounted for nearly two-thirds of global energy use and produced 70 percent of CO2 emissions in 2013 (IEA, 2016). Over two-thirds of the $93 trillion in new infrastructure to be built over the next 15 years will be in cities—$4.5 to 5.4 trillion annually—with $0.4 to 1.1 trillion more needed to make this infrastructure low-emission and climate resilient (CCFLA, 2015).

Most cities, however, have limited financial autonomy. They are unable to raise funds on their own, and are constrained because of governance arrangements that limit funders, such as the MDBs, from working directly with sub-national entities.[6]

Cities are also underfunded in terms of climate finance: just over 11 percent of the $7.3 billion approved by multilateral climate funds during 2010–2015 flowed to projects focused on cities (Barnard, 2015). As the KfW bank group recently noted: 'Global sustainability goals can no longer be reached without an active role of the cities' (Buhl and Stumberger, 2016).

More investment must flow to cities than current institutional arrangements allow. As C40 and other organisations, including ODI, recommended in their *Call for Action on Municipal Infrastructure Finance*[7]:

> *'Development banks should prioritise urban low-carbon and adaptation projects [and] develop new mechanisms to significantly increase their subnational lending. ... If the existing development banks cannot meet this challenge, then they should support the international community to work with city leaders to create new national, regional or municipal development banks [and] lend directly to urban infrastructure and support cities to implement climate action and sustainable development plans.'*

Proposed change

To address this challenge, we propose the scoping of a radical, innovative solution to address the financing gap for low carbon, climate resilient investments facing major cities: a Green Cities Development Bank, with access to international capital markets from an investment grade credit rating. In principle, countries could establish the new financing institution with the express purpose of financing their major cities.

It is conceivable that cities themselves, as borrowers, could collectively establish the new institution, perhaps with support or seed money from corporate or philanthropic stakeholders who see the benefits of a financial institution specifically aimed at meeting the low-carbon investment needs of major cities.

Importantly, the Green Cities Development Bank would be positioned to offer concessionary loans to green projects in developing country cities, which is a key unmet need.

Among the key benefits of creating such a new institution will be to help ensure cities are granted more control over the finance required to deliver on their low carbon ambitions. Additional benefits include:

- lower borrowing costs due to a broader base to access capital and diversify risks
- improved capacity to plan and implement investments aligned with best practices

6 A notable exception is the C40 Cities Finance Facility launched by C40, the Government of Germany, and the Inter-American Development Bank in December 2015. See http://www.c40.org/press_releases/press-release-c40-germany-iadb-achieve-major-breakthrough-for-developing-cities-1-billion-in-green-infrastructure-unlocked-within-four-years

7 See http://c40-production-images.s3.amazonaws.com/other_uploads/images/865_C40_Call_for_Action_web.original.pdf?1479407610

- potential to tailor lending products specifically to meet needs and capacities of cities
- more efficient procurement to improve cost-benefit outcomes for beneficiaries
- more effective knowledge sharing and transfer between and among members

Even prior to formation, the scoping of such a concept may yield benefits among MDBs, which may increase their focus on cities if they see the viability of such a new entrant in competitive terms.

Impact and scale

Given the large and growing need for low-carbon, climate resilient infrastructure in cities, potential demand may lie in the range of hundreds of billions of dollars. At this early conceptual stage, it is difficult to estimate the exact scale; much will depend on the level of initial funding and the interest of cities. The creation of such a new institution could help remove bottlenecks in current funding channels and help finance to flow at the pace and scale cities need to invest in low-carbon, climate resilient infrastructure.

Potential hurdles to overcome

In addition to the credit rating hurdle (noted above) there will be the need for such an institution to develop a strong pipeline of projects to support. This may require city project development and capacity building support, which development banks also provide (Nassiry and Nakhooda, 2016).

A Green Cities Development Bank is an untested idea that may prove impossible to launch in practice due to the inability of cities to secure both the authority to establish or join the new institution and sufficient revenue to support such a venture, along with difficulties in agreeing on its mission and terms.

Moreover, poorly managed cities can pose a financial risk. Creation of a new financial institution would have to consider the risk of adverse selection and how to ensure that potential membership can provide financial strength. Proper evaluation of this concept should include consideration of the need to develop appropriate risk-rating services, along with an effective guarantor mechanism.

Part of the challenge will be to determine how such an institution can be created with a sufficiently strong credit rating that it could offer low cost loans to cities. To secure an investment grade credit rating, it may be necessary to secure some form of sovereign support; this would be another area to test in the initial phase of scoping the feasibility of this concept. As cities are public entities and their debts are, or can become, a contingent quasi-sovereign risk it may also be necessary to assess the feasibility of using philanthropic grants to raise loans in the markets and pass them on at concessionary rates.

Such a proposal may pose a challenge to the MDBs as well as to the role of national financial authorities and regulators, which may block rapid expansion of their cities' borrowing access. Better understanding of the climate-related risks associated with *not* investing in sustainable infrastructure may be required here.

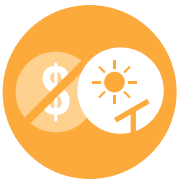
Any assessment would also need to consider existing mechanisms for financing urban infrastructure in developing countries, including incentives for shifting current financing systems toward more climate-friendly investments, as an alternative to constructing an entirely new global financial institution.[8] Scoping a new development bank should also compare the proposed new institution to alternatives such as support for sub-national green banks given the potential to work with states in some countries.[9]

At this early stage, this seems to constitute a 'Hyperloop' project – impossible, until proven possible.[10] However, given the evident alignment of the world's major cities in their aspiration to address climate change, there is much to be gained in exploring this concept and identifying the potential pathways to its further design, planning and implementation.

8 D. Wheeler (personal communication), 27 January 2017

9 For discussion on green banks, see Natural Resources Defense Council, Coalition for Green Capital and Climate Finance Advisors (2016)

10 See Digital Trends, 2017.



Proposal 6: Deliver green debt reimbursement in low income countries

The major beneficiaries of the multilateral climate funds to-date have been exclusively middle-income countries. In many poor countries, international support for climate change action remains at a very low level (Oxfam, 2016). Of the 30 countries most vulnerable to climate change, 28 are Least Developed Countries (Bird et al., 2015). These countries need additional resources now to respond to climate change and set their national development pathways on a low carbon trajectory. However, so far, such countries have not been able to access the required levels of international public climate finance to allow this to happen (UNEP, 2016).

Proposed change

In the context of the need to find more effective channels for the delivery of international climate finance to the most vulnerable countries, this proposal identifies the potential for a '*green debt reimbursement*' initiative. This would target the world's poorest countries, using debt service reimbursement as the mechanism for resourcing mitigation and climate change adaptation actions.

The proposed approach would be to create a debt service reimbursement mechanism informed by innovative practices in the new aid architecture, with previous debt service payments being reimbursed when auditors have confirmed a set of national climate change investments have been made (following a similar approach to USAID's Fixed Amount Reimbursable Agreement (FARA) instrument).

This 'post-audit release' approach has a number of advantages. First, it ensures there is government ownership of the national program, as all expenditure has to be budgeted for and spent through government systems, with some external audit oversight and possibly additional fiduciary safeguards. Second, overhead and administration costs are minimal and the costs of auditing country programmes are relatively low. Finally, the amount of debt service that donors reimburse would be scaled back automatically if audit queries emerge.

Impact and scale

Some of the world's poorest countries have very high levels of public external debt service, at over $100 million a year (Bird et al., 2015). Many others also have substantial debt service levels relative to existing flows of climate finance. Reimbursement of debt service in these countries could therefore radically change the amount of finance available to support climate change actions, thus having a global impact on the poorest and their ability to respond to climate change. It would also contribute towards reduced carbon emissions, which would be in the global public interest, and increase resilience within some of the world's most climate vulnerable countries.

In principle, an additional $1 billion each year could be directed towards supporting the world's poorest countries to make public climate change investments without permanently drawing down on scarce public resources (ibid, 2015).

Potential hurdles to overcome

Not all of the poorest countries have high levels of debt service and therefor debt service reimbursement would have to be tailored to individual country circumstances. In addition, not all development partners would want or be legally able to reimburse debt service. Also, for some countries, development partners might want to limit reimbursements to debt service that is multilateral or to their own country and may therefore be unwilling to reimburse non-concessional bilateral debt owed to another country. The precise proportions of potential debt service

reimbursements would therefore need to be considered on a case-by-case basis.

As with other reimbursement-based mechanisms, there is also a risk that if auditors were to block payment, the country runs the risk of not only a failed project but also an additional debt burden. However, the success of the FARA instrument suggests that such risks can be managed, in part through the mutual agreement of the benchmarks on which reimbursement will depend.

Conclusion

These six development finance proposals offer a menu of options that would help unlock much-needed additional finance to support low-carbon development. While other options undoubtedly exist, the breadth of these six proposals demonstrate a range of opportunities that could be seized on to scale-up finance to support the ambitious trajectory of carbon emission reductions set by the Paris Agreement. In the same way that ratification of this international agreement was made in an exceptionally short space of time, increased efficiency of available finance could also be achieved if the global leadership exists.

Broader, more ambitious proposals will likely require greater political capital to enact. These proposals may therefore be prioritized in terms of expected returns and potential political costs, particularly for proposals that involve the expansion of overall development finance, as compared to proposals that would change incentives or support structures within the current climate and development finance envelope.

Further work will be required to develop these proposals into operational measures. However, business as usual or incremental reforms are likely to be insufficient to move the global economy towards one that is consistent with the goals of the Paris Agreement. In light of the scale of the challenge and the timeframe for progress, what is needed now is the will to take action on a range of the most promising approaches to achieve a rapid transition to a low-carbon, climate resilient global economy.

References

Ahluwalia, M.S., Summers, L.H. and Velasco, A. (2016). Multilateral development banking for this century's development challenges. Five recommendations to shareholders of the old and new Multilateral Development Banks. Washington, DC: Center for Global Development. (https://www.cgdev.org/sites/default/files/multilateral-development-banking-report-five-recommendations.pdf)

Barnard, S. (2015). Climate finance for cities: How can international climate funds best support low-carbon and climate resilient urban development? London: The Overseas Development Institute. (https://www.odi.org/publications/9422-climate-finance-cities-funds-support-low-carbon-resilient-urban-development)

Bird, N., Manuel, M. and Nakhooda, S. (2015). Scaling up international support for adaptation: productive safety nets and reimbursable debt service. London: The Overseas Development Institute. (https://www.odi.org/publications/10080-scaling-up-international-support-adaptation-productive-safety-nets-reimbursable-debt-service)

BNEF and Lighting Global (2016). Off-Grid Solar Market Trends Report. (https://www.lightingafrica.org/wp-content/uploads/2016/12/OffGridSolarTrendsReport2016.pdf)

Buhl, S. and Stumberger, J. (2016). Cities as key actors of the Agenda 2030: more than just a buzzword. Frankfurt: KfW Bank Group. (https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Development-Research/2016-09-07-EK_Stadtakteur-EN.pdf)

Carty, T., Kowatzig, J. and Peterson, A. (2016). Climate finance shadow report 2016. Lifting the lid on progress towards the $100 billion commitment. Oxford: Oxfam GB.

CCFLA (2015). State of City Climate Finance 2015. New York: Cities Climate Finance Leadership Alliance (CCFLA). (http://www.citiesclimatefinance.org/2015/12/the-state-of-city-climate-finance-2015-2/)

C40 Cities (2016). Call for Action on Municipal Infrastructure Finance. New York, London and Rio: C40 Cities. (http://c40-production-images.s3.amazonaws.com/other_uploads/images/775_C40_Call_to_Action_Final_online.original.pdf?1476661242 and http://www.c40.org/blog_posts/mayors-of-the-world-s-major-cities-call-for-national-governments-and-international-financial-institutions-to-help-finance-low-carbon-and-sustainable-projects)

Creutzig, F., Agoston, P., Minx, J.C., Canadell, J.G., Andrew, R.M., Le Quéré, C., Peters, G.P., Sharifi, A., Yamagata, Y. and Dhakal, S. (2016) Urban infrastructure choices structure climate solutions. Nature Climate Change 6, 1054–1056 (2016) doi:10.1038/nclimate3169.

Digital Trends (2017). 'Hyperloop One Will Conduct Its First Full-Size Test In A Matter Of Months'. Phoenix, AZ: Digital Trends (http://www.digitaltrends.com/cool-tech/hyperloop-one-test-ces-2017/#ixzz4WDyCkGuZ).

Gouldson, A., Colenbrander, S., Sudmant, A., Godfrey, N., Millward-Hopkins, J., Fang, W. and Zhao, X. (2015a). Accelerating Low-Carbon Development in the World's Cities. (http://bit.ly/2hcy8cC, http://bit.ly/2gKoVYV and http://bit.ly/2gpZMSx)

Gouldson, A., Colenbrander, S., Sudmant, A., McAnulla, F., Kerr, N., Sakai, P., Hall, S., Papargyropoulou, E. and Kuylenstierna, J. (2015b.) Exploring the economic case for climate action in cities. Global Environmental Change, Volume 35, November 2015, Pages 93–105. (http://dx.doi.org/10.1016/j.gloenvcha.2015.07.009, http://www.sciencedirect.com/science/article/pii/S0959378015300169)

Humphrey, C., (2015). Challenges and Opportunities for Multilateral Development Banks in 21st Century Infrastructure Finance. Seoul: Global Green Growth Institute. (http://gggi.org/wp-content/uploads/2015/07/WP08-Challenges-and-Opporunties-for-MDBs.pdf)

Humphrey, C. and Prizzon, A. (2014). Guarantees for development: a review of multilateral development bank operations. London: The Overseas Development Institute. (https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9398.pdf)

IEA (2016). Cities are at the frontline of the energy transition. 7 September 2016. (http://www.iea.org/newsroomandevents/news/2016/september/cities-are-at-the-frontline-of-the-energy-transition.html)

IFC (2005). The ELI Story: Transforming Markets for Efficient Lighting. Washington, DC: IFC. (http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/learning+and+adapting/knowledge+products/publications/publications_loe_eli__wci__1319577986290)

IFC (2016). IFC Aims to Double Venture Capital Portfolio to $1 Billion to Spur Innovation in Emerging Markets. Published online on 23 June 2016 (http://ifcextapps.ifc.org/IFCExt/Pressroom/IFCPressRoom.nsf/0/92FD3F355030204085257FDB0083912A)

Junghans L. and Dorsch, L. (2015). Finding the Finance: Financing Climate Compatible Development in Cities. Germanwatch. (https://germanwatch.org/en/download/13426.pdf and http://germanwatch.org/en/11246)

Nature Climate Change (2014). Window of opportunity. Nature Climate Change 4: 1037. Published online 26 November 2014 (http://www.nature.com/nclimate/journal/v4/n12/full/nclimate2464.html)

Nassiry, D. and Nakhooda, S. (2016. Finding the pipeline: project preparation for sustainable development. London: Overseas Development Institute. (https://www.odi.org/sites/odi.org.uk/files/resource-documents/11075.pdf)
Natural Resources Defense Council, Coalition for Green Capital and Climate Finance Advisors (2016). Green & Resilience Banks: How the Green Investment Bank Model Can Play a Role in Scaling Up Climate Finance in Emerging Markets. 14 November. (http://greenbanknetwork.org/wp-content/uploads/2016/11/Green_Investment_Bank_Model_Emerging_Markets.pdf)
Soopramanien, S. (2016). Guarantees for private investment in emerging markets. Washington, DC: Chadbourne and Parke LLP. (http://www.chadbourne.com/guarantees-investments-emerging-markets-project-finance-august-2016)
Standard & Poor's (2016). April 12, 2016 Press Release. New York: Standard & Poor's.
Sudmant, A., Millward-Hopkins, J., Colenbrander, S. and Gouldson, A (2016). Low carbon cities: is ambitious action affordable? Climatic Change 138: 681. doi:10.1007/s10584-016-1751-9. (http://bit.ly/2gKoEVO and http://bit.ly/2gYF517)
UNEP (2016). The Adaptation Finance Gap Report 2016. United Nations Environment Programme (UNEP), Nairobi, Kenya. (http://web.unep.org/adaptationgapreport/2016)
World Bank (2010). Concentrating Solar Power (CSP): Into the Mainstream Towards a Sustainable Energy Future. Washington, DC: World Bank. (http://siteresources.worldbank.org/OBALENVIRONMENTFACILITYGEFOPERATIONS/Resources/Publications-Presentations/CSPweb.pdf)

Overseas Development Institute
203 Blackfriars Road
London SE1 8NJ
Tel +44 (0)20 7922 0300
Fax +44 (0)20 7922 0399
www.odi.org
info@odi.org