The Innovative Finance Revolution

Private Capital for the Public Good

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ssessments of how governments and international organizations have dealt with global challenges often feature a familiar refrain: when it comes to funding, there was too little, too late. The costs of economic, social, and environmental problems compound over time, whether it's an Ebola outbreak that escalates to an epidemic, a flood of refugees that tests the strength of the EU, or the rise of social inequalities that reinforce poverty. And yet governments and aid groups rarely prove able to act before such costs explode: indeed, according to some estimates, they spend 40 times as much money responding to crises as they do trying to prevent them.

One reason for this is that complex international problems tend to be dealt with almost exclusively by governments and nonprofit organizations, with the private sector typically relegated to a secondary role—and with the financial sector playing a particularly limited part. Stymied by budgetary constraints and political gridlock, the traditional, primarily public-financed system often breaks down. Government funds fall short of what was promised, they arrive slowly, and the problem festers.

In recent years, however, a new model has emerged, as collaborations among the private sector, nonprofit organizations, and governments have resulted in innovative new approaches to a variety of global challenges, including public health, disaster response, and poverty reduction. Instead of merely reacting to crises and relying solely on traditional

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funding, financiers—working closely with governments and nongovernmental organizations—are merging private capital markets with public systems in ways that promote the common good and make money for investors as well. By relying on financial tools such as pooled insurance and securitized debt, these efforts—which have come to be known as "innovative finance"—can unlock new resources and lead to costeffective interventions. At the same time, such solutions generate profits and give investors an opportunity to diversify their holdings with financial products whose performance isn't tied to that of the overall economy or financial markets.

Technological advances and creative thinking have led to a boom in innovative finance. To realize its full potential, however, solving public problems by leveraging private capital requires more attention from policymakers, who should consider a series of steps to encourage even more progress in this area.

A SHOT IN THE ARM

A wide range of players have begun to embrace innovative finance, including treasury departments, multilateral development agencies, nonprofit financial firms, and traditional investment banks. In most cases, philanthropic foundations have stepped up with seed money. Government aid agencies have then put new concepts into practice by providing funds to create new financial vehicles.

The term "innovative finance" suggests complexity, but it's less complicated than it sounds. Three recent examples help demonstrate what it means—and what it can do.

In the summer of 2002, the United Kingdom's Treasury concluded that the government's budget had not provided enough funding to honor the country's commitment to the Millennium Development Goals, a set of ambitious global efforts to tackle poverty and its many effects. The British were hardly alone in this conundrum: in many of the 189 countries that had agreed to the MDGs, officials had realized that good intentions and bold aid pledges would not yield enough money to make good on their promises. Gordon Brown, then the British chancellor of the exchequer, believed that private-sector expertise and capital markets might be able to help, and he approached the investment bank Goldman Sachs. The firm's bankers turned to the tool kit of so-called structured finance to transform pledges for future aid spending into immediate funding for MDG projects.

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In essence, Goldman Sachs' plan was one that would be familiar to people who hold home mortgages, and who thus borrow from their future selves to pay for the housing they need today. Although at that

moment, governments in the United Kingdom and elsewhere were short of cash for their MDG spending, they had pledged to devote substantial amounts to MDG projects over the course of the next 15 years. That promised future spending represented a kind of underlying asset—similar to a mortgage holder's home—which Goldman Sachs

Innovative finance leads to cost-effective international aid, generates profits, and lets investors diversify their holdings.

wagered investors would find attractive. The innovation was to conceive of a new type of financial product: a bond whose yields would be furnished by future government development aid rather than by the proceeds of a specific project, such as road tolls or water-usage fees.

The British government and its banking partners also identified what they believed to be the best way to spend the money they would raise by selling such bonds: on immunization campaigns that would help reach the MDGs' public health targets. In 2006, they founded the International Finance Facility for Immunisation (IFFIm) and developed the world's first "vaccine bonds." Fitch Ratings, Moody's Investors Service, and Standard & Poor's gave the bonds a AAA (or equivalent) rating, and IFFIm conducted its first bond issue in November 2006, raising \$1 billion. Institutional investors such as pension funds and central banks, as well as retail investors, purchased bonds that matured after five years and that offered an annual yield of five percent-31 basis points above the benchmark rate offered at that time by the five-year U.S. Treasury bond. In the years since, IFFIm has issued 30 bonds in a range of currencies and term lengths for a variety of investors, from institutions to private individuals, and has raised \$5.25 billion. IFFIm recently further expanded its investor base by issuing \$700 million worth of sukuk, or Islamic bonds, which adhere to Islamic lending rules by eschewing interest charges or payments.

To help ensure that this money would be spent in the most costeffective way, IFFIm partnered with Gavi, the Vaccine Alliance, a nonprofit that is funded in part by the Bill & Melinda Gates Foundation

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and that specializes in large-scale immunization programs and creative ways to fund them. IFFIm's bond issues helped Gavi increase its annual budget from \$227 million in 2006 to \$1.5 billion in 2015 and expand programs such as a polio eradication initiative that has financed the development and testing of new vaccines and the stockpiling of proven ones in places such as the Democratic Republic of the Congo and India.

A 2011 evaluation of IFFIm conducted by the health-care consulting company HLSP (now part of Mott MacDonald) credited IFFIm with saving at least 2.75 million lives and improving the quality of millions more. All the while, IFFIm has allowed the United Kingdom and other donor countries to make good on their MDG commitments and has provided investors with healthy, reliable returns. Two representative examples include a three-year, floating-rate *sukuk* that IFFIm issued in 2015, which received a AA rating, offered investors a quarterly coupon payment that was 14 basis points higher than the benchmark three-month U.S. dollar LIBOR rate, and raised \$200 million, and a five-year "kangaroo bond" (denominated in Australian dollars and subject to Australian laws and regulations) that IFFIm issued in 2010, which received a AAA rating, offered investors a 5.75 percent fixed rate (76 basis points over the benchmark Australian Government Bond rate), and raised \$400 million in Australian dollars.

MAKE IT RAIN

The semi-arid Sahel region, which stretches across northern Africa, is no stranger to droughts—nor to the famines that can follow in their wake. There have been three major droughts in the area in the last ten years, which have reduced the food security of millions of people. The traditional response to such emergencies consists of a UN appeal to donor countries for financial aid, which usually arrives too late to prevent the worst effects of a drought. But last year, something different happened.

In January 2015, soon after a drought struck the region, three countries—Mauritania, Niger, and Senegal—received an unusual set of payments totaling \$26 million. Rather than aid donations, they were payments resulting from claims the countries made on drought insurance policies they had purchased the previous year. The total dollar amount might seem modest, but the money's effects were magnified by the speed with which it arrived: the countries

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Liquidity crisis: a woman in a dry riverbed in Mauritania, June 2007

received their payments even before the UN had managed to issue an appeal for aid. Mauritania used the money to make timely food deliveries to those most in need in the Aleg area, preventing many families from deserting their homes in a desperate attempt to survive. Authorities in Niger used the money to fund work programs for farmers in the Tillabéri region who could no longer afford to feed their families after their crops failed. Senegal used its funds to distribute food to the hardest-hit households and also to give subsidies to ranchers who otherwise might have lost their livestock.

These payouts were made possible by the African Risk Capacity (ARC), a specialized agency of the African Union, and its financial affiliate, the ARC Insurance Company, which is jointly owned by the union's member states. Launched in 2012 with funding from the Rockefeller Foundation and other organizations, and born out of frustration with the inefficiencies of the international emergency aid system, ARC was established to help African countries build up their resilience to natural disasters. Capitalized with development assistance from the KfW Development Bank, which is owned by the German government, and from the United Kingdom's Department for International Development, the ARC Insurance Company was established in 2014. Kenya, Mauritania, Niger, and Senegal were the first African countries to sign up for a so-called pooled risk insurance product. For

annual drought coverage of up to \$60 million, each country paid an annual premium of between \$1.4 million and \$9 million: around half the amount that any one country would have had to pay on its own for a similar level of coverage. ARC has since been backed by some of the world's largest reinsurance companies, including Swiss Re and Munich Re.

In addition to providing access to insurance, ARC encourages preparedness. Before countries can purchase a policy, they must produce detailed plans demonstrating that they will use any payments they receive in a timely and effective manner. The planning relies heavily on Africa RiskView, a software platform that was initially developed by the UN World Food Program with funding from the Rockefeller Foundation and that projects crop losses and the cost of weatherrelated difficulties using advanced satellite data and detailed records of past droughts and subsequent emergency-response operations.

ARC has the potential to transform the way developing countries manage the costs of natural disasters, demonstrating that it is possible to shift the burden from governments (and poor and vulnerable populations) to global financial markets, which are much better equipped to handle risk. To date, ARC has issued \$500 million in drought insurance to ten countries, and by 2020, ARC aims to provide \$1.5 billion in coverage to approximately 30 countries, helping protect some 150 million Africans against a variety of environmental risks, including extreme heat, droughts, floods, cyclones, and even pandemics.

PAYING FOR SUCCESS

Innovative finance is not just a developing-world phenomenon. In wealthier economies, new financial tools have been brought to bear on a wide range of challenges, including public health, an area in which traditional approaches often fail to meet the urgent need for prevention and early intervention. Consider the case of the Nurse-Family Partnership, a nonprofit organization in the United States that sends nurses to make home visits to low-income, first-time-mothers, working with them from pregnancy until their child is two years old. The NFP has an impressive track record of improving maternal and child health and supporting self-sufficiency. Indeed, it is one of the most rigorously tested antipoverty interventions in U.S. history; 30 independent evaluations have measured its effects. A 1997 study published by researchers at three American universities found that 15 years after participating

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in the NFP's first-time-mother program, children were 79 percent less likely to have suffered state-verified abuse or neglect, and mothers spent 30 fewer months on welfare, on average. In 2013, the Pacific Institute for Research and Evaluation found that the program had a pronounced positive impact, contributing to healthy birth outcomes, child health and development, and even crime prevention, and estimated that for each family served, the government saved \$40,000 in spending on things such as criminal justice systems, special education, and Medicaid.

Yet despite this track record, the NFP, like so many effective social programs, has had trouble securing the public dollars it needs to serve

more families in the 37 states in which it operates. So the NFP has begun to explore partnerships to secure new sources of private funds in some of the states with the most need, including South Carolina, where 27 percent of the state's children live in poverty. In February 2016, the NFP, the South Carolina Department of Health and

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Human Services, and the Children's Trust of South Carolina entered into a groundbreaking "pay for success" contract structured and overseen by a nonprofit financial organization called Social Finance. (As part of the initiative, the state has also received technical support from experts at the Harvard Kennedy School's Government Performance Lab.) The contract calls for private investors to provide the NFP with \$17 million—money that, along with around \$13 million in federal Medicaid reimbursements, the group will use to expand its services to 3.200 mothers in South Carolina. If the NFP's interventions succeed in demonstrably improving the lives of the participants by hitting specific targets-reducing the number of pre-term births, decreasing child hospitalizations and emergency-room use, promoting healthy spacing between births, and serving more first-time mothers in the lowest-income communities—the investors can be repaid with money set aside by South Carolina and can expect to receive a return of somewhere between five and 13 percent, assuming a performance similar to those of previous pay-for-success arrangements. If the NFP fails to meet the goals, the investors will lose their principal and the government will owe them nothing. The outcomes will be measured

against a randomized control trial, and the evaluation will be overseen by the Abdul Latif Jameel Poverty Action Lab at the Massachusetts Institute of Technology.

Such arrangements—of which the NFP's is one of the largest, but not the first—are sometimes called "social-impact bonds." That is a bit of misnomer: a contract such as this is less like a bond and more like an equity investment, since its returns depend on performance and investors share in both the potential upside and the risk. In the past five years, public-private coalitions have entered into more than 50 of these kinds of pay-for-success agreements in Asia, Europe, the Middle East, and North America, addressing a variety of issues, including public health, work-force development, foster care, military veteran reentry, housing, education, and criminal justice. Current estimates place the global market for such investments at around \$150 million and predict that it will grow to somewhere between \$300 million and \$500 million over the next few years.

MORE BANG FOR THE BUCK

A number of factors favor the advance of innovative finance. First among them are the exceptionally low interest rates in recent years, which have whetted capital markets' appetite for new kinds of investment vehicles, especially those whose performance doesn't necessarily depend on broader economic or financial trends. Innovative finance can provide value to investors even when more traditional equity and bond markets falter. Even if interest rates begin to rise, as many expect they will, innovative financial solutions have already proved their value and will likely endure.

But to grow and expand, such products must reach a wider pool of capital, moving beyond the institutional investors who currently represent the sector's most active players. Some innovative financial products are already available to retail investors, primarily through specialized investment funds, such as the Goldman Sachs Urban Investment Group, and through donor-advised funds that manage investments for major charities. And a growing number of products, including vaccine bonds offered by IFFIm in Japan, have become even more easily available to retail investors.

To achieve larger scale, the developers of innovative financial products must continue to provide attractive yields and further mitigate the risks—real or merely perceived—posed to investors who want to enter this still unfamiliar terrain. Financial professionals who design these products need to take better advantage of government guarantees and government insurance, such as the Development Credit Authority program run by the U.S. Agency for International Development, which provides partial debt guarantees to investors and is backed by the U.S. Treasury. Yet fostering greater participation will require more than competitive returns. Investors also need reliable data to assure them that innovative finance will help them do well while doing good. Here, technological innovation is complementing financial innovation. Consider, for example, recent advances in remote sensors, which can measure the effects of complex processes such as deforestation. The new availability of such data has made it possible to design pay-for-success contracts that depend on rigorous monitoring. Meanwhile, more accurate and comprehensive satellite imagery has also made it possible to better assess the threats posed by bad weather and natural disasters, allowing financiers to develop more sophisticated insurance-based investment products, such as the natural-disaster protection plans now spreading in Africa.

Government policy is also beginning to shift in ways that will encourage more innovative finance. For example, in October 2015, the U.S. Department of Labor repealed restrictive rules that had prevented U.S. pension funds from considering social, environmental, and good-governance factors when making investment decisions. This "ERISA reform"—a reference to the Employee Retirement Income Security Act—has the potential to catalyze investment in innovative financial products by pension funds that must follow ERISA guidelines: a huge source of potential funding. Meanwhile, in 2015, at a summit at Schloss Elmau, in Germany, the G-7 countries adopted the InsuResilience Initiative, a collaboration between the G-7 and a number of countries that are particularly vulnerable to the effects of climate change; the initiative seeks to extend insurance protection against climate disasters to 400 million people. Further progress will require leadership from donor countries and coordinated international policy efforts; one good model is the Social Impact Investment Taskforce, a G-8 initiative that was launched by British Prime Minister David Cameron in 2013 and that tracks and reports on global trends in impact investing.

Investor confidence in innovative finance would also improve if there were clearer rules and norms regarding how financial analysts should measure and assess environmental and social factors and integrate

their findings into their reporting. One important step in this direction was the establishment, in 2011, of the Sustainability Accounting Standards Board, a U.S.-based nonprofit that develops industry-specific methods for addressing such factors in their accounting procedures and financial filings.

In addition, governments must improve their ability to make longterm decisions about spending on investment in social and economic development, at home and abroad. Budgeting processes in most rich countries do not allow for strategic commitments to long-term development aid: the creation of IFFIm would have been impossible had the participating countries not made exceptions to their own budgeting rules. In the United States, Congress should pass legislation—such as the Social Impact Partnership Act, which was proposed in 2015 with bipartisan sponsorship—that would direct federal funding to publicprivate innovative financial initiatives at the state and local levels.

CAPITALIZE ON CAPITAL

In February, international donors met in London and made an impressive pledge of roughly \$11 billion in aid and another \$40 billion in loans to deal with the enormous costs of the Syrian civil war, including the migrant flows currently overwhelming the Middle East and Europe. "Never has the international community raised so much money on a single day for a single crisis," boasted UN Secretary-General Ban Ki-moon. But veterans of humanitarian aid and crisis response watched the conference with a sinking feeling, knowing that a great deal of promised funding fails to materialize and that even the best-intentioned aid frequently falls short of achieving its goals.

Innovative finance can help improve the international community's response to some of the most costly aspects of such crises. Imagine, for example, how pay-for-success contracts or approaches similar to IFFIm's could allow governments to raise funds quickly for the health-care, housing, and educational needs of refugees by securitizing future spending. Such proposals might once have seemed far-fetched; not any longer. With continued philanthropic support and sustained commitment from governments, innovative finance can put the power of private capital markets to work for the public good.