

Exploring How the US International Development Finance Corporation Can Support Health Sector Investments: Is the Glass Half Full or Half Empty?

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Abstract

Health sector investments present an opportunity for the US International Development Finance Corporation (DFC) to demonstrate meaningful global leadership and refocus on its development mandate, driving broader health benefits and contributing to global economic recovery. DFC's early days have been defined by a mixed record, notably in the health sector. Still, in the context of the pandemic's health and economic impacts, the agency is well positioned to help strengthen pandemic preparedness and expand equitable access to health innovations in low- and middle-income countries through investments in private sector manufacturing and delivery capacity.

This paper explores how DFC can strategically invest in health while balancing sometimes competing policy imperatives related to health equity, commercial viability, and foreign policy interests. We first provide an overview of the development finance landscape in the health sector and select DFC health-focused investments to date. We then suggest three high-impact engagement opportunities in the health sector for DFC to consider, including regional manufacturing hubs for health supplies; R&D incentives for biotechnology; and robust supply chains for health-adjacent services and delivery models. Lastly, we outline key principles to guide future DFC health sector investments.

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I. Introduction

The US International Development Finance Corporation (DFC), established through the passage of the Better Utilization of Investments Leading to Development (BUILD) Act and which formally opened its doors in early 2020, is working to find its footing under the Biden-Harris administration and amidst the global COVID-19 crisis. As a full-service development finance institution (DFI), the agency has—at least on paper—greatly evolved from its predecessor, the Overseas Private Investment Corporation (OPIC). DFC is now one of the largest bilateral DFIs with a portfolio cap of \$60 billion, over double that of OPIC (BUILD Act 2018). Further, DFC is not required to invest in projects with substantial connections to the US private sector; has a new equity authority and grant window to conduct feasibility studies and support technical assistance, in addition to providing direct loans, guarantees, and insurance; and is mandated by the BUILD Act to promote development priorities and to focus support in low- and lower-middle-income countries.

In practice, DFC's early days have been defined by a mixed record. The agency has struggled in the face of pandemic-related shifts in the broader development landscape. It has also faced competing foreign and even domestic policy priorities under the Trump Administration, as evidenced by DFC's announcement of a \$765 million loan to Kodak in July 2020 (Landers and Yadav 2020a). Building up a solid pipeline of projects, especially in low-income and lower-middle-income markets, understandably takes time. Still, DFC's early investments have been skewed towards upper-middle-income countries; they have also failed to systematically articulate a strong development rationale (Landers and Estes 2020).

Despite this shaky start, DFC is well positioned to contribute to the Biden-Harris administration's goal to "build back better" from the COVID-19 crisis by strengthening pandemic preparedness and expanding equitable access to health products and innovation. Indeed, the administration has indicated that it views health as a priority for DFC (DFC 2021a). COVID-19 has severely disrupted health product supply chains and delivery of essential health services. In this regard, DFC investments could help build private sector manufacturing and delivery capacity to stem and reverse these losses and insure against future health crises. Health sector investments are also a key opportunity for DFC to demonstrate meaningful global leadership and refocus on its development mandate, driving broader economic benefits and contributing to global economic recovery.

Beyond topline commitments, such as the Global Health and Prosperity Initiative announced in 2020, this policy paper explores how DFC can strategically invest in health while balancing potentially competing policy imperatives related to health equity, commercial viability, and foreign policy interests. We first provide an overview of the development finance landscape in the health sector and select DFC health-focused investments to date. We then suggest three high-impact engagement opportunities in the health sector that DFC could consider. Lastly, we outline key principles to guide future DFC health sector investments.

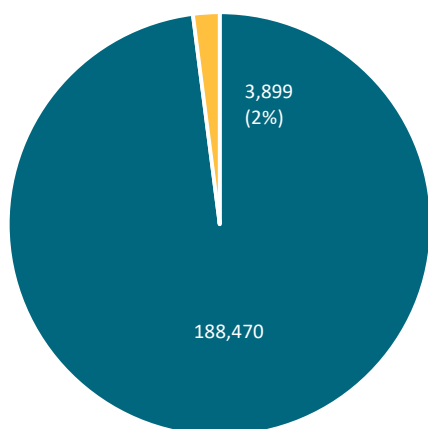
II. Retrospective: The historic role of DFIs in the health sector

Patterns of DFI health sector engagement

DFI engagement in the health sector has historically been minimal. Between 2012 and 2017, investments in healthcare and social assistance comprised just two percent of the combined portfolio (by value) for seven prominent DFIs: the UK’s CDC Group, Germany’s DEG, Netherlands’ FMO, the IFC, Japan’s JBIC, US OPIC, and France’s Proparco (Figure 1). OPIC’s healthcare and social assistance investments accounted for about five percent of its total portfolio value (Figure 2). As a point of comparison, total health expenditure alone accounts for 5.3 percent of total economic activity in LICs; 4.1 percent in LMICs; and 5.7 percent in UMICs, suggesting relative underinvestment in the sector vis-à-vis its overall economic importance (WHO Global Health Expenditure Database 2021).

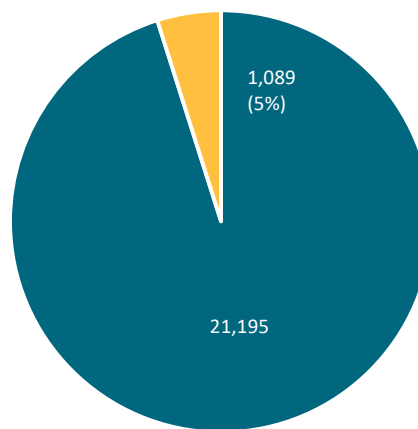
Figure 1. Healthcare and social assistance commitments in relation to total, 2012–2017 (\$US million)

CDC Group, DEG, FMO, IFC, JBIC, OPIC, Proparco



- Total commitments across sectors
- Healthcare and social assistance commitments

Figure 2. OPIC's healthcare and social assistance commitments in relation to total commitments, 2012–2017 (\$US million)



- Total commitments across sectors
- Healthcare and social assistance commitments

Most DFI investments (across all sectors) are directed to UMICs (42 percent) and LMICs (43 percent). DFC is not an exception, as it directed 43 percent of total investments (by value) toward UMICs, HICs and global projects in its first year of operations (Figure 3). Health sector projects demonstrate a more significant skew towards UMICs than overall DFI portfolios. Between 2012 and 2017, approximately 76 percent of DFI investments (by commitments) in healthcare and social assistance were directed to UMICs and HICs; 54 percent were geographically located in Europe and Central Asia (see Figures 4 and 5). (The UK’s CDC represents a notable exception given its exclusive focus on low-income and fragile countries [ICAI 2019]).

In terms of financing instruments, DFIs invest in the health sector primarily through debt (62 percent by value; Figure 6)—a relatively low-risk instrument deployed at later stages of commercial development. Investments were also concentrated in a few larger economies; of the 121 projects we reviewed, 30 took place in India (65 percent by value through equity) and 20 in Turkey (61 percent by value through debt).

Figure 3. DFC 2020 spend (by value) by country income category (\$US million)

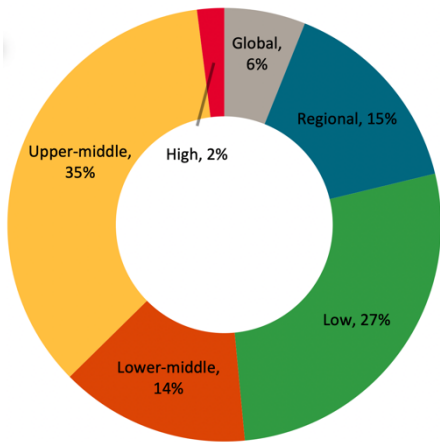


Figure 4. Healthcare and social assistance commitments by country income group, 2012–2017 (\$US million)

CDC Group, DEG, FMO, IFC, JBIC, OPIC, Proparco

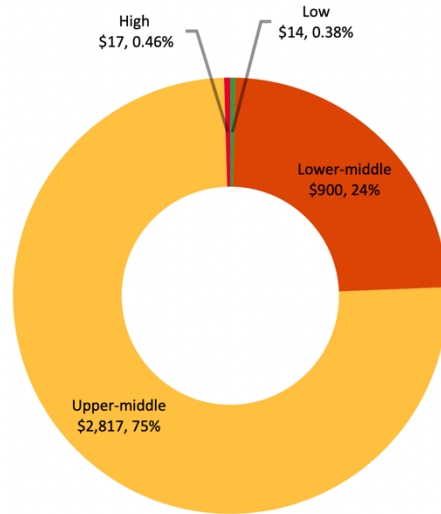


Figure 5. Healthcare and social assistance commitments by region, 2012–2017 (\$US million)

CDC Group, DEG, FMO, IFC, JBIC, OPIC, Proparco

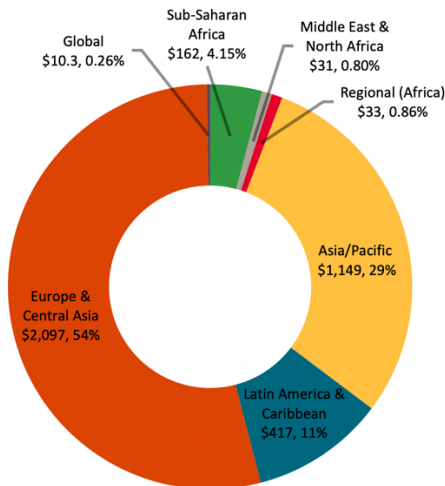
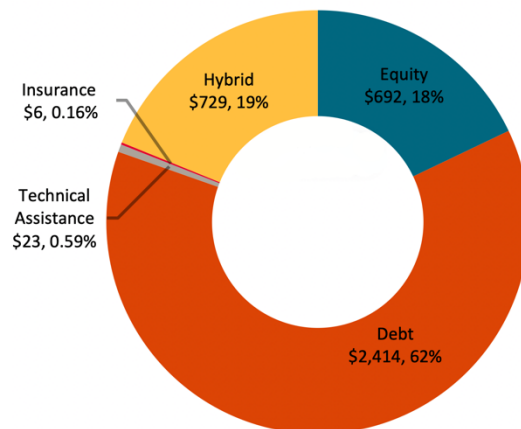


Figure 6. Healthcare and social assistance commitments by financing instrument, 2012–2017 (\$US million)

CDC Group, DEG, FMO, IFC, JBIC, OPIC, Proparco



Notes: Available datasets aggregate healthcare and social assistance spending, meaning that actual health-specific project data may differ slightly. Trends in Figure 4 largely align with other data sources (Convergence 2018). A JBIC investment of \$729 million for a hospital in Turkey is a noteworthy outlier from other projects (JBIC 2017); the average DFI health project value is \$34.2 million and the median is \$12.4 million.

Health and the private sector: The social good conundrum

DFIs' relative underinvestment in health reflects a combination of factors, including a scarcity of investment-ready deals and higher risk of investment in early-stage companies. Yet one overriding and fundamental challenge stands out: the ethics, equity, and acceptability of private, for-profit health delivery.

By definition, private sector entities are profit-oriented; they must secure sustained financial returns from consumers to succeed. But in healthcare, and especially in low resource settings, the consumers are often individuals; their out-of-pocket (OOP) user fees can lead to catastrophic and impoverishing health expenditures and/or prevent access to essential healthcare if they are unable to pay (IHME 2019; WHO 2010). Governments represent the other potential consumers for privately produced health products and services; governments are able to pool financial resources for health across the entire population and therefore protect individuals from OOP expenditure at the point of service. Yet low- and middle-income country (LMIC) governments operate with highly constrained budgets for health and therefore must prioritize finite resources for the most cost-effective uses that will generate the greatest impact for their populations. While it is possible for government spending in the private sector to sometimes offer strong value-for-money, governments (and the public) are often suspicious of private sector involvement in health service provision and typically expect health care to be guaranteed and provided by the public sector. Policymakers have previously received significant criticism for allocating their limited resources towards private entities that were unable to deliver strong value-for-money (e.g., a high-profile controversy in Lesotho in which a new hospital set up by a public-private partnership (PPP) was scrutinized for its financial cost to the government [Hellowell 2019]).

DFI investments are explicitly meant to strengthen the private sector; ideally, they should also contribute to social good. (At minimum, they must “do no harm” from a social perspective.) PPPs more specifically attempt to harness private sector capacities for public good. In either case, it can be difficult to identify investment opportunities that would achieve for-profit, commercial viability alongside ethical, equitable health improvement.

The “social good” calculus must be considered in light of the status quo role of private entities in the health sector—not an idealized, blank slate of public-only provision. At present, approximately 40 percent of LMIC health expenditure is paid OOP to private providers (WHO Global Health Expenditure Database 2021). Privately funded efforts to strengthen service quality or increase competition among providers may therefore benefit existing users of such services, but they could also increase OOP costs paid by poor households or contribute to a “two-tiered” healthcare system in which the rich alone receive superior private-sector services, undermining efforts to achieve universal health coverage (UHC) and exacerbating inequality. Such inequities could be mitigated under publicly funded, value-based reimbursement schemes that include private providers, yet many countries lack the necessary governmental systems and capacities related to strategic purchasing, contract management, and quality control processes.

DFC in the health sector

According to DFC's Inaugural Development Strategy, released in October 2020, DFC's portfolio exposure in health stands at around \$1.4 billion (DFC 2020a). Early health investments have largely focused on (1) financing hospitals and clinics; and (2) insuring humanitarian agencies (DFC 2020a). Several of the agency's 2020 health sector investments were directed toward COVID-19-related challenges. These included some controversial projects which skewed significantly towards UMICs; demonstrated limited development rationale; and suggested influence from national security-driven goals.

Some of DFC's 2020 health sector deals illustrate noteworthy pitfalls to avoid in future investments. First, DFC's funding was used to support domestic production of medical equipment under the Defense Production Act (DPA)—a law dating back to the Korean War that allows the president to mobilize domestic private industry in support of national defense. In May 2020, then-President Trump delegated to DFC use of DPA authority to provide capital to set up and expand US manufacturing plants and support domestic production of medical equipment. Given that DFC could have more effectively addressed global supply chain bottlenecks by sticking to its development mandate rather than investing domestically, DFC's DPA spending ultimately seemed tied to a broader onshoring and domestic supply security agenda as opposed to assuaging global pandemic-induced supply chain disruptions (Landers and Yadav 2020b).

In November 2020, DFC announced a \$590 million loan to Apiject, a Connecticut-based company, to ramp up production of prefilled single dose injectors for COVID-19 vaccine candidates under authority granted by the DPA. While increasing the overall supply of ancillary vaccine products could in theory offer a global benefit, DFC did not clearly articulate any such development rationale. At minimum, DFC could have offered greater clarification around the value-add of its investment to better ensure additionality and development impact (e.g., a specific condition in the loan to provide some share of units for global purchasing once the technology is quality-assured via FDA approval/emergency use authorization or WHO pre-qualification/emergency listing).

Taken together, DFC's domestic investments lacked a clear global development rationale, underlining the importance of transparent selection criteria and portfolio-wide governance considerations that account for broader social benefits and financial additionality (Landers and Yadav 2020a).

Under the Biden administration, DFC recently announced support for Indian manufacturer Biological E Ltd. to produce 1 billion doses of COVID vaccines by the end of 2022 as part of a broader "Quad" agreement between the US, Australia, India, and Japan—altogether a positive step forward in comparison to the application of DFC financing through DPA authority (DFC 2021b). Although the value of this investment may be less related to an explicit need for concessional capital (as Biological E might have raised these resources from other sources regardless of DFC's involvement), the particular overarching foreign policy goal—urgent production of additional, co-financed, quality-assured vaccines—is itself of high developmental value. Concerns about additionality may be offset by the need for

timeliness and expediency, particularly given highly uncertain future demand for specific vaccines. But on general principle and unless otherwise justified, DFC should require demonstration of financial and/or value additionality as part of investment screening and selection decisions. Such assurance is central to good stewardship of US taxpayer resources (discussed in more detail in section 3 below).

III. Looking ahead: Harnessing opportunities for high-impact health sector investments

Recent DFC strategy documents suggest that the agency is seeking a proactive role to address the COVID-19 pandemic and broader health needs. The 2020-2025 strategy and Health and Prosperity Initiative commit \$2 billion in direct investment—catalyzing a total of \$5 billion—in the health sector over the next three years (DFC 2020a). Here, we consider how DFC can course correct from past missteps through targeted investments in three priority areas.

Three priority areas for future DFC investments

1. Build regional manufacturing hubs for health supplies

DFC investment in health product manufacturing can support short-term pandemic recovery through vaccine manufacturing and distribution; medium-term access to essential medicines through enhanced regional manufacturing; and long-term pandemic preparedness and resilience via a distributed and scaled network of vaccine manufacturing facilities.

Across all manufacturing priorities, capacity expansion requires significant upfront investment. Limited access to capital to increase production capacity alongside the low availability and high cost of working capital poses critical supply-side obstacles to regional manufacturing of health supplies (Kaufman et al. 2021). On the demand-side, manufacturers face a high degree of unpredictability surrounding future demand and related procurement plans (Silverman et al. 2019). As a result, individual firms often underinvest in manufacturing capacity, despite the economic and health benefits (Kazaz, Webster, and Yadav 2021).

In the context of COVID-19, uncertain and unorganized demand for specific vaccines, coupled with potentially shifting supply constraints and complicated purchasing arrangements, create a challenging landscape for DFI investment. However, DFIs such as DFC can deploy different financial and contracting instruments that help to accelerate manufacturing capacity (e.g., capacity subsidies, concessional loans, and volume guarantees); specifically, volume guarantees may be the only viable instrument to incentivize socially optimal manufacturing capacity when the vaccine developer has a conservative view of future demand (Kazaz, Webster, and Yadav 2021). Seed financing from DFC, as deployed by the Quad partnership, can also help to accelerate additional short-term manufacturing capacity; these efforts should prioritize investments with the potential for new vaccine manufacturing within a six month horizon, but will ultimately bolster long-term manufacturing capacity for future outbreak preparedness needs (CGD, CSIS, Duke University, and COVID Collective 2021).

DFC has taken other steps to enact this agenda, including its recently announced partnership with IFC, Proparco, and DEG to support suppliers across Africa to develop regional vaccine and pharmaceutical manufacturing for both COVID-19 vaccination and future pandemic response (DFC 2021c). In an initial concrete funding announcement under this initiative, DFC and its partners will provide a €600 million long-term financing package—including €100 million from DFC—to Aspen Pharmacare in South Africa to scale production of COVID-19 vaccines (specifically to compound, fill, finish, and package the Johnson & Johnson vaccine) alongside other therapies (DFC 2021d). Though still at an early stage, this investment is welcome news. The cross-DFI partnership deserves close observation as it unfolds; the direction may hold extensive implications for future DFI collaborations.

In parallel, as such partnerships get off the ground, DFC will need to work with additional partners within and beyond the US government, including procurement entities, to ensure that there is reliable future demand and sufficient financing to purchase DFI-supported vaccines, including through the aforementioned volume guarantees. Promising manufacturing initiatives across LICs and UMICs in Africa, Asia, and Latin America would also benefit from rigorous demand-side analysis of COVID-19 vaccines and other relevant products to provide greater predictability of future procurement and motivate those providing private capital.

In the longer-term, DFC could play a key role in developing a robust health product manufacturing sector in LMICs. Through a focus on regional manufacturing, DFC could help create the necessary enabling environment for the manufacturing of essential medicines and other health supplies in sub-Saharan Africa and elsewhere, contributing to private sector development, broader supply chain resilience and diversification, and cumulative productive capacity for essential health products to support countries' health needs. This area of focus could also spur innovative biotechnology that addresses regional priorities (discussed in more detail below).

Specific levers for DFC intervention include (1) access to affordable capital through innovative financing instruments; and (2) underwriting or lending for voluntary licensing deals from originators to generic producers. DFC should also leverage its grant offerings, in close collaboration with USAID among others, to provide support for key manufacturing related services such as quality control laboratories, bioequivalence centers, and other quality assurance and regulatory approval efforts, helping build a pipeline of quality-assured manufacturers.

Considering ongoing challenges related to project viability and the complex manufacturing landscape, DFC—together with other DFIs—will need to play an active role in identifying key constraints and prioritizing opportunities for investments. Conducting a comprehensive landscaping assessment of current manufacturing bottlenecks and identifying criteria to select firms that are well-placed to expand capacity would be an important next step to create a solid project portfolio.

As DFC makes inroads in the manufacturing space, the agency will also need to establish an overarching policy framework to guide and support its investments and link to longer-term

demand-side considerations in cooperation with key global health entities. For instance, DFC should explore ways to collaborate with PEPFAR and USAID on the potential for US bilateral global health programs and other global purchasers to serve as consolidated buyers in the short-term, providing stable and reliable demand for small and medium-sized manufacturers. In the long-run, DFC should support sustainable sales to national and sub-national governments.

2. Provide R&D incentives for biotechnology

Over recent decades, global health innovation has delivered important new medicines for LMICs and saved millions of lives. Nonetheless, the current innovation ecosystem has major limitations: a dependence on donor “push” funding in commercially viable areas can distort R&D priorities and crowd out private sector investment; “product pileup” of donor-funded innovations are too often met with weak health systems and low demand; cost-effective innovations still face minimal diffusion and uptake; and R&D gaps for pressing LMIC health needs persist (Chalkidou, Towse, and Silverman 2020).

DFC could help to address these challenges by supporting home-grown biotech industries in LMICs that serve local populations with innovations targeted to their specific needs. Potential examples include genomic sequencing technology and products to prevent and treat malaria, tuberculosis, emerging viruses, and neglected tropical diseases (Chalkidou et al. 2020a). Considering that these companies are under-serviced by other market-financed DFIs, focusing on R&D is also a compelling way for DFC to leverage its comparative risk tolerance (Kenny 2019b).

While “push” incentives are important to reduce the costs of R&D borne by the developer through co-financing or partnerships, “pull” incentives increase expected profits (dependent on successful development) by guaranteeing price, volume, or revenue. Pending resolution of a Congressional budget rule that prevents DFC from making ambitious equity investments, DFC could use its equity authority and risk tolerance to act as a “venture capital” investor across a portfolio of moonshot-level biotechnology investments (Morris 2021). DFC could also support companies that are involved in Product Development Partnerships (PDPs) or receiving technology transfers in key priority areas (Moran et al. 2010). On the demand-side, DFC can help “pull” health innovations through research, development, manufacturing, and/or delivery by either (1) insuring manufacturers with volume guarantees; or (2) underwriting public sector purchase commitments and guarantee revenues.

DFC should take an active role in promoting adequate IP provisions to secure access and affordable and sustainable government purchasing of health innovations via value-based tiered pricing and transparent ex-ante price and quality standards (Chalkidou et al. 2020b; Towse et al. 2021). Specifically, DFC can incorporate access provisions into their biotech deals by encouraging companies to secure flexible licensing arrangements with quality assured manufacturers and requiring companies to sell to low-income countries at a very small marginal cost and to middle-income countries at locally affordable tiered prices. These terms might make DFC financing relatively unattractive for biotech companies with other

market-rate private-sector financing options but would therefore self-select for “additionality”—that is, the companies that accept these deals would otherwise be unlikely to receive private finance. In this way, the DFC can support the dual goals of additionality and equitable health impact.

3. Support robust supply chains for health-adjacent services and delivery models

COVID-19 has accelerated the deployment of telemedicine, new low-cost transportation services, “no-touch” product delivery, and other tech-enabled interventions throughout LMICs, but opportunities for more expansive scale-up remain (Salient Advisory 2021). Amidst a capital-constrained and highly fragmented market, DFC could provide financing to ease credit constraints faced by downstream start-ups and mid-sized private distribution and delivery companies. The collateral consequences of the pandemic on essential health services such as primary healthcare—stemming from diverted healthcare resources, shifting lockdown policies, and numerous other barriers to access—raise the salience of expanding capacity and effectiveness (Krubiner et al. 2021).

DFC has supported initial investments in health technology and distribution, including a \$4.5 million loan guarantee for mPharma, an inventory management company in sub-Saharan Africa, and a \$1 million equity investment in Kasha, a Rwanda-based direct-to-consumer delivery start-up. However, future investments should incentivize companies to pursue geographical and socioeconomic expansion (beyond just net growth among predominantly urban and higher socioeconomic market segments), including a focus on how new digital models and tools can eventually be integrated into broader national health systems to ensure they are accessible to the most marginalized groups and households in rural and poor urban areas.

DFC and other development partners can help ensure their investments drive health equity through a variety of funding levers. Innovative products and platforms must chart out longer-term strategies for inclusion of marginalized groups, including linkages with public sector funding vis-à-vis demand-side incentives like vouchers or other strategic purchasing mechanisms. To further strengthen national health financing efforts, DFC could also explore underwriting large health insurance pools (in a similar fashion to DFC’s recent \$26.7 million loan to Parsyl, a cargo insurance technology company working to facilitate cost-effective insurance policies for shipments of COVID-19 vaccines and other health products [Parsyl 2020]).

The Maternal Outcomes Matter (MOMs) Initiative, a partnership between DFC, Merck for Mothers, USAID, and Credit Suisse that seeks to mobilize up to \$50 million for maternal health innovations, is another example of DFC’s role in the space. The Initiative’s first investment was in support of LifeBank, a Nigerian-based health logistics company that transports blood and other supplies to hospitals. LifeBank is in the process of setting up a government subscription service so that costs will be automatically covered for low-income patients, offering a compelling model for how to build equitable access into future DFI projects (USGLC 2020). Nonetheless, press releases and other publicly available documents do not specify how DFC is involved in the MOMs Initiative beyond bringing “a strong

understanding of blending public and private funding” to the partnership (DFC 2019); more clarity is needed on the Initiative’s overarching governance structure, DFC’s (and other partners’) share of the Initiative’s investments, and the criteria used to decide on investments.

Given that significant DFI and donor efforts to increase overall deal flow have had limited success, these types of innovations are a compelling alternative: smaller, riskier deals that require a larger administrative budget and increased staffing, but which would carve out an impactful niche for DFC and ultimately help the global health architecture tap into the potential of local innovators (Kenny 2019a; Kenny 2019b). The importance of cooperating with global health entities is discussed as a key guiding principle later on, but one notably relevant opportunity is for DFC to collaborate with USAID on the upcoming Next Generation of Supply Chain Suite of Programs (NextGen), especially as these awards and contracts look for greater use and strengthening of the private sector, as well as greater capacity within local governments as stewards of the health commodity supply chain.

Finally, DFC could support companies that provide quality-assurance services to validate the authenticity of essential medicines through call centers, QR codes, and other systems (Pisani 2020; Hansen Staples, St-Denis, and Yadav 2020). Such support would be complementary to investments in health product manufacturers, for which competitiveness is hampered by weak regulatory regimes that often lead to purchasing decisions driven by individual provider and patient perceptions of quality (CGD 2019).

Key guiding principles

DFC’s future health-focused investments should be informed by guiding principles to safeguard their effectiveness, leverage, and equitable impact:

1. Pro-equity development impact

The BUILD Act creates a clear development mandate for DFC, but the agency will need to do more to direct investments to lower-income countries, utilize loan conditions, institutionalize performance metrics, and deploy other innovative mechanisms to drive and assess development impact throughout the health investment selection and management process.

Focus on investments that are compatible with long-term UHC goals. DFIs must prioritize investments that complement countries’ UHC agendas. As articulated by Wadge et al. (2017) in their proposed framework to evaluate the impact of private health providers, these providers should be assessed by both how well they care for their patients and to what extent they contribute to the broader health ecosystem. As discussed above, DFC can translate these principles into practice by supporting products and services that public payers are interested in purchasing and could eventually contract, linking its investments to the decisions and priorities of those who know their contexts best.

Investments that aim to introduce new treatments or improve quality of care without factoring in context-specific cost and access considerations risk entrenching two-tier care systems in which the poor are increasingly locked out of higher-quality services. On the other hand, investments that advance equitable health impacts will likely lead to reduced financial returns, meaning that DFC may need to revisit its profitability targets and better align and communicate realistic expectations of financial returns achievable through a long-term commitment to health-promoting projects. For example, the UK's CDC has divided all of its investments across a growth portfolio, with a required return of at least 3.5 percent, and a catalyst portfolio, which is able to operate at a significant loss because the portfolios together are only required to break even (i.e., more than 0 percent); CDC's recent 10.6 rate of return on the growth portfolio is therefore a helpful, tractable signal that the DFI could be exercising more risk to achieve greater development impact (ICAI 2019). Lastly, investments outside of LMICs may potentially be justified if they serve LMIC health interests and employ pro-equity guardrails, which again may result in reduced profitability.

Investing in medical education providers that build the capability and capacity of the health workforce can also add to the overall pool from which both the public and private sectors benefit and help address critical workforce shortages. However, these projects should, at minimum, require a commitment from private entities to “put more into the public system than they take” by collaborating with local medical and nursing schools and public training facilities and seeking accreditation and licensing of programs to ensure sufficient quality, which is especially important given recent research on gaps in health worker knowledge (Wadge et al. 2017; Di Giorgio et al. 2020).

Embed a rigorous learning agenda in decision-making, with a focus on development effectiveness. Although DFC uses economic growth as its primary development tool, DFC also aims to more directly influence health access and outcomes by “developing robust, sustainable health systems led by private sector innovators” (DFC 2020b). To this end, DFC has developed an Impact Quotient (IQ) that considers different metrics on a project-by-project basis to assess the extent to which the investment contributes to economic growth, advances inclusion, and supports innovation (DFC 2020c). As outlined in Box 1, DFC has also articulated “high-level investment targets,” “development goals,” and “aspirational milestones” to track and measure its performance in each of its priority sectors, including health. While transparency about these initial targets and expectations for health impact is a welcome first step, the metrics themselves—and the accountability and learning processes surrounding their assessment, use, and integration with IQ scores—are not currently conducive to evaluating or securing health impact.

DFC plans to provide analysis of the metrics in annual reports and launch “a more advanced monitoring, evaluation, and learning strategy, leveraging technology and systems to fully integrate with the Impact Quotient (IQ) tool to provide DFC a holistic, ex-ante and ex-post assessment of the agency's development performance for the entire portfolio” (DFC 2020a). This sounds compelling on paper, but there are currently no clear plans for how these aspirations will be operationalized or processes will be put in place to institutionalize impact tracking into investment sourcing, management, and learning. Current impact management systems do not incentivize or report on progress related to the health equity considerations

discussed above. As DFC works to follow-through on its commitment to embed impact measurement within its internal systems and processes, it must systematically tailor and adapt these systems to the agency’s growing investment portfolio in the health sector.

Further, DFC states that the IQ tool is used to inform decisions to support projects, track development impact over time, and report outcomes to stakeholders. But DFC also clarifies that the IQ tool “does not directly inform the DFC’s investment strategy or deal sourcing” and the scoring results and methodologies are not publicly available for specific projects. It is also unclear how the health performance metrics in Box 1 feed into IQ scores, highlighting the need for more systematic, cohesive impact measurement systems to guide investment decisions (DFC 2020a).

Box 1. DFC’s performance metrics for health investments

Investment targets by 2025 (the commitment amount and number of projects committed that DFC aims to support):

- Commit to \$3 billion and catalyze \$6 billion more from the private sector in priority areas.
- Increase access to healthcare facilities by supporting 10 new hospitals and health clinics in LICs, LMICs, and underserved communities in UMICs.

Development goals (the projected development outputs that DFC aims to achieve):

- Provide healthcare services to at least 2 million people.

Aspirational milestones (internal goals that are highly developmental in nature, but that may not be readily measurable or applicable on a portfolio-wide basis):

- Increase of access to new and life-saving treatments for priority diseases.
- Increase the number of patient consultations, procedures and surgeries conducted.
- Improve research related to critical drugs and treatments.
- Increase the number of projects that align with our sub-sector focus (digital/IT, pharmaceuticals/life sciences etc.).
- Increase the dollar amount mobilized for healthcare related projects in partnership with 1) USG; 2) private sector; 3 foundations/NGOs.
- Increase the number of healthcare related projects with 2X impact and effects on girls and women (e.g. declining pregnancy mortality rates) where available.

Source: DFC 2020a.

And although DFC is a signatory to the Operating Principles for Impact Management (launched in 2019 after a collaborative development process by IFC and others to establish a common discipline around impact investing), DFC has not yet independently verified the extent to which the IQ tool and the agreed upon Operating Principles are aligned—as required by the Principles—despite aiming to secure verification by April 2021 (DFC 2020d).

DFC should share all IQ scores and their narrative explanations in the public domain as part of a greater commitment to impact assessment, transparency, and shared learning, building and applying knowledge on how to maximize development impact throughout the investment lifecycle (in turn benefiting partner agencies as well). For example, the UK CDC's "impact dashboards," which articulate how each of its investments is expected to contribute to its impact goals, have been shared publicly for all new investments since September 2019 (CDC 2020; ICAI 2020). DFC should similarly produce its IQ scores and explanations alongside other investment details. Further, as the agency scales its role in the health sector, it should take a more systematic approach to embedding opportunities for learning into relevant investments. Such an approach would help contribute important evidence to inform DFC's future investments, while also benefiting other partners within the broader global health ecosystem.

Scale-up staffing in target regions. In 2018, OPIC's portfolio per employee ratio was \$83 million, whereas IFC, CDC, DEG, Proparco, and FMO's were all under \$23 million (CGD 2020). DFC must increase its staffing levels and expertise to build and manage a sustainable pipeline of new projects in lower-income settings. DFC's planned launch of a regional team based in Africa is an initial step, but a significantly expanded presence in countries is critical to investment oversight in difficult markets with the most potential for development impact. In addition to enabling better engagement with clients, local offices are an important way for DFC to collaborate with USAID and other development partners in-country to identify and mobilize context-specific opportunities, described in more detail in the below section on co-financing.

2. Additionality

To assess and achieve impact, DFIs also use a concept of additionality, which refers to an investment that leads to better outcomes than what would have otherwise occurred. Put differently, a specific DFI-financed project would not have happened as it did without the DFI support. This stems from a foundational DFI principle that publicly funded DFI finance should be additional to, and not a substitute for, available private capital (Moss and Kenny 2020). But constructing counterfactuals to assess the impact of a specific project—with or without DFI support—has been a significant challenge for DFIs. Some have attempted to track and publish which environmental, social, or governance safeguards were imposed through DFI loan conditions (i.e., value additionality), while others have shown that the market or sector in a specific country lacked private capital or that similar projects failed to raise private capital (i.e., financial additionality) (IFC 2018; CDC 2017).

Depending on the investment, DFI additionality in the health sector should involve demonstrating how the investment helps to get the right market incentives and regulations in place to increase access, quality and speed while lowering prices, tying into the impact metric considerations discussed above. This should take place during the selection stage, when DFIs can most effectively promote fidelity to development impact (Carter, Van de Sijpe, and Calel 2021). DFC asserts that "financial additionality is discussed and communicated in written documentation throughout the project approval process including in screening memos, credit committee papers, investment committee memos, and in presentations to

DFC's Board of Directors," but numerous potentially fungible investments throughout the last year suggest that considerations of financial and value additionality are not necessarily translating into investment selection and management decisions (DFC 2020d). DFC must publish transparent information on each investment's additionality as part of its selection criteria.

3. Co-financing

Co-financing is now more feasible for DFC given that the agency does not face the US-nexus requirement, which previously restricted OPIC to projects with a significant US equity or controlling stake (OPIC 2017). DFC also has a larger potential risk appetite than DFIs that borrow from the market because it is funded by the US Treasury. A 2018 analysis by CGD found that 35 percent of co-financed DFI investment is in sub-Saharan Africa (compared with 22 percent of their full portfolios) and almost half is in the form of equity (compared with 20 percent of their full portfolios), suggesting that co-financing allows DFIs to invest in potentially riskier contexts with less common financial tools (Kenny et al. 2018).

Co-financing is an important way for DFC to leverage different risk appetites across investors and to collaborate with other development partners, including bilateral US global health programs (e.g., USAID, PEPFAR, PMI) and MDBs, to both develop a promising investment pipeline and improve demand reliability. The focus on US government interagency coordination and advancing existing global health initiatives in DFC's 2020-2025 strategy is welcome, but more concerted efforts are needed to co-finance and partner with other DFIs, MDBs, and development actors writ large in the investment screening and selection process (Landers, Rose, and Estes 2020; DFC 2020a). While COVID-19 has highlighted initial opportunities for increased partnerships, a more systematic approach to collaboration with other development partners, including US government agencies, will be critical to DFC's ability to expand and scale its footprint in the health sector in the near-term. For example, collaborating with development partners could indicate demand stability and thus crowd in additional providers of private capital who are wary of revenue risks (e.g., donor support for results-based schemes and/or "on-budget" health spending to de-risk government funding) (Scheijgrond et al. 2021).

Specifically, partnerships with USAID could harness the agency's deep knowledge of the health sector to align on the most appropriate investment instruments within specific countries, including blended finance with USAID and DFC resources (Yadav and Glassman 2019). Leveraging USAID's sectoral expertise could also signal market opportunities to other DFIs and venture capital investors that are unfamiliar with the global health landscape and may consider investment risks to be greater than they actually are. Further, USAID could help DFC to identify and invest in institutions and intermediaries that contribute to the development of the broader health innovation ecosystem and could support more businesses in improving quality and efficiency, as opposed to focusing only on specific firms (Yadav and Glassman 2019).

Given that DFC's portfolio includes the Development Credit Authority (DCA) formerly housed by USAID, DFC could use DCA, which offers partial credit guarantees backed by the US Treasury to facilitate access to financing for small businesses, as a way to invest in development impact bonds (DIBs) (Collinson and Portelance 2018). DIBs finance development programs with money from investors that earn a return if the program is successful, paid by a third-party donor (like USAID); by tying funding to pre-defined and rigorously evaluated outcomes, DIBs focus delivery incentives on results and would channel DFC resources towards improving health outcomes (Clarke, Chalkidou, and Nemzoff 2019; Oroxom, Glassman, and McDonald 2018).

Exploring these opportunities should be a priority for DFC's first Chief Development Officer, who has been tasked with ensuring DFC fulfills its development mandate and coordinates DFC's interactions with USAID and other agencies (Landers and Rose 2020).

IV. Conclusion

DFC and other DFIs have an important role to play in the global health ecosystem by filling resource gaps and incentivizing innovative health solutions. In the context of the COVID-19 crisis, DFC is well-placed to contribute to efforts to strengthen pandemic preparedness and expand equitable access to health products and innovation. Alongside key principles to safeguard effectiveness, leverage, and equitable impact, our analysis highlights three health areas where the agency should prioritize future investments: (1) build regional manufacturing hubs for health supplies; (2) provide R&D incentives for biotechnology; and (3) support robust supply chains for health-adjacent services and delivery models.

Building a diverse portfolio in the health sector across these areas will require balancing sometimes competing imperatives related to health equity, commercial viability, and foreign policy interest. As DFC seeks to scale its role in the health sector, the agency will need to prioritize investments even within the key areas highlighted in this paper, taking into consideration its own staffing capacity, the need for greater project development, and portfolio-wide trade-offs between risk and profitability. In particular, mitigating stakeholder expectations of the profitability of DFC investments in health could be helpful in the long run, allowing DFC the space and flexibility to determinedly drive equitable health impact. The agency's 2020-2025 strategy and its Health and Prosperity Initiative provide an initial opening to take this agenda forward and scale DFC's role in health, with the prospect of further expanding efforts in the sector, with resources commensurate to its ambitions, over time.

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