CENTRE FOR DISASTER PROTECTION

Airbel Impact Lab

Exploring a role for triggers and risk-informed financing in complex crises

COVID-19 as a case study

JUNE 2021

Contents

Foreword ii

1. Introduction and background 1

2. Analytical framework 3

3. Retrospective analysis and institutional context 4

- Earmarked contingency funding 4
- Parallel tracking expenditure and fundraising 5
- Spending based on projections, not receipts 5
- Sequencing 5
- Decision-mapping 6

4. Trigger design 7

- Epidemiological triggers 9
- Policy and contextual triggers 9
- Operational triggers 10
- Combining and sequencing triggers 10

5. Lesson learning 11

- Lesson 1—Crisis risk management and crisis risk financing can add value for even the most complex risks 11
- Lesson 2—Design to solve real-world problems: form should follow function' 12
- Lesson 3—Design with humility and learn by doing 12
- Blueprint 13

Endnotes 16

Foreword

The Centre for Disaster Protection's mission is to support countries and the international system to manage risks—moving from reaction to readiness. Covid-19 underscored that this represents a radical shift in how countries and the international system manage crises. Although a global pandemic was a known risk, reaction rather than readiness characterized much of the response.

However, Covid-19 also provides an unprecedented opportunity to learn about effective crisis response and how to finance it. While we hope a future pandemic of this scale is not seen again, future crises are a certainty. It is important to take lessons from crisis response during covid—what worked well and why, and what did not—to help us better prepare for future crises.

It has been a privilege to work with the Airbel Research and Innovation Lab at IRC to learn from the effective covid crisis response IRC put in place, identify what underpinned this and what lessons can be taken from that to prepare and be more ready for a future crisis. This work provides key lessons for how effective crisis response can be financed and triggered, useful across a broad range of organizations that engage in crisis response. This work is a first step towards developing a practical and pragmatic blueprint for how organisations can systematically re-orient their resources and processes towards a state of readiness for future crises.

Ruth Hill, Chief Economist, Centre for Disaster Protection

1 Introduction and background

COVID-19 has sparked a complex, multifaceted, and likely protracted global humanitarian crisis. The virus has claimed more than 2.7 million lives worldwide,[1] disrupted critical public services (not least education and lifesaving vaccination programmes), fragmented the global economy on an unprecedented scale, sparked political unrest, fuelled violent conflict, and exposed and exacerbated macroeconomic risks.[2] Mitigation measures - from international travel bans to national lockdowns - have inadvertently destroyed livelihoods and reversed several years of food insecurity and poverty gains.[3]

The virus and these mitigation measures look set to ebb and flow until vaccines are more widely distributed, or natural herd immunity is reached. In the most fragile contexts this could mean years, even decades, of spikes in health, economic, and other risks related to the virus. The complex, dynamic, and protracted nature of this crisis calls for an adequately holistic, dynamic, and long-term approach to humanitarian strategy, operations, and finance.

The *Decision-making During COVID-19* project is a collaboration between the Centre for Disaster Protection the International Rescue Committee (IRC), to test and operationalise crisis risk financing tools in the context of a complex, protracted humanitarian crisis. This partnership aims to put the Centre's call to action outlined in their paper 'The Future of Crisis Financing'[4] into practice, generating learning for integrating risk financing tools more broadly within other organisations.

This work is a first step towards developing a practical and pragmatic blueprint for how organisations can systematically re-orient more of their resources and processes towards a state of readiness for future crises. This approach represents a potentially radical shift in how the international humanitarian system finances response to complex crises.

BOX 1

Understanding triggers

Triggers are the foundation of any crisis risk financing framework. In this context, we use 'trigger' simply to mean the moments during a crisis in which action and associated funding are required. Good trigger design is about articulating these moments clearly to guide technical analysis and instrumentation.

Triggers lie on a spectrum from 'hard' links, where pre-specified actions are mandated when pre-specified events occur; through to 'soft' links, where the decision-maker retains substantial flexibility over whether to pursue the pre-specified actions as a crisis evolves.

Any funding decision or operational action in a crisis risk financing framework can be linked to foreseen but uncertain events (risks) using triggers. These actions could include the release of financing from donors, insurance instruments, or internal contingency funds to finance operational activities or staff deployments.

This paper is the final output from the *Decision-making During COVID-19* project, and presents findings from three phases of work:

- Retrospective analysis and decision-mapping – analysis of IRC's approach to financing its response to COVID-19 during 2020 and relevant decision-making processes.
- Trigger design – analysis to identify, develop and appraise possible trigger mechanisms to support decision-makers and lay the foundation for further risk-informed financing.
- Lesson learning – reflective process learning to capture technical and operational lessons generated during the first two phases of the project.

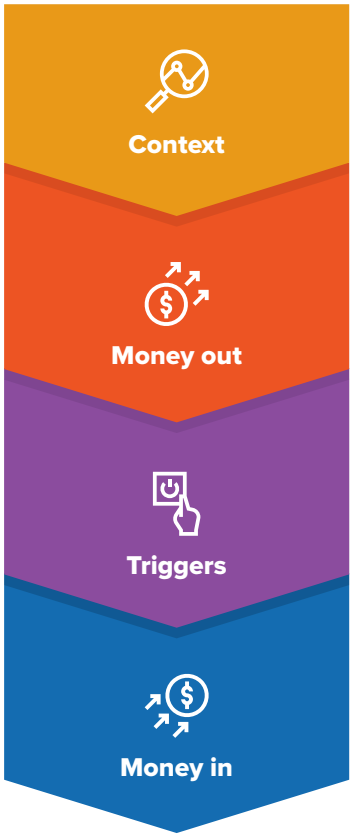
2 Analytical framework

Throughout this paper we use the Centre's Quality Assurance Framework to organise our thinking and analysis.[5] This framework recommends a sequenced, iterative approach to articulating:

- the strategic and operational environment and the risks in scope **('context')**;
- how money will be used through operational contingency plans, including needs assessment, priority setting, and clear roles and responsibilities **('money out')**;
- under what circumstances funding is required and how much will be made needed, including the qualitative and quantitative data that will be monitored and the 'trigger thresholds' beyond which decisions and funding will be triggered **('triggers')**;
- where money will come from, including pre-positioned internal and/or external funding commitments, providing confidence over the amount and nature of funding that will be made available to responders under different scenarios **('money in')**; and
- project and financial management processes, to ensure resources are used in a way that represents good value for money and projects are delivered efficiently and effectively **('process')**.

FIGURE 1

Designing components of a crisis risk financing framework



Adapted from Centre for Disaster Protection's Quality Assurance Framework

Retrospective analysis and institutional context

3

IRC responds to the world's worst humanitarian crises and helps people whose lives and livelihoods are shattered by conflict and disaster to survive, recover and gain control of their future. In more than 40 countries and over 20 U.S. cities, IRC's dedicated teams provide clean water, shelter, health care, education and empowerment support to refugees and displaced people.

While pandemic risk is unique in certain respects, in many ways the COVID-19 outbreak was similar to other crises at the core of IRC's mission. The virus has taken lives, damaged livelihoods, and caused untold harm for clients, their communities and their countries. COVID-19 has interacted with other crisis risks, compounding the impacts of conflict and natural hazards. Tackling COVID-19 is set to become a protracted endeavour much like many other complex crises. Therefore, despite its complexity, we show how capturing lessons from COVID-19 can be instructive for IRC and other operational organisations managing future spikes in transmission, and for organisations managing other crisis risks.

The first phase of this project sought to understand how IRC financed its response to COVID-19 during the first year of the outbreak; and identified the strategic and operational decisions that could potentially benefit from trigger-based approaches and more structured risk information as COVID-19 ebbs and flows. Our retrospective analysis identified three critical innovations that demonstrated how risk financing tools were already being deployed in IRC's COVID-19 response, some formally and some informally.

EARMARKED CONTINGENCY FUNDING

In early-March 2020, weeks before the first UN Global Humanitarian Response Plan launched, IRC established an earmarked contingency fund using its own unrestricted resources. The COVID-19 Central Fund was dedicated to protecting staff and client safety, mitigating risks to allow programs to continue safely, and in certain instances responding to the pandemic directly.

Central Fund allocation decisions were made under a tailored, light-touch governance framework that prioritised speed, technical rigour and locally-led decision-making, without compromising project management and fiduciary safeguards. Country Programs* meeting transparent epidemiological and preparedness criteria were eligible for funding from the Central Fund, though the amount, use and timing of funds (within the categories defined above) were determined by Country Program leadership.

Requests from eligible countries were approved within 24-48 hours, but the timing of requests relative to the local spread of COVID-19 varied somewhat across IRC Country Programs. Our analysis

* We use the term 'Country Programs' as shorthand to mean an IRC operational unit delivering services in crisis-affected countries.

found that the timing of requests was not only determined by country-level epidemiological transmission, but was also affected by operational and policy factors. For example, we found that requests were typically later among Country Programs with more donors, with larger operational footprints and with existing health programs. Our interviews with decision-makers suggested that this was in part because larger offices with more donors were able to absorb initial costs through existing programs.

PARALLEL TRACKING EXPENDITURE AND FUNDRAISING

In a limited number of cases, Country Programs in effect used the Central Fund to 'guarantee' the risk that local fundraising efforts would be unsuccessful. Country Programs began procuring key supplies backed by the Central Fund's balance sheet, while fundraising locally in parallel. When local fundraising proved successful, Country Programs were able to reimburse the Central Fund or to retract requests for funding that was no longer needed.

This flexible approach proved critical in the context of extended lead times for personal protective equipment (PPE) during 2020. For example, one Country Program requested $400,000 from the Central Fund in July 2020 for a project starting on 1 August. In late September, an institutional donor committed to funding the same project, and the project was formally approved by the donor on 2 October 2020.

By this time, the Central Fund had enabled the project team to begin procurement and had covered approximately $16,000 in August expenses. The rest of the project's budget was covered by the institutional donor. Using the Central Fund's balance sheet to unlock parallel procurement and fundraising accelerated action by two months during a critical phase of the pandemic, enhancing value for money for both the Central Fund and for the institutional donor.

SPENDING BASED ON PROJECTIONS, NOT RECEIPTS

IRC's Central Fund was established before its dedicated COVID-19 fundraising appeal was launched during mid-March 2020. **On an exceptional basis, IRC Finance allowed the Central Fund to draw from IRC unrestricted resources and 'repay' when the COVID-19 appeal delivered** new funding over subsequent weeks and months. This meant that IRC's response to the pandemic was not constrained by cash flow to the same extent as a normal emergency response, accelerating action just when it was most valuable.

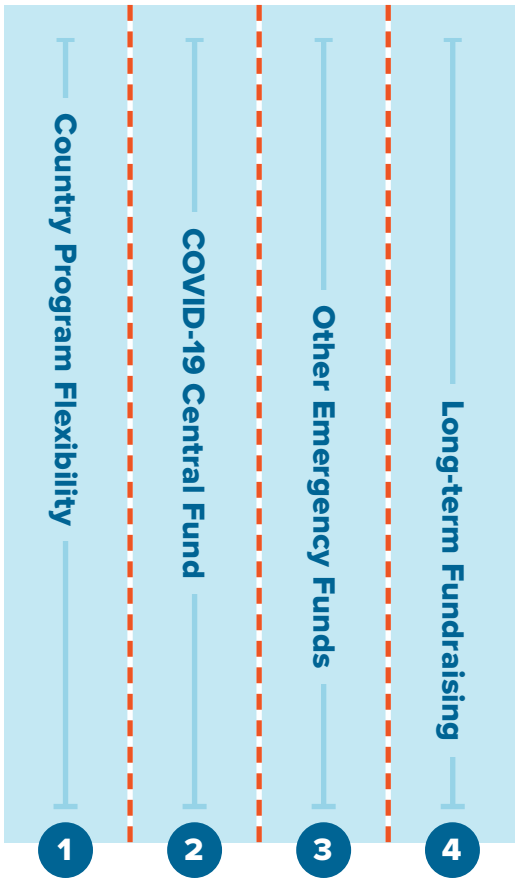
The assured amount increased as donations and pledges came in, based on both real receipts and projections. Provisional data analysis suggests that this approach meant IRC was able to make the first Central Fund allocation two weeks before it could 'afford' the spend from COVID-19 private fundraising; and that IRC was able to approve $2 million in spending to protect staff and adapt programming fully three weeks before this amount had been raised.

SEQUENCING

Carefully earmarked funds for specific activities related to a specific risk type provided Country Programs with the clarity needed to plan and act strategically. Critically, this earmarking complemented long-term programming and flexible emergency funds for unforeseeable crises. First, Country Program leaders were encouraged to negotiate flexibility with existing donors and within existing programs. Second, the Central Fund provided time-bound funding and balance sheet support

while fundraising for longer-term response programming was underway. Third, this longer-term programming began to come on-stream during the second half of 2020, months after the pandemic began to take lives and destroy livelihoods. These fundraising efforts continue today. Finally, IRC preserved other emergency funds for other crises that unfolded during 2020 exacerbating the impact of COVID-19. This provided 'swimlanes' to help decision-makers plan their finances and operational response (see Figure 2). This is not prescriptive, as there are other ways of organizing and describing funding streams; however, this figure describes some of the ways in which funding flowed through IRC during the COVID-19 outbreak.

FIGURE 2
Funding 'swimlanes'



DECISION-MAPPING

Building on this retrospective analysis, we next mapped the specific decisions into which these and other risk financing tools could be integrated going forward. In particular, learning from its experience during the 2014 and 2018 Ebola outbreaks, IRC determined early on that it would not establish new emergency health responses to COVID-19, focusing instead on *managing* risks to staff and client safety, and to programme continuity. This approach was detailed in numerous guidance notes and protocols throughout 2020, culminating in the December 2020 IRC Pandemic Management Plan (PMP).

The PMP is built on the premise that COVID-19 will be a part of IRC's operating environment for the foreseeable future. The plan provides guidance to all IRC staff and programs on the 'core' measures they must observe at all times regardless of the state of transmission,* and the 'supplementary' measures that should be considered when the number of cases in a location surges.**

The costs associated with the PMP's supplementary measures were assessed as relatively limited, meaning that IRC offices and staff should be able to comply without substantive additional funding. Therefore, **we chose to focus first on risk-informed financing for costs associated with maintaining the PMP's core measures in IRC health facilities as the number of cases surged.**

* Core measures include actions related to hand hygiene, physical distancing, respiratory hygiene and face masks, cleaning and disinfection, ventilation, stay-at-home measures, isolation, contact tracing, quarantine and testing.
** Supplementary measures include work related travel protocols, office closures, staff relocation and evacuation, temperature screening, and in-person contact restrictions.

4 Trigger design

Once we had a strong understanding of historic decision-making processes, and future operational decisions that would need to be made, we began to assess the range of potential triggers and financing tools that could support decision-makers. We described the context and defined risks associated with COVID-19, before defining IRC's potential response strategies and response activities, and associated costs. These costs included fixed and variable costs associated with different response activities, as well as frictional costs associated with introducing new decision processes and financial instruments.

Our analysis of historic cost data identified the specific line items that dominated response budgets and the extent to which these costs varied over time. Our consultation with logisticians and preparedness experts across IRC's country, regional and global network helped identify which of these cost drivers was likely to increase going forward, and the epidemiological and other factors that would determine this variation.

BOX 2

Exploring trigger design options

To develop options for potential trigger mechanisms, we began by identifying the factors that most substantively affected the need for funding. As data improved and the detail of IRC's Pandemic Management Plan became clearer, decision-makers relied less on national epidemiological data and increasingly considered more directly relevant policy and operational indicators and in-country insights on funding needs.

Figure 3 shows the additional value that policy indicators and qualitative in-country insights can add, relative to a coarse epidemiological trigger. The top panel shows new daily COVID-19 cases;[6] the middle panel shows stringency of policy measures, using an index compiled by Oxford University's COVID-19 Government Response Tracker;[7] and the bottom panel shows residual funding needs, using IRC COVID-19 Central Fund allocations in Kenya and Libya since the pandemic began.

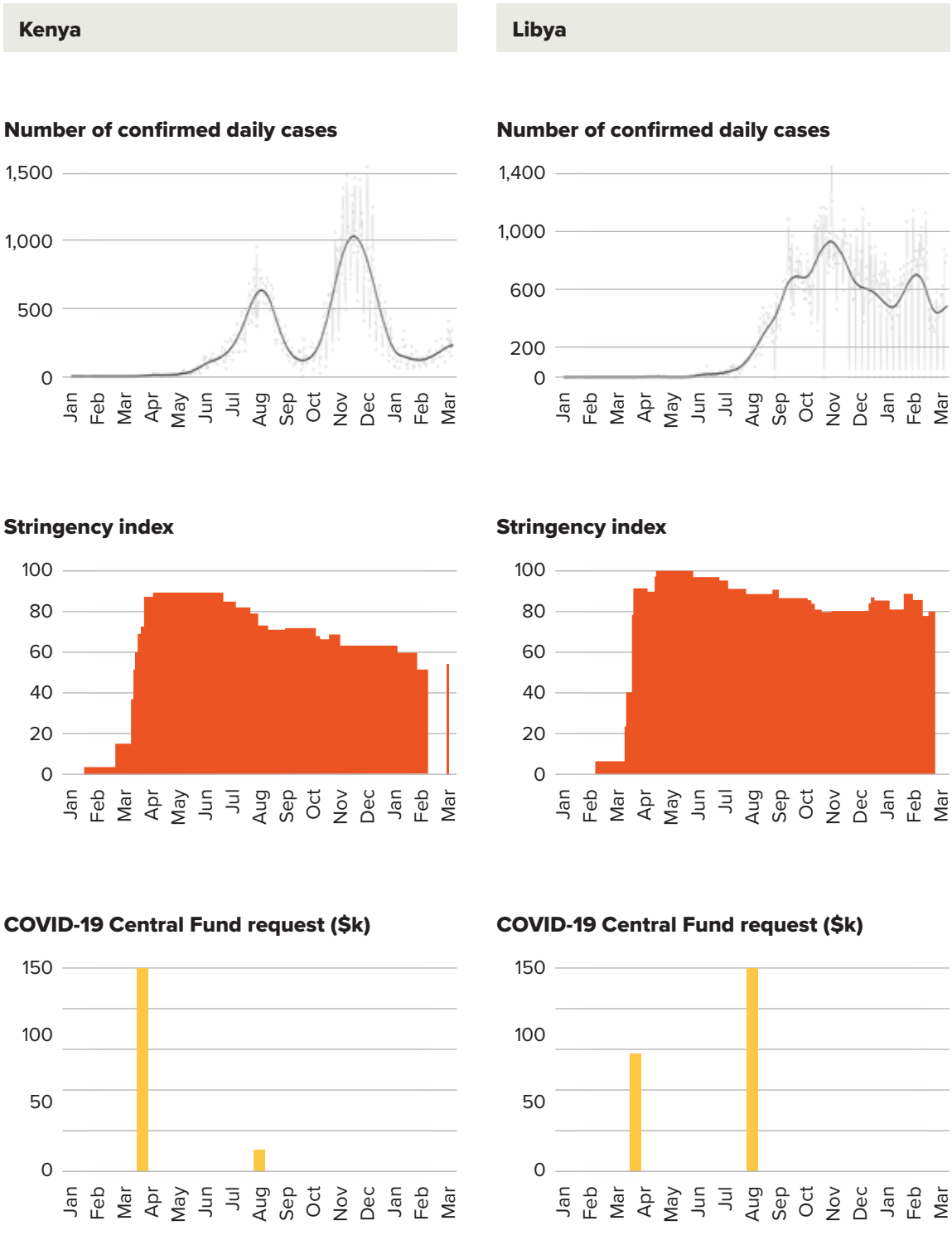
The figure shows that policy measures largely endured in both countries once enacted, despite fluctuating transmission. Allocating funds only on the basis of epidemiological data would not have captured the heightened costs associated with procurement and logistics during this extended period.

Moreover, initial requests to the Central Fund preceded a quantifiable surge in cases by months, because in-country decision-makers foresaw funding shortfalls before they manifested. Waiting for transmission to spike before triggering funding could have been disastrous, relative to the Central Fund's more flexible, qualitative request-based trigger.

This is not an exhaustive list of trigger mechanisms and indicators, and each of the options discussed here has its own shortcomings. However, we hope that this analysis demonstrates the potential value of trigger options beyond headline indicators of macro need.

FIGURE 3

Transmission, policy response and residual funding needs



Sources: https://coronavirus.jhu.edu/map.html; https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker

Taken together, this understanding of unit costs and future demand under different scenarios provided a strong sense of the shape of future funding needs, required to design fit-for-purpose triggers. Our analysis showed that personal protective equipment (PPE) was both a dominant cost driver during 2020 and would likely be the most time-varying input required to protect IRC staff, clients and programming.

In this context, we identified four sets of potential trigger mechanism, each of which could inform decisions related to funding for PPE and other key cost drivers. These triggers are summarised in Box 2, and discussed in further detail below.

EPIDEMIOLOGICAL TRIGGERS

Additional funding for PPE and other key cost drivers could be allocated on the basis of observed information about the nature and pace of COVID-19 transmission. IRC's PMP deploys a binary epidemiological trigger to determine whether COVID-19 is surging or stable in a given country, and therefore, whether supplementary measures should be considered. The indicators and thresholds used to define a surge were chosen using a combination of quantitative analysis of early surges and expert judgement to identify the point at which action was required. This pragmatic approach acknowledges that no scientifically perfect threshold was available to decision-makers, in part because the disease's epidemiology was at that time still poorly understood. Instead IRC's approach prioritised setting an acceptable norm, beyond which action became the default.

The PMP's binary epidemiological trigger replaced an earlier categorical epidemiological trigger, which differentiated between countries experiencing increases and decreases in the number of cases and the underlying vulnerability of each country to this risk. The move to a simplified binary trigger reflected IRC's strategic decision not to initiate, or in time to decommission, new emergency health responses to the COVID-19 outbreak. The simplification also reflects decision-makers' desire to support operational planners, by providing clarity around the circumstances under which different actions are required or expected.

Key concerns with epidemiological triggers remain the quality of publicly reported epidemiological data in the countries that IRC serves. The country-level nature of the data also mitigates sensitivity to the impact of an outbreak on subnational IRC programming. To compensate, IRC funding allocations under the COVID-19 Central Fund complemented objective epidemiological triggers with qualitative insights from in-country and regional emergency health experts.

POLICY AND CONTEXTUAL TRIGGERS

In addition to epidemiological surges, additional action and funding could be triggered as the policy context changes. For example, IRC logisticians assess that border closures and stay-home orders have substantially affected international supply chains for key inputs, increasing order queues and in some cases doubling the time required to clear customs. Using changes in policy to inform trigger mechanisms could help prepare financing for costs that are incurred as a direct consequence of containment measures, but that do not vary with epidemiological transmission. Setting thresholds for policy and contextual triggers requires a clear understanding of the relationship between specific measures and costs associated with response activities. As with epidemiological data, this relationship may vary across countries and over time.

The Oxford COVID-19 Government Response Tracker provides a comprehensive, internationally comparable daily time series, comprising 19 indicators on the nature and extent of relevant policy measures.[8] The main shortcoming with the available data is its lack of subnational coverage in most of the countries IRC serves.

OPERATIONAL TRIGGERS

While epidemiological and policy triggers are appropriate for a broad range of actions and costs associated with a surge in cases, IRC's operational data may provide more sensitive triggers for specific cost drivers. For example, funding could be made available when prepositioned buffer stocks for specific supplies reach critical levels, or when an acceleration in the rate at which they are being depleted implies future shortages. Operational triggers could be particularly powerful during local transmission spikes affecting IRC facilities, but which are not large enough to substantially affect national data. Thresholds for operational triggers of this nature should be derived from 'burn rates' and procurement and logistics lead times, which could vary substantially between countries and over time, in line with epidemiological trends and relevant policies (see above).

RESIDUAL FUNDING NEEDS

Learning from IRC's experience with the COVID-19 Central Fund, perhaps the most sensitive triggers for this purpose would be those that capture *gaps in funding* as COVID-19 surges affect IRC health facilities. The COVID-19 Central Fund demonstrates the value of combining (i) objective eligibility criteria determining the circumstances under which countries can access funds, with (ii) request-led allocations, allowing in-country leaders to consider other fundraising efforts.

COMBINING AND SEQUENCING TRIGGERS

Decision-makers need not (and should not) base financing decisions surrounding COVID-19 surges on a single indicator or on quantitative data alone. The above analysis suggests real value in separating out funding decisions for different response measures and different cost drivers. Similarly, different triggers could be used to inform decisions at different points in an outbreak. Relatively coarse triggers can be appropriate for 'no-regrets' actions during the early stage of an outbreak when there is much uncertainty; while more tailored triggers may be appropriate as risks and response strategy are better understood. Finally, combining objective information with operational discretion may be particularly important in the context of complex crisis risks.

Specific triggers of the nature described above are now under design to inform IRC financing decisions associated with future surges in COVID-19. These triggers could help to formalise the three financing innovations that emerged organically during IRC's COVID-19 response in 2020.

Lesson learning

5

Throughout this project, the virtual IRC and Centre for Disaster Protection team continuously reflected on and captured the lessons we were learning. At the outset, we had hoped to derive from this project a 'blueprint' of instruments to finance complex crisis risks like COVID-19. However, perhaps the overriding lesson from this project is that no one-size fits all risks, organisations or decisions. Therefore, in this section we present three insights that underpin the beginnings of a blueprint *process*, which we hope will be of use for other organisations and decision-makers developing triggers and risk-informed financing tools to solve their own operational challenges.

LESSON 1
Crisis risk management and crisis risk financing can add value for even the most complex risks

Our retrospective analysis of IRC's approach to financing the early months of the COVID-19 crisis demonstrated that pragmatic, tailored, risk-informed financing unlocked more effective action as the outbreak accelerated. Earmarked contingency funding with fit-for-purpose governance; 'guarantees' to parallel track response and fundraising; and enhanced liquidity management all facilitated swifter action to protect staff, clients and programme continuity. These tools were not imposed by external experts in crisis risk financing, nor were they technically optimal in their design, but they provided clarity and structure for decision-makers and accelerated action for crisis-affected communities by months.

Triggers and risk-informed financing may also create value in unique ways during complex crises and for grant-funded humanitarian agencies. For example, the COVID-19 Central Fund's allocation rules provided local decision-makers with access to funding under clearly defined circumstances, but did not prescribe in detail how funds were to be used nor when they were to be deployed. This allowed in-country leaders to make decisions about when funding should be requested and how it would add most value for clients. Grant funding, with the ability to repay or relinquish, facilitated 'no regrets' early allocations in a way that would not be possible with market-based instruments. In this sense, IRC used the Central Fund to add structure and so predictability for in-country decision-makers, *enhancing local planning* not undermining it.

The decision *not* to use other flexible funds to respond to COVID-19 provided further structure and optionality for IRC decision-makers. For example, by preserving much of its fully flexible funding for truly unforeseeable events, IRC was able to respond without delay when a major explosion rocked Beirut in August 2020. In this sense, establishing the COVID-19 Central Fund alongside (i) more flexible response funding and (ii) country-level programming created 'swimlanes' in IRC's finances: country programmes delivered against longer-term, stable funding needs; the COVID-19 Central Fund provided predictable funding for a foreseeable risk; and flexible funds were preserved for unforeseeable uncertainty (see Figure 2). This structure also provides optionality for different donors with different oversight requirements.

LESSON 2
Design to solve real-world problems: form should follow function'

We assess that too often financing innovations are solutions in search of problems. Throughout this project, we sought to describe and derive purpose-built triggers and risk-informed financing tools through thorough landscaping and problem definition. The sequential approach detailed above meant we were able to develop a holistic set of potential triggers, including epidemiological, policy/contextual, and operational triggers, and we were able to recommend ways to formalise emerging innovations rather than impose new solutions that had not been tested in the organisational context. This workflow also meant our efforts were targeted at the *most* salient decisions and at financing for the *most* dominant cost drivers associated with this specific risk, rather than for niche decisions or risks with limited applicability to decision-makers' more general problems.

LESSON 3
Design with humility and learn by doing

From the outset we were determined to derive solutions that solved problems for decision-makers, without forcing objectivity, automaticity or financial innovation where they were not perceived to be helpful. Three key factors enabled this approach.

First, we were able to assemble a virtual multidisciplinary team, combining the Centre's risk financing expertise with IRC specialists in health emergencies, emergency finance, logistics and supply chain management, cost efficiency, crisis analysis, preparedness, and in-country operations. A core team made part-time contributions to this project, with each member bringing a unique perspective to each stage of the process:

- Emergency health and finance specialists were central to our **retrospective analysis**, shedding light on how and why certain financing decisions were made during the COVID-19 outbreak.
- These colleagues and IRC's crisis analysts were central to our mapping of the **context and identification of risks** associated with COVID-19.
- Logisticians and preparedness specialists, and colleagues working on IRC emergency health programs in a sample of countries, were critical in describing likely **money out** systems, while humanitarian economists provided unique insights into dominant cost drivers.
- The four potential **trigger** options that we identified above were derived through conversations with specialists in each domain, including epidemiologists, colleagues managing procurement and logistics under different lockdown regimes, colleagues in Country Programs managing and reporting on inventories of key inputs, and emergency finance colleagues.
- Emergency finance and risk financing specialists were particularly helpful in conceptualising new **money-in** tools, including bringing additional structure to innovations that emerged during 2020.

Working through this process over a six month period allowed us to combine different skill sets at different stages. This process demonstrated to colleagues where their insights were most valuable and where others' perspectives complemented their own, allowing the team to jointly contribute more than the sum of its parts.

Second, we were able to create space for colleagues to contribute their diverse perspectives through generous funding from the Centre, which in turn is supported by the UK Government. This funding allowed IRC staff, most of whom are funded only to deliver direct humanitarian impact, to contribute their deep expertise and experience with complex crisis risks and humanitarian funding. This project would not have been possible without their expertise; yet our experience is that too often donors interested in humanitarian innovation prefer to back wild new ideas with little operational grounding, instead of providing funding to learn from practitioners - people who innovate and iterate out of necessity, to better manage complex crisis risks every day.

Finally, we were able to pursue an exploratory process thanks to backing from leaders at IRC and at the Centre. Such an approach presented an important communications challenge, as we sought to generate buy-in within our organisations by articulating the *potential* of risk-informed financing, without over-specifying or prescribing certain solutions from the outset. We also required latitude to reverse course when critical feedback from decision-makers suggested we were heading in the wrong direction. We are grateful to leadership in both of our organisations, who were willing to back this process with their insights and challenge, staff time and (in the Centre's case) funding.

BLUEPRINT

At the outset, we had planned to develop a blueprint for 'a more comprehensive crisis financing structure that combines predictable financing for long-term, predictable needs; financing based on early-warning signals for foreseeable risks; and effective contingency financing for unforeseeable uncertainty.' Five months on and this objective now feels at odds with the problem-driven approach that we have found to be critical and that we recommend in this paper. From our research it is clear that no single 'comprehensive crisis financing *structure*' will be applicable in all contexts.

Instead, we present here a process that we hope will provide a useful workflow for others exploring the role of triggers and risk-informed financing tools in their organisations. We hope that this is a timely contribution, as organisations reflect on the stresses created by COVID-19, and start to strengthen and reform their financing toolkit ahead of the next crisis. The process described below applies and adapts the Centre for Disaster Protection's Quality Assurance Framework. We attempt to identify the sorts of analysis and expertise that could add value at each stage of the workflow.

We recognise that presenting a process rather than a financial instrument or an analytical tool is an unusual output from a project of this nature. However, our research shows that it is critical for each organisation to develop decision-making processes and financial tools tailored for their mandates, the risks they manage, their clients, their technical strengths and their ways of working. As importantly, we assess following a process of this nature can build organisational capital, by developing a common vocabulary to more efficiently communicate and that by sharing capacity among diverse specialisations.

STEP 1 - RETROSPECTIVE ANALYSIS AND INSTITUTIONAL CONTEXT	
What?	Description how funding has historically flowed into and out of the organisation, before, when and after relevant crisis risks manifest.
How?	☐ Analysis of organisational fundraising and expenditure data, following funds from source (money-in) through the organisation and along downstream delivery chains (money-out). ☐ Key informant interviews to identify and map decision-points along this flow and to understand why and how financing decisions have historically been made, including use of triggers. ☐ Process mapping, to understand project management and financial controls that apply to each financial flow.
STEP 2 - RISK AND NEED ANALYSIS	
What?	Clear articulation of the crisis risk(s) in scope; the impact on crisis-affected people, communities and countries if the risk(s) manifest; and the likelihood that risk(s) will manifest over different time horizons.
How?	☐ Key informant interviews with people, communities and clients exposed to the risks in scope. ☐ Analysis of historic trends in key indicators associated with the risk, identifying baseline, downside and upside scenarios. Where data are adequate this trend analysis could be formalised into hazard models that simulate the likely behaviour of key risk indicators in the future. ☐ Key informant interviews with thematic and operational experts who have experience managing this risk type or comparable risks in comparable settings.
STEP 3 - MONEY OUT	
What?	Operational contingency plans and budgets, where possible building on established preparedness and planning products and processes.
How?	☐ Clear articulation of the organisation's response strategy if the risk(s) in scope were to manifest. ☐ Stress testing existing operational contingency plans and budgets against specified response strategy under the scenarios identified in Step 2. ☐ Key informant interviews with thematic and operational experts, and with at-risk communities, to identify ways to strengthen contingency plans where vulnerabilities are identified through stress tests. ☐ Cost analysis to prepare contingent budgets for activities within operational contingency plans, separating start-up fixed costs from variable costs under each scenario.
STEP 4 - TRIGGERS	
What?	Set of moments in a crisis that can be foreseen, and the impact and likelihood of which can be assessed. In practice, this means a set of qualitative and quantitative indicators that can be tracked, and thresholds beyond which actions and resources in contingency plans will be triggered.
How?	☐ Identify time-varying quantitative indicators that are correlated with the need to act or even more directly with the costs budgeted under Step 3. These could include indicators related to the risk itself, contextual indicators that affect operations and costs, and operational indicators relating directly to key cost drivers. ☐ Identify qualitative information that those involved in response and those affected by the crisis directly collect, which could be used to inform request-led triggers. ☐ Scenario analysis and key informant interviews with budget holders and operational responders to derive appropriate thresholds on each indicator and to establish a proportionate request process and decision-making protocol (where relevant).

STEP 5 - MONEY IN	
What?	Clear contingent financing plans to cover key cost drivers in the operational contingency plan when risk(s) manifest, ensuring that funding will be made available at the right place at the right time when trigger thresholds are crossed.
How?	☐ Assess the extent to which existing financing options established at the organisation could provide the required cash flow, in terms of scale, timeliness, and back-up alternatives if a given instrument fails. Common options include budget reallocations, use of flexible internal contingency funds, use of overdraft or liquidity facilities, and risk transfer instruments. ☐ Analyse the extent to which additional financing instruments could augment existing options, comparing the incremental gain to any direct financial costs, such as premiums or interest payments, and transaction costs. ☐ Analyse how different instruments could be combined (sequenced or layered) to provide confidence that the required cash flow will be available when required?
STEP 6 - PROCESS	
What?	Clear, proportionate program management, financial and fiduciary controls needed to ensure and demonstrate effectiveness and good value for money.
How?	☐ Clear articulation of existing compliance requirements, whether required by external funders or internal policies and processes. ☐ Analysis of incremental requirements associated with any new financial instruments, including analysis of potential gains in impact and transaction costs. ☐ Clear articulation of learning strategy, to ensure the organisation and partners adapt and iteratively enhancing action and financing for crisis risks.
STEP 7 - LEARNING	
What?	Systematically captured evidence, communicated to enhance decision-making within the organisation and (where appropriate) shared with other organisations.
How?	☐ Impact assessment against key criteria, including the speed with which resources were disbursed and the timing of action for people affected by humanitarian crises and any incremental costs associated with new ways of working and financing. ☐ Process learning, to identify the challenges and opportunities associated with altering decision-making processes and financial flows. This learning should include insights from those closest to affected communities.

Endnotes

1. See https://coronavirus.jhu.edu/map.html
2. For a discussion of the relationship between COVID-19 and violent conflict, see Mustasilta (2020) From Bad to Worse? The Impacts of COVID-19 on Conflict Dynamics, retrieved 29 March 2021
3. World Bank Food Security and COVID-19, retrieved 29 March 2021
4. Poole, L., Clarke, D., and Swithern, S. (2020) The Future of Crisis Financing: A Call to Action, retrieved 29 March 2021
5. See https://www.disasterprotection.org/quality-assurance
6. Source: https://coronavirus.jhu.edu/map.html
7. Source: https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker
8. Blavatnik School of Government, University of Oxford, Oxford COVID-19 Government Response Tracker retrieved 29 March 2021.

About the Centre for Disaster Protection

The Centre for Disaster Protection works to find better ways to stop disasters devastating lives, by supporting countries and the international system to better manage risks. The Centre is funded with UK aid through the UK government.

About the Airbel Impact Lab

The Airbel Impact Lab, the research and innovation team of the International Rescue Committee, designs, tests and scales life-changing solutions for people affected by conflict and disaster. Our aim is to find the most impactful and cost-effective products, services, and delivery systems possible. Airbel works to develop breakthrough solutions by combining creativity and rigor, openness and expertise, and a desire to think afresh with the experience of a large-scale implementing organization.

CENTRE FOR DISASTER PROTECTION

Airbel Impact Lab

CONTACT US
airbel@rescue.org