



Special Series on COVID-19

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Central Bank Operational Risk Considerations for COVID-19¹

This note discusses how central banks could respond to the heightened operational risks posed by the global spread of the COVID-19 virus and highlights the importance of developing a risk management framework that can ensure that critical operations are maintained, and employee health adequately safeguarded. The Annex includes examples of specific central bank practices for illustrative purposes.

Ideally, the central bank should have a clear risk management framework in place that would also include Business Continuity Management (BCM). A risk management framework allows the central bank to identify, mitigate, report, and monitor the risks it faces. This would include specific policies and tools for addressing financial and nonfinancial risks (i.e., operational, legal, and reputational risks), as well as identifying key internal stakeholders (management, business departments, risk management, and internal audit), and ensuring clear and effective reporting lines and decision-making structures.² BCM is a specific area of central bank risk management that focuses on preparing for sudden-crisis events through the development of plans to ensure that critical operations can be maintained, and the well-being of employees safeguarded.³ This would include sudden and high-impact risks relating to COVID-19.⁴

Central bank operational risks related to COVID-19 manifest themselves through processes, and people:

- (i) Processes such as decision-making arrangements, reporting lines, communication processes; and
- (ii) people-related issues that would include employee work-health arrangements; implementing protective health measures within central bank premises and branches; in-house basic medical facilities; proper training;

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² See, for instance, Khan, A., 2016, Central Bank Governance and The Role of Nonfinancial Risk Management. IMF Working Paper 16/34. Washington, D.C.: International Monetary Fund.

³ In particular, business continuity and disaster recovery plans.

⁴ Detailed information can be found in the BIS' High-Level Business Continuity Principles for the Financial Sector, as well as via the International Operational Risk Working Group (IORWG, www.iorwg.org), which consists of central bank risk managers. The IORWG has developed, based on best practices of its members, various tools to facilitate central bank risk management, including BCM development.

and the provision of health informational materials. The risks include potential future legal consequences associated with central bank actions or inaction.

Reputational risks could emerge as well. Failure to manage the COVID-19 crisis could ultimately lead to a lack of public trust in the efficiency and effectiveness of the central bank, its policies, and its operations.

I. OPERATIONAL RESPONSES FOR CENTRAL BANKS

Central banks should routinely update and test their business continuity and disaster recovery plans.

Most central banks have full Business Continuity Plans (BCP) with detailed processes and controls, while others have partial BCP setups (IT and payment systems) to mitigate the impact of central bank business disruption on the financial sector. Whether from natural or man-made disasters, any impairment to critical central bank functions, such as to the operation of systemically important payment systems (SIPS), could undermine the provision of financial services and potentially have adverse consequences for financial stability and confidence in the central bank at a crucial juncture.

COVID-19 presents a unique risk where a traditional BCP measure such as relocating staff to a secondary site may not sufficiently mitigate the risk. The operation of systems at both the primary and the secondary sites can be impeded by the infection of central bank staff or quarantines (particularly if affecting critical system operators).

Central banks should, therefore, establish a robust COVID-19 operational risk-management framework, including setting up a COVID-19 Committee.⁵ The committee or team should monitor COVID-19 developments, analyze operational impacts, take necessary actions within the central bank mandate, and coordinate preparations and actions with key internal and external stakeholders (especially with government, other regulators, and regulated entities). The objective of the committee would be to ensure business continuity and operation of critical functions and systems, including disaster recovery measures. It should include executive decision-makers and representatives of relevant departments in the central bank (including risk management, internal audit, IT, security, communication/press office, and HR). The committee could (depending on the legal framework) also involve nonexecutives or members of the oversight body.

II. COVID-19 COMMITTEE ACTIONS TO CONSIDER

- **Ensure effective coordination and cooperation with key stakeholders.** This would include identifying and establishing upfront decision-making arrangements (for instance, ideally by means of Memorandums of Understanding with government agencies and other stakeholders, or quick arrangements if such MOUs are not possible), and establishing effective means of communication with these counterparts in the crisis (ad hoc meetings, teleconferences, hotlines, etc.).
- **While the incidence of COVID-19 varies from one jurisdiction to another, the central bank should develop its own COVID-19 contagion impact scenario planning and prepare for a range of contingencies (including severe scenarios).** The committee should internalize and quickly activate

⁵ Ideally, a central bank's existing risk management framework should allow identification, mitigation, reporting, and monitoring of risks relating to COVID-19. When such a framework is not present, or not sufficiently implemented, an ad hoc structure to deal with COVID-19 would be needed.

pre-planned actions as developments unfold (e.g., closed schools, quarantine of areas, coworker(s) suspected or confirmed to be infected, development of clusters of infections, or failed containment).

- **Pre-planned actions should aim to ensure the safety of premises and staff through extra health and security measures.** These measures should include, inter alia, adopting social-distancing measures to limit spread of the virus; enhanced health and hygiene protocols; reviewing and adapting staff leave policies for the care of children and ill family members; ensuring access to hand hygiene facilities (for instance, hand sanitizers); arranging for full sanitization of premises; and giving special attention to staff in contact with the public and in handling cash such as tellers and cashiers. The central bank could consider testing work-from-home procedures and running Financial Market Infrastructures' (FMI) operations partially remotely, designating key essential personnel for critical operations, splitting critical teams into physically separated units at different locations to ensure continuity of function, requiring backup staff to shelter at home to reduce infection risk, and to the largest extent possible, replacing physical meetings with virtual meetings.
- **Develop a communication plan with stakeholders for each COVID-19 contagion phase and pre-plan committee-approved priority actions and related messages in each of the contagion scenarios.** The advance preparation of internal memos and external press releases would reduce crisis response time. This would also include memos to central bank staff, regulated entities, and the public at large. The central bank should also be prepared to respond to rumors through regular communication and updates to clearly communicate when and why plans are activated, and ensure consistency in messaging to all stakeholders.
- **Define FMI risk management procedures.** Critical system operators such as FMI should define and communicate the operational procedures in the crisis with both internal and external counterparties and stakeholders. Operators should provide any relevant information to the counterparties and stakeholders or their customers on the status and changes to the operations of the payment services during the disruption period.

The Annex includes more specific practices that central banks could employ, and constraints that central banks face, in combatting COVID-19 from a central bank operational risk perspective.

Consideration of Cash Currency Management in response to COVID-19 will depend on the circumstances and extent of contagion of the virus and well as views about potential risks. While a number of central banks in advanced economies have assessed the risk of COVID-19 spreading via banknotes as limited, other central banks view such risks as potentially material, but face resource constraints in addressing them (especially emerging and low-income countries). The costs involved with the large-scale printing and redistribution of new banknotes—or sanitization of existing banknotes—are substantial, and might dissuade many central banks from taking these steps. As the phases of COVID-19 unfold, central banks will need to base their actions on an assessment that balances these costs against the possible risk that banknotes become another conduit for the spread of the virus, which could undermine public confidence that they can use banknotes safely as well as cause reputational damage to central banks.

Central banks could consider limiting or halting the distribution of cash distribution to heavily infected areas. The central bank could introduce measures such as halting distribution between affected provinces and/or to the central bank to reduce the risk of further spread of the virus; requiring commercial banks to sanitize banknotes by use of ultraviolet disinfection or high temperature treatment; and storing banknotes for more than 14 days before issuing them to the public. The People's Bank of China (PBOC) took such unprecedented measures and withdrew banknotes from circulation in heavily infected areas (such as hospitals and farmers' markets in China) as well as injected new or sanitized banknotes to support epidemic prevention and control

and maintain public confidence in the banknotes. Additionally, central banks may encourage the use of electronic payments (possibly by reducing or eliminating fees during the crisis period), as well as examine the introduction of increased use of newer polymer banknotes⁶ that are less likely to transmit the virus. To be successful, these measures will have to be a part of an overall comprehensive national mitigation and response strategy, and are clearly dependent on country-specific circumstances as noted above.

⁶ Polymer banknotes are currently in use in a wide variety of countries, including: Albania, Armenia, Australia, Botswana, Brunei, Cambodia, Canada, Cape Verde, Chile, Egypt, Gambia, Maldives, Mauritania, Mexico, Morocco, New Zealand, Nicaragua, Nicaragua, Nigeria, North Macedonia, Organization of Eastern Caribbean States (OECS), Papua New Guinea, Romania, Russia, Samoa, São Tomé and Príncipe, Solomon Islands, Trinidad and Tobago, United Kingdom, and Vietnam. Note that any considerations to introduce or increase the number of polymer banknotes in circulation, would need to be seen in the light of other cash currency management concerns as well (such as the overall denomination structure, printing costs, public communication, and logistics).

ANNEX. Overview of Possible COVID-19 Central Bank Risk Management Measures⁷

| # | Category | Risk Management Measures | Constraints |
|---|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Staff-related measures | <ul style="list-style-type: none"> • Teleworking: varying from 70%, 80%, 95% to 99%. Staff still at central bank are mostly for banknote distribution, payment systems, security, as well as some IT staff. In some cases, all staff are split in teams to minimize staff presence at the bank at any one time, and sanitization of offices is conducted between team switchovers. • Cross-training of staff for critical central bank functions to ensure sufficient staff availability. • Severely restricted or banned travel, events, public interaction (all central banks). • Mental stress / lack of morale sets in quickly – additional measures taken to increase social contact (such as online staff birthday parties; team virtual hangouts); in some cases, working hours are reduced. • Central bank healthcare contact points to answer questions from staff. • Healthcare department supports Crisis Board and staff: give advice, control number of ill staff, quarantine of each one and keep availability of staff update. | <ul style="list-style-type: none"> • Cross-training of staff for critical functions is complicated in working-at-home environment (suggestion: have junior staff listen in on selected technical discussions). |
| 2 | Board / Management involvement | <ul style="list-style-type: none"> • Dedicated COVID-19 and/or crisis management committee set up – enhanced reporting to Governor and the Board on mitigation measures (varying from daily, 3 times a week, to once a week), or • Business Continuity Committee expanded with all heads of departments. • In some cases, Board approved the main measures undertaken. | <ul style="list-style-type: none"> • Support from Board or Management at early stage of the crisis is sometimes difficult, as COVID-19 effects are not fully clear. |
| 3 | Communication | <ul style="list-style-type: none"> • Internal: avoiding fake news, boosting morale (videos or messages by Governor and by the Board) providing info on health care services, clear feedback from Board / Management. • External: public communication, as well as sharing information with stakeholders (ministries, other regulators). • In some cases, crisis communication actions were needed after a confirmed case was detected among bank's staff, as well as to avoid fake news. | <ul style="list-style-type: none"> • Difficult to keep up with continuously changing news; central bank needs to be proactive, fast, and accurate. |

⁷ For illustrative purposes only, and based on informal discussions with Heads of Risk Management Departments from selected central banks.

| # | Category | Risk Management Measures | Constraints |
|---|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Interaction with financial sector | <ul style="list-style-type: none"> Identifying and sharing best practices in COVID-19 risk management together with financial institutions. Onsite supervision cancelled. Reducing reporting requirements (frequency, simplified contents, and term extensions). Recommendations on fulfilling role in accordance with Government measures (moratory of payments, dividend policy) | |
| 5 | IT & cyber-security | <ul style="list-style-type: none"> Large-scale issuing of hardware (laptops), including delivering these to staff at home and authorizing use of private laptop in some cases. Opening IT systems for remote access and implementing the necessary prerequisites/requirements. Installing additional software (Citrix, Microsoft Teams, OTP applications). Identify crucial third parties (especially for cloud computing and general IT infrastructure). Basic telephone lists drafted and distributed among staff in case regular infrastructure fails. Additional penetration tests conducted to assess IT vulnerabilities. Increased staff awareness activities, especially relating to phishing (all central banks) and information protection. Central bank VPN monitored 24x7 by cyber security division. | <ul style="list-style-type: none"> Almost no central bank had deployed or tested telework (working-at-home) in a large-scale in the past. Cyber risk is biggest concern, especially with weak endpoints (e.g., private laptops, including for critical services), and limited data-protection measures. Phishing attacks on staff are on the increase. Unclear whether IT infrastructure can support this situation in the mid- to long-run / cracks appearing. |
| 6 | Overall risk management | <ul style="list-style-type: none"> Examining if existing legislation and measures are sufficient for (policy and operational) responses. Increasing monetary policy risk tolerance to allow easier access to liquidity. Examining overall effects of monetary policy measures on risk exposure of central bank Reviewing risk appetite. Strategic risk assessment needed to see if central bank can still achieve its (legal) mandate – need to reprioritize objectives, including postponing larger projects. Risk Management Department (RMD) plays key role in collecting bank-wide information for Management & Board. In some cases, RMD powers are significantly expanded to collect risk data directly from departments without departmental management involved. BCM planning were not sufficient (these kinds of extreme scenarios were never included / tested). Some banks had to define new strategies based on worst case scenarios. | <ul style="list-style-type: none"> Legal and reputational risks emerging due to central banks conducting additional (policy) measures, changed public opinion, and effects on financial institutions. |

| # | Category | Risk Management Measures | Constraints |
|---|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| | | <ul style="list-style-type: none"> • Enhanced assessments of critical functions, and staff (when less than 6 people can perform a critical activity). For some central banks critical processes were expanded from the 'normal' 50 to currently 300 – due to predications based on an extended 90-day window for COVID-19 effects • Extension of BCM scope to all central bank activities, including those who were initially considered non-critical. • Development of new internal risk templates to minimize administrative burden on departments. | |
| 7 | Cash currency management | <ul style="list-style-type: none"> • Minimized interpersonal contacts by more shifts, social distancing, additional cleaning/sanitization of buildings and equipment including between shifts. • Quarantining of banknotes between 7 to 15 days. • Still some limited interaction with financial institutions in the form of cash deliveries; no more printing of new banknotes, no more sorting of banknotes and no more flights with banknotes. No sanitization of banknotes was carried out by central banks. • Strategic stock of banknotes in branches is increased to 3 months. • Active encouragement of electronic payments and online transactions (by reducing or eliminating usage fees during the crisis period) | <ul style="list-style-type: none"> • Cash currency management is most sensitive area for new COVID-19 central bank infections. |