



Bank Supervision Department

**Hurricane Preparedness Survey
Summary Results**

Dated: 15 February, 2021

General Overview

Although the experience of Hurricane Dorian, a major Category 5 storm, demonstrated the vulnerabilities associated with the supply of domestic financial services, risks are also posed to operations providing international services from within The Bahamas. This includes potential displacement from physical premises, disruption of access to public utilities and impacts on employees who are essential to maintaining operations. In this regard, in 2020, the Central Bank of The Bahamas sought to assess the preparedness of its supervised financial institutions (SFIs), and to identify ways in which the infrastructure could be made more resilient. On the whole, both domestic and international institutions maintain reasonable business continuity plans (BCPs) to manage recoveries from disruptions. Many institutions maintain contingency support systems, located outside The Bahamas, and a majority backup their data outside of the jurisdiction. For domestic banks and credit unions, digital delivery channels are an important part of the planned resilience against prolonged service outages, underscoring the importance of placing mobile banking and payments access within the reach of a greater share of the population. That said, climate related threats from major storms that could impact The Bahamas highlight scope to improve the resilience of systems relied upon to communicate individually with customers, to protect and assist essential employees who might be displaced, and to more strenuously fortify operating premises and housed utilities from storm damage, including flooding.

The Hurricane Preparedness Survey was issued on 20 July 2020 to all active SFIs, presenting the scenario where a Category 5 Hurricane strikes both New Providence and Grand Bahama, causing catastrophic physical damage. Questions posed related to the operational impact of such a storm and business recovery prospects. Participants included in the survey were international and domestic banks, trust companies, credit unions, money transmission businesses and non-licencee registered representatives. Some 94 (85%) of the 110 surveyed institutions responded; this included, but was not limited to, all of the domestic banks¹, four credit unions and five money transmission businesses (MTBs). Responses covered 42 questions addressing the nature of business continuity arrangements, the impact to operations (including local retail activity), client contacts, information technology (IT) data backup/ IT disaster recovery and general SFI readiness.

The key results are summarized below.

Results

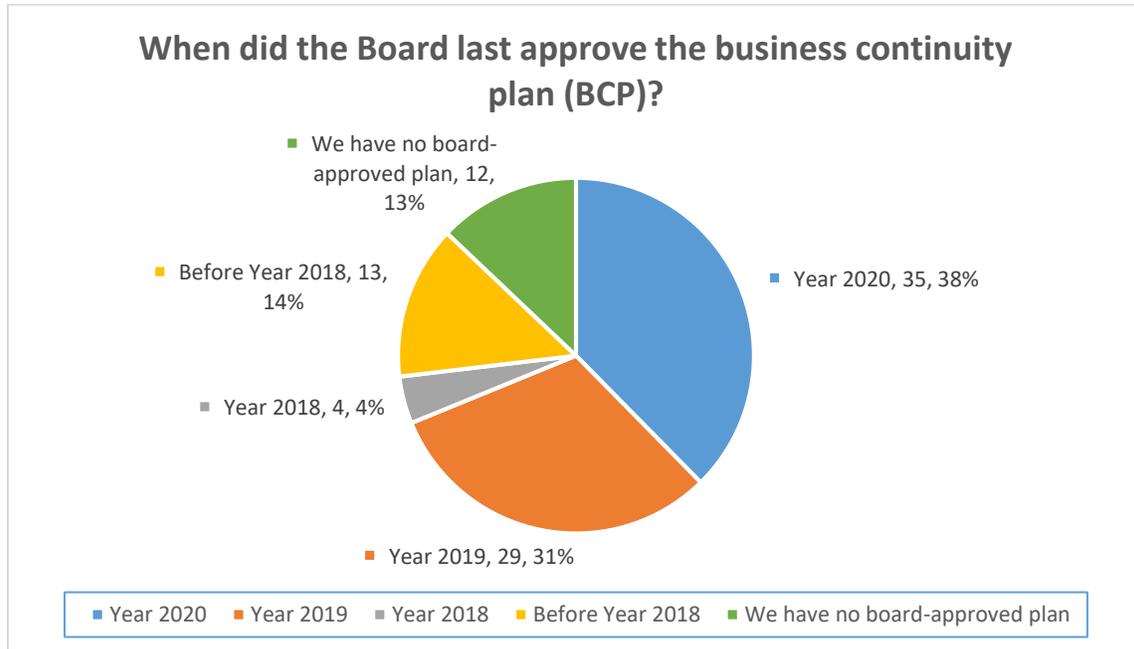
Business Continuity Planning

Formal business continuity plans exist widely in the industry, with most respondents (87%) reporting board-approved arrangements. 73% of existing plans were last ratified in 2018 or later (See Chart 1). Regarding domestic entities, two of the seven domestic systemically important banks (DSIBs) disclosed that their BCPs were approved as recently as 2020, while one reported an approval before 2018. The other four DSIBs had senior management-approved plans. Of the four credit unions (CUs), three reported board approved plans pre-dating 2018 and one had a plan approved in 2020. Of the five money transmission businesses (MTBs) responding, two reported board approved BCPs from 2020 and three had plans approved in 2019. Some SFIs in the international sector explained that business continuity

¹ Domestic Banks include the 7 Domestic Systemically Important Banks (DSIBs) who are active in the local retail market and one commercial bank not active in the retail market.

arrangements were supported through service-level agreements with their affiliated group entity. Therefore, these SFIs reported that there were no formally approved plans.

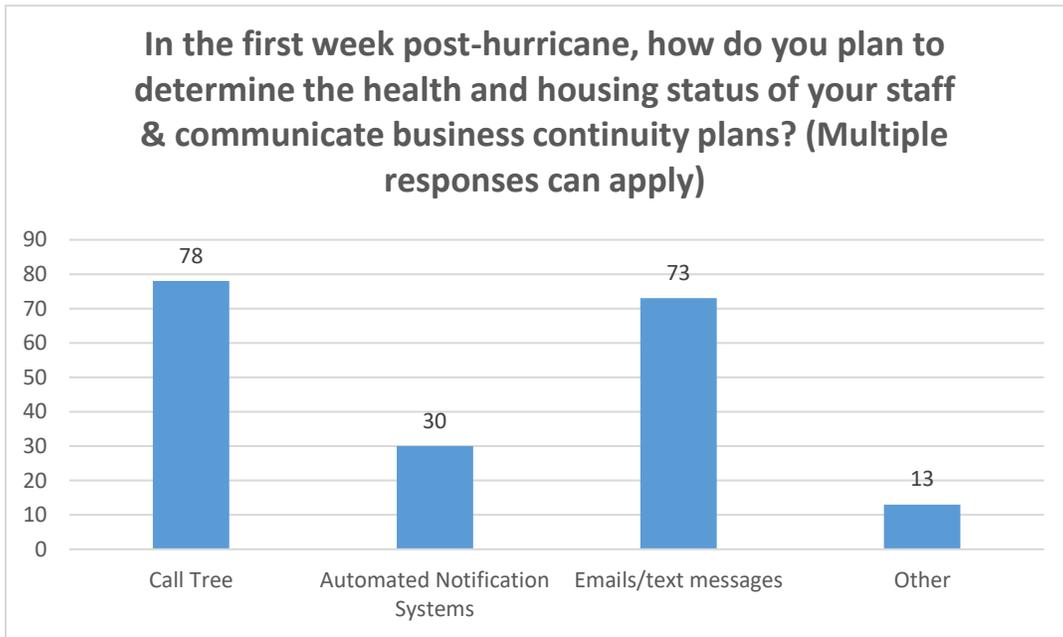
Chart 1



As to the frequency of plan reviews, 83% of respondents reported this was at least an annual process, while an estimated 87% of the plans already contemplated a Category 5 hurricane.

As a broad observation, the industry’s BCP arrangements for data, computers, and telecommunications appear sound although strengthening may be warranted in some areas. The arrangements for buildings, although generally sound, require a bit more work. Entities could also better plan for staff displacement from damaged housing or physical injuries that could impeded their employees’ ability to report for duty. In particular, 70% of respondents lack provisions to respond to injuries or loss of housing among staff. Most SFIs reported plans to assist staff, such as with evacuation, setting up temporary housing, locating shelters, and access to medical care. Respondents also disclosed how they planned to ascertain the health and housing status of staff. All respondents have staff communications arrangements in place, with reliance on a mix of telephone calls, email and text messaging (See Chart 2).

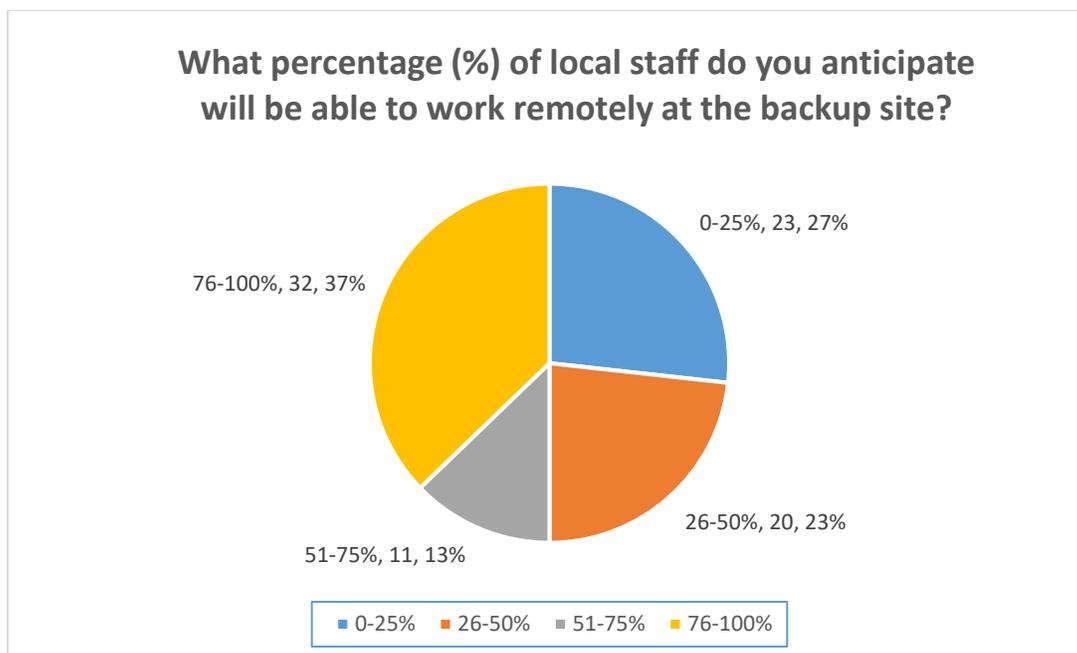
Chart 2



Regarding local office building soundness, 84% of SFIs expressed confidence that their occupied structures met local building codes, though the dates of confirmation of code compliance varied. For 32% of SFIs this verification was done in 2018. 25% of firms have never confirmed building code compliance explicitly.

Entities also have to plan for alternative occupancy arrangements in the event of storm damage or other displacements. Such contingent arrangements were confirmed by 92% of the respondents. For 53% backup environment was located outside The Bahamas, while 44% disclosed alternative locations on New Providence. Respondents reported various levels of work capacity for the backup environment. In 37% of the instances, at least 75% of the staff would be able to work from such remote sites; although in a majority of cases these arrangements were never intended to fit more than half of the staff (see Chart 3).

Chart 3



To sustain confidence in the arrangements, BCPs also require periodic testing. In this regard, 87% of respondents reported testing their plans in 2019 or later, with 98% of tests maintaining or increasing confidence in plans. Regarding adjustments when highlighted, SFIs appeared to be strengthening their hurricane preparedness arrangements.

Among domestic entities, seven of eight domestic commercial banks tested their plans in either 2020 or 2019. Similarly, three of the four responding credit unions performed tests in 2019; and one completed such prior to 2019. Meanwhile, two of the five MTBs conducted tests in 2020; and three, in 2019. International Bank and Trust companies reported testing their plans in either 2020 or 2019 in 62 of 69 cases. 3 reported testing before 2019, and 4 have not tested their plan. The Central Bank will look to ensure that all BCPs are regularly tested.

When asked which third line of defense measures were in place to test their plans, 55% of SFIs indicated reliance on internal audit reviews; 12% supplemented the internal audits with specialist consultants; 8% relied on only specialists; while the remaining firms used “other” methods.

Infrastructure Resilience

Firms also responded on their degree of exposure to storm surges that would place floodwater into their premises (see Table 1).

Table 1 -What level of storm surge will place floodwater into your main building, including basement (if any)?

Under 8 ft	9	10%
8ft to under 12 ft	14	15%
12ft to under 16ft	16	17%
16ft to under 20ft	9	10%
20ft to 24ft	7	8%
over 24ft	19	20%
Uncertain	19	20%

Given the Category 5 hurricane scenario presented, 75% of respondents reported being satisfied that their assumptions on preparedness were sufficiently robust. The remaining 25% indicated that their assumptions were not sufficiently robust, but they plan to strengthen their preparations.

Recovery of Domestic Services

Business continuity sites for retail banking IT operations were disclosed to be outside The Bahamas for five of the seven DSIBs, including in Canada and the Caribbean.

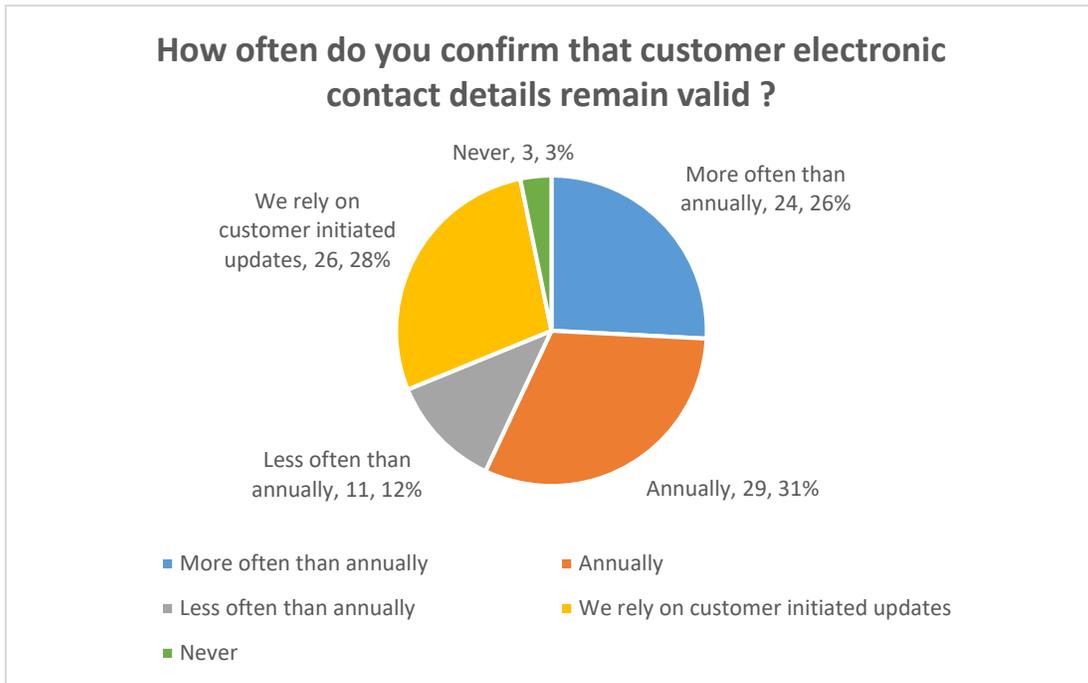
For credit unions, three out of the four maintained backup sites within The Bahamas; and one, inside the USA. Presuming retail banking buildings and ATMs were unavailable, each of the seven DSIB banks reported being able to provide retail clients with Internet, telephone or mobile banking. For the same question, three of the four credit unions offering internet banking services and all four provided telephone or mobile banking services.

Faced with a Category 5 hurricane on New Providence, the DSIBs and credit unions assessed that they would be able to restore phone and internet banking within a few days. As physical service channels could be significantly delayed, increased access to digital options throughout the populations is essential. In particular, use of electronic payments systems could be enabled as soon as mobile phone service were restored. This could be a difference a few days rather than weeks or longer for physical systems to be repaired.

Client Contacts

Although financial institutions reported reasonably strong outcomes around their ability to contact customers following a major hurricane, the Central Bank considers that this is an area where improved practice is still necessary, and will work with industry towards this result. In particular, 80% of respondents disclosed that they had more than one means to contact over three quarters of their clients. This is noteworthy as many clients might also be displaced from their physical addresses after a category 5 hurricane. However, as to the reliability of electronic means of reaching customers, the results varied. Only 57% of SFIs confirm the electronic contact details of customers at least annually (See Chart 4).

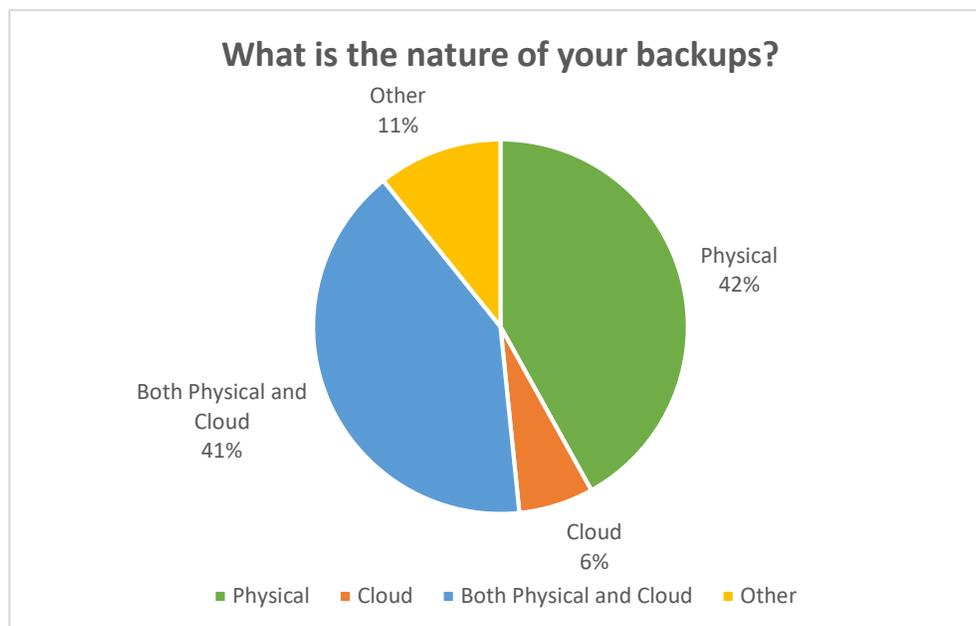
Chart 4



Back-up Data and IT Disaster Recovery

Financial institutions reported use of multiple data storage locations and practices and in most cases, more than one method was employed. While customer and transaction data backups were reported to be stored locally, within The Bahamas, by 52% of respondents, a higher fraction (75%) maintained backup storage outside the jurisdiction. Also 26% of respondents reported use of cloud storage. Virtually all respondents reported that their customer and transaction data were under their direct control. As to the approach to data backup, approaches were mixed between physical and cloud systems, with 42% of respondents using physical systems only; 6% relied on cloud services only; and 41% used both methods (see Chart 5).

Chart 5



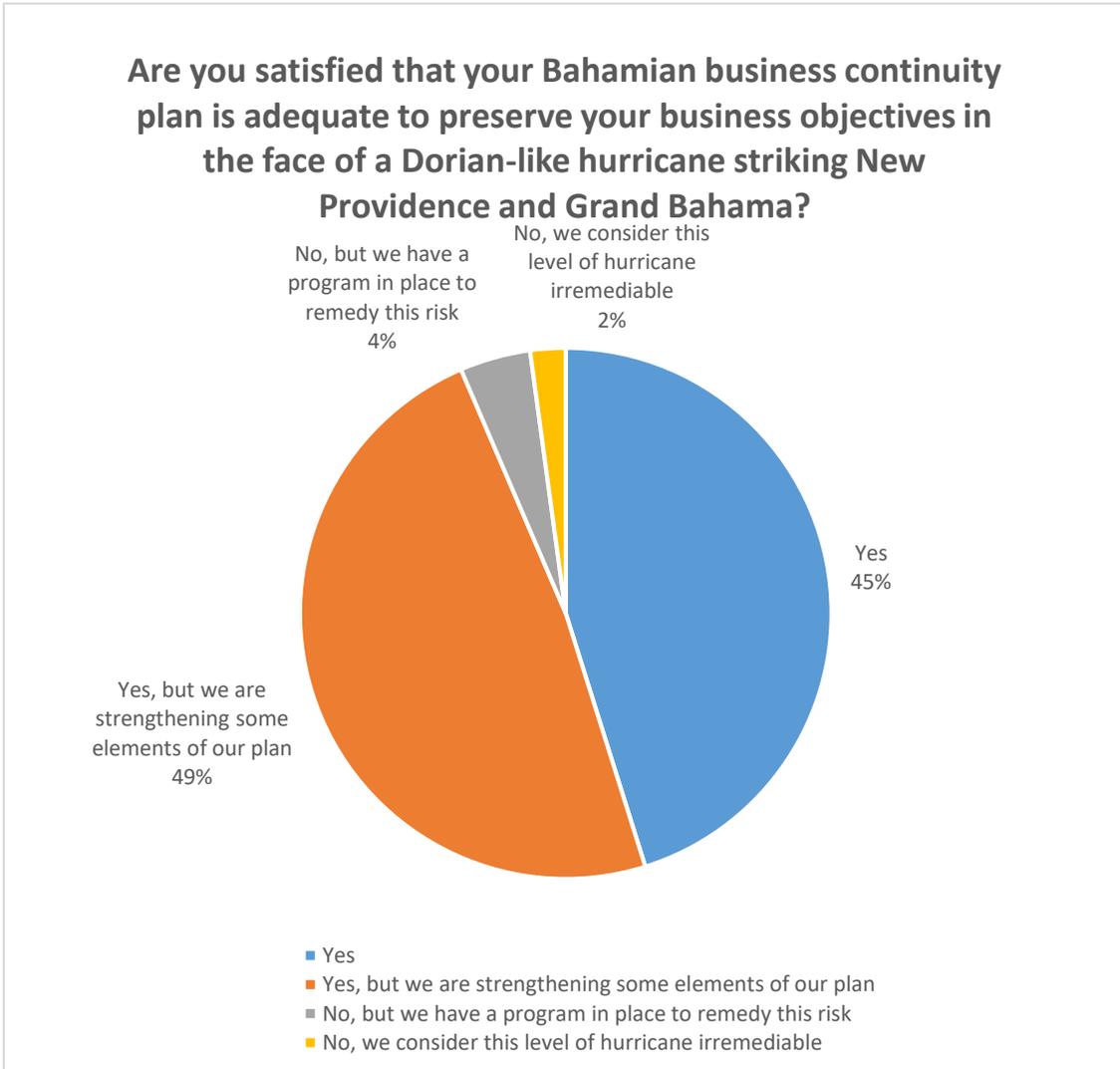
Recovery from Disaster

In the survey scenario of a major storm, 85% of respondents reported that their IT disaster recovery plan would be fully activated, 10% reported partial activation, while 5% would take other approaches. In this, 78% of firms were confident that they could fully meet their targeted time frames to have critical operations restored. For 20% of firms, however, their established recovery time objectives (RTOs) would be partial, although more than half achieved.

As to the maximum tolerable period for disruptions (MTPD) (i.e. how long an organization could function without IT) some 20% reported that a major storm would push them beyond the tolerance. This was due to potential limitations on back-up power systems without refueling and in the absence of functional telecommunications services.

SFIs also commented on whether continuity plans were adequate to preserve their business objectives in the event of a catastrophic hurricane (See Chart 6). Some 94% responded in the affirmative, with confidence bolstered by use of off-site locations and technology systems back-ups. Respondents acknowledged the extraordinary challenge of conducting business locally in the aftermath of a hurricane but appeared confident that available support outside of the country would enable a continuance of some operations. Nevertheless, an appreciable level of responses were qualified along the lines of "...making [their] preparations even stronger." The Central Bank considers this a healthy industry response to the lessons of Dorian, and the implications of climate change more broadly.

Chart 6



Conclusion

The Central Bank’s hurricane preparedness survey results indicate a high confidence from supervised financial institutions in their ability to recover and operate in the aftermath of a catastrophic storm. The results also acknowledge needed strengthening of elements of business continuity plans and preparation.

SFIs have devoted considerable and useful effort in one of the most obvious risks facing the Bahamian financial sector. Going forward, the Central Bank would like to see continuing improvement in the following areas:

- 1) Core buildings, whether owned or leased, need to withstand Category 5 hurricanes, and plausible associated storm surge. Alternatively, SFIs will need business continuity plans that contemplate the absence of access to damaged buildings for weeks to months.

- 2) Resilience should also extend to information technology, telecommunications and electrical systems. Avoiding placement of critical infrastructure in basements of flood-exposed structures, for example, is a strategy worth consideration.
- 3) Most SFIs need to think more holistically about staff impacts from a catastrophic storm. This includes in the first instance ensuring that employees can be contacted, and their welfare assessed. From that point, SFIs need plans in place to ensure that staff who are expected to work during the BCP period have the housing, security and family arrangements in place to facilitate this availability. Staff who are not needed to work in the early BCP stages are nonetheless also necessary to preserve in as good order as possible, to support operations recovery. The Central Bank intends to ask relevant industry groups to evolve an agreed code of good practice in this area.
- 4) Emergency contact arrangements for customers would also benefit from strengthened industry practices. For both disaster recovery and anti-money laundering risk management reasons, it has become apparent that SFIs need multiple and primarily electronic means to contact customers. Furthermore, these contacts need reasonably frequent confirmation to keep them up to date.

The Central Bank of The Bahamas has been encouraged that the results of this survey largely confirm prior expectations that the Bahamian financial sector recognizes and is taking effective steps to manage hurricane risk. While more work remains to be done, particularly in the context of increased likelihood of catastrophic hurricanes, it can proceed from a sound foundation.