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Resilience Impact Securities with Equity (RISE): How to Finance and Democratise Resilience-Building in the Post-COVID-19 Era

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1. Background and introduction

Caribbean economies have been on a downward trajectory. In the recent past, the Caribbean's average GDP per capita on a purchasing power parity (PPP)¹ basis exceeded the global average, but around the year 2016, it fell below. Analysis by the Caribbean Development Bank (CDB) suggests that if this trend continues, the Caribbean region could be among the most deprived in the world by 2050, due to the inherent vulnerabilities of Caribbean small states.

Figure 1 summarises vulnerabilities within the Caribbean that contribute to the Caribbean's poor economic performance. These vulnerabilities include an exposure to macroeconomic

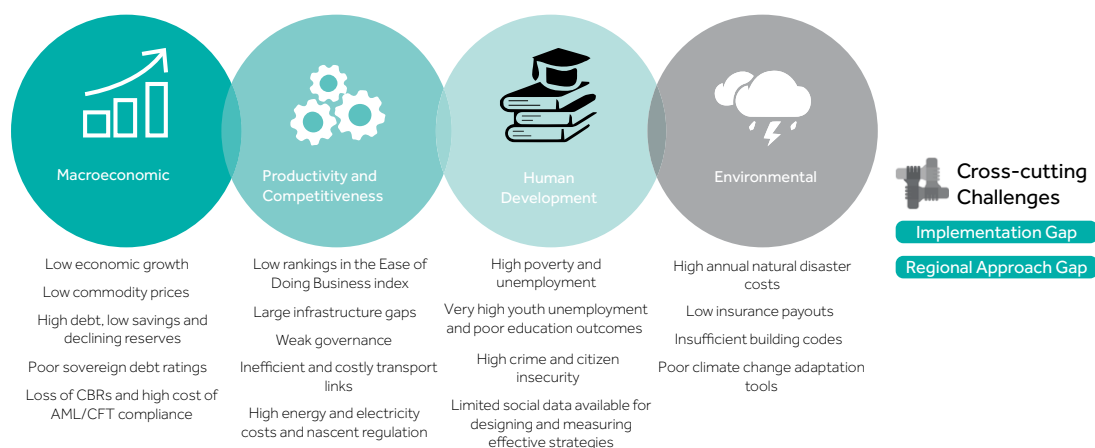
shock due to limited fiscal buffers and high debt levels. Caribbean economies also face productivity and competitiveness constraints due to sector concentrations and a lack of diversification owing to high energy costs and challenging business environments. Further, human development and social weaknesses associated with high unemployment, particularly among the young, and high poverty and high crime rates have a significant impact on economic performance. Of most significance is the Caribbean's vulnerability to weather-related phenomena such as storms and hurricanes, which cause significant losses estimated at around 2 per cent of GDP per year (CDB 2018; IMF 2016).

This overall vulnerability has been assessed by Ram et al. (2019) who compile a Multidimensional Vulnerability Index (MVI) for the region (Ram et al. 2019). The MVI seeks to determine the economic, social and environmental vulnerabilities of the Caribbean. The MVI scores for Caribbean countries show that vulnerabilities are pervasive across all three dimensions.

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1 PPP measures the quantity of a currency needed to purchase a given unit of a good, or common basket of goods and services. Thus, purchasing power is determined by the relative cost of living and inflation rates in different countries. PPP equalises the purchasing power of two currencies by accounting for the cost of living and inflation differences.

Figure 1. Summary of Caribbean challenges and vulnerabilities



Source: CDB (Caribbean Development Bank) (2018)

Some of the vulnerabilities, such as export concentration and dependence on fossil fuels, are economically structural. Others such as high poverty and crime rates are due to structures of society. At the same time, environmental vulnerabilities such as susceptibility to climate change and natural events are due to small size and geographic location.

The recent and ongoing COVID-19 pandemic has again laid bare the extreme vulnerabilities that the Caribbean faces. These countries are ill-prepared to weather the pandemic, given their limited fiscal space and foreign exchange reserves. Therefore, building resilience to all types of exogenous shocks is critical.

However, the Caribbean faces a difficult choice between investing in building resilience to an uncertain event in the future, or investing in an urgent social need today. Due to the Caribbean's high economic, social and environmental vulnerabilities, these are the tradeoffs that Caribbean policymakers face daily. Nonetheless, these choices are false dichotomies as research has shown that a significant component of indebtedness in the Caribbean is associated with rebuilding efforts after natural events. With considerable expenditure going to post-disaster rehabilitation and rebuilding, there are fewer resources for investment in critical areas such as poverty alleviation (CBD 2013).

The circularity and feedback loops within Caribbean economies means that Caribbean policymakers must begin to value future avoided costs as much as they value the alleviation of current societal challenges like poverty. The problem that the Caribbean must confront is that the existing financial architecture does not incentivise resilience-building and avoiding future costs.

This issue of *Small States Matters* explores a concept that seeks, through the correct incentives, to attract much-needed capital for resilience-building. The idea or framework is referred to as Resilience Impact Securities with Equity (RISE). RISE is a financing framework that seeks to incentivise ex-ante resilience-building. The concept is elaborated on in this paper, with the view to build resilience across all vulnerability dimensions including economic, social and environmental and now health, given the COVID-19 pandemic.

“The recent and ongoing COVID-19 pandemic has again laid bare the extreme vulnerabilities that the Caribbean faces.”

2. Costs associated with vulnerabilities in the case of natural disasters

To fully understand why building resilience makes sense, it is crucial to understand the costs associated with vulnerabilities. Since Caribbean vulnerabilities related to natural events are well known, for illustrative purposes the paper will first examine the costs associated with natural disasters to highlight why the Caribbean needs to build resilience and therefore why financing with the correct incentives is critical.

The severity of impacts and the frequency of natural events have increased. This makes it challenging to insure adequately against the costs associated with such events. This dilemma is not unique to the Caribbean. A recent *Financial Times* article (FT 2020) highlighted the difficulties of insuring against flooding in the UK and the USA. According to Aon, a large reinsurer, the worldwide economic cost of flooding in 2019 was US\$82 billion, but only US\$13 billion of that was insured (AON 2019). In addition to the difficulties of insuring against natural events, regardless of geographical location, climate change is increasing the frequency and severity of weather-related activity. This makes risk transfer more painful and expensive.

“Risk transfer is currently costly.”

The changes in weather patterns and global temperatures make insuring unpredictable and, if left to the market, premiums would be very costly. There are two types of insurance to consider at this stage: (i) the traditional insurance policy and (ii) parametric insurance. Parametric insurance is dependent on the triggering events and not any quantification of damages and losses. Parametric insurance provides immediate liquidity and assists with cash flow but rarely compensates for the full extent of losses associated with disasters. For this reason, parametric insurance is not a replacement for traditional insurance policies.

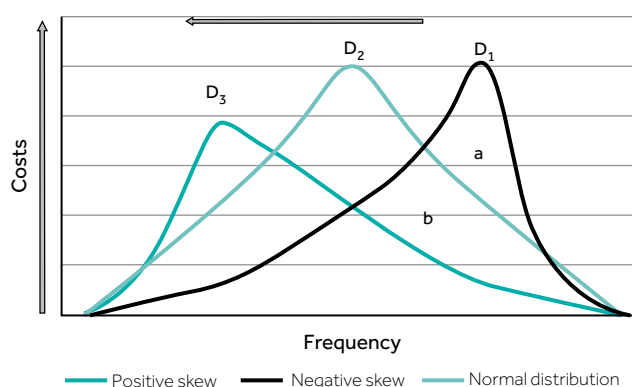
However, the conventional insurance policy can be expensive for many countries; added to this is the fact that premiums tend to increase as payouts increase. As a result, the more damage and losses caused by disasters the more cost restrictive such policies become, at a time when insurance is most needed.

As previously stated, the Caribbean has experienced an increase in the frequency and strength of disasters over the last two decades – mainly tropical weather systems. This increased activity resulted in higher financial costs and, in many cases, affected the medium-term economic performance of these economies. As these impacts increased, so too did insurance premiums, with higher insurance rates of between 10 per cent and 40 per cent observed across the hotel industry (Travel Agent Central 2017). Detrimentally, premiums increased for the entire region and not only the affected countries. This risk-pooling practice symbolises the shared vulnerability of the Caribbean region and the need for regional solutions, as not all risks can effectively be pooled at the national level. For the Caribbean region to return to par or below par premiums, the countries too must all concurrently mitigate and manage risk against potential losses due to natural hazards. This resilient approach will lead to lower claims – despite the number and strength of hazards – and can reduce the risk of underinsurance in the region. The resulting reduced cost of underwriting will then set lower premiums, not only at the corporate level but also for households.

3. Shifting the bell curve

In effect, building resilience refers to shifting the existing distribution curves. Figure 2 demonstrates the pooled risk effect that pervades insurance pricing in the region. Curve D_1 is the current reality, a negatively skewed distribution where the highest frequency of hazards results in high recovery costs to the region. This scenario indicates a higher cost of natural events that drives insurance providers to increase premiums to the entire portfolio of countries whether the disaster had any impact

Figure 2. Hypothetical shifting of exogenous shock or natural event distribution curves



on their local population. One of the tasks for this paper is to consider how to shift the 'bell curve' so that living in the Caribbean can be 'normalised' (reduce vulnerabilities) and ensure that the majority of possible future losses can be avoided, or adequately insured against.

Building resilience will shift the distribution curve to D_2 . This means a reduced number of high-cost disasters through better planning and more robust infrastructure. In this scenario, the disasters more frequently result in a perceived mid-point of cost impacts. In some sense, this gets the region on par with the likely impact of such a disaster in other countries. The area labelled 'a' represents the 'consumer gain' from a lower frequency of high-cost disasters. This gain reduces the payout by insurance companies and translates into lower premiums, assuming standard insurance costing procedures. In the longer-term, and with continued investments in resilient strategies and improvements in regulation, the same number of hazards will result in a higher frequency of low-cost disasters; this positively skewed distribution (D_3) further increases the consumer gain by the area labelled 'b'. The total benefit from continuously building resilience today is the sum of areas 'a+b'. The same holds true where less costly hazards reduce the insurance premiums to the consumers of insurance across the region.

This is the premise of adapting to climate change and building resilience – bringing some semblance of normality to the distribution of

events concerning costs and thus reducing or nullifying the impact of severe hazards.

Therefore, while mitigation of carbon emissions and other greenhouse gases is necessary, the stock of these gases already in the atmosphere means that, in the Caribbean, we can expect the frequency and severity of the natural events to continue increasing. To counter this risk, the region must invest in resilience today to reduce future costs and return the bell curve to a normal distribution or skew the curve positively to the left as D_3 in Figure 2.

4. Financing resilience

The need to shift the bell curve to the left and have a more normal distribution is imperative. Nonetheless, the ability to finance resilience-building is less clear. Caribbean governments do not have the fiscal space to invest in resilience given the high cost of infrastructure; for example, when attempting to build an airport capable of withstanding a category five hurricane. The Caribbean region requires innovative financing mechanisms and risk-mitigation strategies to help build resilience, including mechanisms that will incentivise ex-ante resilience-building to avoid future economic losses from natural events or other exogenous shocks, and to allow insurance premiums to be less costly.

Given costs and the shape and location of the distribution curve, traditional financing mechanisms cannot raise the quantum of

resources needed. Resilience Impact Securities with Equity, or RISE, is one approach that could be deployed to attract adequate capital for resilience-building in the Caribbean.

The concept of resilience bonds is known and catastrophe bonds, including the World Bank's CAT-DDO product, have been in existence for some time. Catastrophe bonds and the CAT-DDO product are bonds that trigger a payout or capital loss for investors when a stipulated shock occurs; as such, catastrophe bonds are still focused on ex-post financing. Traditional resilience bonds in the literature focus on a resilience rebate which equates to the difference between the expected losses when the catastrophe happens with and without the project (Shalini and Rhodes 2018). The RISE framework presented in this paper incentivises ex-ante resilience-building and continuous resilience-building. It also seeks to democratise investments over time.

5. Resilience Impact Securities with Equity (RISE) – converting vulnerability into investment opportunity

Given the many vulnerability challenges that Caribbean countries, firms and individuals face, there is a need for an overarching mechanism that turns these challenges into investable opportunities. Resilience Impact Securities with Equity could achieve the objective of incentivising the private sector, governments, lenders, individuals and possibly donors, to collaborate within a framework to invest in building resilience and transform avoided future losses into future revenue or profit flows. The Resilience Impact Security with Equity is a type of security that has as its objective five primary outcomes:

1. Build ex-ante resilience.
2. Continuously seek to improve an asset's or programme's resilience over time.
3. Provide continuous incentives to both the issuers and creditors to build and maintain resilience over time.
4. Convert vulnerability into investment opportunities.
5. Democratise resilience investments.

How does it work?

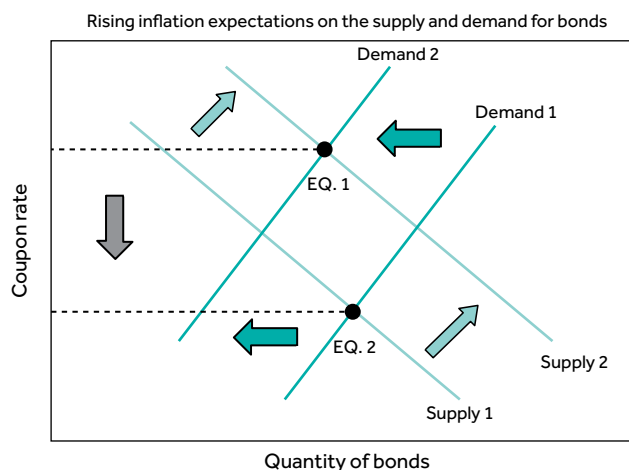
Conventional bonds are instruments issued in the market to raise funds for a particular purpose. Bonds are bought by investors and pay a defined coupon or interest rate. As the bond is traded, there is an inverse relationship between the price of the bond and the interest rate dividend paid on the bond. For example, if a bond has an initial face value of \$100 and a coupon or yield of 10 per cent (\$10 p.a.), then if the bond is traded and the price increases to \$110, the yield of \$10 remains but the percentage of the price paid, the yield, would decline to 9 per cent. The coupon or interest rate that investors are willing to accept will typically depend on inflation expectations and the credit rating of the entity or country selling the bonds. The lower inflation expectations are, the lower the coupon rate/yield that bond investors would be willing to accept for buying the bond.

As Figure 3 shows, higher inflation expectations and lower credit ratings will decrease demand for bonds and increase their supply; these factors result in lower bond prices and higher interest rates. Bond investors, therefore, rely on Central Banks, which provide forward guidance on inflation and hence interest rates. Investors also rely on credit rating agencies that assess the creditworthiness of the entity or country selling or backing the bonds. These ratings or actions by the independent entities provide essential information to investors about whether to buy the bond or not, at what price and what the expected yield should be.

Resilience credit rating agency

Resilient Impact Securities with Equity or RISE would operate like a typical bond, but with the added incentives for the issuer to build resilience and for the creditor to want the issuer to build resilience. The coupon that RISE investors are willing to accept will depend on inflation expectations, creditworthiness and vulnerability expectations. Higher vulnerability expectations will decrease demand for RISE and increase their supply – factors which will result in lower bond prices and higher interest

Figure 3. Supply and demand for conventional bonds



rates. For RISE to work, investors need to be sure about vulnerability and expected losses as well as the upside rewards. This requires an independent resilience or vulnerability credit rating agency – an agency accepted by all parties as being separate and providing vulnerability assessments of the entity, asset, programme or country selling the bonds. For RISE to work there will need to be an independent 'resilience credit rating agency' providing periodic ratings of the asset or programme for which the proceeds of the RISE will be used to build ex-ante resilience or ongoing resilience improvements.

This new resilience credit rating agency needs to be credible and trusted by all parties. The methodologies for rating various types of resilience such as infrastructure resilience, building economic resilience, fiscal resilience or social resilience will need to be transparent so that all parties to the transaction including the issuer, creditors, builders and technicians are

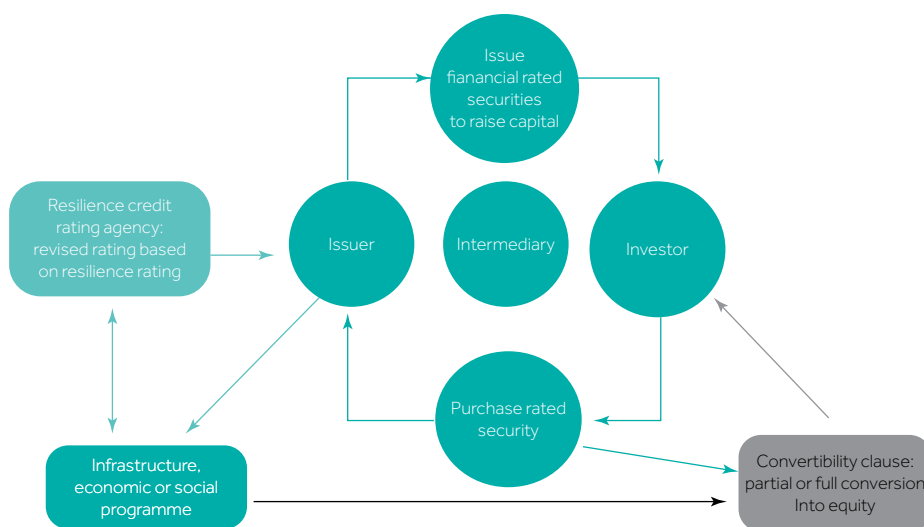
“This new resilience credit rating agency needs to be credible and trusted by all parties.”

familiar with it. Like the operations of existing credit rating agencies, the resilience credit rating agency would provide a resilience opinion about the infrastructure, economic or social programme that the bond resources were applied to.

Figure 4 shows how an issue rated security is used to raise capital. The blue flow lines show the typical path associated with issuing rated securities to raise capital. With the RISE, there is an additional step that would be required when issuing a resilient impact bond, and this is shown with the red flow lines. After the infrastructure has been built or the economic or social programme has begun, the resilience credit rating agency issues a resilience credit rating of the asset or reform programme based on transparent methodology and data. This credit rating is given to the issuer and investors, at which point the coupon is revised to reflect the resilience credit rating. The resilience objective that the RISE is aimed at achieving should be made clear in advance; for example, to build an airport that is resilient to category five hurricanes or to achieve a certain level of per capita fiscal savings.

There could also be an additional step, whereby investors are rewarded for helping the issuer avoid future costs and reap the rewards of higher profits or growth associated with

Figure 4. Capital raising through rated securities with resilience credit rating and convertibility clauses



business continuity if there is a shock in the future. This is the resilience dividend, shown as the yellow box in Figure 4.

Figure 5 gives an illustration of possible resilience credit ratings as well as the corresponding potential yield or interest rates on the RISE. For example, an asset built to withstand a category five hurricane would have significantly more upfront costs than a comparable asset built to withstand a category one storm or with no rating. However, if the first asset is built to withstand category five hurricanes, this asset could receive a rating of triple AAA. Although it would cost more initially to build, the coupon or yield on the bonds would be less (1% to 2%).² The second asset, although costing less, because it is built to withstand only up to category one storms could receive a rating of B+/-, meaning that the cost of the bonds would be in the range of 4 to 6 per cent. RISE, therefore, provides an incentive to invest in upfront resilience via the reduced cost of capital.

Although the resilience credit agency has been described as operating as a typical

credit rating agency, it is envisaged that with algorithms and a digital platform, the resilience credit rating could be automated and thus eliminate human biases or errors. However, this would depend on the preferences of the regulators and investors (institutional and retail).

Incentives for building ex-ante resilience and continuous resilience-building

Although RISE provide the initial incentive to build ex-ante resilience, RISE also has additional mechanisms to incentivise continuous resilience-building. The first incentive includes a clause within the bond contract that stipulates that there will be a moratorium on interest payments if at any time the asset becomes inoperable after a stipulated exogenous shock such as a natural event or global economic collapse. The RISE is also an impact investment tool, an incentivisation tool for both the issuer of the RISE and the creditor or purchaser of the RISE. The RISE provides the entity issuing the RISE with the incentive to invest in resilience via a lower cost of capital. With higher resilience, there is now a higher probability of business continuity if there is a crisis, shock or event.

Thus, ex-ante resilience-building leads to a higher likelihood of business continuity and

² Based on, for example, internationally recognised building codes, land use zoning, impact of climate forecasting.

Figure 5. Illustrative resilience credit rating

	Issuer rating	+	Asset rating	10-year interest
High ↑ ↓ Low	AAA		Bonds of highest quality and offer the lowest degree of investment risk. Asset demonstrates stability and resilience to all conditions.	1% - 2%
	AA (+ -)		Bonds of high quality by resilience standards. Asset carries a singly higher degree of long-term investment risk	2% - 3%
	A (+ -)			
	BBB (+ -)		Bonds of high medium grade. Adverse conditions may impair asset functionality.	3% - 4%
	BB (+ -)		Bonds of lower medium grade. Asset is less vulnerable in the near-term. Continued operability is less certain in the long-term given exposure to possible adverse conditions.	4% - 6%
	B (+ -)			
	CCC		Speculative bond. Asset is operational, but vulnerable. Adverse environmental and social shocks will likely impair asset's functionality, and possibly may activate the moratorium clause.	6% - 12%
	CC			
	C			
	D		Asset is not operable, but showing signs of significant deterioration.	--

therefore avoided future costs, making the entity or programme more viable and possibly more profitable over time, i.e. risks are weighted more on the upside. This contrasts with the existing distribution curve where the risks are weighted on the downside (D1 in Figure 2). It is therefore essential that investors who have provided upfront capital at very competitive rates to shift the distribution curve to the left and thus support the likelihood of business continuity (in the event of an exogenous shock) should share in the future rewards of the project. These incentives are what make RISE different from traditional investment instruments or bonds. The RISE framework is intended to incentivise both the investor and issuer of the RISE to help shift the Caribbean in the desired direction towards the building of ex-ante resilience. These incentive clauses are discussed in more detail below.

RISE moratorium clause

The RISE includes a RISE moratorium clause on payments of interest if, at any time during the bond tenure, the asset or programme becomes impaired or non-functional due to specified shock criteria such as a category three hurricane, global economic shock or even a decline in GDP. Thus, interest on the bonds is non-payable by the issuer while the asset³ is non-functional or the programme has been impaired. The bond issuer would then be in a position to use these deferred interest payments to rebuild the asset to its original specification, or to a higher level of specification so that the asset can once more become functional. The RISE moratorium clause is an essential component of the RISE as it provides incentives for both the issuer and the buyers

³ Asset refers to physical asset or policy programme.

of the RISE to ensure that the asset is built as resilient as possible. The issuer wants the asset to be functional at all times for business continuity, such as after a natural event, to avoid unnecessary or excessive lost economic activity and financial losses. Likewise, buyers want the asset to be functional so that the moratorium clause is not triggered, leading to deferred interest payments.

RISE impact clause – incentivising continuous resilience-building

The RISE framework could also have an additional incentive included in the financing contract. Bond issuers could decide to what level of resilience they want to build, given their existing budget constraints. The resilience credit score of the asset (provided by the independent resilience rating agency) would reflect this level of resilience, e.g. B- as in Figure 5. The interest on the RISE would reflect this resilience rating (4% to 6%). The resilience bond could have an additional incentive such as sustainability-linked loans, where borrowers (bond issuers) are rewarded (or penalised) based on the outcome of the annual resilience credit rating of their asset. Thus, if the asset becomes more resilient over time, for example if the owners of the asset placed utility corridors underground, or invest in mangroves to prevent flooding associated with tidal surges or improve fiscal resilience by increasing the per capita savings in the sovereign wealth fund, the interest rate on the bond decreases. However, if the resilience of the asset decreases the interest rate rises. With these clauses in place, if the resilience of the asset is assessed in a subsequent year and has improved to A+ from B-, then the interest on the bonds decreases to a range of between 2 and 3 per cent from a range of 4 to 6 per cent. This becomes the RISE resilience sustainability clause, which provides an incentive for an asset owner to continuously seek to improve the resilience of the asset and decrease the cost of funds. The buyers or holders of the RISE are also incentivised to provide more resources for ongoing resilience-

building, or become actively involved bond stakeholders, since the more resilient the asset becomes the greater level of business continuity the asset has and the more secure bond interest payments become.

“If the RISE were used to build fiscal resilience, or macroeconomic resilience, it could also attract a dividend based on economic performance.”

Resilience dividend: resilience convertibility clause

Investors or creditors should also share in the benefits associated with continuous resilience-building or business continuity. Since building ex-ante resilience will lead to a higher probability of business continuity or avoided future costs in the event that there is a crisis, investors should have an option in the future to receive a resilience dividend payment or upside risks payment from the issuer of the RISE. This means that the owners of each RISE could receive a dividend payment from the issuer by exercising an option to convert, over time, a proportion of each bond or the entire bond into preferred stock or equity. This is the convertibility option of RISE, which means that investors initially incentivise the ex-ante resilience-building via providing low-cost financing associated with resilience credit ratings, but over time could share in the upside associated with resilience (business continuity and higher profits), by converting a proportion or the entire RISE into equity of the entity that sold the RISE initially. The RISE is converted

into equity of the entity that was used to back the RISE or for which the bond capital was used to build resilience. This conversion means that the RISE (now a stock or equity) attracts periodic dividend payments and capital gains depending on the financial performance of the entity.

If the RISE were used to build fiscal resilience, or macroeconomic resilience, it could also attract a dividend based on economic performance. For example, there could be resilience dividend payment linked to GDP growth above an agreed threshold.

6. RISE example

Using the example of an airport, how would the RISE work? If the owner of the airport wants to build or refurbish their asset to a specified resilience level, for example to withstand a category five hurricane, by:

- i. building/upgrading a new terminal and runway to withstand strong winds (252 km/h or higher) and be above any flood risks or tidal surges associated with a hurricane; and
- ii. incorporating into the airport's master plan a stipulation to become 100 per cent energy sufficient through the use of renewable energy and storage;

investors would first provide the necessary amount of funds to build to the specified resilience, e.g. US\$200 million. A financial intermediary, financiers or financing syndicate could agree to provide resources for a bridging loan to build or upgrade the asset. After the asset has been built or refurbished, the independent resilience credit rating agency evaluates and surveys the property to determine the asset's level of resilience. If the asset is certified as meeting the resilience requirements to withstand a category five hurricane, a triple AAA rating might be provided. If not, then a lower rating is provided. The coupon of the resilience bonds is dependent on the resilience rating and the bridging loan is converted into RISE.

It would be necessary for the independent resilience credit rating agency to appraise

the resilience of the asset once a year to determine if the asset's resilience rating has been maintained, has improved, or has deteriorated. Depending on the annual resilience credit rating scores, the interest on the bonds could be adjusted accordingly. The RISE contracts for the airport would include the RISE moratorium clause and the RISE impact clause to provide continuous incentives to maintain or improve resilience over time. RISE contracts would also include the convertibility clause. As the airport avoids future costs associated with an event, the airport operator has improved business continuity and more sustainable profits. Resilient Impact Securities with Equity holders could, therefore, exercise their right (or not) to convert an agreed proportion of their RISE into equity stocks and receive periodic dividends and, potentially, capital gains.

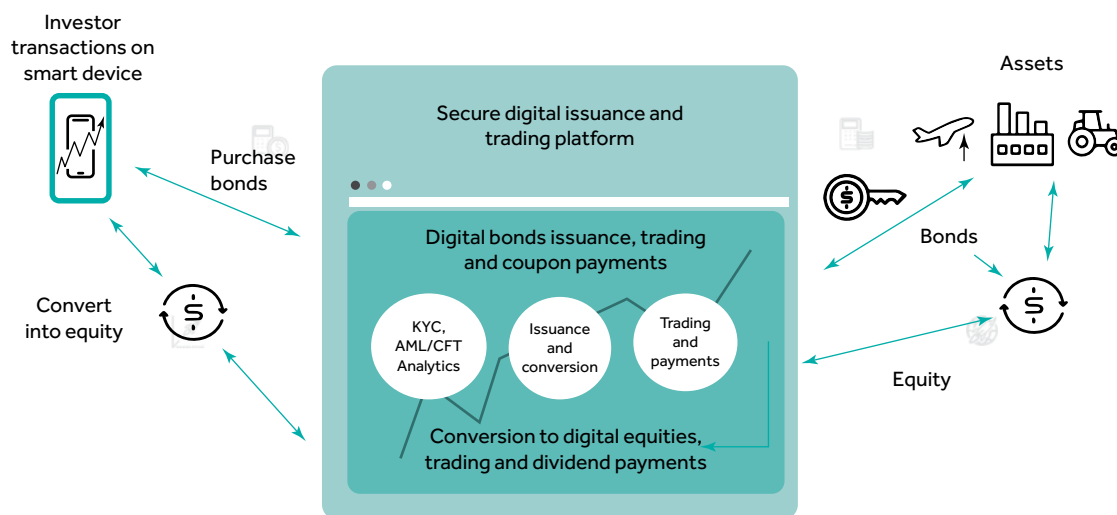
A proportion of the RISE remains as the original instrument providing the incentive to the issuer to maintain or improve resilience based on periodic resilience credit ratings. Similarly, a proportion of the RISE is converted into preferred stock, providing an upside reward to the investor as the profitability of the entity improves over time. The airport RISE, therefore, provides incentives to both the issuer and the creditor for ex-ante resilience-building.

7. Democratisation of investments

Resilience Impact Securities with Equity are well suited to investors with long-term horizons such as pension funds and insurance companies that need to have assets that match their liabilities. However, the proposed bonds are also meant to be available to the average investor through the issue and trade via a digital platform or fintech platform. This would significantly reduce transaction costs, as shown in Figure 6.

In the Caribbean, due to the excessive liquidity in the financial sector earning little or no interest in on-demand accounts, RISE can be designed to allow citizens and residents of countries to

Figure 6. RISE issued on a digital platform allows for the democratisation of investments and the lowering of transaction costs



be investors in building the resilience of their homes, communities, public assets or their economies. The proceeds from the RISE could be used for providing soft loans to households to improve the resilience of their roofs or of their homes. The capital raised by the RISE could, as discussed above, be used according to national, corporate or household priorities for building resilience.

This approach could help democratise national resilience-building by making investing in resilience open to the average saver or investor and providing them with an opportunity to also earn a higher interest on their savings, while at the same time shifting their vulnerability bell curve to normality so that their homes, communities and public assets are more resilient. This would make living in the Caribbean more comfortable by reducing vulnerability and reducing the cost of risk, allowing insurance markets to grow. A wide range of participants could, therefore, invest in the resilience of their community or country.

Democratising investment also increases accountability and governance by allowing the average citizen to have a direct financial stake in the development of their community

or country. By having a direct financial stake in building resilience (unlike indirectly through taxes), they share in the profits associated with avoided costs and business continuity. Since they have a direct stake, retail investors would want their investments to earn a fair return. Investors would, therefore, insist that asset managers or programme managers continuously invest in building resilience so that the RISE's resilience credit rating improves and the resilience dividend increases. The democratisation of investment, which gives residents and citizens a direct stake in their community and economy, promotes financial inclusion, governance and resilience.

The safeguards for the average investor would be in place as the independent credit rating agency provides confidence in the security of the asset and the safety of the RISE instrument. Both issuers and investors have significant incentives to ensure that the asset or programme of activities are built to a high level of resilience because of the resilience credit rating, the RISE moratorium clause, RISE sustainability impact clause and the RISE convertibility clause.

“Democratising investment increases accountability and governance by allowing the average citizen to have a direct financial stake in the development of their community or country.”

8. Fiscal policy for resilience

To engender confidence and to develop the RISE market, it is recommended that regional governments enact fiscal rules legislation. These rules enshrine fiscal discipline in law, so that RISE investors can invest with confidence. The rules provide investors with certainty, knowing that they are investing in countries that seek to maintain fiscal discipline, including building fiscal buffers such as sinking funds and sovereign wealth funds, limiting expenditures on budget lines, such as wages and salaries, to a certain percentage of GDP, and transfer and subsidies. Fiscal rules will also foster and improve the business environment, thereby making Caribbean countries attractive for all investors, including RISE investors.

9. Conclusion

Caribbean countries are highly vulnerable. Recent natural events have led to the loss of lives, livelihoods and economic losses. The region is also highly susceptible to exogenous shocks. The ongoing COVID-19 pandemic has once more highlighted the region’s vulnerability. Insuring against such events is difficult, even in countries that have well-functioning and

established insurance markets such as the US and the UK. The effects of climate change also make the weather-related events less predictable as frequency and intensity increase. Exogenous shocks such as COVID-19 can come at any time without warning. The ‘bell curve’ distribution of these events, i.e. the distribution of the intensity of these events and their costs, is shifting to or is now skewed to the right. This suggests that climate change and other shocks such as COVID-19 are bringing a new level of unpredictability with regard to these natural and other exogenous shock events. The Caribbean must adapt and build more resiliently. Building resilience will not eradicate all risks, but by building more resiliently, the bell curve will shift back to the left or place it on a new level of normality, which would make living and investing more comfortable, more predictable and more insurable. Thus, risks can be better managed, allowing citizens, entities and countries to bounce back more quickly in the event of a natural phenomenon or other types of exogenous shocks.

Building resilience is costly initially – there are high upfront costs. Still, the payback is high, given the future potential avoided costs after an event and the benefits of business continuity. There also needs to be an understanding of what it means to build resiliently and for that level of resilience to be certified by an independent resilience credit rating agency.

Resilience-building is not only about improving tangible assets like ports, road or houses; it also refers to building fiscal resilience, social resilience and other types of resilience-building programmes.

The Caribbean needs new financing to help it build resiliently. Traditional financing mechanisms and cost-benefit analyses alone will not solve this problem. There is a need for innovative resilience financing mechanisms. The RISE framework provides an innovative finance mechanism and framework to incentivise ex-ante resilience-building as well as continuous resilience improvements. These incentives are supplied via the RISE moratorium clause,

RISE impact clause, the convertibility clause for investors and an establishment of the independent resilience credit rating agency.

The RISE moratorium clause, impact clause and the convertibility clause for investors can all be used at the same time or individually. Which clauses are utilised will depend on the risk appetite or the type of resilience that is being built. The RISE must, therefore, be adapted to suit the circumstances of the asset or programme of resilience. It is also possible to issue a mutualised RISE, supported by regional governments, with the capital being used to build resilience in every participating country.

“Resilience-building is not only about improving tangible assets like ports, road or houses; it also refers to building fiscal and social resilience.”

RISE are ideally suited to investors with long horizons such as pension plans and life insurance companies, which require assets that match the duration of their liabilities. However, RISE could also be suitable for the ordinary investor. If RISE are issued digitally, then there is the possibility that investing in resilience-building could be democratised and opened up to as many investors as possible. This encourages ordinary savers to invest in the resilience of their homes, communities and country, while at the same time earning a rate of return that is aligned to the level of resilience built with the RISE resources. This could be a novel approach that the Caribbean utilises so that building resilience could foster a co-operative approach

to development and thereby give all citizens and residents a direct and tangible stake in the development of their communities and their countries. RISE can, therefore, enlist the liquidity and savings in the region for resilience-building and development of Caribbean economies.

Finally, Caribbean governments would be best placed and are encouraged to enact fiscal rules legislation that allows the investment climate to become truly conducive to all investment, including RISE investments.

10. References

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