



# Scaling Up Currency Risk Hedging for Low and Lower Middle-Income Countries

## A Proposal to Mitigate Currency Risk at Scale and Mobilize Private Finance for Sustainable Development

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*TCX is a global development finance initiative supported by a shareholder base that includes FMO, KfW, EBRD, EIB, IFC as well as the Dutch, Swiss, British, French and German governments, and the European Commission. TCX protects borrowers in emerging and frontier markets from currency risk by facilitating indexed local currency lending from development finance institutions. TCX offers derivative instruments—cross-currency swaps and FX forwards—in currencies, tenors and sizes where commercial alternatives are absent or inadequate. TCX started operations in 2007 and has since then hedged a total volume of over USD 13 billion in over 70 currencies.*

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## EXECUTIVE SUMMARY

**The purpose of this document is to outline a multitier effort to improve the management of currency risk in cross-border debt finance to LICs/LMICs. This note presents a package of mutually supporting policies and measures to catalyse and incentivize the provision of local currency-denominated loans or hard currency loans indexed to local currency. The rationale behind it is to grow both supply of and demand for (indexed) local currency financing and, at the same time, increase capacity for currency risk solutions.**

We present a quantitative scenario based on specific assumptions about (a) strengthening of MDB responsible lending practices, (b) strengthening of capacities amongst borrowers to quantify and manage currency and interest rate risks, (c) scaling up of TCX and its market creation capacity, and d) the creation of a donor-funded Bridgetown trust fund to improve the affordability of hedging currency risks.

It is now widely established that currency risk can sharply undermine our ability to finance climate goals and the UN Sustainable Development Goals (SDGs). Without urgent action, the unhedged currency exposure of developing economies may triple by 2030 from its already excessive current level of \$2 trillion. This threatens borrowers in LIC/LMICs where currency risk exposure has been the single biggest driver of debt distress.

Nearly all MDB lending to these countries is denominated in hard currencies. Consequently, the burden of currency risk rests on the shoulders of poor economies that are ill-equipped to manage and mitigate it, while sophisticated international lenders are protected.

Such questionable lending practices have been reinforced by market failure. Foreign exchange markets are big with a daily turnover of \$7.5 trillion but remain highly concentrated. Currencies of more than 100 low-income economies account for less than 0.2% of all trading. Even borrowers in more liquid emerging market currencies are not able to obtain long-term hedging protection for infrastructure projects.

In a first effort to address this challenge, TCX was launched in 2007 to facilitate development lending indexed to local currencies, to protect borrowers from currency risk while catalysing risk markets in the currencies of LIC/LMICs. Today, TCX has matured and is ready to be scaled up and expand the scope of its product offerings to improve the management of currency risk for the larger climate and SDG financing flows necessary by 2030.

TCX proposes to expand its currency risk hedging capacity to US\$50 billion and establish a trust fund which provides a concessional guarantee to improve affordability, widen market access and reduce liquidity premia. TCX will also step up its cooperation with MIGA, Frontclear and other specialized insurance and guarantees providers to expand the scope of currency risk hedging by offering deliverable products and substitutes for cash-collateral requirements. As TCX expands its scale and scope, its ability to lay off risks to and mobilize institutional investors and private capital more generally will grow. Greater liquidity for frontier currencies and diversification will further improve affordability of hedging.

In parallel, policy reforms are critical to increase the supply and demand for currency risk solutions. The most important of these reforms would be a tightening of responsible lending practices by MDBs and DFIs. Offering borrowers the option to include currency indexation and other risk-mitigation clauses must become the default practice. To address institutional inertia, MDB owners should set

annual targets for the adoption of local currency/hedging in new lending which should be ratcheted up every year to 2030. Hardwiring a preferential treatment of local currency/hedged borrowing in the review of IMF's debt sustainability and debt limits policy will also be impactful and should be reinforced by capacity building for Debt Management Offices and regulatory reforms that facilitate onshore hedging. These reforms will accelerate currency risk market growth and make it more attractive for large institutional investors to participate, enabling TCX to lay off more risk.

The donor and development finance community has overseen how currency risk has been piled up on low-income borrowers. Now, we have the responsibility and opportunity to promote a more resilient and fairer financing model. Scaling up the mitigation of currency risk is the necessary first step towards this.

## INTRODUCTION

The Bridgetown Initiative correctly identified that, unless proactively addressed at scale, unhedged currency risk undermines any serious efforts to deliver the UN Sustainable Development Goals (SDGs) and tackle climate change. Meeting the global climate financing goal and the SDGs in emerging and developing economies other than China will require annual spending of \$1 trillion by 2025 and \$2.4 trillion by 2030<sup>1</sup>. Of this at least \$1 trillion per year will need to come from external sources<sup>2</sup> by 2030 given the low per capita GDP levels and limited pool of domestic savings that can be activated in many of these countries, particularly in LICs/LMICs<sup>3</sup>. These additional external inflows will likely triple the unhedged currency risks borne by LICs/LMICs from \$2 trillion to \$6 trillion by 2030<sup>4</sup>. Unhedged currency exposure increases macroeconomic risk, raises premiums for credit, and has been the most frequent trigger<sup>5</sup> for past and ongoing debt crises faced by developing economies.

***Currency risk exposure of LICs and LMICs contributes to debt vulnerabilities and threatens their debt sustainability. Past and current lending practices of Multilateral Development Banks (MDBs) have contributed to excessive build-up of currency risk exposure.***

An analysis of nearly 100 currencies since 1971 has shown that, on average, 12.5% of developing country currencies fell by 20% or more against the US dollar in any given year, with 5% falling by over 50%<sup>6</sup>. Everything else being equal, this pushes the local currency value of their hard currency-denominated debt burden up substantially, nearly doubling it for four to five developing economies in any single year.

More than 80% of lending to LICs/LMICs by MDBs and Development Finance Institutions (DFIs) is denominated in hard currencies, especially US dollars<sup>7</sup>. This shifts the exposure to and responsibility for managing currency risk away from sophisticated MDB treasuries on to Debt Management Offices (DMOs) of LICs/LMICs that are severely capacity constrained. It burdens poor and fragile economies facing serious idiosyncratic risk. This practice defies the logic and spirit of the responsible lending principles<sup>8</sup> that the DFIs, MDB and donor community have repeatedly committed to.

The problem of currency risk in the financing of low-income countries has been recognized years ago under the heading “original sin”. Eichengreen et al (2022) highlight that the persistent inability of low-income borrowers to obtain external funding in their local currency may reflect a lack of international investor appetite for obligations denominated in the currencies of small countries. Low-income countries are penalized for not being able to borrow in their own currencies<sup>9</sup> inflicting huge macroeconomic, human and welfare costs of being forced to borrow in hard currencies. The “original sin” has been partially mitigated for large emerging economies, such as Brazil, when investors buy local

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<sup>1</sup> <https://www.orfonline.org/research/the-green-development-and-investment-accelerator/>

<sup>2</sup> <https://repository.uneca.org/bitstream/handle/10855/49154/b12021660.pdf?sequence=1&isAllowed=y>

<sup>3</sup> <https://www.worldbank.org/en/news/feature/2023/03/13/what-you-need-to-know-about-how-ccdrs-estimate-climate-finance-needs>

<sup>4</sup> Authors’ calculations based on part of the SDG funding gap being plugged, but mostly in hard currencies.

<sup>5</sup> <https://www.ft.com/content/59b57504-921c-498c-a1e2-611c524d3bab>

<sup>6</sup> <https://www.txfund.com/wp-content/uploads/2019/01/Development-agencies-turn-to-local-currency-lending.pdf>

<sup>7</sup> [https://niftys.org/wp-content/uploads/2021/07/NIFTYS\\_The\\_International\\_Currency\\_Fund.pdf](https://niftys.org/wp-content/uploads/2021/07/NIFTYS_The_International_Currency_Fund.pdf)

<sup>8</sup> [https://unctad.org/system/files/official-document/gdsddf2012misc1\\_en.pdf](https://unctad.org/system/files/official-document/gdsddf2012misc1_en.pdf)

<sup>9</sup> <https://www.ricardohausmann.com/original-sin>

currency debt<sup>10</sup>. But the problem continues to grow in small and mid-sized low-income economies, where 70-85% of debts are denominated in hard currencies<sup>11,12</sup>.

LICs/LMICs are experiencing what can be best described as a “dollar debt doom loop”<sup>13</sup>.

*“Any adverse event — such as a war, pandemic, or financial crisis — can lead to a flight to (dollar) quality and out of developing country assets. Their currencies then take a hit, their debt servicing costs shoot up, credit ratings are slashed, interest rates skyrocket, and refinancing risks jump, leading to further capital flight, depreciations, and ultimately a potential sovereign default. This dollar debt doom loop is active today. And it turns debt suspension into a senseless instrument that exchanges a big problem today for a much bigger problem tomorrow.”*

All this becomes even more alarming in context of recent World Bank findings about the negative consequences of debt defaults on social development. Defaults increase poverty rates by around 30% in the short term but also leave lasting scars, such as higher infant mortality rates and shorter life expectancy even a decade after defaults<sup>14</sup>.

The World Bank has explicitly stated that currency risk in many IDA countries’ external public borrowing represents one of the biggest financial risks, and the potential impact is intensified by weakening debt sustainability. Recognizing that local capital markets are not able to offer financing in the volumes and tenors required for SDGs in the short or medium-term, solutions already exist to protect borrowers from currency risk in even the most challenging markets.

**TCX has developed a ‘roadmap to financial resilience’ that identifies required policy actions and mandates to significantly increase the supply and demand of currency risk solutions, making borrowers more financially resilient and thus more attractive for private finance.**

**This paper outlines near-term policy measures that are catalytic and realistically deliverable by 2025/2026, as well as a more ambitious mid-term 2030 perspective that is necessary to create currency risk markets at scale.**

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<sup>10</sup> <https://www.ft.com/content/ae4db21e-d2a0-458f-a096-96b5d2d19af0>

<sup>11</sup> <https://news.un.org/en/story/2022/12/1131432>

<sup>12</sup> Eichengreen, Barry, Ricardo Hausmann and Ugo Panizza, 2022.

<sup>13</sup> <https://www.ft.com/content/ef56e83b-4e6c-41b9-b404-ab84da34776f>

<sup>14</sup> <https://openknowledge.worldbank.org/entities/publication/a02dc531-6bd3-5b6d-bdd7-910e3325365d>

## **Measure 1: MDBs should improve responsible lending practices and commit to an (indexed) local currency lending target.**

The quality of development financing is critically important to prevent debt vulnerabilities. Being able to predict debt service (re)payments is part of this and contributes to greater macroeconomic stability and long-term development outcomes<sup>15</sup>. Unhedged hard currency financing has the opposite effect since it exposes borrowers to unpredictable debt levels due to movements in the local currency.

MDBs can contribute to debt predictability and macro-risk transparency by denominating debt in local currencies, or alternatively, hedging hard currency loans. IDA has committed to one pilot transaction for lending in local currencies<sup>16</sup>, which is a useful start, but one that needs to be scaled up rapidly.

### **1.1. The first and most impactful measure is to gradually shift MDB lending from hard currency denomination towards (indexed) local currency loans.**

This shift should logically be led by the concessional lending arms of the MDBs, such as IDA and the ADF. They are the most critical sources of financing for the low-income economies most vulnerable to currency risk and debt distress. This function brings with it special fiduciary lending responsibilities. As discussed at the Paris Summit, the MDBs are recognized trusted partners of treasuries and DMOs in LIDCs and have a special responsibility to help mitigate currency risk by embedding risk-mitigation instruments into their lending products.

In principle, we advocate that development lenders should always offer their public sector and private sector clients the option to add risk mitigation clauses to the standard loan products. These include currency indexation of debt service, debt service conversion clauses, suspension and reduction clauses. Properly informing and advising clients and the broader public about the availability, long-term benefits and pricing of such loan clauses must become part of responsible lending practice in development finance.

The MDBs should not keep the additional risks associated with such clauses on their books but should play a catalytic role in triggering the growth of underlying risk markets. Once a borrower chooses to add a special clause to the MDB loan contract, the MDB treasuries will access risk markets to pass on all or most of the resulting risks. Risk transfer instruments include parametric insurance contracts and cross-currency swaps.

Annual targets for the proportion of lending that includes innovative risk resilient debt clauses will be required to catalyse demand for currency hedging instruments and promote the growth of underlying risk markets. Setting even a modest near-term target of indexing only an additional 2.5% of all new lending to be indexed to the local exchange rate by 2025 will be useful in stimulating both demand and supply. It will also greatly support the build-up of risk capacity at DMOs, as it will stimulate active currency risk management.

Ratcheting up annual lending targets will meaningfully reduce risk while still giving MDBs and borrowers more discretion on a country-by-country basis. The non-concessional arms of the MDBs should also set targets, especially for blend countries that can borrow from both the IBRD and IDA.

At the same time, MDB staff should be incentivized to meet local currency lending targets.

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<sup>15</sup> <https://ideas.repec.org/p/gii/giihei/heidwp09-2020.html>

<sup>16</sup> <https://thedocs.worldbank.org/en/doc/a379b54b77db699b48d4dfa02ce504b8-0410012021/original/draft-IDA20-deputies-report-for-public-comment.pdf>

We propose concrete measures that MDBs can implement to promote (indexed) local currency financing:

<b>Measure 1</b>	<b>World Bank and other multilateral concessional lenders, including ADF, GCF, IFAD</b>
<b>Until 2025</b>	<ul style="list-style-type: none"> <li>• Commit to an additional 2.5% new lending target to be indexed to local currency.</li> <li>• Always proactively offer borrowers <u>the option</u> to borrow in (indexed) local currency and be transparent about the impact of hard currency borrowing on debt sustainability.</li> <li>• Include a ‘loan conversion clause’ in all loan documentation, allowing borrowers to convert to local currency or local currency-indexed loan.</li> </ul>
<b>Until 2030</b>	<ul style="list-style-type: none"> <li>• Commit to an additional 10% of new lending target to be indexed to local currency.</li> </ul>

The resulting increase in (indexed) local currency lending will require MDBs to have access to risk markets in the currencies of LICs/LMICs. While the FX market is the largest market in the world registering a daily turnover of \$7.5 trillion, it remains concentrated in dollars, euros and a handful of other currencies belonging to developed economies<sup>17</sup>. More than 100 low-income economies together account for less than 0.2% of all currency trading<sup>18</sup>. It is only possible to find commercial market-based prices for a 10-year hedge for 11 developing economies, all of which are large, and none for a low-income country. At a 3-year duration, a market exists only for around 20 developing economies. Achieving a substantial improvement in the global allocation and management of currency risk-related to financing flows to LICs/LMICs will require the creation and deepening of currency risk markets.

**Measure 2: Improve the scale and scope of TCX to facilitate large volumes of hedging in LICs/LMICs currencies.**

A development initiative, TCX was established in 2007 by several donor governments and development finance institutions as a solution to FX risk for the most challenging markets. TCX is impact-maximizing and offers currency risk solutions in markets where commercial options are inadequate or inexistent. It functions as a currency risk pool for development finance and commercial investors in LICs/LMICs.

TCX has built deep expertise and, with exposure to many currencies, has achieved significant economies of scale and a risk-return outcome that is superior to what any of the individual parties can achieve. TCX has a proven business model with a 16-year successful track record of about 5000 hedging transactions in over 70 currencies. It is ready to be scaled up to help de-risk the large volumes of financing in support of the SDGs.

**2.1. TCX’s balance sheet should be scaled up to become a larger catalyst for mobilizing investor interest in frontier currencies and improving liquidity for such currencies in the market.**

Since inception, TCX has organically grown its scope and risk capacity through accumulated earnings, addition of new shareholders, and new commitments from existing shareholders. But this gradual pace will not be adequate to achieve the scale and speed required.

<sup>17</sup> [https://www.bis.org/statistics/rpfx22\\_fx.htm](https://www.bis.org/statistics/rpfx22_fx.htm)

<sup>18</sup> <https://www.ft.com/content/2b570cac-a6f7-4908-b68e-47ad0803486c>

TCX can increase its capital base from the current level of \$1.3 billion to \$5 billion with adequate donor and MDB support in the near term. This would enable TCX to increase its leverage ratio and hedging capacity which can accommodate the expected increase in currency hedging demand from MDBs and DMOs.<sup>19</sup>

Scale effects and efficiency gains can drive TCX's ability to increase its risk profile. In a conservative scenario, TCX can gradually increase its risk appetite and capital leverage ratio from about 2.5 times to above 3 times by 2030. A strong backing from an expanding set of sovereign investors will help to further improve its standing and creditworthiness as signalled by S&P<sup>20</sup> and Moody's<sup>21</sup>. This may support further risk appetite by TCX. Nevertheless, to accommodate the targeted annual currency risk absorption requirement of \$39+ billion, TCX would need to further increase its capital base.

## **2.2. TCX can increase its 'market creation' efforts to mobilize interest from institutional investors in frontier currency risk, increase its capital leverage ratio, and contribute to market development.**

In recent years, TCX on-sold up to 50% of the currency risk it onboarded to institutional investors. Currency risks are sold either with cross-currency swaps or on the back of investment grade bonds indexed to local currency. Frequent interactions with institutional investors demonstrate a growing interest in LICs/LMICs currency risk as an alternative asset class or for the purpose of diversification. But discussions also revealed the existence of a size barrier. Larger investors require larger tickets and a steady supply before committing resources to a new asset class.

In the baseline scenario, the share of onboarded currency exposure TCX is able to sell grows to around 70% or to about \$26 billion per year by 2030. This represents a considerable increase from its current scale but a fraction of the annual \$1tn of external capital that is required to achieve the SDGs by 2030<sup>22</sup>. As 50% of the \$1tn target is destined to be supplied by the private sector, increasing TCX's scale needs to be accompanied by a strong understanding of investor requirements with respect to frontier currency risk as an alternative asset class. Granted the opportunity to continue down the path TCX is already walking, TCX can increase the pool of capital that is willing and able to invest in frontier and emerging market FX risk.

To that effect, TCX will intensify its communications with financial institutions and through coalitions such as GFANZ to increase its understanding of investor requirements and how to better address remaining regulatory barriers for institutional investors to invest in currency risk as an alternative asset class.

## **2.3. TCX increases the scope of its product offerings to include solutions to transfer & convertibility risks and counterparty credit risks, in collaboration with institutions such as MIGA.**

TCX currently offers hedging instruments called *non-deliverable forwards* and *cross-currency swaps*. These risk transfer instruments help to ensure that lenders can offer local currency indexed loans and transfer the associated currency risks to third parties like TCX. Borrowers still receive much-needed

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<sup>19</sup> Any additional new hedging demand related to new private sector debt flows will need to be accommodated by additional capitalization measures.

<sup>20</sup> <https://www.tcxfund.com/wp-content/uploads/2023/05/SP-TCX-Full-Analysis-May-2023.pdf>

<sup>21</sup> [https://www.tcxfund.com/wp-content/uploads/2023/07/230725-Credit\\_Opinion-The-Currency-Exchange-Fund-NV-25Jul2023-PBC\\_1370370.pdf](https://www.tcxfund.com/wp-content/uploads/2023/07/230725-Credit_Opinion-The-Currency-Exchange-Fund-NV-25Jul2023-PBC_1370370.pdf)

<sup>22</sup> <sup>22</sup> From: The International Experts Group (2023). Strengthening MDBs: The Triple Agenda, vol. 1. In constant 2019 USD, based on commitment and disbursement statistics.



hard currency but all their loan repayments are indexed to the local currency, making repayments predictable and unimpacted by fluctuations in the exchange rate.

TCX will continue to innovate to create new solutions to FX risk in the currencies of LICs and LMICs. One challenge ahead is to develop and gradually expand *deliverable* cross-currency swap solutions to protect lenders and borrowers from inconvertibility and transfer risks. TCX started to look for cooperative solutions with MIGA, Frontclear and other inconvertibility insurance providers with an initial focus on the larger LIC/LMICs.

Another cooperation opportunity with these institutions is to expand a guarantee solution to address counterparty risk and replace cash-collateral requirements for counterparties in LICs and LMICs. These guarantee products are already on the shelves and are ready for scale-up deployments.

We propose concrete measures to scale TCX and expand the scope of its product offerings:

<u>Measure 2</u>	World Bank and other multilateral concessional lenders, including ADF, GCF, IFAD	TCX
<b>Until 2025</b>	<ul style="list-style-type: none"> <li>• Include a 5% 'Local Currency Window' in the IDA replenishment round to strengthen IDA's investment in TCX.</li> <li>• MIGA to expand scope, scale and efficiency of transfer and convertibility risk insurance for all IDA countries.</li> <li>• MIGA to expand scope and scale of counterparty risk insurance.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase capital base substantially.</li> <li>• Offer to at least 50% of LIC and LMIC DMOs cross-currency swaps with tenors of up to 20 years.</li> <li>• Establish trading agreements with all large official bilateral lenders to IDA/IBRD countries.</li> <li>• Mobilize interest of institutional investors in local currency risk assets.</li> <li>• Strengthen role in local capital market development.</li> <li>• Expand the scope of TCX's product offerings, such as:               <ul style="list-style-type: none"> <li>- Offer deliverable swaps in 5 large countries in cooperation with MIGA/Frontclear and other inconvertibility insurance providers.</li> <li>- Increase the availability and use of counterparty risk guarantees to reduce or eliminate the need for cash collateral.</li> </ul> </li> </ul>
<b>Until 2030</b>		<ul style="list-style-type: none"> <li>• Increase capital base to over \$10 bn in response to demand.</li> <li>• Assess need and possibility to transform into a multilateral DFI.</li> </ul>

### **Measure 3: Policy reforms to mitigate currency risk at scale.**

Scaling up TCX's hedging capacity alone is not sufficient to make a meaningful impact without complementary policy reforms in the development finance architecture that reinforce each other.

#### **3.1. The IMF should review how modern risk management tools, such as cross currency swaps, are accounted for in its Debt Sustainability Analysis and Debt Limits.**

The ongoing review of the Debt Sustainability Analysis and the planned review of the Debt Limits Policy are right occasions to review current practices.

The IMF's and World Bank's own research have established that a debt stock partially denominated in or hedged into local currency is more predictable, less macroeconomically destabilizing and hence more sustainable than one that is entirely hard currency denominated. The current policy framework already provides the IMF sufficient flexibility to treat special risk-resilient loan clauses, such as currency indexation, more favourably by offering more headroom in its revised DSAs and offering higher borrowing limits under its revised debt limits policy. Giving borrowers clarity about the future treatment of currency indexation and other clauses will be important in tilting incentives towards reducing the excessive currency risk that exists today.

#### **3.2. Existing capacity building programs should build up and reinforce currency risk management capacities of DMOs, central banks, regulators, and finance ministries.**

A forthcoming IMF survey of DMO capacity will show a noticeable shortfall in currency risk management capacity in low-income economies, which has most likely contributed to poor outcomes on debt dynamics. The shift to local currency-denomination will become more successful if the DMOs are able to quantify currency risk and manage them, even with relatively simple tools, especially local currency-indexed debt from MDBs.

To facilitate this, donors will need to re-direct technical assistance and capacity building resources to build currency risk and interest rate risk management capacities at national DMOs. Donors have already generously financed capacity building programs for Public Debt Management, for example through the World Bank's Debt Management Facility (DMF)<sup>23</sup>, but the DMF has not yet consistently provided capacity building and guidance to governments on setting-up appropriate legal and regulatory frameworks for the management of currency risk by DMOs, how to design and integrate a currency risk management strategy in the country's overall debt management strategy, and how to operationalize the use of local currency indexed debt or derivatives. In order to fill this gap before 2030, TCX would be happy to support existing TA providers in developing blueprints for such programs.

The baseline scenario assumes that until 2030, 25 DMOs of the largest emerging and frontier economies will receive targeted technical assistance to build up market risk management capacities, including currency risk, interest rate risk, and commodity price risks. However, we do not assume that DMOs should become major direct participants in the currency risks markets in the foreseeable future. Only the most sophisticated and well-staffed DMOs will hedge currency risk directly in the markets, which will trigger about \$2.5 billion in additional currency risk hedging demand.

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<sup>23</sup> <https://www.worldbank.org/en/topic/debt/brief/debt-management-facility>

### 3.3. Encourage and advise on legislative and regulatory changes to standardize the way that currency risk hedging is treated in national jurisdictions.

Sound regulatory treatment of collateral frameworks, acceptance of netting, counterparty risk, and deliverable derivative products can encourage the formation of liquid risk and hedging markets.

We propose concrete measures and policy reforms to encourage and enable (indexed) local currency financing:

<b>Measure 3</b>	<b>IMF</b>	<b>World Bank and other multilateral concessional lenders, including ADF, GCF, IFAD</b>
<b>Until 2025</b>	<ul style="list-style-type: none"> <li>• Use flexibility in DSA and Debt Limits policies and practices to incentivize local currency indexation, currency hedging and other risk management activities.</li> <li>• Advise on regulatory reforms for currency and interest rate risk markets.</li> </ul>	<ul style="list-style-type: none"> <li>• Add a dedicated currency risk management capacity building module for DMOs (Debt Management Facility).</li> </ul>
<b>Until 2030</b>	<ul style="list-style-type: none"> <li>• Advise on regulatory reforms for currency and interest rate risk markets.</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver risk management capacity training to 25 LIDCs.</li> </ul>

#### **Measure 4: Improve the affordability of (indexed) local currency financing.**

Risk-based pricing is essential for prudent development financing. Large loan volumes can look sustainable at the outset if grace periods and non-risk-based pricing are applied. Hard currency loans look concessional and attractive initially because currency risk has not been priced in. This lack of risk transparency has led to poor decision-making by lenders and borrowers alike, with MDBs and other development lenders inflicting currency risk on low-income borrowers and economies ill-equipped to handle it.

The economically sound thing to do is to adjust the supposedly attractive pricing of hard currency debt for currency risk. Choosing a 1% dollar-denominated loan over a 15% local currency-denominated loan is neither attractive, nor responsible if depreciation effectively doubles the value of the dollar debt in local currency terms.

The perception that local currency lending is more expensive than its hard currency equivalent and that currency hedges are expensive remains endemic. Underlying this perception is a confusion between whether financial services are provided in an efficient and effective manner and whether the resulting costs are affordable for borrowers.

To properly incentivize and enable MDBs to offer lending and risk management instruments, the interest rates and fees received need to compensate for the underlying risks and costs. In other words, the deployed capital needs to earn an adequate risk-adjusted return. Borrowers are willing to pay higher nominal interest when they expect that the higher costs are more than compensated by long-term benefits of substantially improving the predictability of cash flows, improving long-term planning and policy implementation, lowering their credit risk, and eventually increasing their policy space.

Under the risk-based pricing practice generally followed by financial markets, the riskier the transaction, the higher the price demanded to make it. For example, Zambia, which is in default, can only borrow at a 26% annual premium over 10-year US Treasury rates (UST), B-rated Egypt at 19% over UST, BBB- rated Kazakhstan at 8% and BBB Brazil at a spread of 2.3%. The interest rate for Zambia looks exorbitant but so is the risk of losing a substantial part of the investment. Prohibitively expensive pricing for high-risk environments is exactly what risk-based pricing and prudent management dictate.

Part of the confusion around whether local currency hedging and lending is expensive or not stems from the fact that sovereign lending by the MDBs are an exception to the rule. They have a special mandate and rather uniquely do not follow a risk-based pricing model (*see box 2*).

**Risk-based pricing is and should be the norm. Not using this would subject a lender or hedging provider to large financial losses that will drive private firms into bankruptcy and lead international financial institutions, such as IFC and MIGA, to have to repeatedly ask donors to inject fresh capital.**

Undercutting risk-reflective pricing using excess donor subsidies also runs the risk of destroying markets, rather than creating them, and discourages rather than encourages the mobilisation of private investors.

#### **BOX 2: Risk-Based versus Risk-Agnostic Pricing**

All commercial entities and many international financial institutions use risk-based pricing. Both MIGA and IFC, two of the four agencies of the World Bank Group, price their products according to the risk of financial losses that they face on each transaction. MIGA, for example, states that it prices its guarantee premiums “based on a calculation of both country and project risks”<sup>24</sup>. And IFC states that its pricing reflects such “factors as market conditions and country and project risks”<sup>25</sup>. In very high-risk cases, risk-based prices will simply exclude any offer at all. For example, MIGA offers its inconvertibility insurance only in a few SSA countries.

IBRD and IDA in contrast are using risk-agnostic pricing. Pricing is not based on risk, but rather on income levels and other measures of country vulnerability. Risk-agnostic pricing is made possible because concessional lenders are protected by their preferred creditor status. Borrowing sovereigns must put repaying their obligations to the IBRD and IDA above their repayments to other creditors.<sup>26</sup> Moreover, IBRD<sup>27</sup> and IDA<sup>28</sup> are backed by capital and guarantees in the form of callable capital by most of the largest, richest and most credit-worthy countries in the world which allows them to enjoy the AAA credit rating<sup>29</sup>. IDA is replenished by new grants from donors every three years to pay for the grants and heavily subsidized loans it disburses<sup>30</sup>. When loans have needed to be forgiven, as under the Multilateral Debt Relief Initiative (MDRI) finalized in 2006 that envisaged \$37 billion in IDA debt relief<sup>31</sup>, donors have funded it through additional contributions to the MDBs to minimise disruptions to lending capacity<sup>32</sup>.

<sup>24</sup> [https://www.miga.org/sites/default/files/2019-05/miga\\_at\\_a\\_glance\\_v1\\_0.pdf](https://www.miga.org/sites/default/files/2019-05/miga_at_a_glance_v1_0.pdf)

<sup>25</sup> [https://www.sec.gov/Archives/edgar/data/1384542/000138454219000019/ifc\\_informationstatementxf.htm](https://www.sec.gov/Archives/edgar/data/1384542/000138454219000019/ifc_informationstatementxf.htm)

<sup>26</sup> [https://www.4scic.com/pdf/2%20Kotecha\\_Revitalizing%20the%20Spirit%20of%20Bretton%20Woods.pdf](https://www.4scic.com/pdf/2%20Kotecha_Revitalizing%20the%20Spirit%20of%20Bretton%20Woods.pdf)

<sup>27</sup> <https://thedocs.worldbank.org/en/doc/67aa115569be43f048cbdfc5b3e4b88d-0340022022/original/Moodys-IBRD-World-Bank-CA-February-2022.pdf>

<sup>28</sup> <https://thedocs.worldbank.org/en/doc/daed9065774b50e10261008f065969ca-0340022023/original/Moody-s-IDA-03Feb2023.pdf>

<sup>29</sup> <https://www.ft.com/content/0e1eb247-3703-40ed-8389-b91111494fc4>

<sup>30</sup> <https://ida.worldbank.org/en/replenishments>

<sup>31</sup> <https://timeline.worldbank.org/en/timeline/eventdetail/3251>

<sup>32</sup> <https://documents1.worldbank.org/curated/ar/768971470993173182/pdf/107820-BR-Box396272B-PUBLIC-IDA211-AdditionstoResources-FinancingtheMultilateralDebtReliefInitiative.pdf>

**4.1. Improving affordability of hedging will incentivize prudent financing choices. Financial support from donors could help to defray the higher upfront risk-reflective costs of local currency borrowing and incentivize the growth of currency risk markets.**

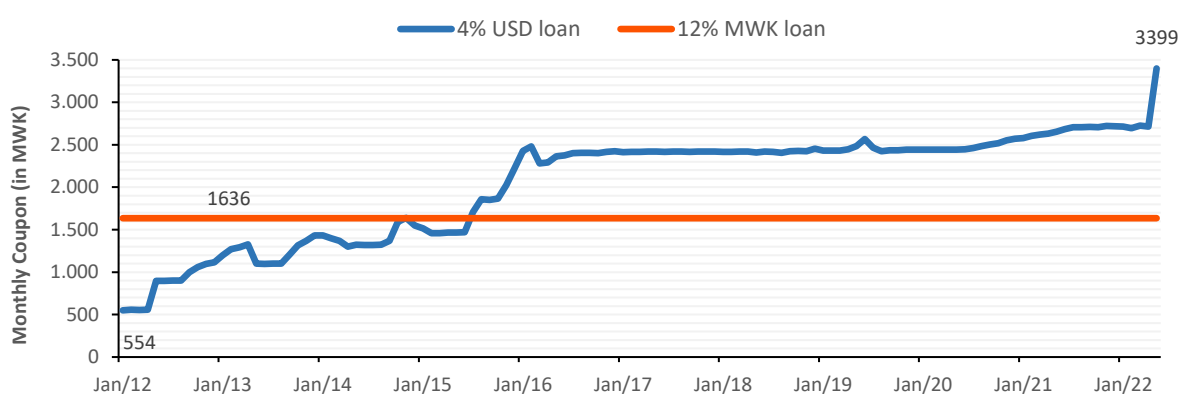
Annex 2 provides performance data of TCX which evidences that pricing has, in a large majority of cases, been efficient. The average annual return of about 5000 hedging transactions was 1.6%.

However, fairness of pricing is quite separate from whether hedging services or local currency-indexed loans are affordable and accessible for borrowers. Cash-strapped borrowers in fragile economies may simply not have resources to pay for insurance services (even if they are efficiently priced and no cash-collateral is required) or they may prefer to spend them for other purposes.

Borrowers are faced with a timing problem. Local currency hedging based on risk-based pricing typically results in a higher upfront interest burden for borrowers compared to loans in hard currencies. But these upfront costs will eventually be offset by positive effects as the exchange rate protection kicks in. Stable cash flows compress credit margins, improved risk transparency enhances budget planning and execution, and the lower frequency of debt distress and currency shocks enhances macroeconomic stability. Moreover, debt servicing costs (in USD terms) decrease sharply in times of crises and depreciations.

Chart 1 highlights this timing problem by looking at a hypothetical case of the Malawi Kwacha (MWK). If in 2012, a Malawian borrower would have chosen a 10-year local currency-indexed loan in MWK over a USD-denominated loan, he or she would have paid higher amounts in MWK to service the debt in the first three years. Currency volatility over time impacted the monthly coupon payments expressed in MWK significantly. When the decision was made, the additional debt servicing costs to lock in a fixed MWK payment for the entire lifetime of the loan may have looked expensive, but history eventually showed that this would have been a responsible choice.

**Chart 1: Comparing monthly coupon payments over time of a 10 year 4% USD Loan with a 12% MWK loan (fixed rates)**



The Bridgetown Initiative has rightly identified that macroeconomic risks and the resulting high hedging costs are a main cost factor in climate mitigation and adaptation finance. Efficiency gains from market creation alone are unlikely to suffice and donor assistance in form of blending or direct subsidies is called for to accelerate investment and the deployment of new technologies.

LIC/LMIC currency hedge pricing is particularly challenging because of data scarcity, unstable institutions, illiquid or non-existing markets, and a high exposure to climate shocks. To reduce the resulting risk premia, TCX and several stakeholders have developed a joint blending program to

catalyse market growth by lowering the costs of hedging and addressing market failures, targeting climate investments in emerging markets first.

#### **4.2. A donor-funded 'Guarantee Trust' can lower hedging costs to support climate mitigation and adaptation financing.**

In response to the Bridgetown Initiative, a donor-funded Guarantee Trust is proposed to share pricing risks with TCX's shareholders. This allows TCX to reduce its risk-premium. The concept is very similar to a contingent subsidy and has already been deployed with the help of the EU EFSD program as a small pilot program. The objective is to establish a sufficiently large Trust to lower hedging costs below the standard TCX or market price for a swap portfolio of up to USD 10 billion. This portfolio will exclusively support climate mitigation and climate adaptation projects globally.

The Trust will support hedging activities in larger emerging markets by improving access to and affordability of long-dated and large volume hedging transactions that are not offered by commercial banks. This will contribute to the further deepening and widening of existing and dynamic local currency risk markets. The Trust will also aim to catalyse currency risk markets in smaller LIC and LMICs. The expectation is that improved access and affordability of currency hedging will gradually trigger a supply response. The more stable the macro-policies are, the higher the expected donor leverage and the better the chances of success. Increased market liquidity may eventually reduce or eliminate the need for donor support.

The Trust could be step by step financed by public and private donors, including the use of existing climate-related funding commitments. For example, TCX is negotiating with the EU an extension of the current ongoing pilot program for a total targeted volume of about €1bn and other stakeholders expressed interest in participating in the program.

The effectiveness and catalytic effect of the Trust will depend on many factors, most importantly (a) the average tenor of supported hedging transactions, (b) the discount compared to the standard TCX valuation curve, and (c) the deployment procedures.<sup>33</sup>

### **Conclusion**

Additional hedging capacities and a stronger credit profile for TCX, combined with an expanding pipeline from MDB local currency lending targets, and a broader ecosystem of supportive policies will make it easier to catalyse currency risk markets. Further innovations, such as the use of concessional guarantees, will further improve access to currency risk instruments. All this may feed into a positive loop of more private investment and hedging capacity, more liquidity, more demand, and so on. Eventually, a trillion dollar market for currency risk in the currencies of LICs and LMICs may be achievable in the foreseeable future.

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<sup>33</sup> The expected leverage for contingent grant or concessional guarantee supported blending facilities can only be estimated, but it should in principle always be larger than that of an explicit upfront subsidy.

**Appendix 1— Proposed measures for increasing (indexed) local currency financing**

	IMF	World Bank and other multilateral concessional lenders, including ADF, GCF, IFAD	TCX
<b>Until 2025</b>	<ul style="list-style-type: none"> <li>• Use flexibility in DSA and Debt Limits policies and practices to incentivize local currency indexation, currency hedging and other risk management activities.</li> <li>• Advise on regulatory reforms for currency and interest rate risk markets.</li> </ul>	<ul style="list-style-type: none"> <li>• Commit to an additional 2.5% new lending to be indexed in local currency.</li> <li>• Always proactively offer borrowers <u>the option</u> to borrow in (indexed) local currency and be transparent about the impact of hard currency borrowing on debt sustainability.</li> <li>• Include a ‘loan conversion clause’ in all loan documentation, allowing borrowers to convert to local currency or local currency-indexed loan.</li> <li>• Include a 5% ‘Local Currency Window’ in the IDA replenishment round to strengthen IDA’s investment in TCX.</li> <li>• MIGA to expand scope, scale and efficiency of transfer and convertibility risk insurance for all IDA countries.</li> <li>• MIGA to expand scope and scale of counterparty risk insurance.</li> <li>• Add a dedicated currency risk management capacity building module for DMOs (Debt Management Facility).</li> </ul>	<ul style="list-style-type: none"> <li>• Increase capital base substantially.</li> <li>• Offer to at least 50% of LIC and LMIC DMOs local currency swaps with a tenor of up to 20 years.</li> <li>• Establish trading agreements with all large official bilateral lenders to IDA/IBRD countries.</li> <li>• Mobilize interest of institutional investors in local currency risk assets.</li> <li>• Strengthen role in local capital market development</li> <li>• Expand the scope of TCX’s product offerings, such as: <ul style="list-style-type: none"> <li>- Offer deliverable swaps in 5 large countries in cooperation with MIGA/ Frontclear and other inconvertibility insurance providers.</li> <li>- Increase the availability and use of counterparty risk guarantees to reduce or eliminate the need for cash collateral.</li> </ul> </li> <li>• Scale concessional hedging program to facilitate \$10 bn in climate finance.</li> </ul>
<b>Until 2030</b>	<ul style="list-style-type: none"> <li>• Advise on regulatory reforms for currency and interest rate risk markets.</li> </ul>	<ul style="list-style-type: none"> <li>• Commit to an additional 10% of new lending to be indexed in local currency.</li> <li>• Deliver risk management capacity training to 25 LIDCs.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase capital base to over \$10 bn in response to demand.</li> <li>• Assess need and possibility to transform into a multilateral DFI.</li> </ul>

## Appendix 2— A quantitative framework estimating future demand and supply of currency risk hedging flows

We developed a conceptual model to estimate how much capital is required to implement the proposals set forth in this policy paper. It is recommended for MDBs and DMOs to use de-risking mechanisms to safeguard themselves and their dependents from currency risk. Using this framework we estimate how future financing flows from these institutions may influence the demand for currency hedging and how policy targets for local currency financing scale-up the effort of building currency markets in LICs and LMICs.

### Demand for hedging instruments

In our simple model, we project three sources of demand for currency hedging, coming from the MDBs, the DMOs, and a growing stock of the current business of TCX.

1. The International Experts Group (IEG) (2023) projected that MDBs would increase their total yearly disbursements to \$390bn in concessional and non-concessional flows by 2030, up from \$130bn in 2019. Only a fraction of this will be denominated in or indexed to local currencies. For simplicity, our model assumes that an additional 2.5% of new annual MDB flows in 2025 will be indexed to local currencies and hedged. This will rise to about 10% in 2030.
2. A smaller source of hedging demand will emerge from DMOs which, through technical assistance (TA) from the MDBs, build currency risk management capacities. Today, most DMOs in LICs/LMICs are insufficiently equipped to manage currency risk and fully utilize the tools available on the market. We assume that by 2030, 25 DMOs will have received capacity building assistance from the World Bank and other TA providers. The resulting increase in demand will strongly vary from country from country. In our scenario, we assume an average yearly demand for direct hedging (a contract between the DMO and a hedging provider) of \$100mn per DMO, growing at 5% per year in the years following initial capacity development. This demand may result from hedging the currency risk coming from issuing bonds or hard currency loans from MDBs.
3. The growth of the already existing business of TCX is assumed at 15 percent per year.

### Supply of hedging instruments

In our model, we project two sources of supply: TCX and the market.

With the expected development of FX markets over time, we project that the market (i.e., commercial banks and institutional investors) will be able to de-risk about 25% of the demand for hedging from MDBs and DMOs, up from about 10% today. The remaining 75% can be onboarded by TCX.

As part of TCX's market creation efforts, TCX currently sells up to 50% of the currency risk it onboards to institutional investors. We assume that this figure will grow gradually as TCX is able to offer the consistency and ticket sizes that large investors require. We project that with increased size, 70% of the risk TCX onboards every year can be on-sold to institutional investors. The remainder will accumulate in TCX's portfolio and mature in three years.



## Estimations for Growing Currency Markets in LIC and LMICs (in USD billions)

	2024	2025	2026	2027	2028	2029	2030
<b>1. Estimating the Impact of MDB Lending Targets on Hedging Volumes</b>							
1.1 Annual MDB Flows	<b>214.2</b>	<b>236.7</b>	<b>261.6</b>	<b>289.0</b>	<b>319.4</b>	<b>352.9</b>	<b>390.0</b>
1.1.1 Concessional flows MDBs	49.4	54.6	60.4	66.7	73.7	81.4	90.0
1.1.2 Non-concessional flows MDBs	164.8	182.1	201.2	222.3	245.7	271.5	300.0
<i>Assumption</i>	<i>1% of indexed LCY MDB flows</i>	<i>2.5% of indexed LCY MDB flows</i>	<i>4% of indexed LCY MDB flows</i>	<i>5.5% of indexed LCY MDB flows</i>	<i>7% of indexed LCY MDB flows</i>	<i>8.5% of indexed LCY MDB flows</i>	<i>10% of indexed LCY MDB flows</i>
1.2 Additional Annual MDB Flows in <i>Indexed</i> Local Currency (Hedging Volumes)	<b>2.1</b>	<b>5.9</b>	<b>10.5</b>	<b>15.9</b>	<b>22.4</b>	<b>30.0</b>	<b>39.0</b>
<i>Assumption</i>	<i>3 DMOs hedging FX risk</i>	<i>5 DMOs hedging FX risk</i>	<i>7 DMOs hedging FX risk</i>	<i>10 DMOs hedging FX risk</i>	<i>15 DMOs hedging FX risk</i>	<i>20 DMOs hedging FX risk</i>	<i>25 DMOs hedging FX risk</i>
1.3 Annual Hedging Volumes Resulting from Capacity Development at DMOs	<b>0.3</b>	<b>0.5</b>	<b>0.7</b>	<b>1.5</b>	<b>2.0</b>	<b>3.4</b>	<b>4.1</b>
<b>2. Estimating the Impact on TCX's Hedging Volumes</b>							
<i>Assumption</i>	<i>10% hedged by market</i>	<i>12% hedged by market</i>	<i>14% hedged by market</i>	<i>16% hedged by market</i>	<i>18% hedged by market</i>	<i>20% hedged by market</i>	<i>25% hedged by market</i>
3.1 Additional Annual MDB/DMO Flows Hedged by (Commercial) Providers other than TCX	<b>0.2</b>	<b>0.8</b>	<b>1.6</b>	<b>2.8</b>	<b>4.4</b>	<b>6.7</b>	<b>10.8</b>
3.2 Additional Annual MDB Flows Hedged by TCX	<b>2.2</b>	<b>5.7</b>	<b>9.6</b>	<b>14.6</b>	<b>20.0</b>	<b>26.7</b>	<b>32.3</b>
3.3 Other TCX Hedging Volumes (from bilateral lenders and private market)	<b>2.1</b>	<b>2.4</b>	<b>2.7</b>	<b>3.1</b>	<b>3.2</b>	<b>3.7</b>	<b>4.2</b>
<i>Assumption</i>	<i>50% of risk on-sold to market</i>	<i>53.33% of risk on-sold to market</i>	<i>56.67% of risk on-sold to market</i>	<i>60% of risk on-sold to market</i>	<i>63.66% of risk on-sold to market</i>	<i>66.67% of risk on-sold to market</i>	<i>70% of risk on-sold to market</i>
3.4 Annual TCX Hedging Volumes	<b>4.3</b>	<b>8.1</b>	<b>12.4</b>	<b>17.7</b>	<b>23.2</b>	<b>30.4</b>	<b>36.5</b>
3.4.1 Onsold to market	2.2	4.3	7.0	10.6	14.8	20.3	25.6
3.4.2 Absorbed on TCX's balance sheet	2.2	3.8	5.4	7.1	8.4	10.1	10.9
<b>3. Estimating TCX's Outstanding Hedging Portfolio Volume</b>							
4.1 Gross TCX Outstanding Hedging Portfolio Volume (stock number)	<b>6.9</b>	<b>16.2</b>	<b>28.5</b>	<b>41.9</b>	<b>57.0</b>	<b>75.1</b>	<b>93.9</b>
4.1.1 Onsold to market Volume from 2024 (stock number)	2.2	6.5	13.5	21.9	32.4	45.6	60.6
4.1.2 Net Outstanding Hedging Portfolio Volume (stock number)	4.7	9.7	15.1	20.0	24.6	29.4	33.3
TCX's Outstanding Hedging Portfolio Volume (Aug '23)	3.8						

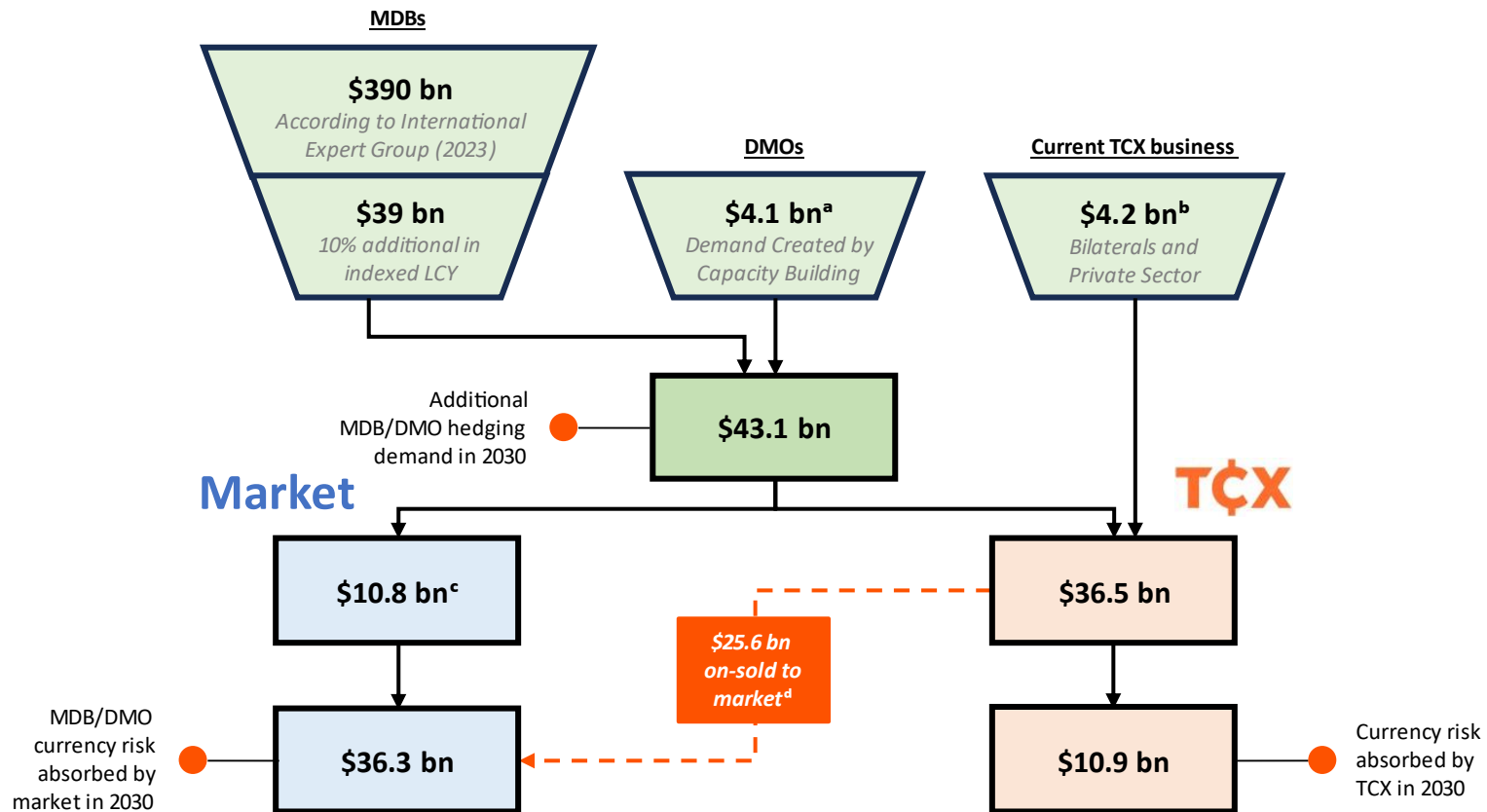
**Disclaimer:** the table above represents a scenario in which Annual MDB flows for 2024-2030 are interpolated from policy targets<sup>34</sup> and accompanied by a set of assumptions about the development of DMO demand, the market's appetite to absorb currency risk and TCX's ability to on-sell its exposure.

**Note:** in line with current averages, the amount representing TCX current (Aug 2023) outstanding hedging portfolio (\$3.8 bn) matures proportionally over 2024, 2025, 2026 (i.e., \$3.8bn /3 = \$1.27bn per year). This is taken into account for figures presented in 4.1 and 4.1.2.

<sup>34</sup> From: The International Experts Group (2023). Strengthening MDBs: The Triple Agenda, vol. 1. In constant 2019 USD, based on commitment and disbursement statistics.

**Flow chart diagram – Growing Currency Markets in LIC and LMICs (in USD billions) – Baseline scenario**

*This flow chart depicts a baseline scenario of expected hedging flows in 2030 when an additional 10% of MDB flows are indexed to or denominated in local currency and assumptions presented in the baseline scenario are met.*



<sup>a</sup> Based on capacity building target for 25 DMOs by 2030 (see annex 1)

<sup>b</sup> Based on projected 15% yearly growth of current TCX volumes from bilaterals and the private sector

<sup>c</sup> Based on assumption that the market services 25% of new hedging demand from DMOs and MDBs

<sup>d</sup> Based on projection that, with increased scale, TCX will on-sell 70% of onboarded risk (compared to ~50% today)

### Appendix 3— The pricing performance of TCX

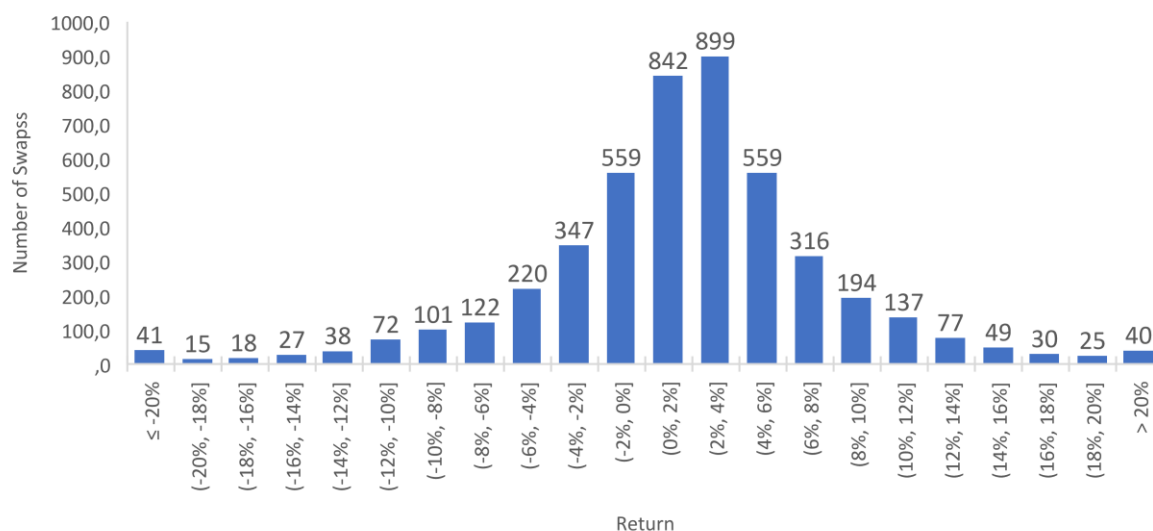
We have analysed the pricing performance of TCX using 15 years of data and transaction history. It shows that in most situations, the pricing of TCX has fairly and efficiently reflected the underlying risks.

TCX prices currency risk across a wide range of countries, including the least developed ones. Some have sound and sustainable macroeconomic policies while others follow unsustainable or questionable policies. Some countries are geographically small and heavily exposed to climate risks, while others are large and less exposed. Some economies are quite diversified but other less so. Reflecting this diversity, the prices quoted by TCX for hedging across nearly 100 currencies varies significantly<sup>35</sup>.

The best metric for assessing the efficiency and effectiveness of TCX's pricing is to look at the return outcome of actual transactions and the quality of indicative pricing for all currencies, independent of whether transactions were executed or not. In the first case, TCX has actual return observations. In the second case, a hypothetical return can be calculated *ex-post* by comparing the initial indicative pricing with the actual currency movements observed.

TCX achieved an actual average annualized return of 1.6% over all currency hedging transactions executed between 2007 and 2023. This points at a good average pricing performance. The chart below presents the performance distribution of 4,700 actual return observations (having eliminated transactions which were running for less than one year). It shows that a large share of returns is bunched around the mean in a relatively narrow range of -5% to +7%. It is worth highlighting that these observations include hedges of pegged currencies, which are especially challenging to price and either have a relatively high positive or a high negative return if the peg breaks.

**Graph 2: Distribution of annualized returns of swaps with more than 1 year maturity (average = 1.6%)**



Looking at the actual performance of indicative quotes that TCX has provided in a monthly Trading Newsletter, TCX finds a consistent and similarly encouraging pricing performance. Since 2012, TCX has provided about 5,000 quotes for 3-year fixed rate cross-currency swaps. By looking at the actual currency depreciations *ex-post*, the average return for TCX shareholders (before operational costs, etc) would have been 2.4% with a rather moderate Sharpe ratio of about 1.4.

<sup>35</sup> <https://www.tcxfund.com>

## Appendix 4—Case Study 1

### Managing Currency Risk in Sovereign Borrowings: The Case of Georgia

TCX has been active in Georgia since 2010, supporting investments and the government's Lariization strategy. The government and the National Bank adopted a 10-point Lariization plan in 2016 to disincentivize the use of dollars and make the economy more resilient to external shocks. Georgia's exposure to the dollar remains a key source of vulnerability with 45% of loans and 50% of deposits denominated in dollars.

#### *Price creation: enhancing market data and liquidity*

In most developing markets the lack of market data hampers investment flows in the local currency. Since 2010, TCX has executed 137 hedging transactions in Georgia for over \$1bn in volume, protecting micro, small, and medium enterprises from currency risk. Lari transactions were initially priced with the help of the Forecasting and Policy Analysis System (FPAS), a medium-term macroeconomic model developed by TCX. TCX's hedging activities, price points and benchmarks have over time encouraged commercial banks to engage in Lari trading, enhancing market data, liquidity, and offering local currency financing at more favorable rates.

#### *Market creation: supporting local capital market development*

TCX's hedging activities in Georgia have contributed to the development and extension of the yield curve, which aligns with the Georgian government's policies to deepen Lari capital markets and foster the growth of an offshore indexed Lari bond market. During 2013-2023, TCX placed GEL bonds for total volumes of \$405.56mn with international investors, not only providing benchmark pricing but also creating a buy-side market and mobilizing private capital. The growth of the offshore bond market eventually paved the way for international investors to become comfortable with Georgian Lari risk, catalyzing investments in the onshore market. This facilitated the government's strategy to increase the share of Lari-denominated debt while reducing external debt.

#### *Capacity building: enhancing currency risk management capabilities*

Many debt management offices (DMO) in developing countries lack the capacity to quantify and manage currency risk effectively, which limits their ability to cope with external shocks. Adequate risk management capacities at the DMO improve conditions for fiscal and monetary policy execution. In 2022, TCX signed a Memorandum of Understanding (MoU) with the Ministry of Finance to provide Technical Assistance (TA) which is currently being delivered.

Please see [TCX's 2022 Impact Report](#) (p.24-25) for an interview with the Deputy Minister of Finance of Georgia about the importance of currency risk management for the DMO and the value add of TCX's TA.

## Appendix 5—Case study 2

### Enhancing Debt Sustainability through FX Risk Management: The Case of Sierra Leone

Sierra Leone is amongst the world's poorest countries, ranking 180<sup>th</sup> out of 187 in the Human Development Index. The country is threatened by simultaneous global and domestic shocks, which have magnified pre-existing macro-fiscal weaknesses. The aftermath of the pandemic witnessed a record rise in inflation and exchange rate depreciation (27.1% and 41% respectively in 2022), negatively impacting economic activity and debt sustainability. To address this vulnerability, investments supporting the SDG agenda should be financed in local currency, to support debt sustainability and a green economy transition. The Central Bank of Sierra Leone is working on a series of reforms, including an efficient FX market clearing mechanisms and more exchange rate flexibility.

#### *Price creation:*

Most external debt inflows are denominated in hard currencies. Such hard currency dependency undermines the efficacy of monetary and fiscal policies, diminishing the country's overall economic and financial resilience. TCX provides risk-based pricing and has hedged 37 loans in Sierra Leone since 2017 amounting to USD 25.6 million. Many of these transactions benefited the microfinance industry, some with concessional pricing supported by the EU Market Creation Pricing component.

#### *Market creation: supporting off-and-on-shore capital market development*

In 2022, TCX played a pivotal role in facilitating the issuance and subsequent hedging of [two first-ever SLL-denominated bonds](#) (equivalent to USD 12.5 million) with FMO. The bonds were placed with international investors seeking portfolio diversification and yield. The transactions supported renewable energy investments.

Under this structure, TCX facilitated market creation and allows bond investors to acquire FMO's triple-A rated notes with a coupon that mirrors the higher risk exposure. The combination of AAA creditworthiness with the risk and return attributes of a frontier market creates an innovative asset class for which there is clear demand from global investors. This issuance served to mobilize international capital into fragile economies like Sierra Leone, an important step in reducing the reliance of local borrowers on the US dollar. Furthermore, these transactions enable TCX to free up its risk-exposure to SLL and in turn support more sustainable local currency lending in local currency.

#### *Supporting Power Purchasing Agreements in local currency*

TCX has also started discussions with international donors to promote the gradual de-dollarization of Power Purchasing Agreements in Sierra Leone. Today, with PPAs denominated in USD, currency risk rests with utilities, final consumers, and via guarantee commitments on the central government. The availability of long-term currency risk hedging instruments would allow to shift the currency risk of grid based power to international markets and allow the adoption of PPAs denominated in Leones.

Please see [TCX's 2022 Impact Report](#) (p.18-19) for an interview with the CEO of Easy Solar about the importance of currency risk hedging to the distributed energy sector in Sub-Saharan Africa.