

Local Currency Matters



TCX
the currency exchange fund

TCX Theory of Change 2014

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1 Introduction

1.1. Currency risk in frontier economies

The best way to fight poverty in frontier economies is through economic growth. Bilateral and multilateral development banks target the private sector in order to fuel this growth and reduce poverty. Either directly by investing in corporates and projects, or indirectly via the financial sector.

In small and fragile frontier economies, development banks and other impact investors are the main providers of scarce long term capital to fuel economic growth. Long term capital is particularly crucial to fund long term investment projects in the real economy. As a result of underdeveloped local capital markets, the supply of long term money must come from abroad. Foreign investors however expect hard currency returns, which leaves the local borrower with a mismatch between the currency earned, and the currency needed to repay debt.

If the international funding is provided to a local financial institution serving local borrowers, this currency risk is passed on in the form of hard currency loans to their clients, with repayment in the hard currency. If the international lenders directly fund infrastructure and energy projects, the currency risks are typically passed on to the users of the utility service or to the local government.

This has a number of undesired effects:

- The potential benefits of financial inclusion are limited. As banks strive to minimize credit risk, they will primarily focus on exporting companies that have a natural hedge in their export proceeds. This leaves the vast majority of the economy, and the least affluent part, out of reach of long term funding.
- If banks do provide hard currency loans to non-exporters this constitutes a potential threat to the borrower. In times of currency crisis, the hard currency loan's debt service will quickly rise in local currency terms, increasing the cost of capital. This rise in cost of

debt will disrupt the borrower's business planning and can even cause its bankruptcy. The bank will naturally focus on debtors that have most reserves to withstand this type of risk, leaving a large part of the population unbanked.

- Infrastructure projects with local currency income are often guaranteed by the local governments. A devaluation will be paid for through the government budget. As a secondary effect it will lead to increased tariffs, increased taxes and/or the postponement of new investments.

In practice, it has been conclusively shown that banks favor expediency and profitability over risk management or consumer protection, and that they will provide loans to their customers in the currency of their funding, regardless of the client's natural currency preferences (Brown, Kirschenmann and Ongena, 2010). If an emerging market bank is funded by international lenders in hard currency, their clients will be served with hard currency loans.

As another example, foreign-funded energy projects have their purchase power agreement in hard currency. This protects the entity that is funded with hard-currency external capital and makes it bankable, but it also requires the project to generate hard-currency returns and pushes the risk to the ultimate client (the households and businesses) or the government off-taker of the project. For the economy as a whole, this shifting of risks offers no solution.

Macro-economically, the predominance of hard currency sources to fuel a financial system in a small and volatile frontier economy means that this economy is saddled with the drawbacks of factual dollarization. This effect is called "original sin", where the dollarization means that local monetary authorities lose effective control over their monetary system: devaluation as a means to mitigate economic slowdown, boosting exporters and reducing the competitiveness of importers, becomes harmful as borrowers get hurt by the increased debt burden. Regulators targeting inflation also have less effective tools to guide their economy if the de facto trading and finance currency is not their own.

1.2. TCX

In many frontier markets the financial system is underdeveloped and local currency bond markets fail to function effectively. Under these circumstances currency risk management products as offered by TCX contribute to completing the market, support the development of local capital markets and help reducing the currency mismatch in the system as a whole.

In the small and volatile frontier economies of its activity, TCX is the natural partner to the international lenders and local financial institutions that dominate the long term lending market. TCX is the missing component in the system by providing the currency absorption mechanism. It makes the international funding model financially sustainable for the local borrowers and allows the local banks to create long-term local currency funding options for their clients.

TCX's presence serves a purpose until local market-based alternatives develop. This ultimately leads to a balance between local capital supplied and credit demanded. At this point in time, the local financial system functions as an intermediate between supply and demand. We have seen this development occur in certain markets that we operated in in the early years of our existence (e.g. Kenya or Peru), leading to a gradual reduction in demand for TCX's product in recent years.

TCX is most useful to local institutions that have no access to long term local currency funding. In the context of the financial sector, this means that TCX's product is used less by the larger banks that have access to domestic deposits and that are large enough to absorb tenor mismatches between short-term deposits and longer term loans provided to clients. Conversely, it is more used by the smaller and non-deposit-taking financial institutions such as microfinance institutions (MFIs), non-banking finance institutions (NBFIs) and Tier-2 banks. As it is these institutions that provide the backbone of financial services to the base of the economy, this leads to high impact of TCX's intervention on the issue of financial inclusion.

The other area of natural high impact for TCX is in the funding chains for physical infrastructure (including housing finance,

transport infrastructure, power and water), sectors that require long-term finance for services sold in-country and therefore logically denominated in local currency. This is also another part of the economy strongly supported by international funders, so that TCX's function could have as much impact as in the financial sector. For these reasons TCX is specifically focusing on product development in this field.

1.3. Key principles

TCX operates along the following key principles:

FOCUSED PRODUCTS: TCX only invests in market risk management products such as currency swaps. It does not provide funding.

UNIQUE RISK MANAGEMENT: TCX assumes outright currency risks in highly illiquid markets, managing risk through portfolio diversification across all regions and countries in the emerging and frontier markets.

ALIGNMENT WITH SHAREHOLDERS: By working with the commercial officers of its shareholders, TCX has origination access to their combined client networks and deal-flow. TCX tailors its investments for these institutions.

MARKET-BASED PRICING: TCX invests in products that are priced in accordance with prevailing market rates and methodologies.

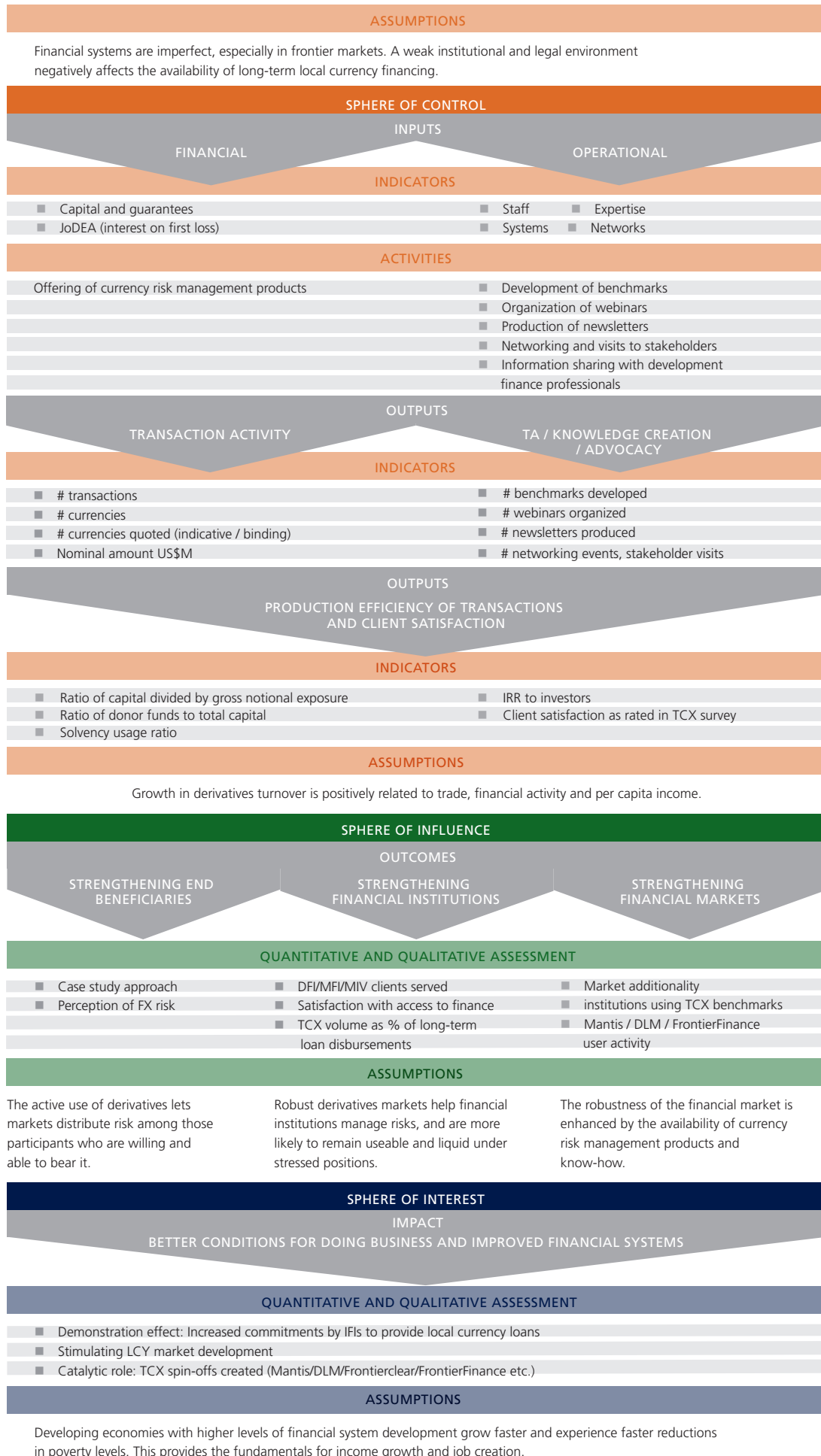
ADDITIONALITY: TCX only invests where its counterparties have no adequately priced commercial alternatives.

NON-SPECULATION: TCX only hedges actual exposures to the real economy.

1.4. Results Framework

The cause and effect relations as described in this document are presented in the following framework:

RISKS — IN FRONTIER ECONOMIES, THE UNPREDICTABILITY OF MACROECONOMIC DEVELOPMENTS AND POLITICAL EVENTS IS HIGH, DETERMINING THE VOLATILITY OF THE CURRENCY.



2 Intervention strategy

2.1. Inputs: Financial and organizational elements

TCX contributes with its balance sheet (capital and guarantees) to covering development finance institutions and their clients against exchange rate volatility, by using its staff, expertise, systems and networks.

2.2. Outputs: Hedging transactions and knowledge creation

TCX pursues its mission not only by hedging the FX risk in transactions between international investors and their clients, but also by using its know-how and making it available to others in order to assist in further development, as well as in realising spin-off initiatives.

TRANSACTIONS

TCX offers the following currency risk management products:

- Cross currency swaps, which typically mirror the cash flows of a loan: TCX can hedge the lender, who can then provide a local currency loan to the borrower; or TCX can hedge the borrower, who can then accept a hard currency loan from the lender.
- Forward contracts, which can also be used to hedge portfolios of loans or equity investments, or support roll-over hedging strategies.

Depending on the preference of the client, TCX can provide either a floating rate hedge (where the local currency part has a short-term interest rate linked to a domestic benchmark such as the 3-month T-bill) or a fixed rate hedge (where the local currency interest rate is fixed for the term of the hedge).

The TCX product can be either “non-deliverable”, i.e. all amounts are settled in hard currency in an offshore location, or “deliverable”, where the local currency amounts are paid locally.

TCX tries to maximise the usefulness of its products to the actors in the funding chain. E.g. TCX agrees to maintain pricing levels for extended periods of time, to allow actors to have price certainty during the negotiations on a loan.

TECHNICAL ASSISTANCE / KNOWLEDGE CREATION / ADVOCACY

TCX supports the financial market infrastructure by (where possible) freely disseminating its know-how (e.g. on its pricing policy in each market) to its transaction counterparties and market participants more broadly. It does so to reduce knowledge barriers and promote the use of local currency finance.

TCX provides valuation curves to its counterparties on a monthly basis. It supports the public dissemination of available (but hard to access) information on the local benchmarks in exotic currencies, and assists international investors to develop self-hedging capabilities. TCX staff proactively transfers its know-how on the FX market, risk management techniques and innovative finance via workshops, webinars and tutorials, targeting various financial intermediaries a.o. clients, shareholders, investors and other interested parties in the financial development community.

TA ACTIVITIES

Beyond the core business of hedging currency transactions, TCX offers targeted TA activities to develop pricing benchmarks in illiquid markets, identifies TA needs (in frontier markets and in financial institutions), and provides support to build capacities. Besides providing these services to financial development institutions, TCX engages directly with central banks, local bankers and government officials.

2.3. Outcomes: Strengthened markets, institutions and end clients

By providing currency risk management products to international funders and local borrowers, and by contributing to creating the necessary framework conditions, currency risks placed onto the local system are reduced. TCX’s interventions are aimed to achieve short-term and medium-term effects at three strongly interdependent levels in a frontier economy’s financial system: 1) financial markets, 2) financial institutions and 3) the end clients.

STRENGTHENING FINANCIAL MARKETS

TCX contributes to financial market development and growth by providing new tools (e.g. currency swaps) that local banks and institutional investors can use either to risk manage their own books, or as building blocks for their own product development for their clients. Foreign entities focused on capital market development need a vehicle to temporarily warehouse currency risks. TCX fulfils this function and enabled a number of bond issues.

ASSUMPTION: TCX's effect on financial market development is not dependent on TCX's intervention relative to the overall size of the market.

STRENGTHENING FINANCIAL INSTITUTIONS

When a financial institution is provided with hard currency funding and it has no access to FX hedging, the resulting currency risks must be absorbed domestically. Local banks typically push the FX risk on to their end clients in the form of hard currency loans. If these clients have no balancing FX income, this creates increased credit risks associated with the FX mismatch: the risk that the clients cannot bear increased debt service if the local currency devalues. If done at large scale, this risk becomes systemic.

ASSUMPTION: This effect is highest with local financial institutions that would have limited alternative sources of local currency, i.e. the non-deposit taking institutions.

STRENGTHENING END CLIENTS

The end client of the funding chain, whether a MSME or a household, is typically the least able to manage currency risks. He (more often a she in microfinance) faces a repayment obligation in hard currency, and absorbs the risk of becoming over-indebted due to currency devaluations outside of his/her control. As has been illustrated during recent currency crises in more developed markets such as Hungary and Poland, currency risks can cause mass financial distress with households. By solving the FX risk in the value chain

down to the end client, TCX makes the whole chain less risky and relieves the end clients from periodic distress.

ASSUMPTION: The type of institution reached by TCX determines the impact achieved on the end client. Financial institutions serving households and MSMEs, and infrastructure sector, achieve a broad-based reach of TCX's product.

2.4. Impact: Better conditions for doing business

TCX was created to address the problem of dollarization of international debt flows to the private sector in frontier economies. The mission of TCX is to intervene in the international (debt) funding chain to frontier economies, so that the end clients are not saddled with currency risks. This is vital to improve financial systems and create better conditions for doing business. By acting as the shock absorber to frontier economies, TCX contributes to the stability of the financial system.

DEMONSTRATION EFFECTS

TCX's size is limited and it cannot solve the needs of all borrowers in frontier economies. To bring about impact more broadly, TCX aims to act as a catalyst and demonstrate the benefits of using currency risk management products, so that its existence assists others to find solutions and achieving an impact beyond its direct transactional capacity.

SPIN-OFFS

TCX has used the know-how developed internally to create new initiatives that extend the impact of its activities. Specifically, Mantis (a macro-economic research company focusing on smaller frontier economies), Frontier Clearing Corporation (a guarantee fund supporting interbank transactions in TCX's markets) and FrontierFinance.net, a network for development finance professionals, were developed as direct extensions of TCX.

3 Indicators

This section lists all indicators according to the structure of the results framework, working up: inputs, outputs, outcomes and impacts. Each indicator has a short description of what it entails, how it is calculated, together with the source and the unit. The indicators can be adjusted to reflect TCX's future strategic priorities. Data will be collected every two years – subject to data availability - and will be published in a biennial development review.

3.1. The input level

To generate impact and achieve results, TCX contributes with its balance sheet (capital and guarantees) and by using its staff, expertise and networks.

FINANCIAL INPUT

TCX must match its hedging capacity to the financial resources (capital and guarantees) that are available. A comprehensive financial overview is available in the annual report.

CAPITAL: In order to function properly and ensure long-term financial sustainability, TCX needs to ensure that it has adequate capital to cover the risks incurred. On an annual basis TCX reviews its capital adequacy and capital planning in the ICAAP.

Source: TCX ICAAP, Unit: Nominal capital invested (including loans) and callable capital

ORGANIZATIONAL INPUT

TCX must match its ambitions to contribute to financial system development to the resources (staff, expertise, systems and networks) that it utilises.

STAFF: TCX staff has the skills and capabilities to work in a high standard international working environment.

Source: TCX, Unit: number of FTE directly or indirectly working for TCX.

EXPERTISE: TCX has empowered its staff and uses the specialized knowledge of its staff to provide hedging transactions and TA. The expertise of its staff is measured through the satisfaction surveys conducted annually with the most frequent clients.

Source: TCX, client satisfaction survey, Unit: scale 1-10 or quote from client satisfaction survey.

NETWORKS: TCX mostly invests through or with its investors which have established local networks in emerging markets.

Source: Internal reporting, Unit: number of counterparties (shareholders, shareholder clients, network banks)

3.2. The output level

It is not enough to achieve results, it also matters how they are achieved. Efficiency and effectiveness of the operation determines if the activities are the best way to employ capital and human resources to achieve results. TCX operations focus on delivering high-quality transactions, making the best use of its resources. The overall set of indicators at output level reflect the efficiency and effectiveness of TCX, looking at the production efficiency of transactions and client satisfaction.

PRODUCTION EFFICIENCY OF TRANSACTIONS AND CLIENT SATISFACTION

CAPITAL ADEQUACY RATIO: To assess capital efficiency related to the performance of the underlying currency exposures, the capital adequacy ratio is calculated, taking into account a minimum required capital of 14% plus the pillar two capital buffer.

Source: TCX data,

Unit: Capital Adequacy Ratio.

CATALYSING EFFECT: the first loss tranche as provided by donors have catalysed the equity investors. These two groups combined have realized a certain amount of primary notional hedges. This amount of notional hedges accumulates over the years and gives an indication of the amount of local currency financing realized through the first loss tranche

Source: TCX Data, Unit: Accumulated notional of primary trades/first loss capital provided.

SOLVENCY USAGE RATIO: To assess the capital efficiency, the amount of capital TCX holds against its portfolio for market risk with the sum of the capital required for each individual transaction on a standalone basis, using equal risk measures, is compared. This provides an indication of the capital efficiency gains achieved by pooling the exposures generated through its investors in the currencies diversified globally.

Source: TCX data, Unit: %.

IRR TO INVESTORS: TCX does not have a profit maximization approach, but aims to remain a financially sustainable institution. The IRR target is therefore to achieve a low positive number. As TCX's results are volatile by nature, we use a three year rolling average.

Source: TCX data, Unit: rolling three year average IRR.

CLIENT SATISFACTION AS RATED IN TCX SURVEY:

TCX aims to be a reliable and knowledgeable partner for its clients. Every years, clients are polled to measure their satisfaction on how well TCX delivers on its key products and services offered (transactions and TA/knowledge sharing).

Source: TCX survey, Unit: scale 1-10.

TRANSACTION ACTIVITY

These indicators show the transaction results of TCX's activities. One of the main drivers to TCX's added value is its ability to better manage portfolio diversification as a pool with contributions from multiple sources. TCX's primary risk mitigating instrument puts stringent limits on the portfolio (including a net single currency exposure maximum of 10% of the portfolio, and regional limits).

NUMBER OF TRANSACTIONS: Better diversification leads to lower risk and better capital utilization. This indicator counts TCX's transactions by country classification, region and sector.

Source: TCX data, Unit: number of transactions by country classification, region and sector.

NUMBER OF CURRENCIES: TCX's mandate is to be additional to the regular financial markets and to complement them. This indicator counts the amount of TCX's currencies traded, in relation to the amount of currencies the market offers.

Source: TCX data, Bloomberg, Unit: number of currencies.

NUMBER OF QUOTES (INDICATIVE VS. BINDING):

In FX trading, market makers like TCX are asked by a potential counterparty for indicative quotes for a transaction. The frequency of this interaction is a reasonable estimate for the interest in hedging options.

Source: TCX data, Unit: number of quotes (indicative and binding).

NOMINAL AMOUNT OF THE OUTSTANDING EXPOSURES: The nominal amount outstanding provides a measure of TCX's size in the market, as well as a rough proxy of the potential transfer of price risk in derivatives markets.

Source: TCX, Unit: nominal amount outstanding (USD million).

TA / KNOWLEDGE CREATION /ADVOCACY

Effective framework conditions are an important element of a sound financial system. TCX strives to support development finance professionals to help strengthen the financial infrastructure. Besides establishing benchmarks in countries where the market is absent, TCX employees proactively share information on the FX market via webinars, newsletters and during networking events and visits.

NUMBER OF WEBINARS ORGANIZED: To illustrate TCX's objective to proactively share information on FX market developments, this indicator counts the amount of webinars organized and the number of participants.

Source: TCX, Unit: number of webinars, number of participants.

NUMBER OF NETWORKING EVENTS, STAKEHOLDER VISITS: To illustrate TCX's objective to share information and transfer knowledge with its stakeholders, this indicator counts the amount of networking events and stakeholder visits organized.

Source: TCX, Unit: number of networking events, stakeholder visits.

3.3. The outcome level

The outcome level focuses on TCX's contribution to strengthen financial systems, at the three strongly interdependent levels 1) strengthening financial markets, 2) strengthening financial institutions, and 3) strengthening end clients.

By contributing to the creation of the necessary framework conditions and by providing currency risk management instruments to international funders and local borrowers, the whole value chain is strengthened and made more resilient.

STRENGTHENING FINANCIAL MARKETS

This set of indicators show the results of TCX's efforts to create the necessary infrastructure to provide risk management instruments in frontier economies.

ADDITIONALITY TO THE MARKET: TCX's mandate is to be additional to the regular financial markets and to complement them. This indicator focuses on TCX's additionality by comparing TCX's maximum fixed rate tenors approved by TCX to price fixed rate transactions, with the offering of the market.

Source: Bloomberg and TCX data,

Unit: Fixed rate tenor offered by the market and by TCX (in TCX countries).

BOND ISSUES ADVISED OR SUPPORTED: An important measure for the strength of local capital markets is the number of bond issues in that market. Foreign institutions often play a catalytic role by setting interest rate benchmarks for the market with these bonds. Their activity is limited by their inability to take currency risk on the monies invested in the bonds. TCX acts as a solution to this inability and enables these institutions to implement their capital market development strategies.

Source: TCX Data, Unit: Number of bond issues in frontier markets supported by TCX

TCX VOLUME AS PERCENTAGE OF LONG-TERM LOAN DISBURSEMENTS: TCX contributes to decreasing the currency risks related to long-term debt provided by international institutions. The systemic effect of TCX's activity on the domestic financial system is larger where TCX's intervention is large relative to the overall size of the market. This indicator focuses on TCX's annual deal volume, per currency, relative to the total disbursements of the local banking sector of loans with a tenor of longer than 1 year.

Source: TCX annual deal volume and World Bank debt statistics, disbursements on external debt private non-guaranteed (subject to data availability). Unit: Top ten TCX currencies (subject to data availability).

NUMBER OF INSTITUTIONS USING TCX BENCHMARKS: TCX makes available market data that is otherwise hard to access. It does so to remove barriers for investors interested in frontier economies. The success in achieving higher investor interest is indicated through the number of institutions using TCX benchmarks.

Source: TCX data, Unit: number of institutions.

TCX SPIN-OFFS USER ACTIVITY: TCX broadens the impact of its activities by actively creating spin-off institutions that extend on its own business. The success in creating useful spin-offs is measured through the number of institutions using the services from TCX spin-offs.

Source: TCX, Mantis, DLM, FrontierFinance, Frontclear data, Unit: number of institutions.

STRENGTHENING FINANCIAL INSTITUTIONS

Expanding availability means little in the absence of realizing transactions. Financial institutions such as TCX provide services as intermediaries within financial markets. DFIs have limited capacity to maintain open positions in illiquid developing country currencies and thus rely on cross currency swaps as offered by TCX to offer local currency funding. Microfinance vehicles provide services as intermediaries of financial institutions to end clients.

Number of microfinance institutions and SME banks served: This indicator counts the number of micro-finance institutions and SME banks (directly or indirectly) served by TCX.

Source: TCX data, ,

Unit: number of transactions for MFIs and SME banks in the portfolio, as disclosed in disclosure forms.

TCX VOLUME AS % OF LONG TERM LOAN DISBURSEMENTS BY DFIS: This indicator shows TCX's contribution to reducing the currency mismatch of DFIs, by measuring TCX's volume as % of long term local currency loan disbursements by DFIs (excluding the more liquid currencies like the Brazilian Real or Chinese Renmibi). It can only be collected on a case-by-case basis, as part of a country case study.

Source: TCX and DFI annual reports, Unit: %.

PERCEPTION OF FX RISK BY MFI'S: FX risk is one of the various risks faced by microfinance institutions, and addressing it is the core of TCX's existence. The higher the weight given to this issue, the more relevant TCX is for these institutions. The success is measured using the report of the Centre for the Study of Financial Innovation (CSFI) which assesses the perception of MFIs towards FX risks. indicator shows the perception of MFIs towards FX risks.

Source: CSFI Banana Skins report, Unit: rank of FX risk in the MFI industry

STRENGTHENING END CLIENTS

The end client in the funding chain, typically a MSME or a household in a frontier country, is the least able to deal with FX risks. TCX intervenes in the funding chain to avoid the frequent outcome, that the FX risk is placed onto the end of the chain. This set of indicators estimates the number of end beneficiaries that TCX serves indirectly via MFIs.

TCX volume as % of long term loan disbursements by microfinance institutions: A measure of TCX's success is how many end clients were reached with local currency loans. Using industry averages, this indicator can be derived by taking TCX's annual deal volume per country to the microfinance sector relative to the total long term lending activity (tenors longer than 1 year) of local MFIs, and applying this relative share to the number of clients of those MFIs. The information can only be collected on a case-by-case basis, as part of a country case study.

Source: TCX data and International Debt Statistics, World Bank and mixmarket.org., Unit: TCX annual deal volume per country to MFIs (top five countries served by TCX), divided by non-guaranteed long-term loans by MFIs.

3.4. The impact level

The impact level reflects TCX's mission to intervene in international funding chains to remove FX risks for clients in frontier markets. The impact indicators reflect TCX's role in having an indirect catalytic and demonstration effect on others.

CONTRIBUTING TO STRENGTHENING OF FINANCIAL MARKETS

TCX's mission requires it to concentrate on the least developed markets. Results are reviewed by mapping TCX's transaction volumes to the financial market strength of each country in TCX's portfolio.

Source: World Development Indicators – Domestic credit provided to private sector by banks (% of GDP), Unit: TCX's activity in countries with lowest financial market strength.

DEMONSTRATION EFFECT: INCREASED COMMITMENTS BY IFIS TO PROVIDE LOCAL CURRENCY LOANS

TCX places high value on its demonstration effect as the unique institution active in local currency in frontier economies, and in its contribution to solving FX issues beyond its limited transaction capacity. The results of the demonstration effect is measured through the growth trends in the commitments by IFIs to provide local currency loans (regardless of whether TCX hedges these loans).

Source: IFI annual reports and interviews, Unit: qualitative assessment of LCY commitments by IFIs.

STIMULATING LOCAL CURRENCY MARKET DEVELOPMENT

TCX's products can be used by the local banks as building blocks in support of further market or product development. This is a positive strategy to achieve broader-based local currency market development. By growing the direct activity with international commercial banks, TCX removes barriers and pulls them into frontier markets and encourages more interbank interaction. By increasing direct hedging for local banks, TCX increases the tools available to them for product development for the domestic markets. Finally, where TCX sells exposure through transactions with these banks, TCX realizes capital relief for itself and frees up capacity to continue extending its primary production, therefore increasing the impact per unit of capital invested. This effect is measured through the growth trends of transactions with commercial parties.

Source: TCX MTM overview – transactions with international and local banks, and hedges, Unit: amount and volume of transactions.

CATALYTIC ROLE: TCX SPIN-OFFS CREATED

Based on the extensive knowledge of providing innovative currency risk management products in frontier markets, TCX is in the unique position to help establish related innovative services. TCX aims to deepen the financial system by acting as a catalyst to support the development of new innovative risk management products for local market players.

Specifically, TCX has created a number of institutionalised spin-off activities: MFX Solutions, DLM, Mantis, Frontier Clearing Corporation and FrontierFinance.net. This indicator is assessed qualitatively in assessing these TCX spin-offs.

Source: TCX spin-offs, Unit: qualitative assessment of TCX spin-offs created.

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