We’ve only just begun

TCX 2019-2022

“Funding individuals, enterprises and projects in developing countries in the appropriate currency must become as standard as it is in Western markets today.” Ruurd Brouwer, CEO TCX

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TCX

Market creation

TCX creates markets where there is no supply and demand, or where either exists but not the other. This is the case in the most underdeveloped markets. TCX innovates to introduce currency risk mitigation at grassroots level.

Market deepening

TCX lengthens maturities, increases volumes, and supports local-currency bond issues in imperfect, nascent markets. We introduce fixed-rate hedging solutions beyond government yield curves and offer deal sizes for which the local markets are still too shallow.

Knowledge sharing

TCX has gathered valuable knowledge and experience about local markets and local-currency solutions. This knowledge and data must be shared to further the development of local capital markets.

Dear reader,

With pleasure and pride, we present the ambition of The Currency Exchange Fund for the years to come. Our ambition is straightforward: funding individuals, enterprises and projects in developing countries in the correct currency must become as standard as it is in Western markets today.

In 2007 TCX was set up to make local-currency financing possible in the most frontier markets. In 2018 we look back at an impressive track record. Through TCX, investors have realized foreign investments in local currency in 67 countries, for USD 6.5 billion in notional value. To date, the Fund has executed close to 3,000 transactions, protecting millions of individuals and households from currency risk, and preventing instability instead of fighting its consequences. Whilst doing so, the Fund generated a modest positive return for its investors, despite three global financial crises.

Our activities to 'sell' to private investors the currency risks that arise from foreign investments have become as important over time as our activities to absorb and remove these risks. Private parties have been catalyzed by TCX in rapidly increasing amounts. Since inception of the Fund, over USD 1.5 billion has been offset in 37 currencies. In 2018 alone, TCX will have mobilized USD 38 of private investments in frontier market currencies per USD 100 of capital invested. This creates and deepens local capital markets and boosts the Fund's capital efficiency.

Over the past two years, the Fund's activities have grown by more than 50% per annum. Looking forward, we see a continuation of growth in demand for local currency. All parties in the development finance community understand that it is unthinkable to finance the Global Goals for Sustainable Development in hard currency, because the resulting currency risk ends up on the shoulders of those who can bear it the least. The willingness to resolve the currency risk challenge is growing. Transforming this willingness into action is the reason TCX exists.

The plan of action for the near future is based on the following three key activities:

Market creation **Market deepening** **Knowledge sharing**

The success of TCX is built on the availability of patient, risk tolerant, and impact-seeking capital. As foreseen in the 2018 ICAAP, we have reached the limits of growth based on our current capital. We are therefore calling on the existing and new investors to support TCX in realizing its mission through additional capital injections. Simultaneously, TCX shall significantly increase its capital efficiency, by mobilizing the private sector and delivering more impact per dollar invested.

In September 2017, TCX celebrated its 10th anniversary by asserting that "we've only just begun". This paper explains how we will continue and asks for your support in realizing our joint ambition.

Ruurd Brouwer
CEO, TCX

Bert van Lier
CIO, TCX

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1 | TCX 2007 - 2018

1 |1 From innovation to global solution

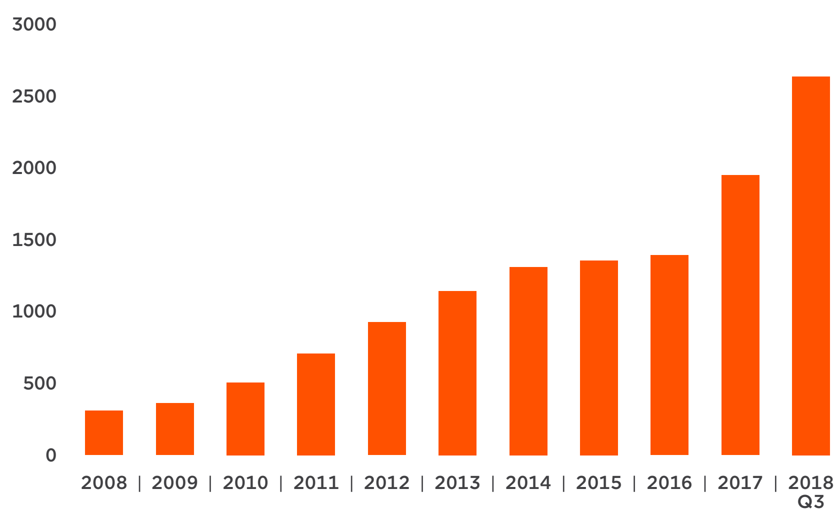
Currency risk is as old as development finance. In 1947, the French request for what would be the first loan from the World Bank was for 500 million US dollars, not French francs. Because the balance sheet of the Bretton Woods institutions was in USD, the USD was the currency of choice, regardless of the need of the borrower. This approach would ultimately become the standard way of doing business in development finance.

As development finance moved towards the financing of developing countries, the volatile nature of these countries' currencies resulted in significant negative side effects from receiving hard currency loans. Debt service in the home currency was unpredictable and erratic and could make the debt burden unsustainable overnight. The financial health of USD-borrowing local enterprises became a function of international financial instability, not responsible business management practices. This effect is as harmful for private sector borrowers as it is for governments.

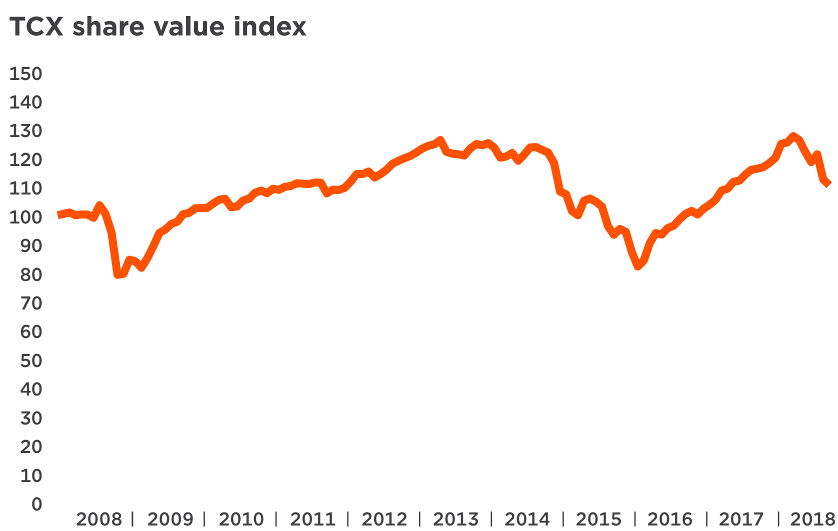
To prevent offloading currency risk to its clients, FMO experimented with a fund that lent in local currency. Given the high risks, the capital was made available by the Dutch government. When the currency related losses were evaluated after ten years, the conclusion was that the diversified nature of the exposures and the use of local-currency base rates were key factors in realizing a small positive return. A backward-looking analysis on a hypothetical emerging market currency portfolio by Cardano Risk Management B.V. (now TCX's Risk Monitor) confirmed these findings, and the foundations for TCX were laid.

TCX started out as an innovative way to prevent currency risk from being offloaded to those who can bear it the least. In 2018, the Fund expects to transact USD 1.4 billion in primary transactions in frontier currencies, up from USD 1 billion in 2017 and USD 560 million in 2016. Over the past 18 months, TCX has almost doubled its gross portfolio to USD 2.6 billion, whilst increasing the overall percentage hedged from 23% to 32%.

Primary portfolio (million USD)



Shortly after the launch of TCX, a western mortgage finance crisis turned into a global crisis, with a devastating effect on emerging market currencies. This was followed by the Euro crisis, the Ruble crisis, the Asian stock market crisis and the global commodity crisis of 2014-2015. Throughout this period TCX continued to grow its activities and portfolio. The Fund suffered significant losses during these crises, as foreseen, given the Fund's purpose to absorb the losses that local individuals, entrepreneurs and institutions would otherwise incur. Simultaneously, the Fund confirmed its ability to generate over the longer-term a modest positive return for its shareholders.



Today, the conclusion may be drawn that TCX's business and risk models have been thoroughly tested, and the Fund has proven to be crisis resilient. More importantly, the conclusion should be that the Fund has succeeded in protecting millions of individuals and households against currency risk. The Fund created stability and prevented financial disruption, which is preferable to fighting crises and managing their aftermath.

For more information, see the 10 year impact evaluation report at:

10 year impact evaluation report

1 |2 TCX foundations

The business model

TCX's business model rests on two foundations: diversification and the interest rate differential.

Diversification of currency exposures reduces return volatility and improves returns on a portfolio level. The diversification principle ensures that less capital is needed to cover the same amount of risks, leading to efficiency gains for all. Moreover, the concentration of currency risks in a single vehicle brings significant economies of scale and deepens and broadens the knowledge that may be applied in the development of innovative solutions.

The second foundation is the interest rate differential. When offering hedges, the Fund applies the market base rate of the relevant local currency. Typically, this rate is higher than the USD base rate. The difference between the two, the interest rate differential, on average makes up for the losses due to depreciations, plus a small risk premium. In effect, this means that the true cost of debt service is almost equal (on average) for local-currency and dollar loans. This is not evident when comparing the nominal value of the local and USD base rates.

From the borrower's perspective, the local-currency loan provides stability and predictability in debt service. It protects the borrower from currency depreciations and the volatility of international financial markets. This, in turn, translates itself in a better credit risk for the lender, allowing the lender to charge a lower credit risk premium.

From the investor's perspective, the combination of diversification, economies of scale, and the interest rate differential (or carry) makes TCX a fundamentally viable and sound investment. Moreover, the absence of profit maximization as a goal allows TCX to focus on maximizing the impact of its activities, notably opening and developing frontier markets.

TCX's business principles

In pursuit of its ambition, TCX applies the following principles, which reflect the values and business philosophy of its founders and funders:

- **TCX exists to support long-term investment flows in local currency into the DAC markets (the developing countries and territories eligible to receive official development assistance as defined by the Development Assistance Committee of the OECD). It tailors its products and policies to maximize its impact on, and support of, this investment process.**
- **TCX offers its product when no adequately priced commercial alternative is available.**
- **TCX applies market-based principles when designing and pricing its products.**
- **TCX does not support speculation.**
- **TCX applies international social, environmental, KYC and AML guidelines.**

The risk model

The business model outlined above has been proven to work when the time period is sufficiently long. However, in shorter periods of stress, currency correlations tend to increase, and market sentiment often leads to large (and typically overshooting) exchange rate moves. During such periods, the interest rate differential does not make up for depreciation losses and diversification does not prevent sizable losses.

TCX needs to have sufficient capital to survive such stress periods. To this end, the Fund deploys a conservative capital framework to ensure that it always has a high enough capital buffer. For transparency reasons and to align with generally accepted risk measurement techniques, this capital framework is derived from the Basel III framework that applies to banks. This framework is reviewed and updated annually in the Internal Capital Adequacy Assessment Process (ICAAP).

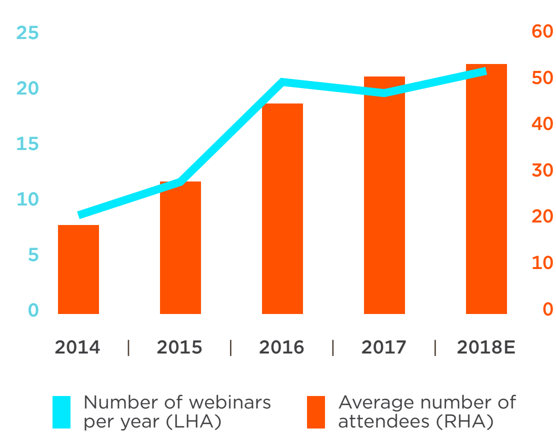
In TCX's capital framework, the 14% (Pillar 1) ratio of available capital to risk-weighted assets is defined as the minimum capital level, as it historically equaled the AAA capital level of financial institutions. If this ratio is breached, the investors have the right (but not the obligation) to dissolve the Fund. To avoid reaching this situation, a substantial Pillar 2 buffer is added on top of the Pillar 1 minimum, that addresses through forward-looking stress scenarios the potential underestimation of the backward-looking risk measures captured in Pillar 1. Presently, the sum of these two Pillars (i.e., TCX's 'required capital ratio') stands at circa 20% of risk-weighted assets. On top of this, there is the so-called 'growth buffer', which is the amount of capital that may be deployed freely.

Although this conservative capital framework translates into a high capital intensity, it has worked well historically and is a safe basis for the future of the Fund, as reflected in the strong 'A' rating from Standard & Poor's.[1]

Advocacy

One of TCX's core activities is advocacy, or actively promoting local-currency financing and the importance of preventing currency mismatches. For this, TCX uses a variety of communication channels. An important channel is our participation in conferences, especially in the field of climate finance and renewable energy. The Fund regularly organizes workshops, seminars and (co-)hosts webinars, often on specific countries. The advocacy takes the shape of technical assistance in Africa, when we meet with governments, utilities and ministries to explain the pricing tool TCX applies to create local-currency financing in their markets. TCX is increasingly active on social media and publishes articles and op-eds. The graph below shows an increase in the number of webinars organized by TCX, as well as an increase in the average number of participants.

TCX webinars over the years



1 Going forward, it could be investigated to increase TCX's risk appetite. This paper assumes that the capital framework remains unchanged and the required capital ratio remains at 20%. This ratio feeds into the target capital ratio of 22% that we use later in this paper to size the Fund's capital needs, since there is preference to run the Fund with a 2% cushion above its required capital levels.

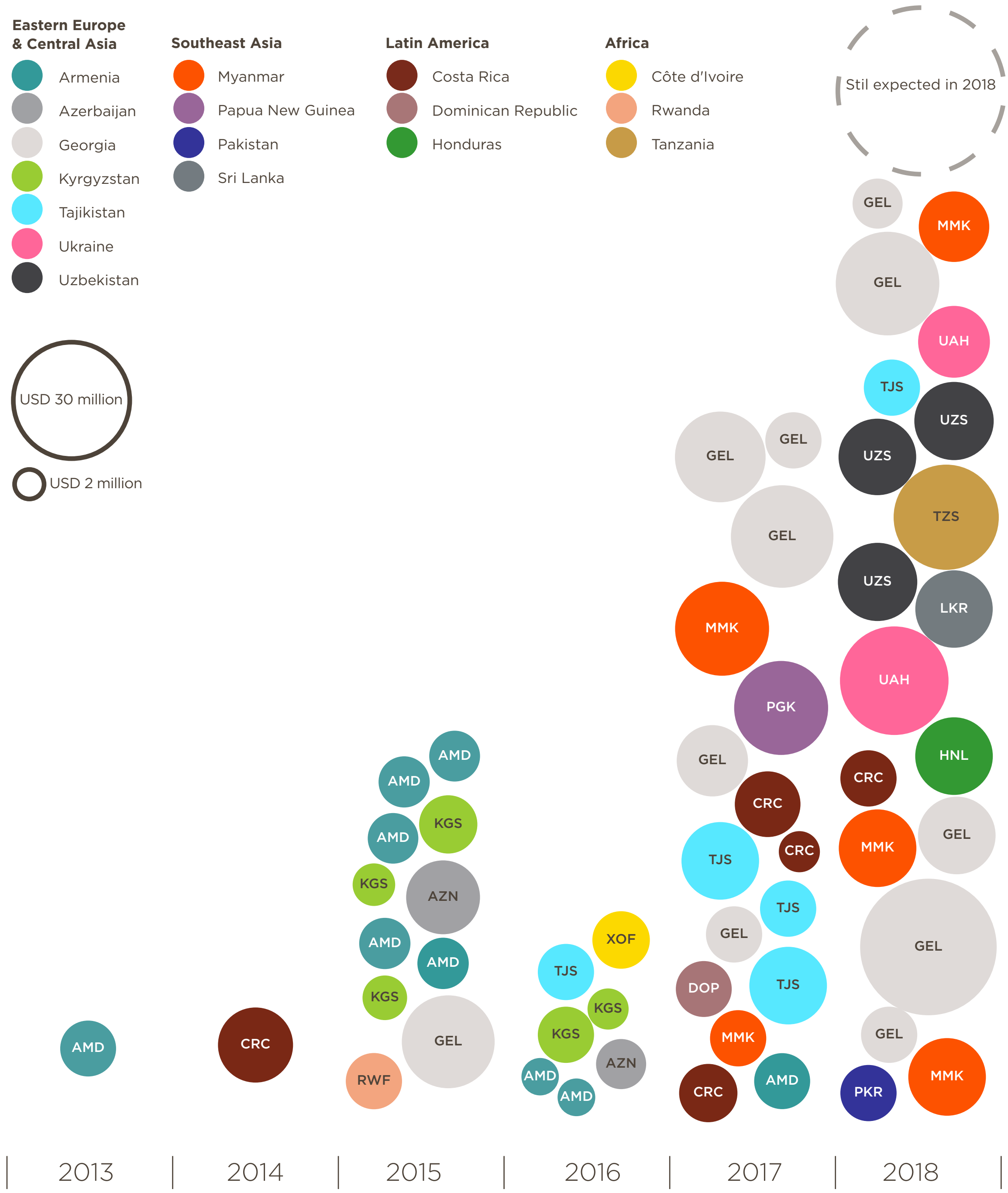
1 | 3 Hedging as the third foundation

As described above, TCX's risk model is grounded on conservative capitalization. This is a strength as it allows the Fund to weather extreme emerging market crises. However, it also limits the leverage, in the sense that for every USD 100 million invested, the Fund can only provide approximately USD 250 million in currency risk protection. To reduce its dependence on continued access to capital, the Fund has therefore sought to offset as much of its long positions as possible, and thus to enhance the efficiency of the capital deployed within it. This 'third foundation' to TCX's business model has become a key to boosting its future impact worldwide.

As of end-September 2018, the Fund has sustained about eight consecutive quarters of servicing a strongly increasing demand for local-currency (LCY) hedging without the support of any new capital inflows. This was made possible by offsetting much of the risks of booking its long positions. As a result, the Fund has shifted from being a long-only LCY vehicle in 2012 (i.e., 0% of the long portfolio hedged), to holding short LCY positions that now account for 32% of the long LCY portfolio. The Fund realized this 'third foundation' to its business model in two ways: by hedging the short end of TCX's long-term exposures with commercial banks, and by co-structuring local-currency bonds issued by its shareholders.

In a local-currency bond program, the AAA-rated shareholder issues the bond in a frontier market currency at the relevant interest rate. TCX swaps the bond back to USD, resulting in USD-funding for the issuer, who does not want the currency risk. Through this structure, TCX offloads its long local currency risk onto private investors, who seek access to frontier market risks and returns. The uniqueness in this instrument is that the private investor is not forced to take the usually high credit risks associated with investing in frontier markets. To date, TCX has catalyzed more than USD 500 million of such private sector investments, as shown in the graph that follows.

Local-currency bond issues (million USD)



2 | A triple-impact fund

2 |1 The creation of a market

TCX creates its primary impact by shielding individuals, enterprises, and institutions in frontier markets from currency risk. The local-currency solutions TCX supplies are made available to the development finance industry, impact investors, and microfinance vehicles, as well as commercial banks that lend to clients in frontier markets. The products offered by TCX have changed development finance irrevocably, and there is an identified need for a substantial increase in the supply of frontier currency hedging solutions. How TCX will satisfy this need is described in section 2.2.

Based on its long positions in local currencies, TCX has realized a second source of impact. By 'selling' its exposure to local currencies to the private sector, TCX has enhanced its capacity to book long positions and create primary impact. How TCX will prioritize boosting this demand is described in section 2.3.

The third source of impact is market creation by bringing supply and demand for local-currency together. This 'market-making' results in more transparent price setting and higher liquidity. In theory and in practice, the increase in liquidity tends to bring down local-currency rates, especially in the most frontier countries where there is no market. As outlined below, TCX will increasingly develop into a 'market-maker' for the most frontier currencies.[2]

Theory of change

TCX's currency hedging products and services in emerging and frontier markets generate significant social value in those countries by contributing positively towards stable economic growth and poverty alleviation. TCX's activities benefit society through improving livelihoods and the resilience of poor households through the following channels:

TCX's instruments induce incremental investment through mitigation of risks for investors in key sectors for inclusive economic growth such as infrastructure, microfinance and renewable energy.

TCX's market-making contributes to financial sector deepening and financial stability. This directly channels into improving financial access and reducing poverty. In countries with low financial development, TCX is the sole provider of currency risk hedging instruments and promotes accessibility to such products. In more developed markets, TCX provides liquidity and augments available products through e.g. longer maturities, thereby deepening the domestic FX markets and developing the local-currency capital markets.

TCX's thought-leadership and knowledge-sharing raises awareness on risks associated with foreign currency lending, thus making an important contribution to financial stability.

TCX is currently revisiting the theory of change. When finalized, currently expected in November 2018, the results will be published on the Fund's website:

www.tcxfund.com/impact-initiatives/theory-of-change

2 Market-making in the context of this paper is not to be interpreted as market-making in the context of MIFID and other EU regulations. For TCX, 'market-making' means actively stimulating and bringing together demand and supply in its markets. It does not mean "being continuously willing to trade at publicly quoted prices".

2 |2 Developing the supply side

TCX will continue to develop local-currency de-risking instruments, with a specific regional focus on Africa and a product focus on renewable energy, climate change, and infrastructure. Zooming in, the Fund sees the following priorities:

Infrastructure, climate finance, and renewable energy

Over the past three years, TCX has stimulated and witnessed a growing interest from the infrastructure, climate finance, and renewable energy sectors to secure finance in local currency. In particular, we actively promoted local currency in the off-grid sector, where too often households are forced to accept the currency risk, comparable to the microfinance sector ten years ago.

TCX also hedged several transactions in the infrastructure sector, such as water and energy utilities and public transport. The impact of decoupling the tariffs of public services from volatile exchange rates is high and makes financial planning significantly more predictable. For TCX, it means larger trades with longer tenors. Capital increases and increased offsetting of the currency risk will be instrumental in growing our impact in these sectors.

Local capital markets development

Many of TCX's shareholders develop local capital markets, amongst other means through the issuance of local-currency bonds. These high-impact issues are often hampered by a lack of flexibility and capacity, for example to temporarily offset currency risk. TCX will further its flexibility and capacity to better serve as a strategic partner in the development of local capital markets. In terms of risk, this means that TCX foresees taking net short positions, and develop the markets to hedge these short positions as well.

Extending outreach, delivering local currency

TCX will establish additional distribution channels through local banks. Often investees of TCX's shareholders, these banks can service clients in local currency whilst TCX's shareholders often cannot. In terms of risk, this implies that TCX will increasingly take on counterparty risk.

These local banks will also allow TCX to start offering deliverable products, as opposed to the Fund's current non-deliverable products.

The deliverable product

TCX's standard product is a non-deliverable hedge. This means that the difference between local and hard currency amount is settled off-shore, in hard currency, using locally observable exchange rates. The pricing is therefore mainly driven by currency depreciation expectations. This means pricing can be often disconnected from the on-shore cost of funds. This happens especially in times of crises and/or when capital markets are closed or heavily regulated.

Offering a deliverable hedging solution, whose pricing would be linked to the on-shore cost of funds, provides certainty that the cost of local-currency loans provided by foreign entities remains linked to local interest rates. TCX will need to transact with onshore banks to offer this product. This changes the character of TCX from a pure market risk taker to also a taker of credit risk of the top-tier local financial institutions. This product was presented to, and approved by, the 2018 Annual General Meeting of shareholders.

In addition to the above, TCX will engage with the export finance market to explore ways to extend the Fund's impact and investor base. Long-term export finance has many similarities with development finance, in terms of the adverse impact of currency risk on investment and lending/borrowing decisions.

The use of subsidies

TCX foresees an increase in the use of subsidies to unlock and develop local markets or sectors. A positive experience recently was the USD 10 million subsidy from the United Nations' Livelihoods and Food Security Multi-Donor Trust Fund (LIFT), that catalyzed over USD 80 million of medium-term funding in Myanmar's microfinance sector. It is important to stress here that the Fund follows and will continue to follow, whenever possible, local capital market rates to prevent market distortions.

2 |3 Developing the demand side

As described earlier, TCX is offsetting an increasing part of its local-currency positions. Growing this demand for local-currency exposure is a crucial part of the Fund's strategy. In our daily interactions with market participants, we have identified the following activities that will spur this development:

Growing offshore local-currency bonds

Developing the demand for local-currency bonds as a foundation of TCX's success is a priority for the future. We will increase the depth and number of relationships with arranging banks that have access to an institutional investor base through their sales network. Parallel to this, we will engage with asset managers and impact investors to market the bonds. We will also broaden the base of bond and/or note issuers. These activities create offshore benchmark-based yield curves, adding to market transparency and development.

The key product will remain a synthetic frontier-currency-denominated note settled in hard currency (usually USD or EUR). The issuer will be a highly rated institution (A or higher) to whom TCX provides a swap to convert the frontier-currency funding to floating-rate dollar-based funding. Alternatives for TCX to issue such bonds itself will also be investigated.

Hedging

TCX will significantly increase its hedging activities, offsetting its long positions with onshore or offshore banks. We expect that this will function as a risk-mitigant primarily for the shorter term, whilst TCX keeps the long-term risk on its books, hence limiting the quantum of capital relief. Nevertheless, liquidity in the market is increased through this activity, whilst the Fund benefits from hedging its peak exposures, improving its diversification profile, and realizing capital efficiencies.

Developing new demand

There is an unmet hedging demand from non-governmental organizations (NGOs) and aid agencies. These institutions often have income in US dollars but local-currency expenses. With a treasury function that is in many cases underdeveloped, these institutions run unnecessary currency risks, often in the most frontier currencies. For TCX, this represents an additional opportunity to offset its shorter-term risks, whilst servicing the NGOs' needs.

The active pursuit of the activities mentioned above was not foreseen when the Fund was set up. Therefore, the Fund will need to reassess and adjust its risk management models and structures to accommodate these new and exciting developments. We will return to this point in the following chapter.

The TCX Frontier Currency Index

TCX is investigating constructing and publishing the 'TCX Frontier Currency Index' (TFCI) to achieve the following:

- **Show that emerging and frontier currencies are an investable asset class by supplying transparent and observable data, and thus lifting the interest in these currencies.**
- **Increase the visibility of TCX and local-currency financing solutions, especially in the most illiquid currencies.**
- **Leverage TCX's unique data set, whilst supporting the further development of the Fund's core business.**
- **Offset part of the Fund's exposure by selling multi-currency bonds and/or making the index fully tradable (longer-term goal).**

3 | Business expectations

3 | 1 The growing demand for local currency

In 2017, the United Nations identified an annual gap of about USD 2.5 trillion in foreign investments needed in emerging economies to reach the Sustainable Development Goals (UN, 2017). The G20 has expressed its commitment to increase local-currency financing to support the private financing of infrastructure. The European Commission recently made an increase of local currency in development finance a policy goal for the years to come (EC, 2018). DFIs have indicated that many transactions that should be in local currency are still funded in hard currencies.

According to the Overseas Development Institute, the most important risks to infrastructure investors in emerging markets are macroeconomic, political, and currency risks (ODI, 2018). More strikingly, 65% of institutional investors have indicated that their main risk management strategy to minimize these risks, is not to invest at all (WEF, 2016).

Based on the above, the conclusion can only be that the demand for local-currency finance should and will grow at an accelerating pace. This demand will be serviced by local capital markets, by local liquidity under guarantee structures, and by parties willing to take outright currency risk, not least TCX.

Given the extent of the local-currency demand, we believe that the hedging capacity TCX can deliver will ultimately only be restrained by pricing considerations, the amount of capital available to the Fund, and the possibilities to offset its exposures and boost its capital efficiency. The market for TCX to offset its positions is still young, shallow, and unpredictable. This means that TCX cannot yet rely on it as a structural solution to offsetting its capital needs. And since TCX is convinced that it is on average pricing the frontier currencies correctly, the only constraint for now is capital. This is the principal reason why independent studies have advised scaling up TCX to grow local-currency financing in frontier markets.

3 |2 Capital planning scenarios

As explained in section 3.1 above, it is safe to assume that the demand for local currency will continue to grow. Our capital planning scenarios are therefore not based on different demand growth assumptions, but on assumptions regarding the availability of capital. We assume a constant demand growth and show what part of the growth can be serviced by TCX depending on capital availability and efficiency. This is a fundamental change in approach relative to the past, as for the first time in the Fund's history capital is the limiting factor, not market demand.

Assumptions

For capital planning and capital raising purposes, we build on the ICAAP scenario approved by the 2018 General Meeting, with the following adjustments:

First, we project that long production volumes will grow by 20% per annum, in line with the average growth of the past five years (21%). Annual predictions of production volumes have proven to be extremely difficult, but we believe a continuation of medium term growth along the lines of recent history is a safe assumption. This growth will come from existing investors, new investors, and commercial banks. It is also expected that the production in the currencies of the least developed countries, including many in Africa, will increase relatively stronger. This is due to the strong focus TCX and its investors have on these countries, as well as the 'promotion' of more developed countries out of the OECD/DAC list.

Second, we extend the scenario horizon from 2020 to 2022.

Third, we assume an average duration of new transactions of 5 years, well above the current 3.5 years, to reflect a lengthening of trades resulting from an increase in renewable energy and infrastructure transactions.

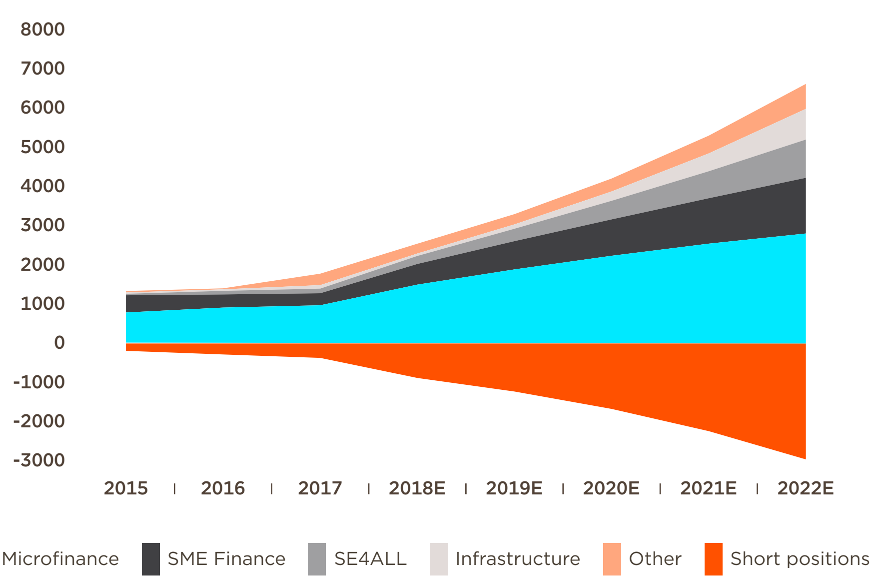
Fourth, we assume a hedge efficiency ratio of 90%. This assumption is of increasing importance given the growth in hedging activities. Many hedges that TCX executes have lower weights, especially if the tenor of the hedge is shorter than the tenor of the underlying exposure.

Fifth, we assume a target capital ratio equal to 22% of risk-weighted assets, consistent with the current minimum capital requirement of 20%.[3]

Finally, we assume a 2018 loss of USD 40 million (as of October 2018) and a production growth leading to a capital ratio of 20.4% by year end.

From the volume perspective, these assumptions lead to the following portfolio developments:

Primary portfolio per sector (million USD)



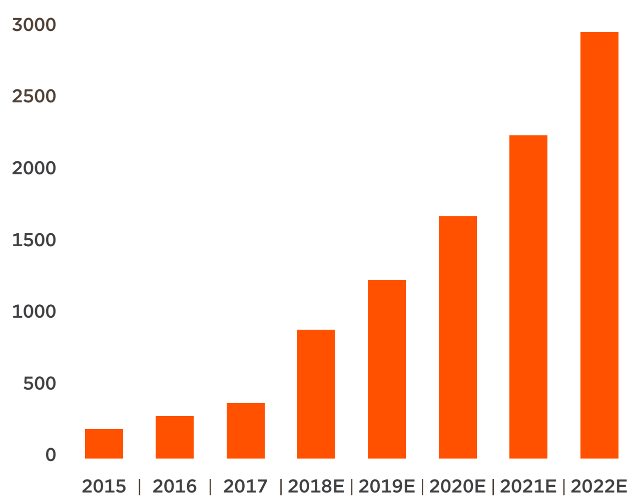
3 See Footnote 1

Base case

The base case is an aggressive case in terms of the growth in offsetting hedges. The key reason is that the long-term future of TCX is tied to the Fund's ability to become increasingly efficient in deploying its scarce capital. The key to this increased efficiency is the possibility to 'sell' or 'short' frontier currency exposures that the Fund holds or is 'long'. For the base case, we assume a growth of the hedging portfolio to 45% of the long portfolio in 2022. This translates into the size of the hedged portfolio growing by over USD 2 billion over the four-year period, as depicted in the graph. TCX would thus have to triple its short position when compared to the USD 900 million achieved at the end of 2018, growing it by 35% per annum, well above the 20% growth of the long portfolio. Crucial to achieving this objective is identifying new and repeat local-currency bond issuers and buyers and benefiting from a positive sentiment towards emerging markets, amongst other factors. A repeat, for instance, of the 2015 commodity crisis would make realizing this hedging scenario unlikely. The mitigating effect would be that in this scenario the expected growth of the long portfolio would also be temporarily lower.

The capital needs resulting from this base case are USD 225 million in early 2019 and on average USD 200 million in the following three years. Although the capital needs decrease as the hedging increases, under the current risk framework hedging can never be a full substitute. As the risk framework was designed for a different TCX and did not include such an active hedging strategy, it will be revisited. Over the four-year period and based on the current risk framework, the overall need is USD 825 million.

Growing the hedge portfolio (million USD)



The significant increase in capital will allow the Fund to grow in the infrastructure space. This in turn will lead to longer and larger exposures. These exposures in turn will allow TCX to grow the market in offsetting hedges by inviting larger, institutional investors, ultimately increasing the hedge ratio.

Lower case

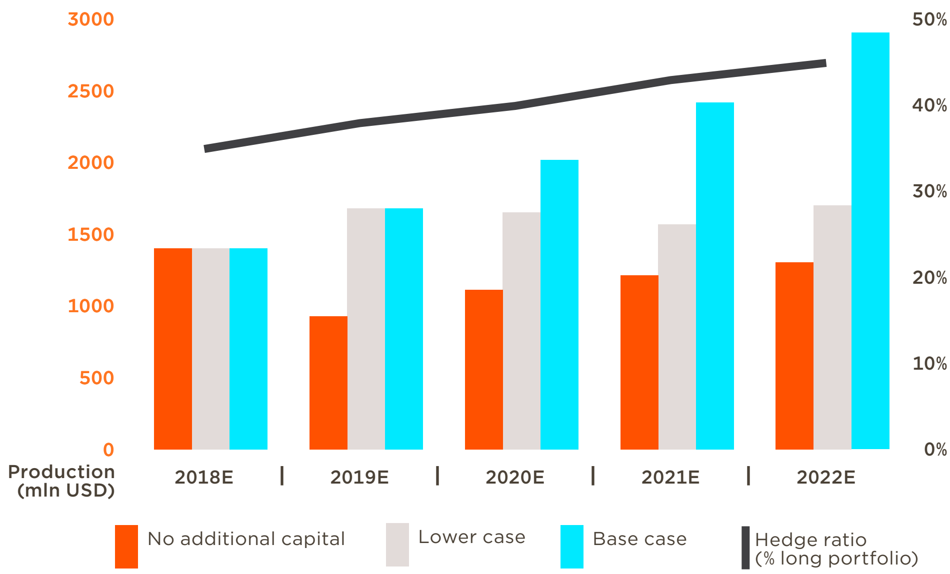
The lower case assumes that TCX will only be able to raise USD 300 million in the 2019-2022 period. If we assume that this capital comes in early 2019, the Fund will be able to grow in 2019 and 2020 only. Its annual production potential will be limited thereafter to USD 1.6 billion and a function of the increase in efficiency combined with retained earnings. If the capital comes in after 2019, the Fund will have to limit production in 2019.

The lower case means that the Fund will have to limit its ambitions as far as growth in the infrastructure sector is concerned, as this sector is the most capital intensive due to its longer tenors and larger sizes.

Status quo (no additional capital)

It is also worthwhile to depict what the result will be if no additional capital is injected in TCX. Applying the base case assumptions on average tenor and the increase in hedging, this scenario entails 'steady state production' levels where new production does no more than replace maturing transactions, with growth beng a function of the increase in hedging and retained earnings, as above. In this scenario, TCX would still be able to offer an average of USD 1.25 billion in new hedges annually, assuming no unexpected losses. This is, however, below the expected 2018 production and less than half of the base case volumes of USD 2.9 billion per annum by 2022.

Maximum production per capital raising case

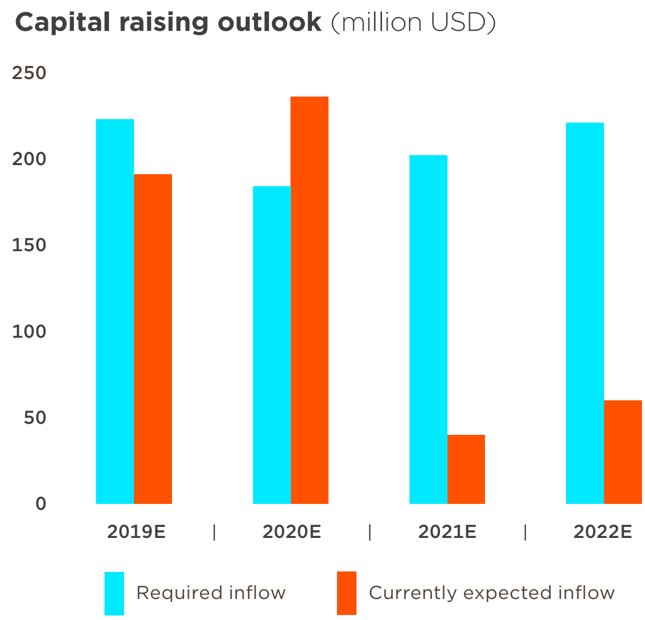


In this and other cases where the expected demand for TCX's products outgrows its ability to satisfy that demand, TCX will be forced to ration the available capacity. An option could be to increase the risk appetite of the Fund by accepting a higher leverage ratio. This would require a fundamental discussion between the shareholders regarding their risk appetite and between the first loss providers and the shareholders. The likely implications on TCX's rating would have to be assessed as well.

Capital raising outlook

Although the capital requirements of TCX going forward are high, we also see a significant increase in attention for currency risk in developing countries, and a broad wish to resolve it. This resolve translates in a significant number of potential investors that have indicated their willingness to support TCX in its activities.

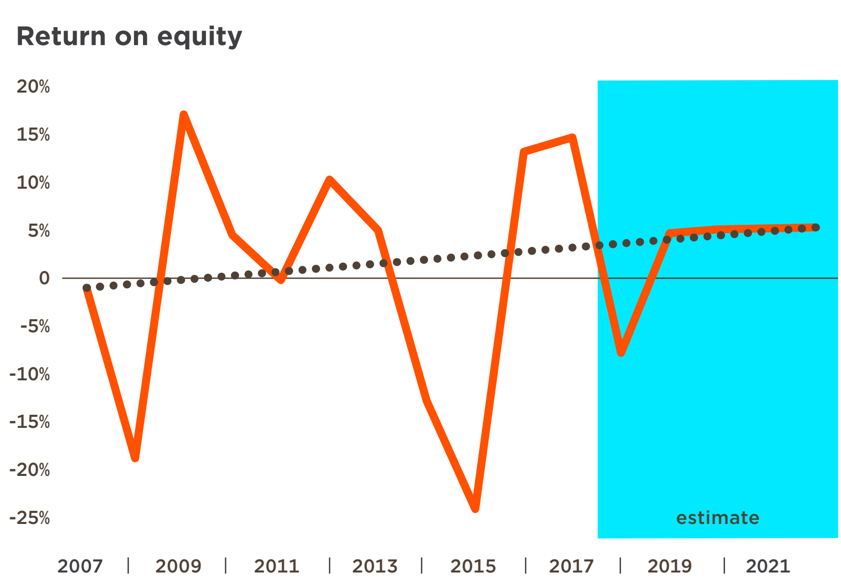
The Fund Manager is in contact with almost 70 potential investors. First contacts have also been established with governments of OECD/DAC countries to explore their interest in joining TCX's capital structure. To give an indication of the capital raising potential, we have constructed the capital raising outlook below. The blue bars represent the capital needed to serve the 20% increase in demand over the coming years. The orange bars represent the capital raising potential based on the discussions with all prospective investors. This potential is weighted by a chance of success, that decreases as time passes, hence the lower projected inflow from 2021 onwards.



As shown, the data presently indicates a conservatively adjusted capital raising potential of USD 525 million over the period. The gross total identified is well above USD 1 billion, but experience has shown that the predictability is limited. Not visible in the graph but crucial for capital raising (in terms of both upside and downside potential), is that USD 600 million of the gross total represents the potential investments of two parties. Experience has also shown that the universe of potential investors changes, and we expect new investors to be identified in the coming years.

3 | 3 Return expectations

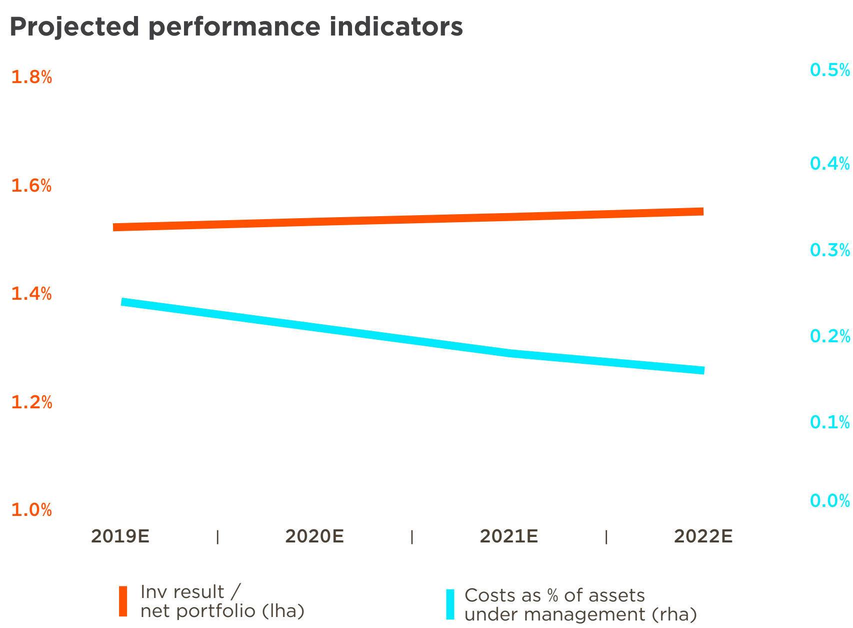
The projections for the financial performance are based on the long-term average investment result of the portfolio. Since TCX is a market risk driven vehicle, the projections have limited value in predicting the expected actual annual performance. The graph below does, however, give a good indication of the historical volatility and the expected growth path. The volatility in the annual returns results from the combination of the currency fluctuations, their correlation with one another, and the leverage of the Fund. Our expectations are that the volatility will increase as the average tenor of the portfolio increases, while leverage will be maximized and remain high compared to the past.



The assumptions underlying the projected performance are as follows:

- The investment result on shareholder transactions is assumed to remain 1.4%, in line with the long-term average, while non-shareholder transactions are priced 1.0% higher on average.
- The return on the Fund's liquidity portfolio is expected to remain slightly below 6-month Libor rates.
- When TCX acts as an intermediator (hedging 'back to back') or hedges the synthetic local-currency bond issuances of its shareholder, a spread of on average 50 bps is targeted. It is important to realize that the cost of hedging and the combination of imperfect hedges and the loss of carry mean that the Fund does not per se expect to increase its profitability by hedging. The main motivation is to increase the efficiency of capital usage and boost production levels.
- A 10% increase in operating expenses per year to accommodate the targeted 20% growth in long production, the 35% growth in short production and other activities to enhance the Fund's impact.

The resulting performance indicators show that the Fund's operating efficiency is expected to continue increasing as TCX further benefits from economies of scale. Operational costs as a percentage of assets under management (long + short portfolio) decrease from 0.3% to below 0.2%. This development is consistent with the increasing efficiency realized over the past decade. It further positively impacts the expected long-term average return on equity, which increases from 4.7% to 5.3% per annum, also partially driven by an increase in Libor (thus lifting the returns on the liquidity portfolio).



3 | 4 Preparing for a new reality

The future of TCX is a promising and exciting story of impact, growth, innovation, and development. The character of the Fund is changing from being a passive risk taker to an active market maker.[4] The transactions it executes are growing in number, size, tenor, and complexity. To fuel the growth, capital raising has become a high-priority activity and the number of investors is expected to rise. This bears witness to the increased awareness of the negative effects of currency risk on recipients of hard currency finance in developing countries. At the same time, achieving this development impact will require proposing and implementing several changes to the Fund's set-up. Described below are the principal attention points that will ultimately be put on the agenda of the Supervisory Board and/or General Meeting.

4 See footnote 2.

Adjusting risk and capital management

The Fund's risk model needs adjusting to cater for a portfolio where long local-currency positions are increasingly offset by short local-currency positions. Net short positions to either support local-currency bond issues, or to support a more efficient risk and capital management need to be embedded in the Fund's core documentation. In addition, going onshore and increasingly working with local financial institutions requires adjusting the Fund's credit risk appetite.

Product development

Apart from the deliverable product mentioned earlier, there is a demand for longer term risk protection. The Fund needs to investigate the feasibility of offering hedges adjusted to the needs of the renewable energy and infrastructure projects, since these sectors require more price certainty during the construction period. The Fund is already able to service the long tenors needed in these sectors.

Adjusting the internal organization

The strong focus on growth of the long and short portfolio requires investing in people. The TCX Frontier Currency Index needs to be developed and maintained, and additional staff will be required to go onshore and face local banks. Credit risk analysis skills need to be expanded and developed. The strong growth in the number of quotes requires further automation of the pricing process to keep it manageable and limit operational risks. For the development costs of the high impact but non-commercially viable activities we will continue to leverage on our partnership with the German government through BMZ and BMUB, whilst maximizing our efforts to broaden the base of TA funding.

Lengthening the first-loss tranches

As the tenor of the transactions increases, the tenor of TCX's first-loss tranches requires lengthening. We are in negotiations with the existing first-loss providers to lengthen the tenor to 2045. The potential new providers of first-loss instruments in the Fund will also be asked to commit to TCX for the long term, from the start.

Revisiting the capital structure

The Fund may be forced to revise its capital structure to provide a solution for two phenomena that some investors consider undesirable:

First, we see that there is significant interest to invest in the first-loss tranches, or in a similar type of debt instrument that does not reflect the changes in TCX's NAV. This means that the fluctuating value of the larger portfolio will be reflected in a relatively smaller number of shares. This is expected to increase the share price volatility.

Furthermore, we see that Basel III makes a share investment in TCX expensive for certain investors, from a capital charge point of view, even though the economic downside of the shares in a liquidation scenario is protected by the first-loss tranches. Effectively, this first-loss buffer takes the economic function of equity, while the shares can be seen as senior, not unlike debt instruments.

Whether these issues can be addressed in a revised capital structure and/or adopting alternative IFRS accounting rules requires investigating.

4 Conclusion

The demand for local currency solutions will grow significantly in the future, fueled by the need to shield households, enterprises, and institutions from currency risk.

The supply of local currency is limited at present, and inadequate to meet the future demand.

Over the past decade, TCX's business and risk models have been thoroughly tested and the Fund has proven to be crisis resilient. While focusing on maximizing impact, the Fund has proven its ability to generate a modest long-term return. These factors make TCX a fundamentally viable and sound investment.

With the demand for local currency finance expected to grow at an accelerating pace, TCX is at an important crossroads. Although the Fund has increased the efficiency of its capital usage and expects to continue doing so, presently the Fund has exhausted its growth potential, given its existing capital base and the foreseeable limits to its risk appetite and ability to hedge its exposures. TCX's capacity to service the growing demand for its products will be a direct outcome, therefore, of how much capital the Fund attracts in the coming years, starting as early as possible.

With the full support of the TCX Supervisory Board, we therefore call on your institution to support the growth of local currency financing by injecting fresh capital into the Fund.

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We’ve only just begun