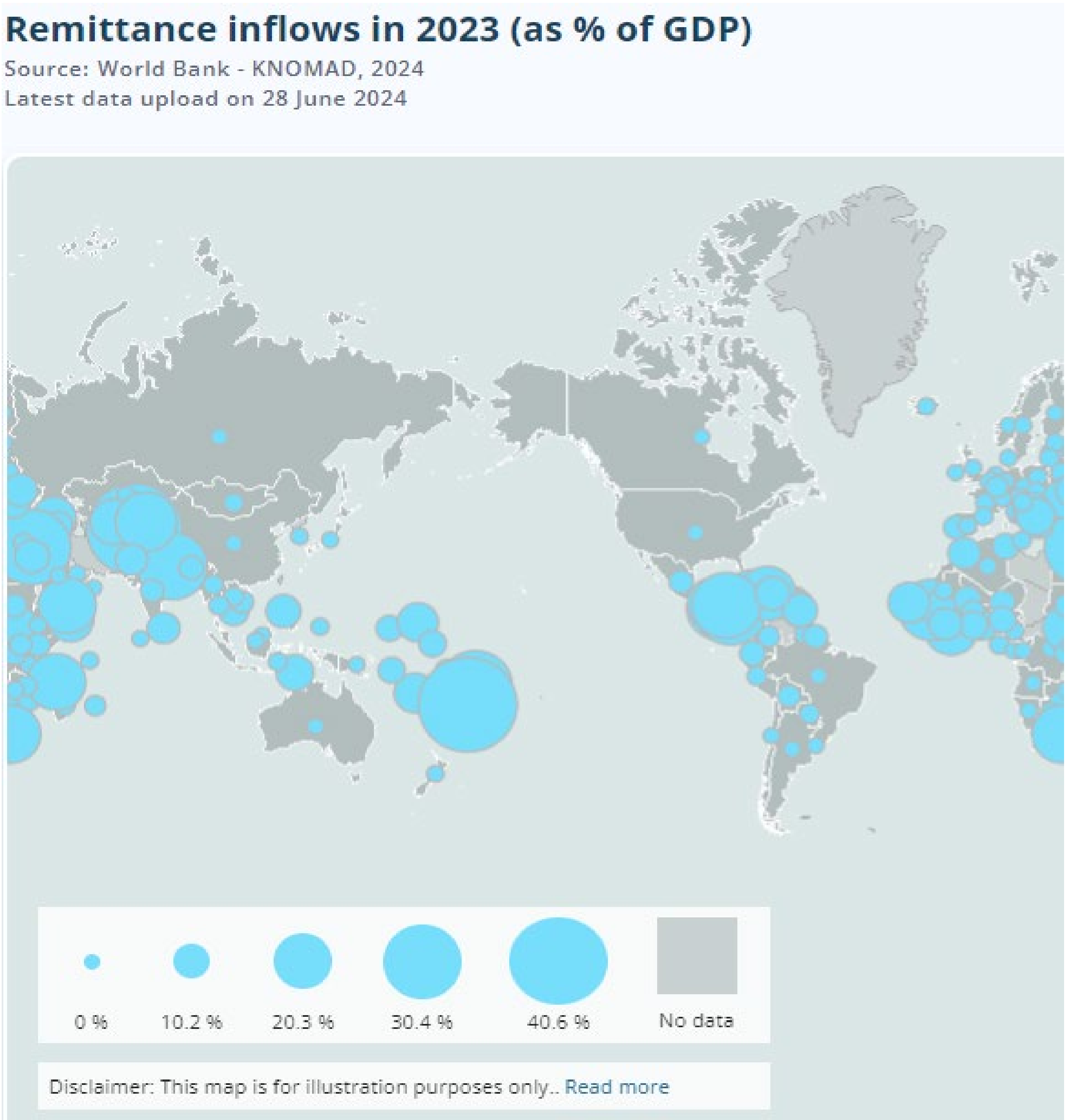
CONFIDENTIAL

RACS INTERNATIONAL'S REMITTANCE-BACKED INTERNATIONAL TRADE EXCHANGE



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Executive Summary

Objective: RACS International's fintech/insurtech venture (hereafter RACS, which stands for Risk-averse Capital Stewardship) aims to launch a **Remittance-backed International Trade Exchange**[1] as a step toward the establishment of a **Global Supply Chain Risk Management** marketplace, to be formed in a **UAE free economic zone,** with its Clearinghouse – in **Bermuda**.

In its first phase, it aims to offer:

a. An Integrated, blockchain-based, mixed **Currency/commodity/merchandise Exchange** that:

   i) **Matches** Exchange member HIC exporters (HIC – High-income Country), LMIC importers (LMIC – Low- and Medium-income Country), HIC Remittance Aggregators/Transmitters, and Transportation and Logistics companies as core participants of a basic transaction; ii) **Swaps** importers' non-internationalizable foreign currency deposits/collaterals into $/€/£, etc., deposits/collaterals[2] by leveraging the worldwide, estimated annual $669B, private remittances market; iii) **Clears** the transactions through the Exchange's Clearinghouse; iv) **Orchestrates** the physical delivery of goods– *currently developed at a prototypical level*;

b. **Infrastructure and Platform as a Service** (IaaS and PaaS) extended to grandfathered**,** such as Western Union and MoneyGram, and incubate new Remittance Aggregators/Transmitters to promote remittance sourcing, aggregation, and transmission **from HIC residents to the designated LMIC residents** with the Exchange mechanism;

c. **Banking as a Service** (BaaS) or Digital Wallet white-label front-end dropped down from the Exchange to LMIC banks, with virtual back-end integration and **account settlement** services through the exchange's Clearinghouse**.**

The **skeletal architecture** of RACS's platform is diagrammatically depicted[3] below:

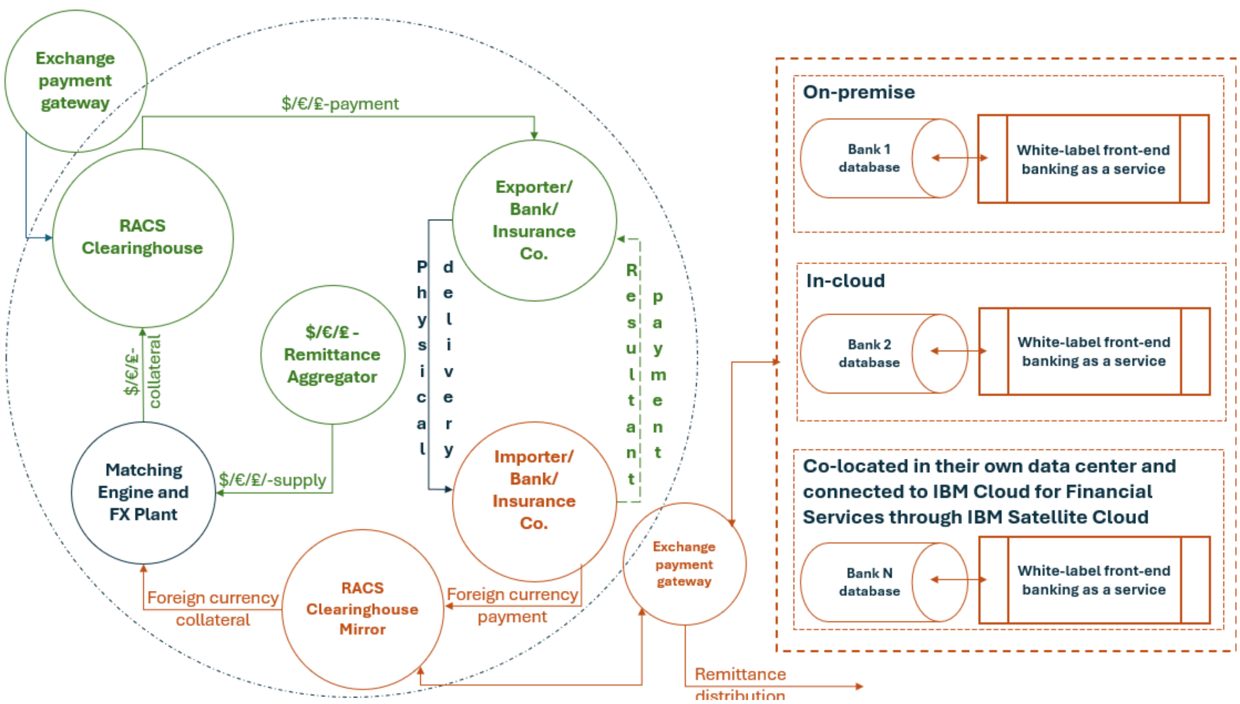

Fig. 1 Private remittance-backed mixed Commodity/Merchandise-currency Exchange and BaaS[4]

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1 The venture is RACS's scaled up response to an appeal for help from an African manufacturer. The problem transcends beyond Africa and is prevalent in Asian, Latin American and Caribbean countries as well.

2 In contrast to conventional commodity exchanges, where the core transaction is between two parties – buyers and seller – RACS Exchange's basic transaction represents a trade between at least four parties, and can be for a non-commoditized merchandize such as machinery, etc.

3 This venture constitutes a complex undertaking, and, in our view, the traditional 14-or-so-slide PowerPoint Presentations do not represent a good media for the articulation.

4 The green in this figure stands for HIC, the burgundy – for LMIC entities and currency flows, and the blue – for the transportation and logistics, and exchange internal operations.

Problem and solution: In the first phase of its deployment, RACS' Exchange aims to offer a **structured trade finance vehicle** to alleviate the severe international trade problems experienced by LMIC small and medium-sized enterprises (SMEs), particularly in most of the African, Asian, and Latin American and Caribbean countries, caused by their foreign currency reserve deficits, regulatory barriers, non-internationalizability of currencies, or risks and operational frictions that introduce bank technology non-readiness, among other problems.

As a root solution, RACS's Exchange offers a **swap of non-internationalizable currency collaterals into international currency collaterals as part of its algorithmic Matching Engine and FX Plant function,** thus eliminating LMIC and their bank risks from the international trade cycle and aiding importers in countries that are challenging to transact with to become more bankable. As a result, the mechanism helps the HIC exporters expand their markets.[5]

The above conversion is achieved with the utilization of the recurring private remittance flows from immigrant/migrant-hosting countries to LMICs by structuring:

i. **Depository Account Control Agreement (DACA)** with credible international banks in suitable jurisdictions or, alternatively,
ii. **Captive Insurance Company-backed Clearinghouse, reinsured by majors such as Lloyd's of London,** to offer less expensive and more creative account settlement and other functions autonomously from banks.

With **blockchain-based immutable data**, the platform will also semi-automate and improve the **integrity and security of the entire, tokenized, trade cycle**.

The Exchange will have adequate Cybersecurity Threat and Financial Fraud and Crimes protection.

Market size and share: The World Bank-estimated annual $669B private remittance market size establishes a scale, floor, and an understanding of RACS Exchange's profitability: Although RACS will compete for much larger than 1% of this market, still, if to assume that only 1% of the above-mentioned $669B private remittances flow through RACS's Exchange, to support the international trade-triggered reverse currency flow, where each remittance dollar generates a conservative 4% revenue from the round trip, 1% from the direct flow and 3% – from the reverse flow, almost $270M revenue will be generated from the operations of the Exchange. Gradually, RACS will strive to capture market share also in the corporate and not-for-profit remittance flows.

Expansion: RACS's methodology transcends international trade and, in time, will lead to the creation of an organized and structured **Global Supply Chain Risk Management** marketplace and introduce monetizable efficiencies in the overall international banking cycle since corporate and not-for-profit remittances can also be seamlessly incorporated into the presented mechanism.

Furthermore, among other things, the mechanism can help structure and expand:

1. **Futures and options** for LMIC currencies;
2. **International investment banking (IB) and Foreign Direct Investment (FDI)** in LMICs;
3. **International crowdfunding (ICF)** into LMIC SMEs while domesticizing the scheme's crowdfunding element and **legally bypassing** international crowdfunding barriers;
4. **Insurance Linked Securities (ILS)** tied to the supply chain cycle, illiquid currencies, etc., and new classes of assets such as **Remittance Backed Securities (RBS)**.

It can also support the operation of sovereign financial institutions such as the US ExIm Bank, BpiFrance, and other export credit agencies, the multilaterals such as MIGA, IFC, DFC, and EBRD, and private insurance providers, active in the political risk domain, to mitigate the default risk they face when guaranteeing international trade transactions against the currency inconvertibility risk as part of the standard political risk insurance scheme, to collect their receivables in case of default.

Fundraising and investor exit: RACS strives for rapid growth acceleration with the help of strategic partnerships, M&As, LBOs (Leveraged Buyouts), and roll-ups in addition to its current investment round.

With the setup of RACS's Exchange in UAE, within 5-7 years, the venture renders an opportunity to build a multibillion-dollar corporation executing commoditized and non-commoditized, and over-the-counter international trade transactions through the exchange and **offering its investors an exit through**:

- IPO at a well-suited exchange; or
- Full/partial sale of shares to one or more strategic players in international trade and/or banking.

[5] Without significant alterations, the mechanism can also offer a competitive solution for trade between developed countries.

Specific Problem, Venture’s Origins, and RACS’s Solution

LMIC Importer International Trade Financing Problems

Absent sovereign guarantees, generating a Letter of Credit, arranging a working capital facility, or securing a term loan for an international trade transaction where the importer is an SME in an LMIC is typically a tall order due to the non-readily convertibility of the given LMIC’s currency among other problems.

The non-readily convertibility or moveability, resulting first of all from the divergence of LMIC accounts payables and receivables and frequently exacerbated by economic, political, legal, and regulatory factors, or operational constraints associated with the additional not-readiness of LMIC banking technologies and HIC bank's reluctance to assume LMIC-political or LMIC-bank credit risk, introduces severe stress on the LMIC banking system.

At times, even when currency conversion may not be a massive problem in the given LMIC, such as in India or Mexico, still, regulatory barriers or transaction fees, even if redeemable over the long term, may make the trade transactions prohibitive.

Taking a step further, with the understanding that LMIC SMEs frequently need foreign investments for their operation and growth, attracting foreign investors to LIMC businesses is not a trivial task for objective reasons. One of the barriers in such schemes is the difficulty of repatriating the dividends or capital gains in international currencies, which, unless expressly prohibited, can also be achieved with RACS's mechanism.

In addition, RACS’s solution can offer a mechanism for offering international currency loans to LMIC enterprises, while the borrowers pay in their local currencies and the lenders get paid in the currencies used in lending.

Venture’s Origins

Presented in this document RACS venture arose from a specific problem posed by an Ethiopian business owner in need of acquiring textiles for her sportswear manufacturing factory in Ethiopia:

In response to her inquiry to generate a $/€/£ or other international currency Letter of Credit for a foreign textiles exporter as the beneficiary, due to the severe shortages of foreign currency reserves in the country, the Ethiopian banks would urge waiting for 4-6 months for the international currency to be provisioned to their businesses. Even with the required international currency provisioning in 4-6 months, just making the international currency available could add about 10% to the transaction cost and, at times, become prohibitive of an economically meaningful transaction.

The research revealed that this is a systemic problem for most LMICs.

RACS’s Solution and Its Commoditization

RACS's solution is robust, scalable, and consistent with classic banking paradigms and foreign currency market practices between developed countries.

It removes inefficiencies from the international trade cycle and transforms non-internationalizable currency collaterals provided by LMIC small and medium-sized businesses into $/€/£ or other international currency collaterals held under a credible custodial arrangement in suitably selected jurisdictions.

At its core, the solution manifests the collection of private remittances from the members of the Ethiopian Diaspora residing in the U.S. and intending to send help to their families back in Ethiopia, at an agreed-upon exchange rate, holding this cash under a credible custodial arrangement in US, simultaneously collecting Ethiopian local currency, Birr, in an amount corresponding to the above exchange rate, from the Ethiopian importer and using it, domestically, to distribute the designated remittances to the families of U.S-residing Ethiopians that intended to send remittances to them. Finally, to close the cycle, the U.S. or other country textile's exporter payment is guaranteed with the help of the USD cash collected from the remitters and held under custody, and the shipment of the textiles to the Ethiopian importer is orchestrated.

Thus, the establishment of RACS's Exchange aims at solving the outlined problem at scale, reliably, credibly, and efficiently, while institutionalizing the solution.

RACS's Exchange

Exchange Structure

In the first phase of its deployment, the Exchange will orchestrate integrated, simultaneous, and automated transactions between High-income Country (**HIC**) exporters, Remittance Aggregators/Transmitters[6], Low- and Medium-income Country (**LMIC**) importers, and Transportation and Logistics Companies, core **RACS Exchange Members**, matched through the Exchange's **Matching Engine and FX Plant** and guaranteed by the Exchange's **Clearinghouse**.

RACS's Exchange is only somewhat similar to other commodity exchanges, such as the Chicago Board of Trade (CBOT) or Intercontinental Exchange (ICE): Its operational process is more involved than the typical commodity exchanges since the conventional exchange-intermediated transactions are for a straight purchasing and selling of commodities between the buyers and sellers, i.e., only two parties, with a given liquid international currency.

The skeletal structure of a typical commodity exchange can be visualized below:

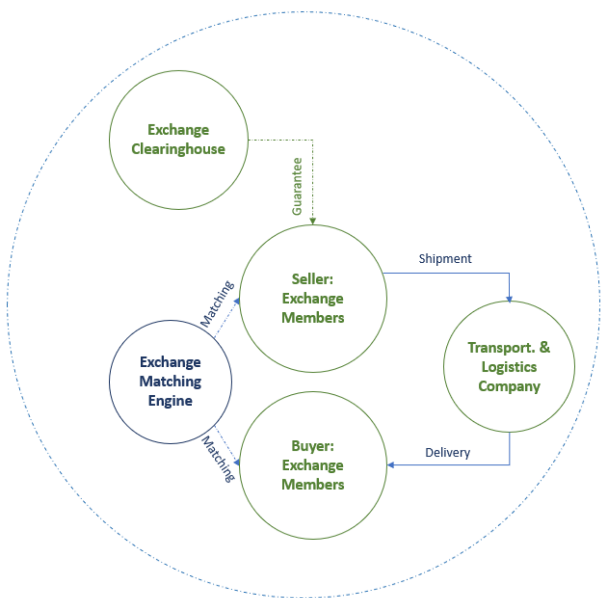


Fig. 2 Skeletal Structure of Conventional Commodity Exchanges

With some adjustments, the exchange structure depicted in the above Fig. 2 scheme can also be fitted to reflect the skeletal structure of over-the-counter, i.e., bank-intermediated, international trade transactions.

Typically, the banks choose the conventional Letter of Credit route for their transactions, which is costly, difficult to pull together, and bundled with unnecessary risks, such as foreign bank risk.

In contrast to the conventional exchanges, RACS's Exchange offers its Members a platform for the purchase and sale of, not necessarily commoditized, goods between two parties but four, and, possibly, including machinery, **between at least four parties, with an integrated swap of non-**

[6] Such as Western Union, Money Gram, etc.

necessarily readily convertible currencies, executed by the exchange's unique **tokenized, algorithmic** Matching Engine and FX Plant and guaranteed by the Exchanges Clearinghouse.

More creative and involved structures can also be envisioned to add more parties, such as banks and insurance companies. While this may further complicate the RACS Exchange transactions, a strong, real-life rationale can be offered to justify such complications. For instance, **Insurance Brokers** can be envisioned as such additional parties.

One way or another, this additional complexity can be successfully handled by RACS's Matching Engin and FX Plant.

The skeletal description of RACS Exchange's structure was provided in the earlier Fig. 1 of the Executive Summary section of this document.

Despite the currency transaction element, the above purchasing and selling cycle has to be seen as a commodity transaction since LMIC currencies, with their associated "production, storage, and transportation" barriers and frictions, are more reminiscent of commodities than international currencies.

Furthermore, these currencies should be considered part of the supply chain due to their lack of liquidity, internationalizability, readily convertibility, and other barriers to moving them around.

To avoid an overly cumbersome diagrammatic depiction of the process, the transportation and logistics company category is omitted in the above Fig. 1. However, it is presented in later, more focused, diagrams.

Exchange Matching Engine and FX Plant

As suggested before, the presence of the Remittance Aggregator/Transmitters, in need of sending HIC currency cash to set LMIC recipients for an unrelated purpose, as an additional Exchange Member class, makes RACS's Exchange more involved than the conventional commodity Exchanges**.**

RACS's mechanism presumes two additional steps compared to the conventional transactions:

- The **HIC Remittance Aggregator deposits** with RACS Exchange's Clearinghouse (see more on the Clearinghouse in the next section) the cash it needs to be sent to LMIC recipients, while RACS's Clearinghouse guarantees that the deposit, more precisely the right amount in the LMIC currency according to the agreed upon exchange rate, will be disbursed in LMIC according to the pre-defined **Deposit Account Control Agreement** (**DACA**) in **HIC**;
- The **LMIC Importer deposits** the relevant amount of domestic, non-readily convertible currency cash with RACS Exchange's Clearinghouse's limited functionality, mirrored operation in the relevant LMIC, which may simply be a local or global payment partner, for the Exchange's orchestration of the purchase of goods and services from and payment to the Exporter, and the corresponding delivery of the physical goods. This deposit will also be disbursed according to the pre-defined **Deposit Account Control Agreement** (**DACA**) in **LMIC**.

Recall that the above is not a simple currency exchange since LMIC currencies are not readily convertible, and the solution to this problem is orchestrated by the Exchange's Algorithmic Matching Engine and FX Plant, and the Clearinghouse.

As a matter of mechanics, unless the Exporter and Importer arrive at the Exchange with a preference to transact with each other, RACS's algorithmic Matching Engine and FX Plant matches the Export and Importer (or assume that they have been already matched per their own, expressed, preference), as well as matches a Transportation and Logistics company able and willing to pick the goods up from the Exporter and Deliver to the Importer, and, absent other necessary participants in the solution chain, a Remittance Aggregator/Transmitter or several such Aggregator/Transmitter to the transaction to make the international currency supply available for the entire transaction, including the Exchange and possible other solution chain participants.

The payments and physical delivery to all recipients are guaranteed by the Exchange's Clearinghouse.

If multiple Remittance Aggregators/Transmitters, Transportation and Logistics companies, and other necessary solution chain participants are available for matching, price-time priority will be used to complete the matching.

It is important to note that the Exchange would not execute pure currency exchange, as its purpose is not to simply convert currency but to facilitate international trade by using the HIC remittances under its custody as a tool to support trade transactions.

Exchange Clearinghouse and its Credit Enhancement

RACS's Clearinghouse, as any commodity exchange's Clearinghouse, must guarantee both financial and physical transactions that take place on the floor of the exchange.

To be trusted by the prospective Exchange Members, the Exchange Clearinghouse needs credit enhancement. Typically, as far as the guarantee of the financial transaction is concerned, this credit enhancement is provided to exchanges by major settlement banks.

In RACS's view, this outcome may be achieved more efficiently by "wrapping" a **reinsured-by-a-major Captive Insurance Company** of one type or another over the Clearinghouse, which seems to be an innovative undertaking.

In broad strokes, Captive Insurance Company is a variation of an insurance company that is owned by the parent company of the given entity, in this case, RACS, or a group of such entities, that insures its/their' s and operationally close operational affiliates' risks in a less expansive manner than otherwise. A lot of times, Captives can offer risk coverages when off-the-shelf coverage doesn't exist in the insurance marketplace. Captives are reinsured by reinsurance companies and share their reinsurers' strengths.

RACS believes that such an "umbrella" structure reduces the cost of Clearinghouse credit enhancement and provides it with more agility and flexibility to accommodate a steady flow of new and off-the-shelf products and transactions that settlement banks would not have the appetite and ability to offer.

Typically, when bypassing the more expensive and bundled with additional risks Letter of Credit route, several insurance coverages are underwritten in the transactional cycle of international trade:

a. Payment-guaranteeing **Credit Insurance**, implicitly or explicitly extended to the exporter and transportation and logistics company on behalf of the importer. Typically, this Credit Insurance coverage doesn't exceed 90% of the exposure;
b. Failure-of-performance-compensating **Performance Bond** extended to the importer on behalf of the exporter;
c. Delivery of goods-related **Performance Bond** and/or **P&C insurance** extended to the importer on behalf of the transportation and logistics company.

At the onset, all of these risks and their coverages are between the Exporter, Importer, Remittance Aggregator/Transmitter, and Transportation and Logistics company, with the insertion of the respective insurance companies, and are dealt with by them outside of the Exchange.

However, RACS strives to pass all of these and other relevant coverages through its Clearinghouse, to turn the Exchange into a **one-stop-window solution provider** for its members, net the risks, introduce and monetizable efficiencies in the transactional cycle.

To this end, when onboarding the above-described minimum four member categories of Exchange, RACS expects each of them to provide the Clearinghouse with a Performance Bond to compensate the Exchange in case they default on their transactional obligations.

In turn, the Exchange, more exactly its Clearinghouse, should guarantee or, in case of its default, should compensate the Exchange Members engaged in such transactions. This can be efficiently resolved since each such guarantee or compensation will be based on appropriate cash-collateral or back-to-back Performance Bond guarantees.

In more detail, to offer a **secure one-stop-window solution** to the Exchange Members matched through a transaction, yet not take risks that it cannot be able to control, the following will be executed:

A. Clearinghouse, through its mirrored, limited LMIC operation, will extend a Performance Bond to the Importer in return for obtaining an LMIC cash deposit of the proper amount, guaranteeing that the right amount of HIC currency will be allocated to guarantee the Exporter, Transportation, and Logistics Company, and any other solution chain participant payments under the transaction terms. The HIC currency remittances collected from the HIC Remittance Aggregators/Transmitter will be used as cash collateral to cover these Performance Bonds;

B. Simultaneously, the Clearinghouse will extend a Performance Bond to the Exchange Member HIC Remittance Aggregators/Transmitter guaranteeing that the correctly exchanged amount of LMIC currency corresponding to the remittances taken under Clearinghouse custody will be distributed to the designated LMIC recipients according to the transaction terms. The LMIC cash deposit taken under custody from the LMIC Importer will be used for these purposes;

C. The clearinghouse will extend a Performance Bond to the HIC Exporter, Transportation and Logistics Company, and any other solution chain participants, guaranteeing that they will be paid under the transaction terms. The HIC currency remittances collected from the HIC Remittance Aggregators/Transmitter will be used as cash collateral to cover this Performance Bond;

D. Clearinghouse will extend a Performance Bond and, if needed, P&C Insurance to the LMIC Importer, to guarantee that the goods will be delivered under the transaction terms. These Performance Bond and P&C Insurance will be back-to-back covered by similar coverages obtained by the Clearinghouse as a beneficiary, from the HIC Exporter, Transportation and Logistics Company, and any other solution chain participants.

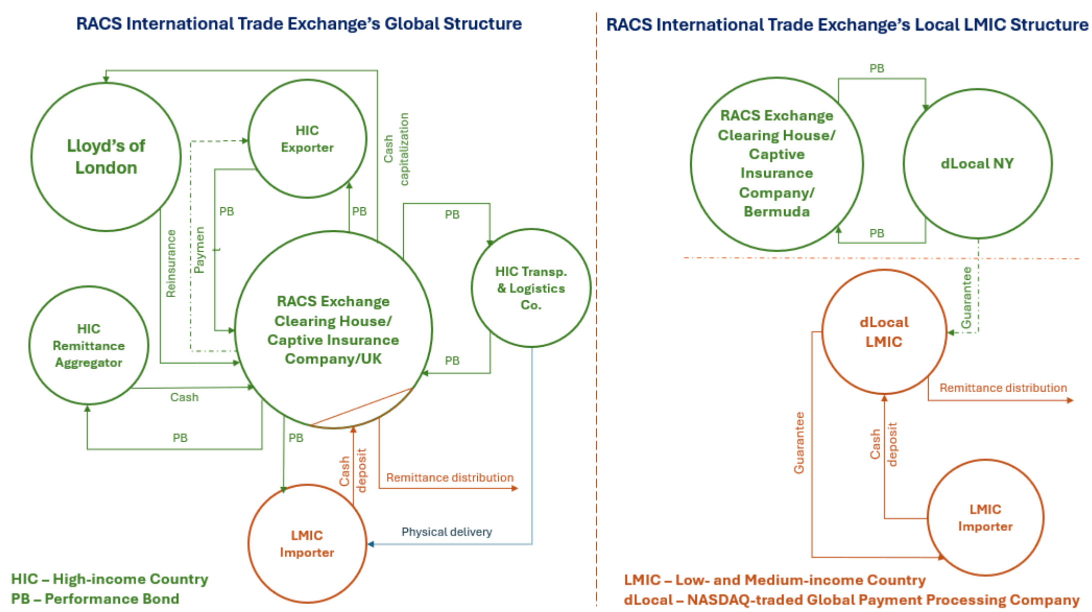


Fig. 3 Clearinghouse's Skeletal Structure

RACS's intended integrated "umbrella" coverage can introduce additional efficiencies and can be visually conceptualized through the above diagrammatic representation.

As a result of the above-described coverages, Clearinghouse will not assume any non-covered transactional risks, Instead, it will be protected from all types of defaults. The same concerns the

Clearinghouse's Captive Insurance Company and, down the chain, the reinsurer.

In essence, the Clearinghouse serves as a pass-through and provides only HIC currency payment and physical delivery guarantees – all covered, back-to-back, by cash collateral or other appropriate insurance policies while being the latter's beneficiary.

With required minimal structural enhancements and adjustments expansion, this mechanism can be extended to ensure the operation of a **Global Supply Chain** risk management marketplace.

The cybersecurity and financial crimes- and fraud-related risks will need to be addressed as well. However, these are standard risks subject to standard procedures and coverages and, therefore, their details are omitted from this document.

LMIC Currency Futures and Options, Insurance Products, and Securitization

The above outlined Clearinghouse structure will also be instrumental in developing LMIC currency futures and options.

The very structure of the above-outlined Clearinghouse offers the hedging and pricing foundations for such derivative instruments along with the possibility to securitize these currencies and hybrid assets.

The full support of the participants of the Global Supply Chain may also require the underwriting of insurance policies that are outside of RACS's Captive Insurance Company's scope and mandate.

However, with the Exchange Membership of insurance brokers positioned to underwrite policies outside of RACS's Captive Insurance Company market, acquiring and trading such policies can be structured through the exchange, approved, executed, and claimed through the exchange mechanisms, and, eventually, lead to the structuring of the Insurance-linked Securities with the transfer of such securities to paired venues suited for their trading.

The underwriting of such insurance policies through RACS's Exchange would require harmonization and standardization of such policies and connectivity with insurance broker systems through a designated API.

RACS and Bermuda Stock Exchange Synthesis

Before further familiarization with the Bermuda Stock Exchange's (BSE) growth strategy, systems, capacities, and needs, the following possible synthesis can be envisioned by RACS:

i. BSE's or its parent company's participation in RACS Exchange's growth as a strategic investor and partner;
ii. BSE's relevant license and permit utilization by RACS' Exchange, in exchange for the latter's equity, until the latter gets its own licenses and permits;
iii. Pairing of RACS's Exchange with BSE and channeling of ILS and other products' flow to the latter;
iv. Utilization of BSE's back-office functionality by RACS for a pay;
v. Providing mutual advisory and technology development services to each other for pay.

Technology

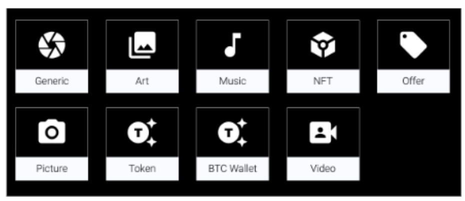
RACS Exchange's platform is anchored at Web4 technologies and represents an upgrade of those of Web3, developed by RACS's CTO. It accelerates development and production processes and, generally and when merited, utilizes millions of CPUs and RAM from devices like mobile phones, tablets, and laptops, forming an ad hoc distributed network.

Web4 surpasses Web3 technologies by delivering significant savings in processing power, memory, and storage while enabling a fully serverless computing environment and it incorporates a robust, multi-layered approach to cybersecurity.

RACS's Exchange is also based on an advanced tokenized payment gateway that revolutionizes the way transactions are handled and offers a secure, private, and real-time payment processing experience, ensuring that customer data is never exposed and compromised.

By converting payment details into unique tokens, the gateway mitigates the risk of data breaches, ensuring that actual data is never stored or transmitted, which not only bolsters customer confidence but, with its top-notch security and privacy, also absolves counterparties from the liability associated with stolen customer information.

The generated **Smart Tokens,** executed on a real-time basis, represent JSON-formatted objects containing details about the products or services acquired by counterparties. Smart Tokens are executed based on their intended purpose and once transitioning from creation to payment success, they are added to a blockchain, which ensures their integrity and immutability.



The Exchange represents an innovative platform that enables the creation and secure transaction of digital assets – each with its own blockchain. These assets, or blocks, can contain URLs, photos, videos, and data representing real-world items or electronic information, and can be displayed as text, media, or streaming content.

The network supports the minting of cryptocurrencies for seamless cross-border transactions and the creation of stablecoins pegged to stable assets. This flexibility and security make the Exchange a cutting-edge solution for managing diverse, structured, and multi-component **digital assets** in the global digital economy, including the international trade cycle.

It is noteworthy that the tokenization of assets and processes can be implemented also at the level of ensuring the integrity of the storage, customs clearing, and transportation of the trade's logistic cycle.

The Exchange is built on a decentralized platform where all participants connect through a Peer-to-Peer (P2P) system to transact digital assets. This decentralized approach ensures that there are no central authorities or intermediaries, enhancing security and transparency in transactions. The Exchange can seamlessly list all types of digital assets and allow the creation and expansion of a dynamic marketplace where these assets can be bought, sold, and traded by leveraging the efficiencies and security of blockchain technology to facilitate trustworthy transactions.

The Exchange is also equipped with a unique, decentralized digital wallet authentication with a private PKI Key, whereby at each relevant instance User Access Analysis with Hyperchain is run at a server level to ensure the integrity of access while granting complete control to the client-level end user.

A variety of proprietary AI functions and functionalities are seamlessly and readily available for integration with Exchange's Matching Engine, Clearinghouse, Payment Gateway, back office, and beyond.

RACS Team

RACS's key team members' concise, professional bios are submitted as a separate enclosure, amended at the end of this document.

Market Opportunity

The rising political, geopolitical, and economic tensions between developed, developing, and less-than-developed countries are the major modern contributors to the supply chain risk.

Within the context of RACS's venture, the term supply chain means production, storage, transportation, distribution, and overall logistics of goods and services, including the capital and labor force.

Traditionally, unless explicitly dealing with these issues, the conversion-transfer of capital and human migration, and availability of labor force don't receive much consideration within the context of the supply chain.

Yet, it is noteworthy that due to the various barriers and limitations, LMIC currencies pronouncedly exhibit commodity-like behavior and, along with the labor force, are essential supply chain constituents and constraints. It is also noteworthy that one of the implications of the newly surfaced trade tensions may result in the commodity-like behavior of some HIC currencies as well.

The adverse for the HICs' demographic dynamics and their skewness in favor of the younger population in LMICs can be seen from the UNCTAD-provided Fig. 7 below.

It is apparent from these images that in the next 25 years or so, the population of developed countries will continue becoming older, while the population of developing countries – the opposite.

This, in turn, implies that developed countries will need more younger people as a labor force to generate tax and social security revenue to support the growing older population, while the increasingly younger population of developing countries will continue migrating to developed countries until, decades from now, a new geopolitical and geoeconomic equilibrium is established:

Fig. 4 Population Pyramids, 2022

The projections also suggest that in the foreseeable future, private remittances sent from HICs to LMICs will continue increasing, and international trade will continue being directly impacted by the recognized, whether transient or lasting, supply chain problems.

Judging by the geopolitical developments of the last couple of decades and their acceleration post-U.S.-elections in 2024, a strong case can be made that the vertically integrated global order is increasingly unsustainable, leading to a more fragmented and regionalized world, which, at least for the near future, will prove its resiliency relative to the vertically integrated structures.

The below UNCTAD-provided table presents the export-importing statistics categorized by groups of economies, shows their 2021-2022 export-import values, and offers a coarse understanding of the flow of goods and services according to this categorization.

As such, it provides a snapshot of the balances of payments, which, among other things, creates opportunities for RACS's venture as seen further.

The seen in below Fig. 5 skewness of the balance of payments against their sovereign currencies is plausibly caused by the simple fact that most LMIC imports significantly exceed their exports, exacerbated perhaps by causational political factors.

A pronounced attribute of these economies will continue to be the severe disruptions of the supply chain of capital, affecting not only their importers but also exporters, as the latter frequently need first to import raw materials, technology, equipment, and machinery to enable their export-oriented operations.

While increasing attention is being given to providing solutions towards the mitigation of the goods-and-services supply chain bottlenecks and frictions, systemic solutions are absent for the elimination, at least mitigation, of supply chain disruptions and bottlenecks of the flow of capital between HICs and LMICs, or within the LMIC universe.

(Billions of United States dollars)

Origin	Year	Destination					
		World	Developed economies	Developing economies			
				Total	Africa	Americas	Asia and Oceania
World	2012	18 334	10 920	7 242	607	1 124	5 511
	2017	17 590	10 486	7 018	539	987	5 492
	2022	24 790	14 630	9 973	789	1 416	7 768
Developed economies	2012	10 507	7 236	3 134	278	670	2 186
	2017	10 197	7 066	3 063	234	614	2 215
	2022	13 562	9 548	3 867	296	825	2 745
Developing economies	2012	7 827	3 684	4 108	329	455	3 324
	2017	7 393	3 420	3 956	305	373	3 277
	2022	11 228	5 081	6 106	492	591	5 023
Africa	2012	634	346	286	83	22	181
	2017	438	199	236	71	10	156
	2022	667	314	351	91	16	244
Americas	2012	1 118	669	439	22	223	194
	2017	992	619	365	18	164	184
	2022	1 411	837	539	24	210	305
Asia and Oceania	2012	6 074	2 669	3 383	225	209	2 949
	2017	5 963	2 602	3 354	217	199	2 938
	2022	9 151	3 930	5 216	377	365	4 473

Fig. 5 2012-2022 export by origin and destinations

Yet, the stressed flow of capital and the barriers to the seamless conversion of one currency to another may be a primary stumbling block for the smooth operation of the overall supply chain, particularly international trade finance.

Although local banks theoretically provide trade finance credit facilities to finance importers and exporters in advanced economies, in its study, WTO reports that developing countries face chronic shortages.

According to them, "...in 2020, the trade finance gap has widened to $1.7 trillion, affecting SMEs, especially those run by women. Collateral requirements, lack of credit history, and archaic and bureaucratic application processes hinder SMEs' access, disproportionately affecting women-owned SMEs. The war in Ukraine, inflation, and the food and fuel crises are expected to exacerbate the gap."

They also state that country risk has increased in some regions due to a more uncertain international political environment and the prospect of global stagflation. Further, in some cases, local currency values have fallen dramatically, making trade finance in foreign currency scarce, and the strain can be seen through dwindling foreign exchange reserves ...

They conclude that digital trade finance has the potential to narrow the trade finance gap by providing a more efficient, resilient, and inclusive trading system, as digital trade finance costs less and is easier to manage, potentially making trade finance more readily available to new SME entrants. Digital trade finance can also support the tracking and mapping of trade flows, improving the transparency of trade finance.

WTO's survey of West African banks in the four largest economies of the Economic Community of West African States (ECOWAS), Côte d'Ivoire, Ghana, Nigeria, and Senegal, has found that these countries' trade expansion was vastly constrained by limited and costly access to trade finance. Trade finance supported only 25% of trade in these countries, lower than the African average of 40% and the global average of 60-80%. Rejection rates by banks for trade finance applications are high, averaging 21% of requests and 25% in terms of value. Rejections fall disproportionately on SMEs, particularly those owned by women. The unmet demand for trade finance – the trade finance gap – is around $14 billion annually for the four economies combined.

It further says that banks report that common barriers to trade finance availability include difficulty meeting the requirements of foreign correspondent banks, insufficient collateral for the high perceived risk of borrowers, and shortages of low-cost funding. Increasing trade finance availability and lowering costs could boost ECOWAS merchandise exports and imports by around 8%, or around $14 billion in annual trade.

The available observations suggest that the situation is similar in other African countries, perhaps except for South Africa and Nigeria, and in most Asian and Oceanian, as well as Latin American and Caribbean countries.

Without even considering the penetration of various cryptocurrencies into the various global payment systems, RACS can project that SWIFT, as an organization executing and guaranteeing international financial transactions, including international trade, is or will be one of the immediate casualties of the continuing regionalization and fragmentation of the world order. Establishing alternatives to the SWIFT settlement system is well underway, and trade between China and Russia, bypassing SWIFT and settling payments in their respective currencies, is a good demonstration. It is not an exception, and it could expand to cover newly forming or expanding country groupings such as BRICS.

Another essential element not adequately conceptualized in the supply chain's traditional context is the following, strategic in the case of countries like Tajikistan and spontaneous in the case of most other countries, phenomenon:

The skewed balance of payments creates economic distress in LMICs and stimulates migration. However, once settled, migrants channel recurring streams of hard currency remittances to their countries of origin to support the families they left behind and, albeit inefficiently and partially, mitigate the skewness of the balance of payments.

Thus, in the big picture, labor force migration or export helps narrow the export-import gap between LMIC imports and exports, reducing the balance of payments gap.

Improving private remittance utilization efficiency by creating a proper marketplace for its flow and stimulating the combined import and export cycle, in addition to utilizing other possible monetary flows, will render an enormous, monetizable opportunity to mitigate supply chain disruptions and reduce bottlenecks and, in the end, stimulate economic sustainability in LMICs.

RACS's Private Remittance-backed International Trade venture offers a robust mechanism for implementing and monetizing the opportunity mentioned above and a downpayment towards the creation of global supply chain risk-sharing, risk-transferring, risk-distribution, risk-retention and, finally, risk-monetization venue, with one of the outcomes of this venture being the regionalization and functionalization of the settlement systems in contrast to their crumbling centralization.

Total Addressable Market

RACS's total addressable market is defined by the depth and size of private remittances it could muster to transact through its Exchange's infrastructure.

To support international trade between HICs and LMICs, RACS aims to capture the bulk of the wholesale private remittance-flows-to-be-swapped from the US/Canada, extended EU, constituting thirty-eight SEPA zone countries, which includes also UK, and the GCC countries.

RACS believes that well-established Remittance Aggregators/Transmitters can be enticed to join its Exchange as Members if incentivized with better exchange rates as the natural consequence of the Exchange's operations. The reason is, that the Exchange would offer a marketplace where the LMIC Importers will, albeit implicitly, meet the Remittance Aggregators/Transmitters and transact directly.

It is noteworthy that the 2023 World Bank-estimated annual size of the visible part of private remittances flowing to the world's LMIC countries to the world's LMIC countries at $669B, which alone is commensurate to the seventeen years of WTO-spearheaded aid to leverage trade for development under the auspices of its Aid for Trade initiative from its founding in 2005 through 2022. It demonstrates the private remittances' potential to stimulate international trade. Yet, this is a resource that, at least explicitly, is not, at least efficiently, utilized by international banks.

Generally, it is known that the size of the private remittances flowing to the LMICs exceeds the total foreign aid to these countries by more than threefold. The World Bank estimates the 2022-2024 worldwide visible private remittance size dynamics as $836B in 2022, $860B in 2023, and $887B in 2024. As mentioned before, it also estimates that the 2023 private remittance flow to developing, and less-than-developed countries has reached $669B[7].

Their following year-to-year dynamics of global private remittance flow tell a story of trending volumetrically-up remittances. Yet, it only captures what grows through the visible parts of the markets and bears no information on the flow through the invisible channels, which, according to some industry experts, is larger than the officially observable one.

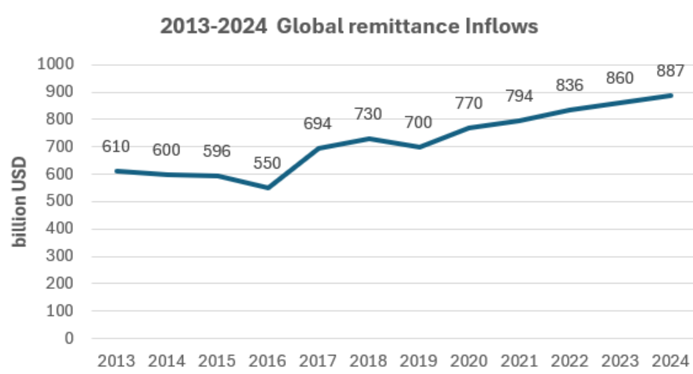


Fig. 6 2013-2021 global remittance flow

[7] Several developed countries also receive substantial remittances. For example, in 2021, France received about $32B annual remittances from the outside world, while Germany and Italy received about $20B and $10B correspondingly.

The same source estimates the 2023 top ten private remittance-recipient countries in terms of their absolute values, as well as the top ten recipient countries according to the percentages of the private remittances they receive relative to their GDPs:

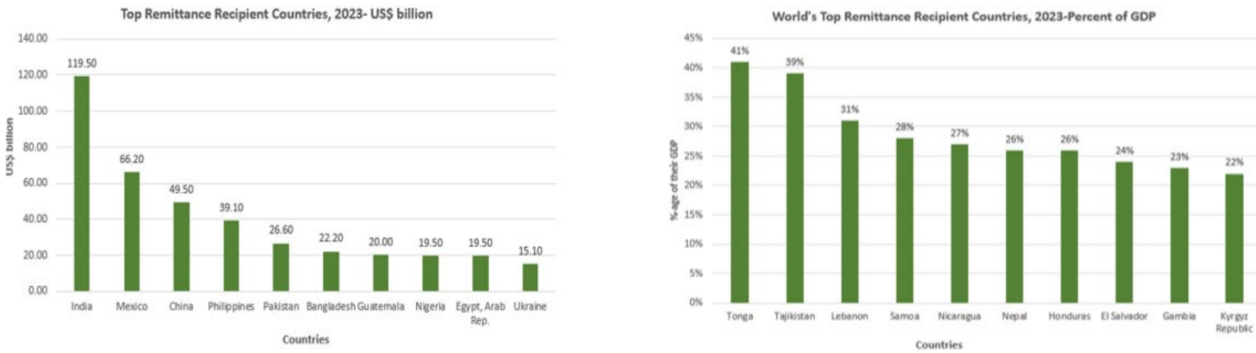


Fig. 7 2023 Top 10 private remittance recipient countries; Provided by the World Bank

It is further revealed that the estimated size of the 2021 private remittance from the United States and Canada was about $230B; from the SEPA zone, incorporating 38 European countries – about $210B, and from the GCC countries – about $150B.

Non-negligible size remittances to the rest of the world also flow from Australia, South Africa, Singapore, South Korea, Indonesia, Israel, Malaysia, and Japan, which, at the same time, are also remittance-receiving countries. However, they represent smaller opportunities compared to the three regions mentioned above – the US/Canada/, SEPA zone, and GCC countries.

Below are the World Bank reports of 2010-2022 into- and intra-Africa private remittance flows:

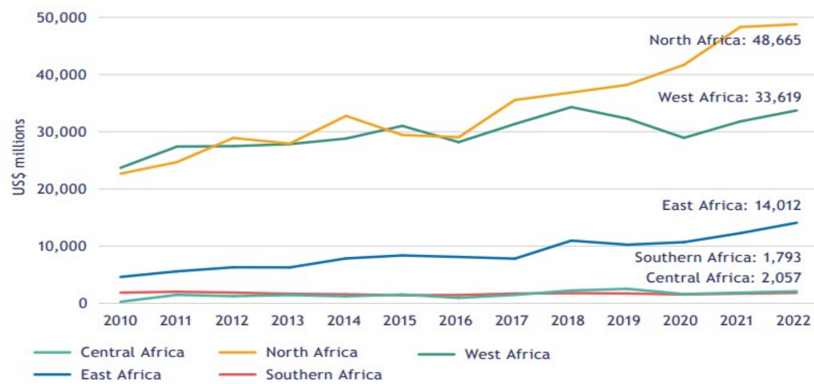


Fig. 8 2010-2022 into- and intra-Africa remittance flows

Complementary relative to the Fig. 8 statistics, as provided by World Bank-KNOMAD**,** Fig. 9 below captures the 2022 South Asian remittance flows:

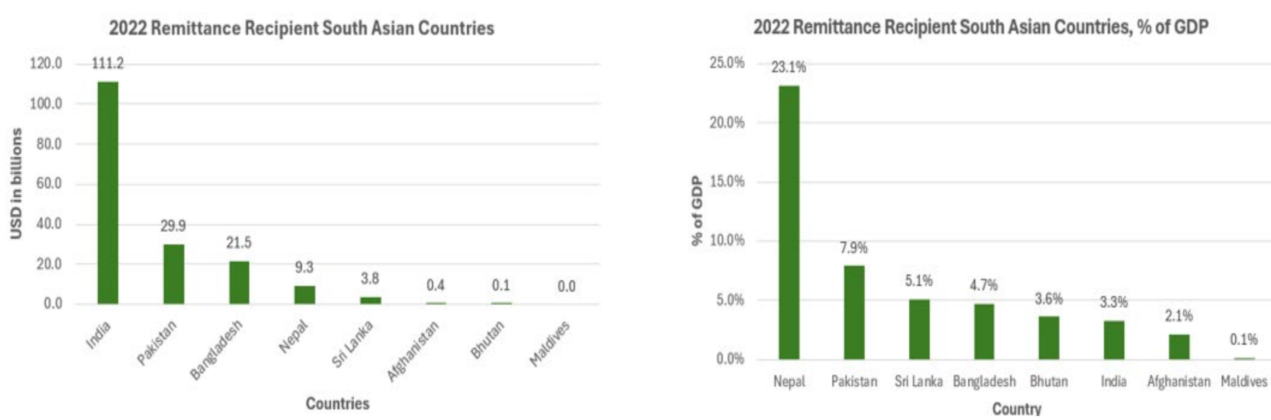


Fig. 9 2022 Remittance flows into South Asia

As seen, private remittances represent a higher percentage of the GDP for some countries vs. others and may play a more important role in the survival of the countries with a high percentage of private remittances relative to their GDPs.

As a rule, with the current international operational model, the counterparts of Remittance Aggregators/Transmitters are the LMIC banks, which offer low exchange rate margins. These banks subsequently flip the remittances in their possession to the importers in their respective countries and capture significant margins at the expense of the Importers.

RACS thinks this is the primary reason it can incentivize well-established Private Remittance Aggregators/Transmitters and LMIC importers to join the Exchange where, due to their direct, albeit implicit, interaction, both sides can get better exchange rates.

Although detailed 2021 World Bank data with further breakdown and insights are available for almost all countries, below are only a few examples provided by the Migration Data Portal:

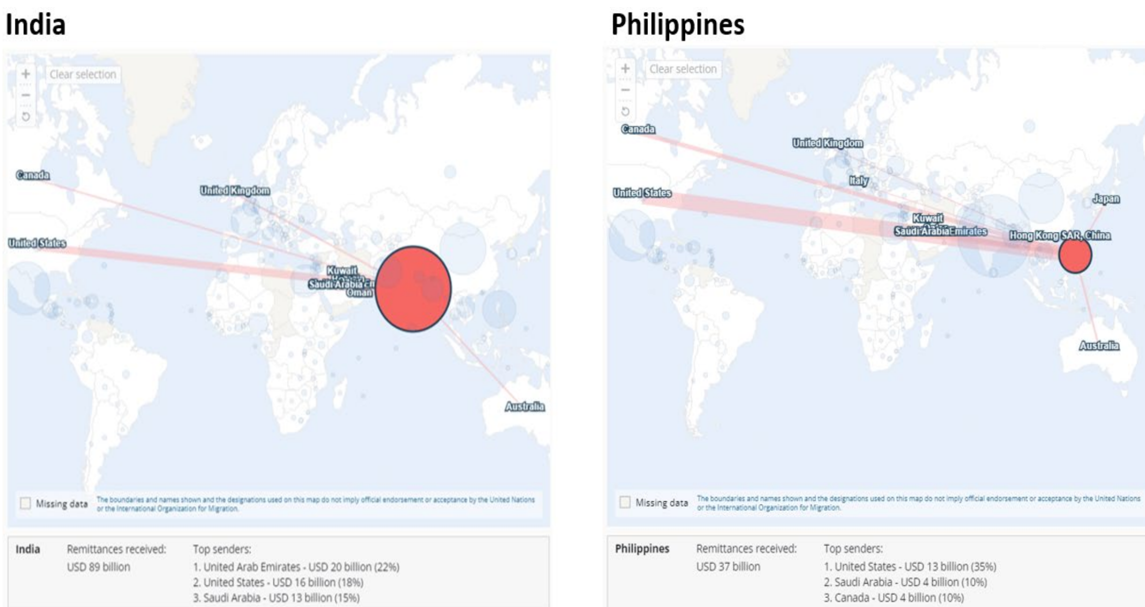


Fig. 10 India and Philippines – the largest Asian private remittance recipients

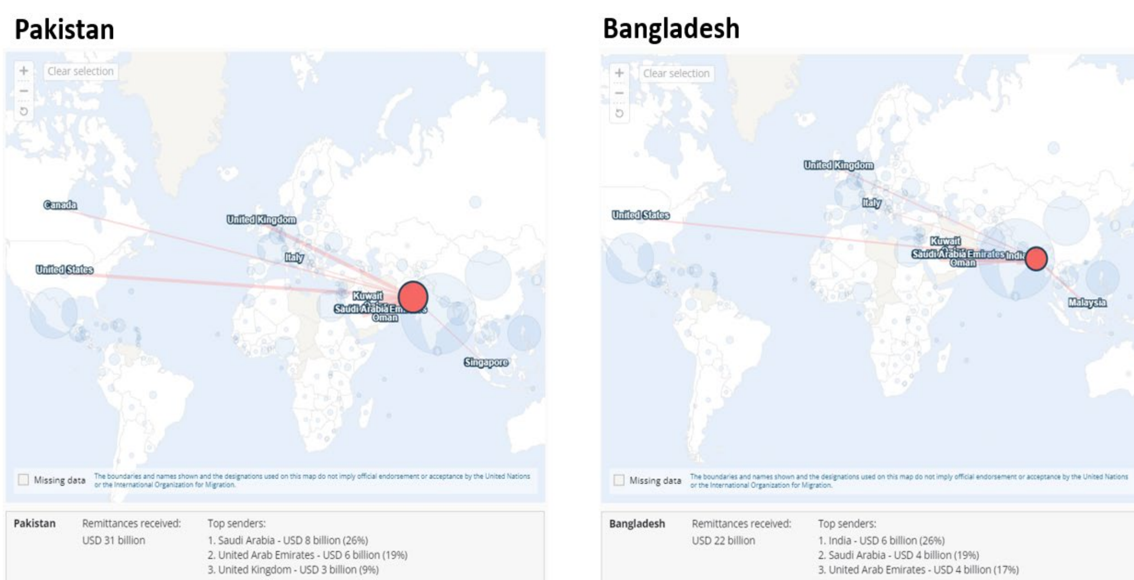


Fig. 11 Pakistan and Bangladesh – the next largest Asian private remittance recipients

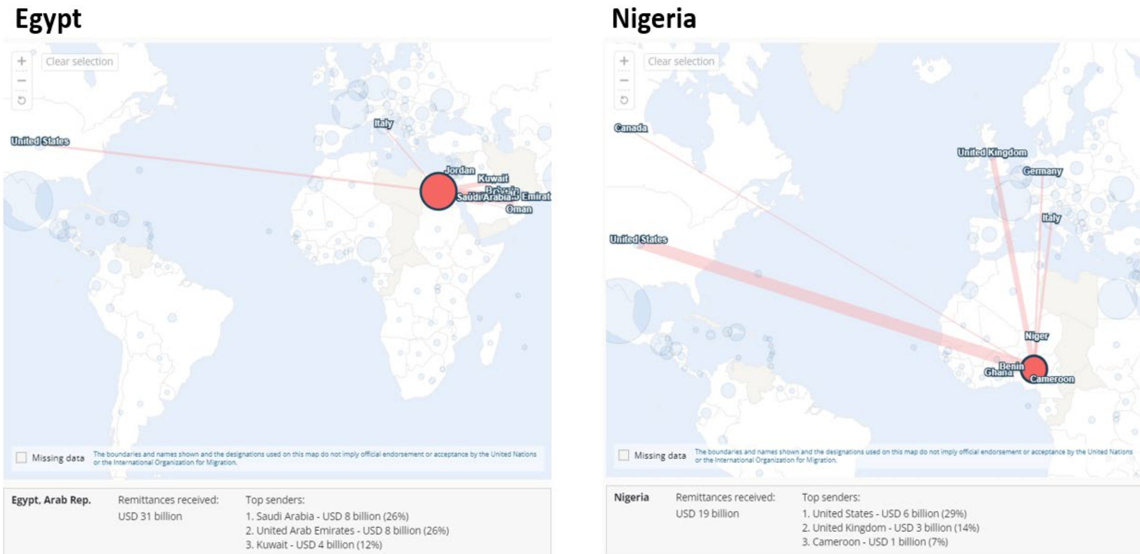


Fig. 12 Egypt and Nigeria – largest African private remittance recipients

World Bank's Migration and Development Brief 39, released on December 18, 2023, excerpts of which are presented below, provides the latest updates on the flows and costs of private remittances on a region-by-region basis:

Sub-Saharan Africa

"Remittance flows to Sub-Saharan Africa are expected to have increased by about 1.9% in 2023 to $54 billion, driven by strong remittance growth in Mozambique (48.5%), Rwanda (16.8%), and Ethiopia (16%). Remittances to Nigeria, accounting for 38% of remittance flows to the region, grew by about 2%, while two other major recipients, Ghana and Kenya, posted estimated gains of 5.6% and 3.8%, respectively. Fixed exchange rates and capital controls are diverting remittances to the region from official to unofficial channels. In 2024, remittance flows to the region are projected to increase by 2.5%. Sending $200 to the region costs 7.9% on average in the second quarter of 2023."

Middle East and North Africa

"Remittances to the Middle East and North Africa are expected to decline again in 2023, falling by about 5.3% to $61 billion in 2023, driven mainly by a sharp drop in flows to Egypt. For Egypt, a significant gap between the official exchange rate and the parallel market likely caused a large part of remittances to be unrecorded. Meanwhile, remittance flows to the Maghreb countries experienced a gain, offsetting some of the decline. Sending $200 to the region cost 5.9% on average in the second quarter of 2023. In 2024, remittance flows are projected to recover to a 2.1% gain based on an expected turnaround in flows to Egypt."

South Asia

"Remittance flows to South Asia are estimated to have grown 7.2% in 2023 to reach $189 billion, tapering off from the over 12% increase in 2022. The increase is attributable entirely to remittance flows to India, which are expected to beat previous forecasts by $14 billion and reach $125 billion in 2023. The key drivers of remittance growth in 2023 are a historically tight labor market in the United States, high employment growth in Europe reflecting extensive leveraging of worker retention programs, and a dampening of inflation in high-income countries. Sending $200 to the region cost 4.3% on average in the second quarter of 2023. In 2024, growth in remittance flows is expected to fall to 5% due to projected weaker economic growth in the United States, the Euro Area, and GCC countries, major hosts of migrant workers from the region."

East Asia and the Pacific

"Remittances to East Asia and the Pacific increased by an estimated 3% to reach $133 billion in 2023. Excluding China, remittances to the region grew an estimated 7% to $83 billion in 2023, supported by the sustained growth in remittance flows to the Philippines, which has migrants in a well-diversified set of host destinations across the world. The average cost of sending $200 to the region was 5.9% in the second quarter of 2023. In 2024, remittance growth to the region is estimated to be 2.4%."

Latin America and the Caribbean

"Remittance flows to Latin America and the Caribbean are expected to increase by 8% to reach $156 billion in 2023. The strong labor market in the United States positively impacted remittance flows. Remittances to Mexico, the region's biggest recipient, are projected to increase by 9.7%. The growth of remittances is expected to be 45% in Nicaragua, 9% in Guatemala, and 7.5% in Colombia. The average cost of sending $200 to the region was 6.1% in the second quarter of 2023. Growth in remittances to the region is expected to slow to 4.4% in 2024."

Finally, while much more detailed information is available, the following diagram offers a coarse description of the costs associated with sending a $200 remittance:

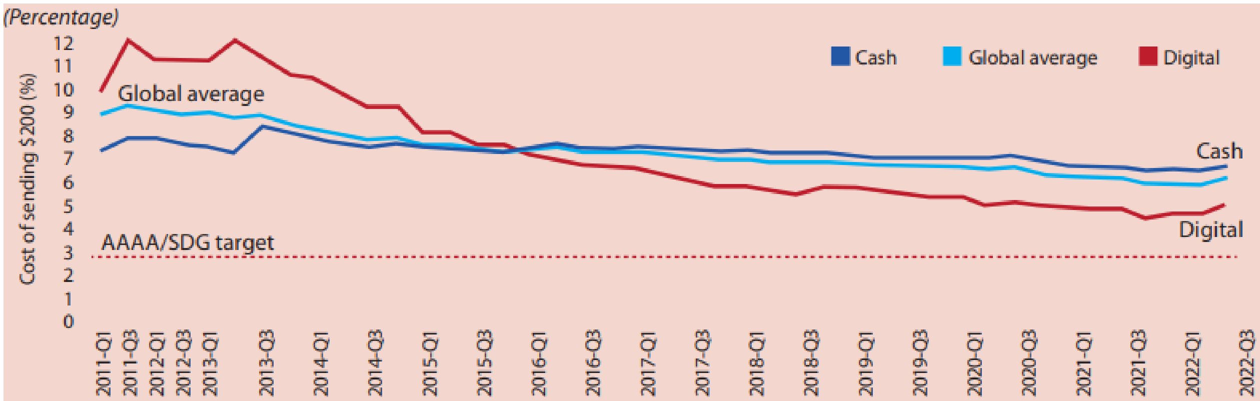


Fig. 13 2011-22 $200 remittance global costs: WB Remittance Prices Worldwide, Issue 43

With all the above observations, cognizance is advised that LMICs are difficult countries to deal with, and overcoming natural and artificial obstacles may be needed to support these countries' international trade transactions.

Go-to-market strategy

RACS's go-to-market strategy is agile and layered, incorporating multiple simultaneous and nonlinear efforts instead of ramping them up linearly, and the below high-level outline represents only an introduction to the topic.

A more detailed rationale and strategy implementation can be presented for each particular element. Understandably, each such sub-presentation will further contribute to the volume of the documentation.

The first element of nonlinearity mentioned above is that RACS positions itself to operate in many countries, and the success or failure in one country cannot predicate the operation's success or failure in another.

Launching RACS Exchange from a UAE free economic zone can be a valuable piece for the success of the operation as most of the African, Asian, and Middle Eastern Countries trade through UAE's various free economic zones and facilities.

Singapore is also well-paced for Asian sales operations, while Miami is well-placed for Latin American and Caribbean country sales.

Similar sales offices are expedient to be established in London, as a major trade and finance center, and Paris – with an eye on the French-speaking Africa.

RACS will strive to attract Remittance Aggregators/Transmitters, such as the Western Union, and MoneyGram, as Members of its Exchange RACS's Exchange by enticing them with better exchange rates and opportunities to improve their bottom line when transacting through this venue. RACS's capacity to offer such enticement is triggered by its direct matching of these Remittance Aggregators/Transmitters with the LMIC importers while bypassing the local banks which play the role of trade intermediation while extracting significant additional exchange rate margins, meanwhile adding bank risk and loss of efficiency to the cycle. In turn, RACS will offer contemporary Banking as a Service to these banks under beneficial terms with the utilization of its Clearinghouse as an international settlement mechanism for them.

The better sourcing of European private remittances may require RACS's presence in the UK and, considering French-speaking Africa as a target market, France.

RACS's presence in most remittance designation countries may be required only for legal and sales purposes, without any overwhelming technological or operational reason.

As hinted earlier, India may be an anchor country in Asia, while Ethiopia, Kenya, and South Africa may be good anchors in Sub-Saharan Africa, with Egypt playing a similar role in The Middle East and North Africa.

Discussions of a partnership with a major Global Payment Service provider that operates in LMICs are well in progress. To the least, this partnership will empower the Exchange with remittance distribution capacity in target countries.

Yet, RACS cannot go to all places at once, and at the initial stages of its operations, it will have to carefully choose regional anchor countries through which it will further penetrate the countries of the corresponding regions. RACS has to act in a manner so that the LMIC financial services enterprises themselves come to RACS's Exchange.

RACS will have to solicit through knowledgeable and capable local partners in each designated remittance distribution country by entering into some form of a joint venture with them, as each country will have its idiosyncratic issues and barriers that may take a long time to learn and sovereignty sensitivities that may require lots of resources to overcome and be respected and observed. Most importantly, these partners will have to act as local sales operations.

RACS can also summon IBM's and other technological partners' human resources to amend its development team.

In moving into a new country or market, the primary criteria of country choice will be the size of remittances it receives from the U.S., EU/UK, and GCC countries. The breakdown of private remittance sizes originating from every country of the world is public information.

The attempts to create a vertical infrastructure would lead RACS to failure, and instead, emphasis should be placed on a horizontal infrastructure and the empowerment of local partners in destination countries. After all, RACS's primary value proposition is establishing a functional, efficient, and largely decentralized transaction settlement mechanism.

Some of the essential tools for RACS's rapid expansion and the widening of its market penetration will be strategic M&As, Leveraged Buyouts, or roll-ups.

The launching of an Accelerator for Remittance Aggregators/Transmitters and offering them an Infrastructure as a Service to source remittances at lower costs than it would be required from them to develop their own capacities from all possible countries, and transacting through the Exchange, conditional to their ability to obtain corresponding licenses or permits, and capitalization, subject to the Exchange-defined standards, will be another way of securing wholesale remittance flow to the Exchange.

Generally, it is hard to think of a rationale for each Remittance Aggregator/Transmitter to develop and maintain an infrastructure almost the same as their competitors. The shared infrastructure offered by RACS's Exchange will reduce costs and entry point barriers for all market participants.

Notably, in a rational world, all Remittance Aggregators/Transmitters should focus on competing with each other in the marketing domain rather than duplicating each other's, at times, not the most efficient, legacy platforms.

Such transformation has successfully taken place, for instance, in telecommunications and energy industries, and can be repeated with success in the private remittances industry, which, by the time RACS's operations reach a steady state, can overcome the annual $1 trillion threshold, worldwide, if judged by the World Bank estimates and current visible market trends.

RACS's market entry can also be accelerated by a strategic partnership with other exchanges and the acquisition of third-party logistics software with the latter's integration with RACS's Exchange software.

Risks, their Mitigation and Management

The primary risks associated with RACS's venture are volumetric, political, legal, and regulatory, including KYC/AML, driven mostly by the possible resistance of target countries, such as India, Egypt, etc., Central Banks. In RACS's view, special measures may need to be taken to mitigate their possible resistance since, under RACS's most efficient operational regime, they may not possess direct custody of the transmitted remittances, although they still can maintain a say by imposing limitations on their importers.

Volumetric risks in this context mean the variability of the size of the remittances that can be summoned under RACS's two-armed operation, Private Remittance Aggregator and Private Remittance-backed Exchange, as well as the volume of the sourced international trade deal flow from foreign importers: The low remittance volumes under RACS's or other Aggregators' oversight will reduce its revenue and stress the returns on the capital, including R&D and operating costs, but will not expose RACS to new, especially market or credit, risks.

For context, it is noteworthy that even a $1% market share in the $669B annual size market of private remittance transmissions to the LMICs will result in possession of a $6.69B+ leverage for trade transactions.

Considering the remittance transmission and trade transaction fees, and assuming they will amount to a mere 4% cumulative or round-trip commissions, which is a very conservative estimate, since, possibly, twice that amount is feasible, one can estimate that from just one segment of the Exchange's operations, the Exchange's annual revenue will be of the order of 4%*$6.69B≈$270M.

One of the measures of mitigating volumetric risks and enticing the corresponding countries' Central Banks' and other governmental bodies' cooperation may be achieved by the promotion and lobbying of the U.S. Commerce Department and Congress to grant tax-deductible status to private remittances headed from the U.S. to foreign countries if these remittances will be used to finance U.S. exports.

In RACS's opinion, while the above-articulated tax deduction may seem as if resulting in a loss of U.S. Treasury Department revenue, RACS believes that it may be more than compensated by the increase of U.S.-originated "white market[8]" of private remittances and more than recapturing of tax revenue from the resultant exports via RACS's Exchange.

On the flip side, the increased flow of private remittances, incorporated by other types of cashflows headed to the countries in question, such as RACS Exchange-assisted investment banking, Foreign Direct Investments, and Crowdfunding, should entice cooperation from the Central Banks of the target countries for them to grant waivers to RACS's Exchange against any legal and regulatory impediments.

[8] There is an opinion that at least twice as much private remittances flow through the "black market" than the "white".

Additionally, the opposite, manifesting a "stick," action of the U.S. government of taxing private remittances, conditionally circulated by the current U.S. administration as a threat directed particularly at Mexico in response to the asymmetric tariffs, may also serve the expansion of the U.S. exporters' reach to difficult markets, thus increase RACS Exchange's deal flow.

With success with the U.S. government and Congress, RACS would strive to replicate this enticement mechanism also concerning private remittances flowing from EU/UK, GCC (Gulf Cooperation Council) countries, and beyond.

Considering the venture's first phase orientation towards LMICs, which are not always politically stable countries[9], RACS's operations may be exposed to various political risks.

Political risks are insurable through major, including state, unilateral or multilateral players, or private actors. They can be structured directly from them or through the Captive Insurance Company wrapped over the RACS Clearinghouse.

Typically, such insurance coverage premium has been less than 1% of the insured amount, which can be factored into the pricing of RACS services. However, it is not unreasonable to assume that these premiums may increase due to the increased political and geopolitical risks worldwide.

For context, political risk includes changing and prohibiting regulations or laws or creeping expropriation by private remittance destination countries, which can contribute to the Supply Chain Risk.

Yet, we live at times when political risks are significant and tend to grow to a size perhaps beyond that of the insurance and reinsurance companies' appetite. Therefore, structuring a new class of politically risk-related **Insurance-linked Securities** (ILS), and transferring this risk to the Capital Markets, traded at the Bermuda Stock Exchange, may be the way to address this increasingly expensive component of the Supply Chain Risk.

Cybersecurity is also a major, albeit insurable, through the above-mentioned Captive Insurance Company or established providers, and will have to be dealt with accordingly.

One way or another, RACS's platform will reside in a major data center/cloud and will utilize also its additional cyber-protections. At this point, as an IBM Partner Plus Company, RACS is positioned to have it deployed at IBM Cloud for Financial Services.

KYC, including politically exposed individual or terrorist funding screening and prevention services, must be performed according to the standards of the operation's settlement banks and insurance and reinsurance companies, as well as other solution chain partners involved in the solution chain.

Similar to the Cybersecurity Risk, Financial Crimes Risk, such as Money Laundering, will have to be addressed through robust AML and other procedures as insurance coverage.

It is noteworthy though that RACS's solution mechanism renders a better and more comprehensive oversight over the trading cycle as it tracks to a greater depth the supply chain, including the governance of the international currency roundtrip, door-to-door.

For more detail and insight please feel free to contact Martin Jermakyan at mjermakyan@ravcap.com or +1(212) 219-3251.

[9] An argument can be made that, currently, EU, UK and USA are also sources of non-trivial political risks.