

Competing Rails for Cross-Border Payments: Banks, Fintechs and Stablecoins

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Background on Cross-Border Payments

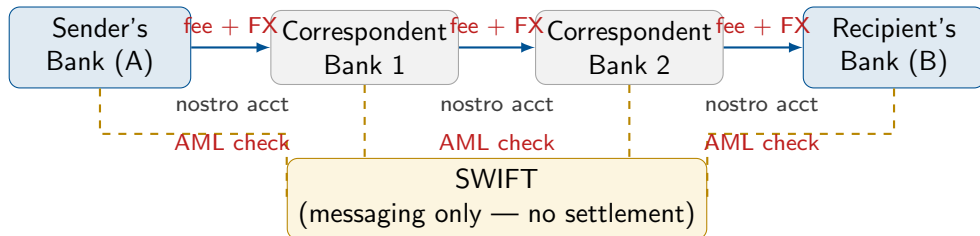
- ▶ Overall size of cross-border payments is estimated to be **\$200 trillion per year** (UBS, 2025).
- ▶ Remittances exceed **\$700 billion per year** to developing countries — larger than FDI for many nations
- ▶ Global average cost of sending \$200 remittances is **6.36 percent**, well above the G20/SDG target of 3%. Payments can take several days to arrive.
- ▶ Meanwhile, FX turnover is **\$9.6 trillion per day**, and average bid-ask spreads at **a few basis points**.
- ▶ High costs of cross-border payments cannot be explained by liquidity of the FX market.
- ▶ **Can new payment rails increase speed and reduce payment costs?**

Can Stablecoins Solve the Problem?



Three Payment Architectures

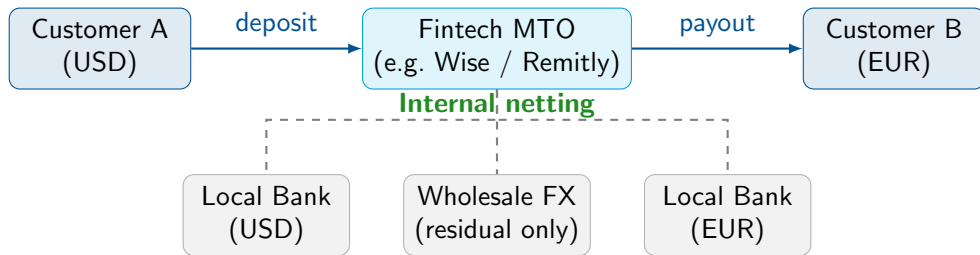
Architecture 1: Correspondent Banking & SWIFT



Reasons for Costs and Delays:

1. **Multi-hop fees and FX markups** accumulate at every intermediary
2. **Nostro balance costs:** pre-funded balances in multiple currencies
3. **Duplicated AML/CFT compliance:** each hop screens independently, causing delays

Architecture 2: Non-Bank Fintech MTOs

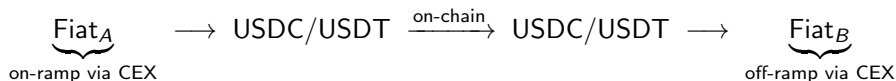


► How do MTOs compress costs and increase speed?

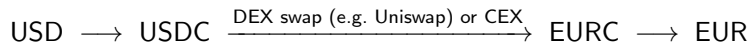
- Pre-funded local accounts, instant payout
- internally net flows in opposite directions; only residual imbalances settled via wholesale FX.
- Digitized KYC/AML reduces marginal cost per transaction.
- Transparent upfront pricing.

Architecture 3: The Stablecoin Sandwich

Single-layer sandwich:



Double-decker sandwich (DeFi on-chain FX):



Four cost components:

1. **FX cost** on CEX or DEX (stablecoin–fiat or stablecoin–stablecoin spread)
2. **Exchange trading fees** (0–100 bps depending on platform and volume tier)
3. **Blockchain gas fees** (negligible: \$0.001–\$0.53 per transaction)
4. **Fiat on/off-ramp fees** (fixed charges)

Key Fact

Stablecoin rail introduces new intermediation, such as banks to crypto exchanges and AMMs, rather than eliminate it. **Centralized crypto exchanges** (CEXs) perform functions **similar to correspondent banks**: fiat access, compliance, custody.

Data and Methodology

Data Sources

- ▶ **Benchmark FX:** Bloomberg BGN (daily) and BFIX (intraday 30-min quotes)
- ▶ **Personal bank wires:** Retail wire transactions at large international banks (US, EU, UK, Singapore)
- ▶ **World Bank RPW:** Quarterly, 300+ corridors, \$200/\$500 transactions (2022Q1–2025Q1); banks and MTOs via FXC Intelligence
- ▶ **Real-time MTO scraping:** 30-min intervals, January 2026, ~100 corridors, four sizes (\$200/\$500/\$10K/\$50K)
- ▶ **B2B fintech platform:** Transaction-level FX wires, community bank + education institution, 2024–2025; fixed \$8 wire fee
- ▶ **CEX prices:** USDT/USDC–fiat pairs from CoinDesk, 30-min frequency, 2021–2025
- ▶ **DEX data:** Dune Analytics — USDC–EURC and other pairs; prices and protocol fees
- ▶ **Gas fees:** Token Terminal, 3-year average across blockchains (January 2026)
- ▶ **Exchange fee schedules:** Coinbase, Kraken, Binance US, Gemini, Crypto.com, Uniswap, PancakeSwap

Methodology: Harmonized All-in Cost

FX Cost (implicit markup embedded in exchange rate, in basis points):

$$\text{FX Cost}_{i,j,t} = 10,000 \times (\ln E_{i,j,t}^{\text{bbg}} - \ln E_{i,j,t}^c)$$

where E^{bbg} = Bloomberg benchmark rate, E^c = customer rate. Higher E^c implies *lower* cost.

Explicit Fees: fixed and proportional charges (wire fees, commissions, trading fees), converted to bps.

All-in Cost:

$$\text{All-in}_{i,j,t} = \underbrace{\text{FX Cost}_{i,j,t}}_{\text{implicit, hidden in rate}} + \underbrace{\text{Explicit Fees}_{i,j,t}}_{\text{transparent charges}}$$

Results: Banks

Retail FX Wires sent by Global Banks (Personal transactions)

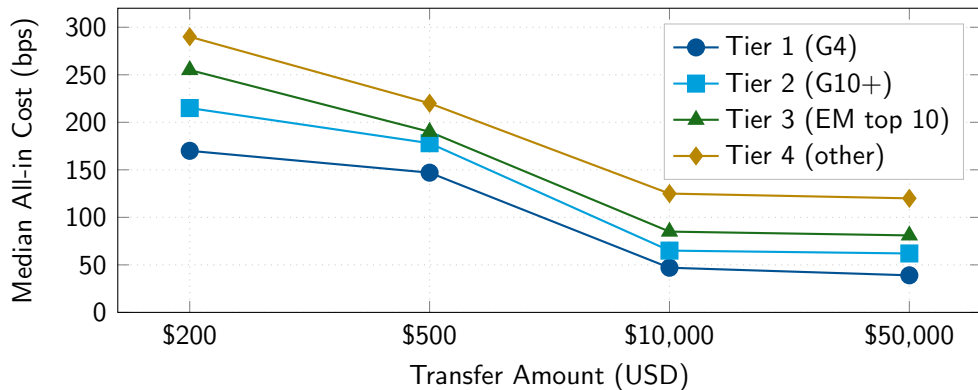
Date	Send	Receive	Sending Bank	Receiving Bank	FX Cost
11/18/24	EUR	USD	Large German Bank	Large U.S. Bank	365.5
6/26/25	USD	EUR	Large U.S. Bank	Regional French Bank	230.2
7/22/25	EUR	SEK	Large U.S. Bank	Large Scandinavian Bank	198.6
8/1/25	EUR	USD	Large French Bank	Large U.S. Bank	457.8
8/1/25	EUR	USD	Large French Bank	Large U.S. Bank	467.8
11/28/25	CHF	USD	Large Swiss Bank	Large U.S. Bank	309.2
1/6/26	USD	EUR	Large U.S. Bank	Regional German Bank	299.5
1/16/26	SGD	USD	Large Singaporean Bank	Large U.S. Bank	313.7

- ▶ FX cost only; international wire fees (\$25–\$45) add further.
- ▶ These banks have 5–10 bps wholesale FX access and have branches/subsidiaries globally.

Results: MTOs

Fintech MTO Costs Across Transfer Sizes and Currency Tiers

Data: three major MTOs, intraday quotes, January 2026. Lowest all-in cost method per corridor.



- ▶ Fintech MTOs cut down the costs significantly relative to bank SWIFT wire costs.
- ▶ Scale economies — costs fall sharply from \$200 to \$10K. At \$10K: Tier 1/2 converge to 40–65 bps; Tier 3/4 remain 80–130 bps. Gap persists at \$50K.

B2B Fintech: Community bank + education institution

Tier	Curr.	Mean	SD	N	Tier	Curr.	Mean	SD	N
1	GBP	82.6	36.2	643	3	MXN	148.7	34.1	32
1	EUR	82.6	27.9	1,412	3	ZAR	148.8	23.9	74
1	JPY	83.6	29.5	118	3	PLN	177.0	62.9	4
1	Avg	83.0	31.2	2,173	3	INR	257.4	47.6	107
2	NOK	82.6	19.8	16	3	KRW	400.3	13.8	18
2	AUD	84.8	33.5	45	3	CNY	452.6	33.6	24
2	CAD	85.9	20.9	70	3	BRL	608.4	140.7	29
2	CHF	92.3	15.1	74	3	Avg	345.2	50.2	296
2	SGD	144.0	4.1	17	4	THB	154.3	14.0	7
2	HKD	145.5	1.8	18	4	PHP	268.6	13.6	5
2	Avg	96.2	26.9	310	4	NGN	758.9	43.7	14
					4	Avg	321.7	26.3	188

- Tier 1/2 costs are remarkably uniform regardless of currency. Tier 3/4 dispersion is large.
- **The Community bank using Fintech B2B for retail payments has way better FX wire costs than large global banks.**

Results: Stablecoins

The Stablecoin Sandwich: USD → USDC → EUR

On-ramp
fiat → stablecoin

100 USD

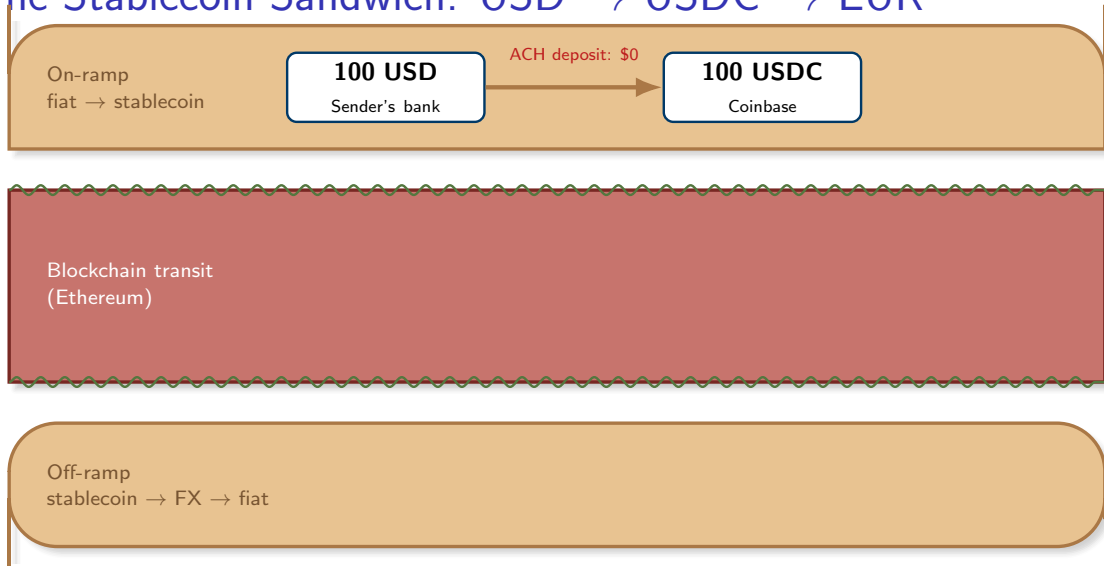
Sender's bank

Blockchain transit
(Ethereum)

Off-ramp
stablecoin → FX → fiat

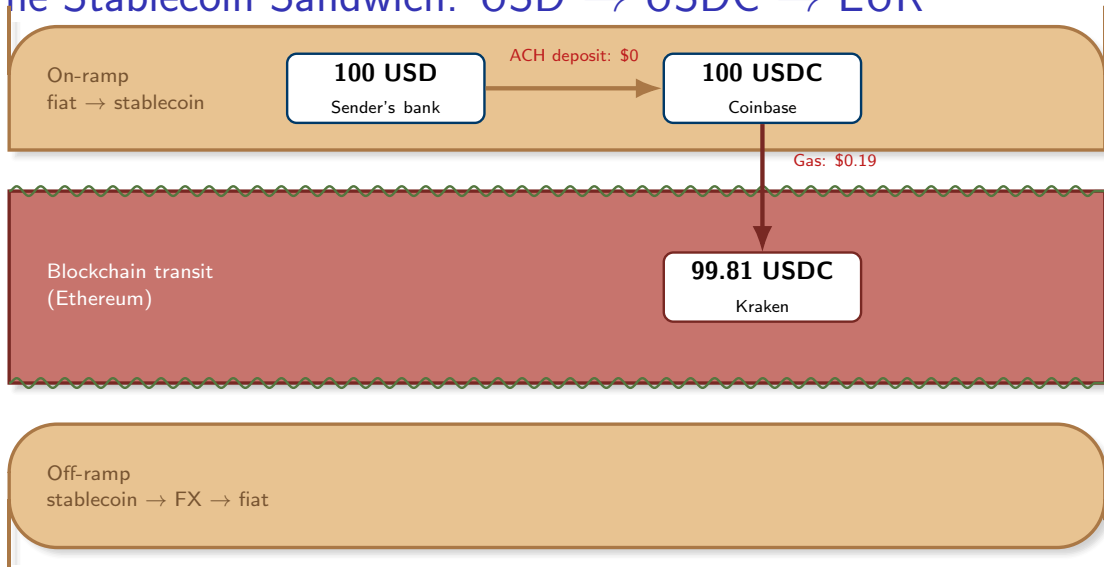
Fiat ramps (banks, exchanges, KYC/AML, FX) | **On-chain rail** (blockchain transit) |
Costs accumulate at each layer

The Stablecoin Sandwich: USD → USDC → EUR



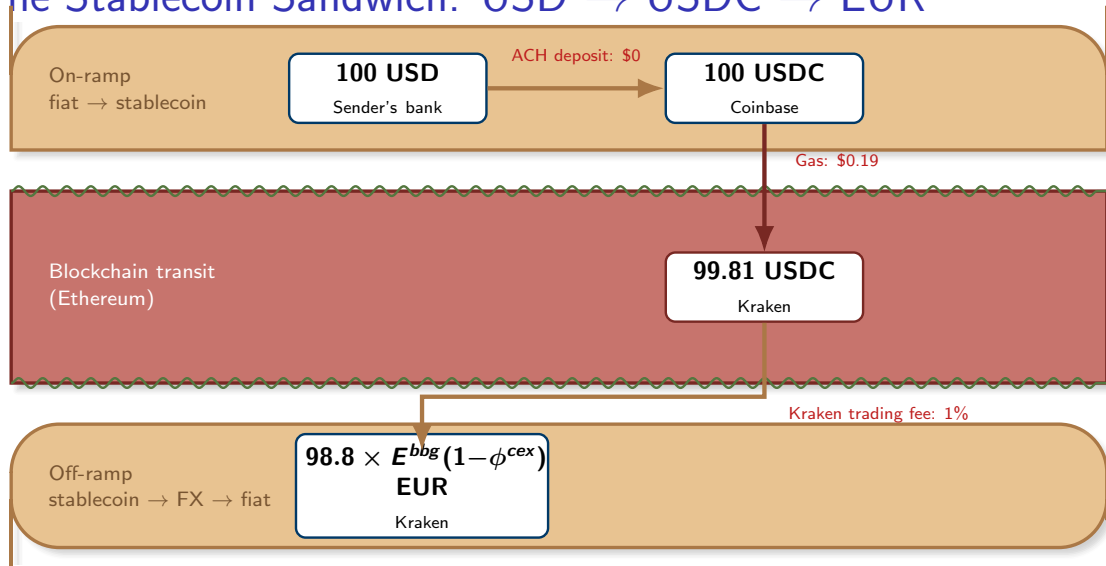
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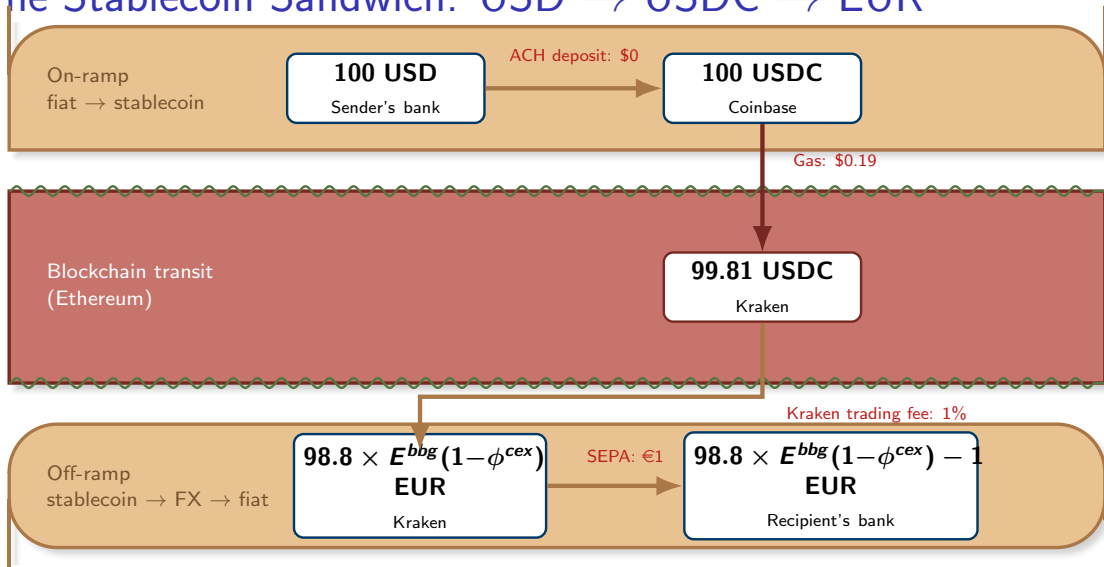
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Stablecoin FX Costs on CEX: Major Currencies

For Tier 1 and Tier 2 currencies, stablecoin-implied FX rates **track Bloomberg BFIX closely**:

Tier	Currency	Mean FX Cost (bps)	SD (bps)	Daily Vol (\$M)
1	EUR	-8.2	35.8	185.7
1	GBP	-2.2	87.3	17.4
1	JPY	+1.2	162.2	0.2
2	CHF	-6.7	41.5	3.2
2	SGD	-8.0	29.2	0.7
2	AUD	-9.9	79.7	4.0
2	HKD	-2.0	23.8	3.5
2	CAD	+5.1	52.2	1.7

- ▶ Mean FX costs are near zero — stablecoin-implied rates closely match wholesale benchmarks for major currencies.
- ▶ SDs are large relative to means. Reliable pricing is not guaranteed over time.

Stablecoin FX Costs on CEX: Emerging-Market Currencies

For Tier 3 and 4 currencies, FX costs are **strongly negative** — stablecoin-implied rates are *more favorable* than Bloomberg benchmarks for inflows into EMs:

Tier	Curr.	Mean (bps)	SD (bps)	Vol (\$M/day)
3	INR	-474	382	0.8
3	KRW	-211	1,067	143.5
3	ZAR	-194	177	3.6
3	TRY	-80	134	83.2
3	BRL	-60	81	20.9
3	MXN	-2	45	7.4
4	ARS	-4,393	2,886	2.0
4	NGN	-1,616	2,035	0.1
4	UAH	-429	532	2.3

Stablecoin Access Premium

Residents in capital-controlled economies pay a premium for USD stablecoins, creating a favorable FX rate for inbound senders. The cost advantage is due to capital control barriers, not due to better technology.

Additional Considerations

Wise Unit Economics: GBP → EUR bank transfer

Cost component	Fixed	Variable
Customer Support	£0.11	0.01%
Compliance (AML, Fraud, KYC, Sanctions)	£0.06	0.01%
Other Servicing (Ops)	£0.05	0.01%
COGS (Bank fees, treasury, FX)	£0.02	0.03%
Marginal cost per transfer	£0.24	0.06%

Source: Provided by Wise (2026)

Servicing and compliance costs dwarf the payment rail itself

Customer Support (£0.11) and Compliance (£0.06) together cost $\sim 8\times$ the actual bank/FX rail (£0.02 COGS) for Wise.

The stablecoin sandwich avoids both: **no KYC/AML at every hop** (compliance), and **self-service custody with no dispute resolution** (CS). The cost advantage is regulatory and operational, not technological.

Emerging Use Case: Stablecoins Without Off-Ramps

- ▶ **Digital goods payments from emerging markets.** EM customers pay directly from their crypto wallets for services. No off-ramp for the sender.
- ▶ **Platform payouts to EM recipients.** Example: a platform like Airbnb collects in USD, converts to pesos, but hosts prefer dollars. Now the hosts can hold stablecoins
- ▶ **Virtual dollar accounts at scale.** Offering real dollar accounts globally requires costly banking licenses across jurisdictions. Stablecoins provide a scalable substitute.
- ▶ **Visa stablecoin cards help spend stablecoins in emerging markets:** Visa captures captures economic value through FX conversion spreads!
- ▶ **After all payment “innovations”, we are back to CARDS (!), which cost more than the digital wallets EMs have already adopted.**

Conclusions

1. Costs reflect market power and payment rail architecture, not FX illiquidity.
2. Fintech MTOs have substantially compressed cross-border payment costs.
3. Stablecoins introduce new intermediation, rather than eliminate intermediation.
4. Stablecoin EM pricing advantage reflects capital-control frictions, not superior technology.
5. Stablecoin off-ramping into local currency faces significant liquidity constraint. However, important use cases exist without the need for off-ramping.

Stablecoins are not the magic solution to cross-border payments. Fintech MTOs' success deserves more celebration.