

DLT in Cross-border Payments

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The Rule of Law in a Digital World

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Agenda

1. What is distributed ledger technology (DLT)?
2. Cross-border payments walk-through
3. DLT walk-through
4. Why does any of this matter?

What is DLT?

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- **Blockchain** — Technology that collects transactions into blocks and chains them in chronological order, with copies distributed across a number of different servers
- **Digital signatures** — A cryptographic scheme used by parties to authorize transactions and by the protocol to authenticate transactions
- **Consensus mechanism** — A process by which multiple nodes agree to update the blockchain with new transactions

Different DLTs make different choices



Different DLTs make different choices



Different DLTs make different choices



Funds Transfer: “[T]he series of transactions, beginning with the originator's payment order, made for the purpose of making payment to the beneficiary of the order.” [*U.S. Uniform Commercial Code § 4A-104(a)*]

How do cross-border payments work today?

Suppose that Alpha Corp. based in Brazil wishes to make a payment to Beta Corp. based in Thailand. They choose to do so by a funds transfer.



Alpha Corp.



Beta Corp.

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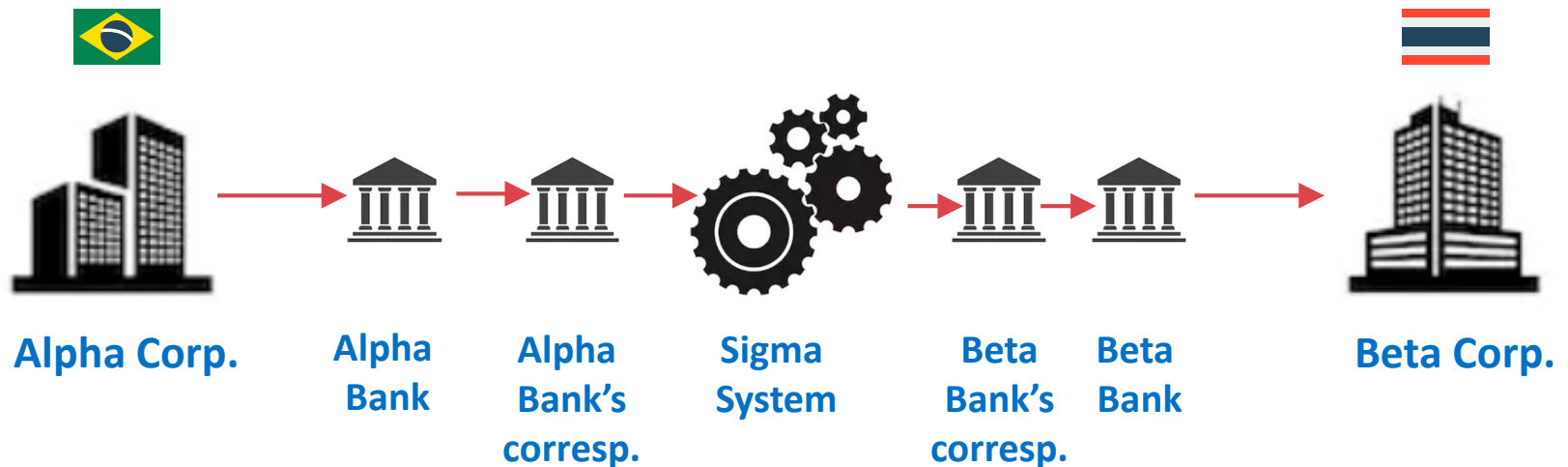
Sigma System

Debits Alpha Bank's account (-R\$)

Credits Beta Bank's account (+฿)

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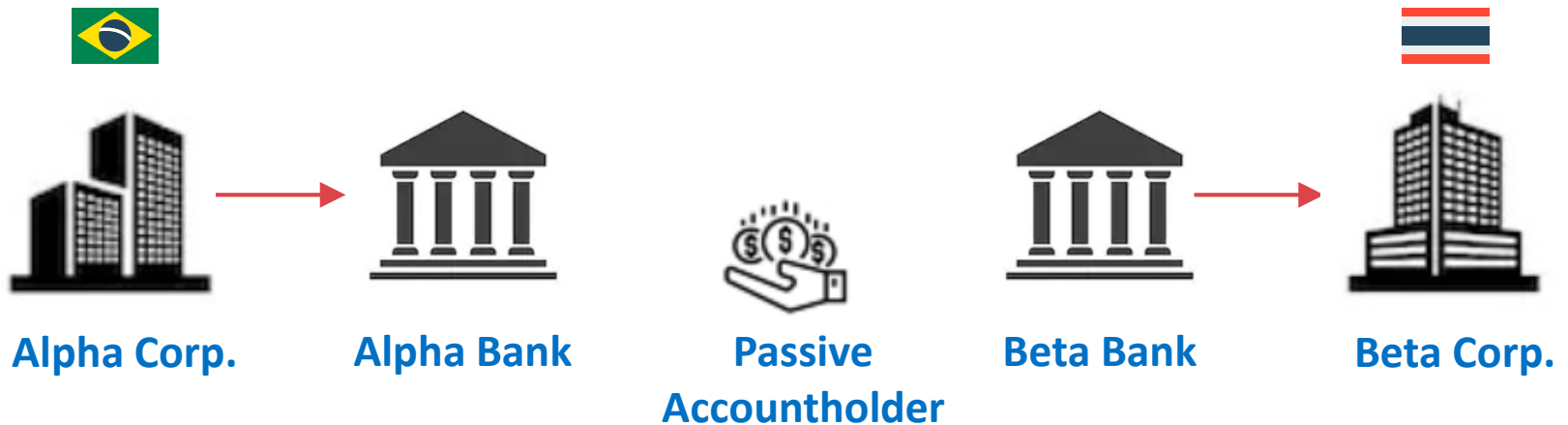
Now with DLT

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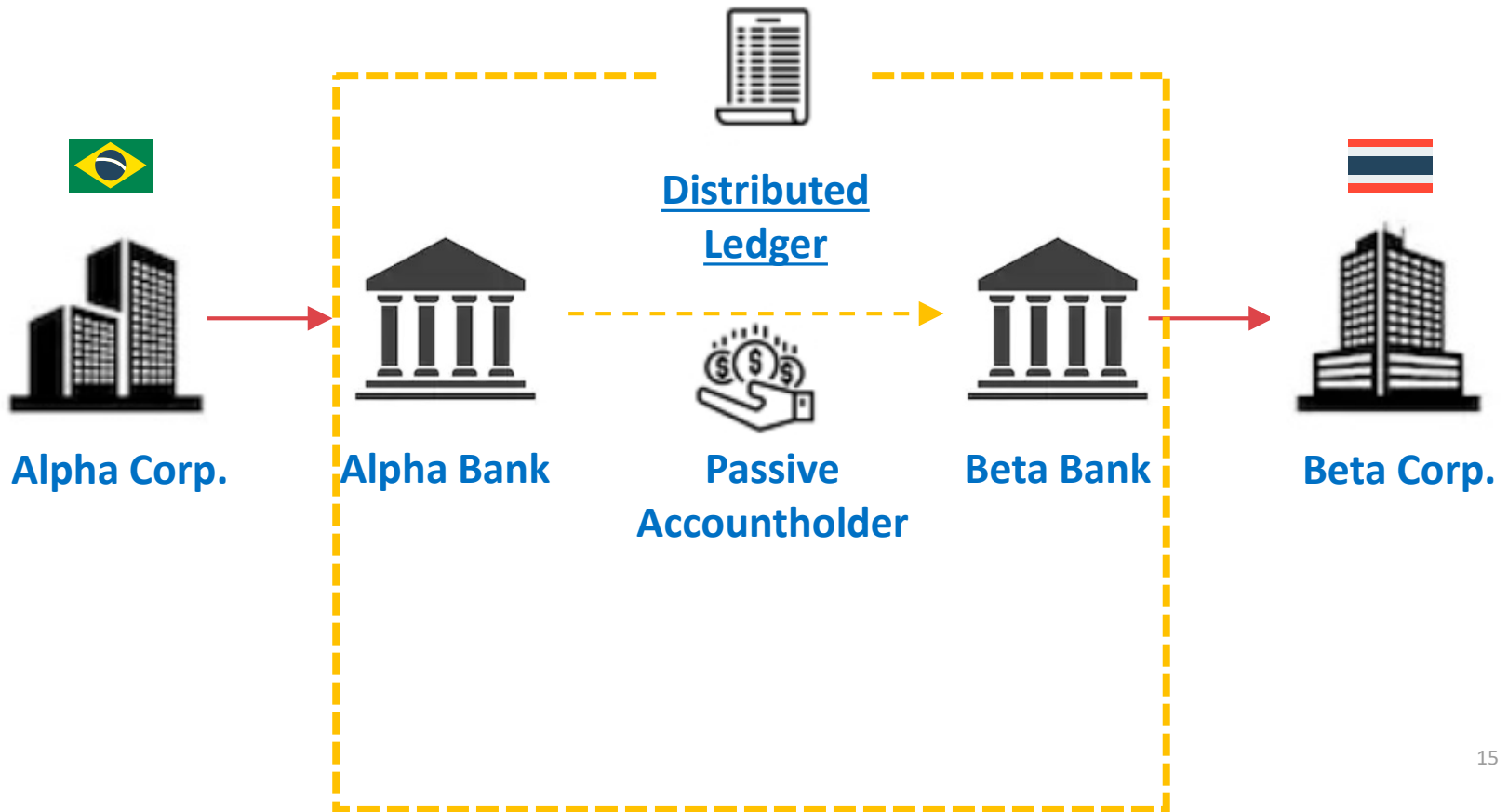
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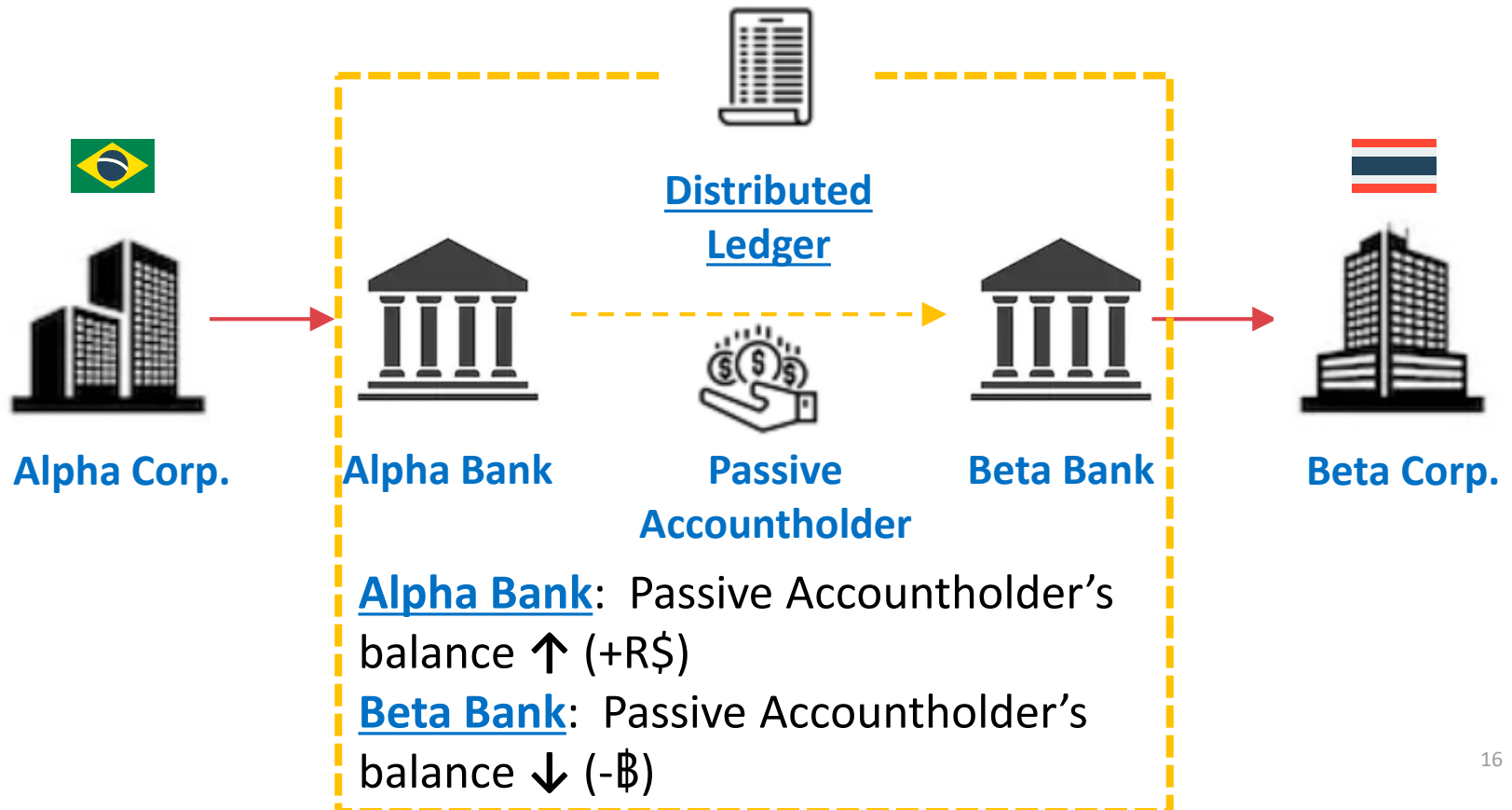
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What are some key differences?

Payment system intermediary

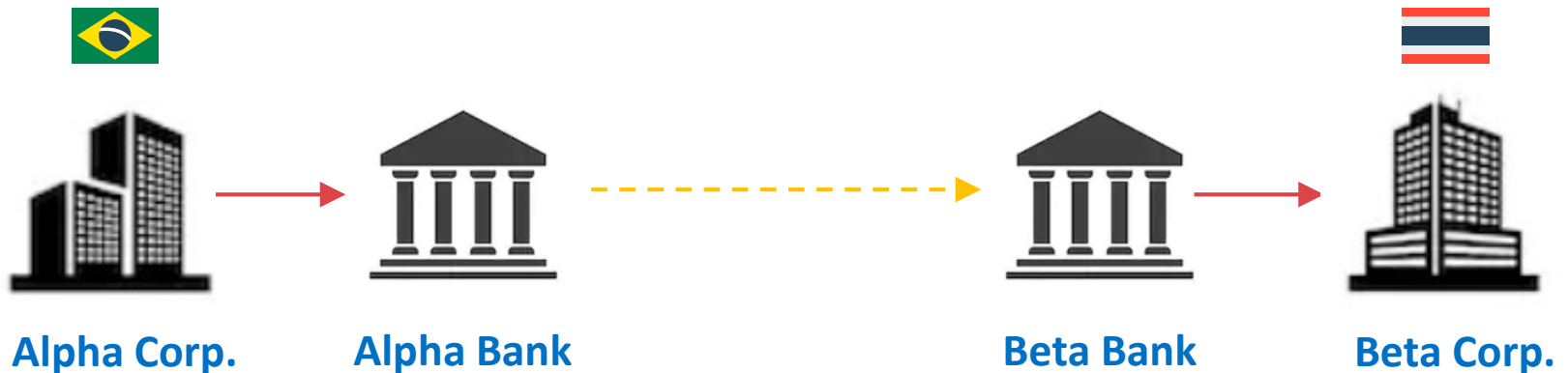
- Trust in **one counterparty**, Sigma System
- Transfers of money between banks are **recorded by Sigma System**
- Banks **reconcile** their own records with Sigma System's books

DLT disintermediation

- Trust in a **protocol**, the process itself
- Settlement occurs on the **banks' own books**, coordinated by technology
- Changes are updated in **real time**

Other DLT-based approaches

- DLT-based automated processes like Interledger Protocol and Corda
- Crypto assets as a bridging tool



Why does this matter?

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Remittances

Payments made on a recurring basis by individuals working in one jurisdiction to family members, friends, or others in their home country abroad

Even today, making remittance services **more affordable and inclusive** still remains a work in progress → DLT can help the industry **restructure relationships and enhance communication systems** to enhance remittance services

Financial inclusion

Applications of DLT to cross-border payments can create **new paths for value to more efficiently flow** between payers and payees around the world

DLT can open up of the **type of connections** between banks around the world

Important legal challenges

Important legal challenges

<u>Regulatory req's</u>	<u>Account relationships</u>	<u>Payment rules</u>
<p>Any DLT solution must support banks in their <u>regulatory compliance</u></p> <p><u>Query:</u> Does a given solution support <u>OFAC and AML compliance</u>? Do they enable, for example, the following operations:</p> <ul style="list-style-type: none">- Screening against sanctions list (and allow that screening to be done <u>before</u> the transaction is settled)- Securely <u>retaining</u> and <u>passing on</u> certain transaction information (U.S. “record keeping” and “travel” rules)	<p>Greater reliance on <u>new account arrangements and transaction structures</u> may emerge from disintermediation</p> <p>Specialized commercial arrangements (e.g., <u>special deposit or escrow accounts</u>) can be used to connect counterparties that <u>lack a trusted business history or formal relationship</u></p> <p><u>Query:</u> Is there <u>legal uncertainty</u> as to the treatment of balances held during pendency (e.g., unexpected application of setoff rights or creditor process in insolvency)?</p>	<p>Legal rules should <u>clearly define the roles and responsibilities</u> of the various parties with respect to their interbank payment activity over DLT</p> <p>Allow banks to <u>protect</u> their own interests and <u>coordinate</u> their activities to the benefit of all banks using the technology</p> <p><u>Query:</u> Does the solution come with a <u>clear and enforceable legal basis</u>? <u>And</u> is there risk that insolvency law (e.g., zero-hour rules) will <u>effectively void payments</u> that otherwise appear to have been settled and final?</p>

Important legal challenges

Payment rules

Legal rules should **clearly define the roles and responsibilities** of the various parties with respect to their interbank payment activity over DLT

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Modernizing legal frameworks

Clear and predictable legal rules that accommodate technological change, tailored to national circumstances

Thank you

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