Payments Simplified – From Basics to ISO20022

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Thank you all for Joining

Payments Introduction

What is a payment ??

It is the transfer of value from one party to another

How is it achieved ??
Through what is know as "Payment Instruments". An instrument helps us achieve a particular task. A payment instrument helps us in achieving the act of payments.

Examples : CASH, Online Account to Account Transfers, Cards (Debit/Credit), Bitcoin.

Scope : The scope for this session in the online account to account transfers. For the sake of simplicity we are going to call them "Payments"

Payment Types

- Non-electronic Vs Electronic
- High Value Vs Low Value
- **Domestic Vs International**
- Customer Vs Bank
- Push Vs Pull

Example for some of the above

- There are several other classifications. There are a few other classifications.

Payments – A2A

A2A stands for Account-to-account transfer. In the modern era all of you must have perform at least a few such payments in the past month.

We are going to understand the behind the scene action of what happens after we click on 'submit'

The world will come to a stop if we are unable to make payments. Now that the technology is evolving at a rapid phase and the way we send and receiving payments is evolving there is huge opportunity for professionals to get into this industry and thrive.

We will touch upon the fundamental concepts related to payments

Payment System & Parties

Payment system are a set set of rules and standards that the parties must adhere to for smooth flow of payment

Several payment systems exists through out the world. Even within a particular country/region there might be more that one payments system each one serving a different purpose.

Parties

1.Customers
2.Banks
3.Clearing and Settlement Mechanism
4.Third-Party Payment Solution Providers
5.Governing Bodies

Link 1 : https://www.paymentsdomain.com/2021/05/14/parties-in-a-payment-system/

Accounts

Classification of accounts

- Customer accounts
- Bank's internal account
- Clearing account
- Mirror clearing account
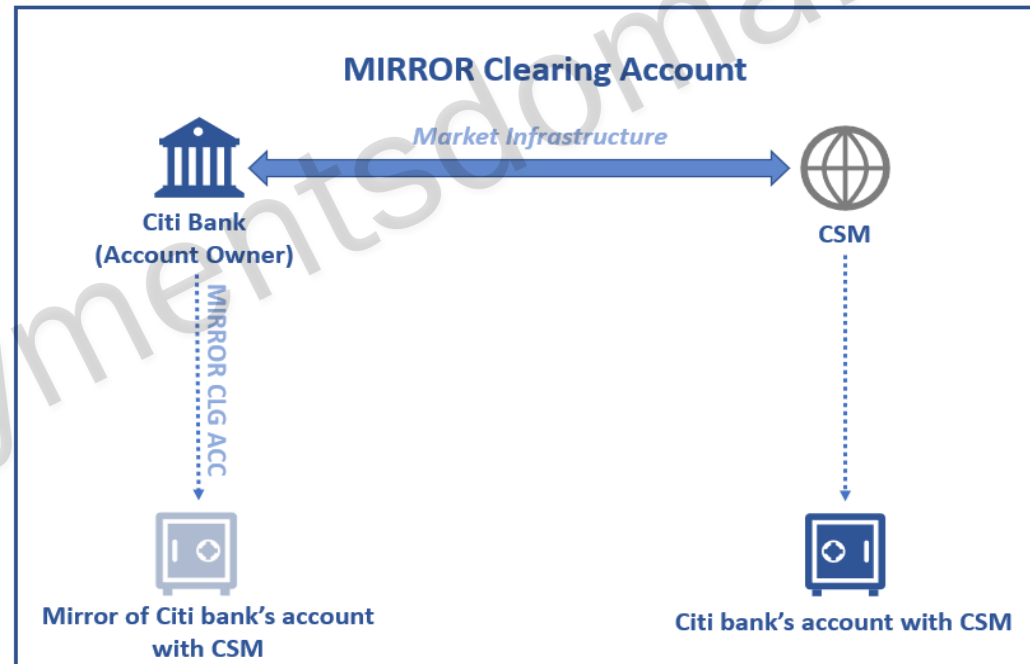- Nostro/Vostro Accounts

Customer accounts : These are accounts that customers hold with the banks. Savings and checking account are the most common.

Bank's internal accounts : These are accounts that banks use for a variety of purposes. Charge account, PL account, GL accounts.

Accounts

Clearing account: Banks open accounts with clearing houses. These accounts are called clearing account.

Mirror clearing account : Banks open an account that mirrors the clearing account mentioned above in their books. We will see "why ?" in the following slides.

MIRROR Clearing Account

Market Infrastructure

Citi Bank (Account Owner)

CSM

MIRROR CLG ACC

Mirror of Citi bank's account with CSM

Citi bank's account with CSM

Accounts - Contd

NOSTRO/VOSTRO: The most confusing among accounts. The one takeaway from this session

Mirror Nostro: Same concept as that of mirror clearing
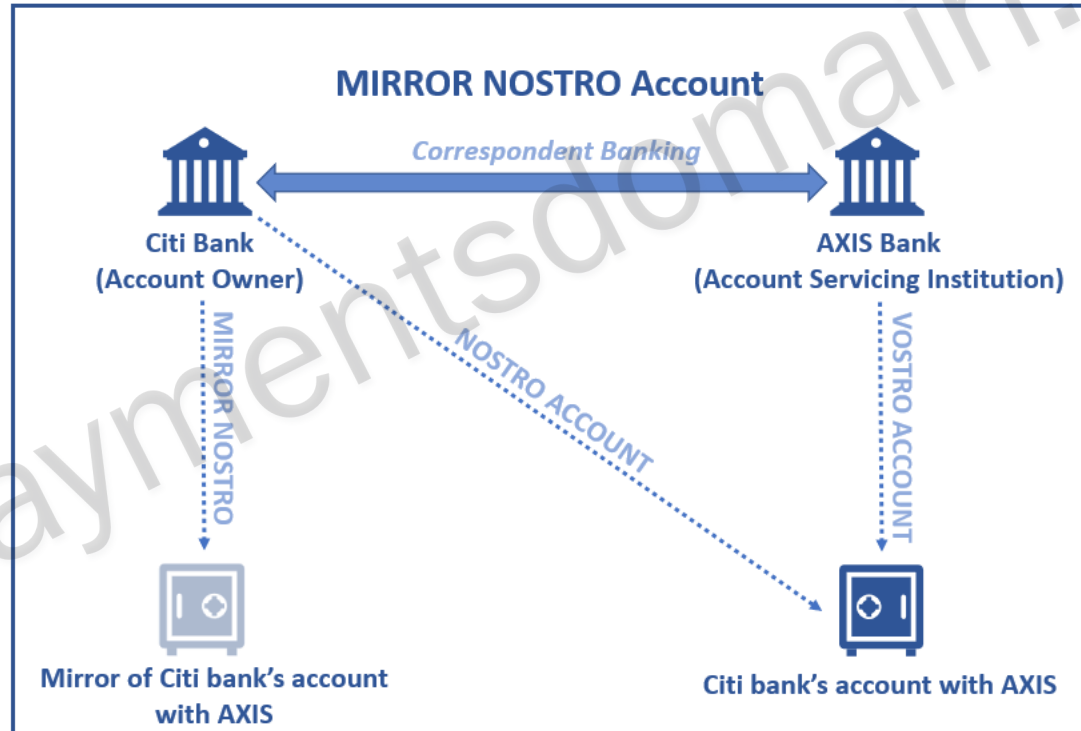
Domestic payments

Exchanged between two parties within the same country or region
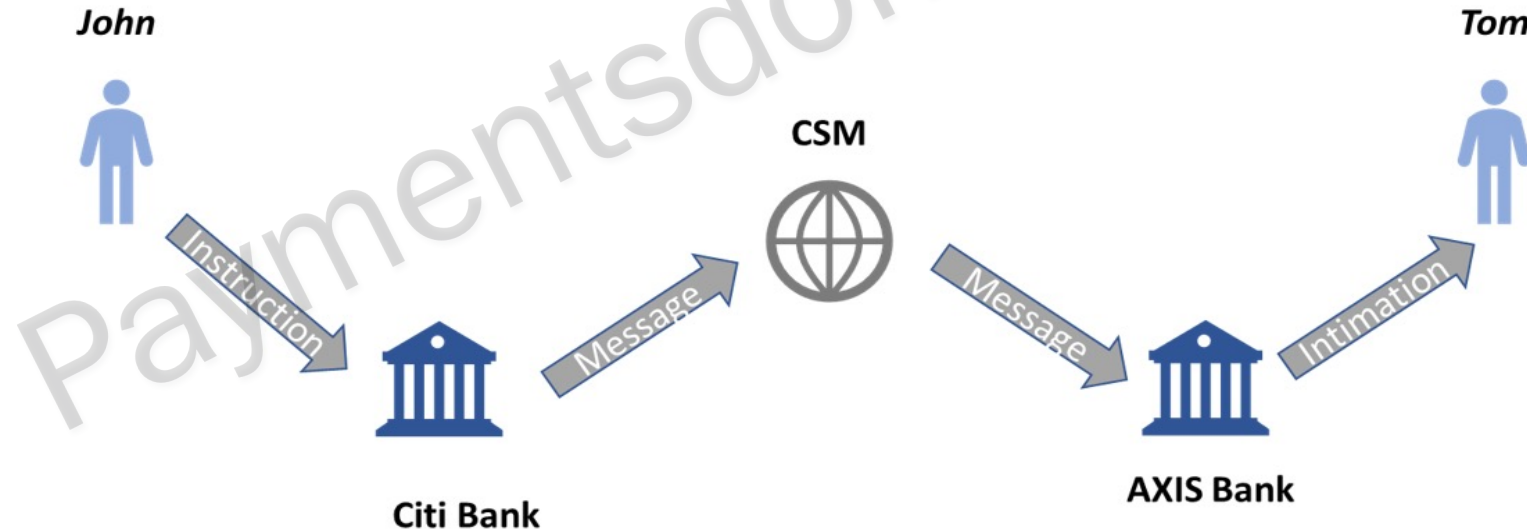
Types of Domestic Payments:
1. High Value (RTGS)
2. Low Value (NEFT)
3. Instant (IMPS or UPI)
4. Direct Debits (ECS)

Characteristics:
➢ Comparatively Simple
➢ In a single currency
➢ Monitored/Overseen by the central banks
➢ Done though a CSM

A Sample Payment

➤ John wants to send TOM 10000 INR
➤ What details are required
➤ Details entered in bank's website or mobile app

Sender: **JOHN**

Amount: 10000 INR

Purpose: Rent

Account Number: 123456

Bank: **Citi Bank**

Receiver: **TOM**

Account Number: 987654

Bank: **AXIS**

John

Tom

CSM

Instruction

Message

Message

Intimation

Citi Bank

AXIS Bank

Cross-border payments

➢ These are payments that are done from one country to another
➢ The purpose of these transaction may be to settle money for trade, foreign remittance etc.
➢ Used heavily by corporates
➢ Comparatively complex as it involves FX, Cross Jurisdiction Compliance, International sanction

These are also colloquially called 'SWIFT' payments or 'wire' transfers. The way in which cross-border payments are achieved is called 'Correspondent i.e. via NOSTRO/VOSTRO accounts.

Money from a country never leaves its borders. If a bank from India wants to send money to a bank in the USA then it must open an account with a US bank who will act as its correspondent. They are the country. Only bank in USA deal in their local currency USD.
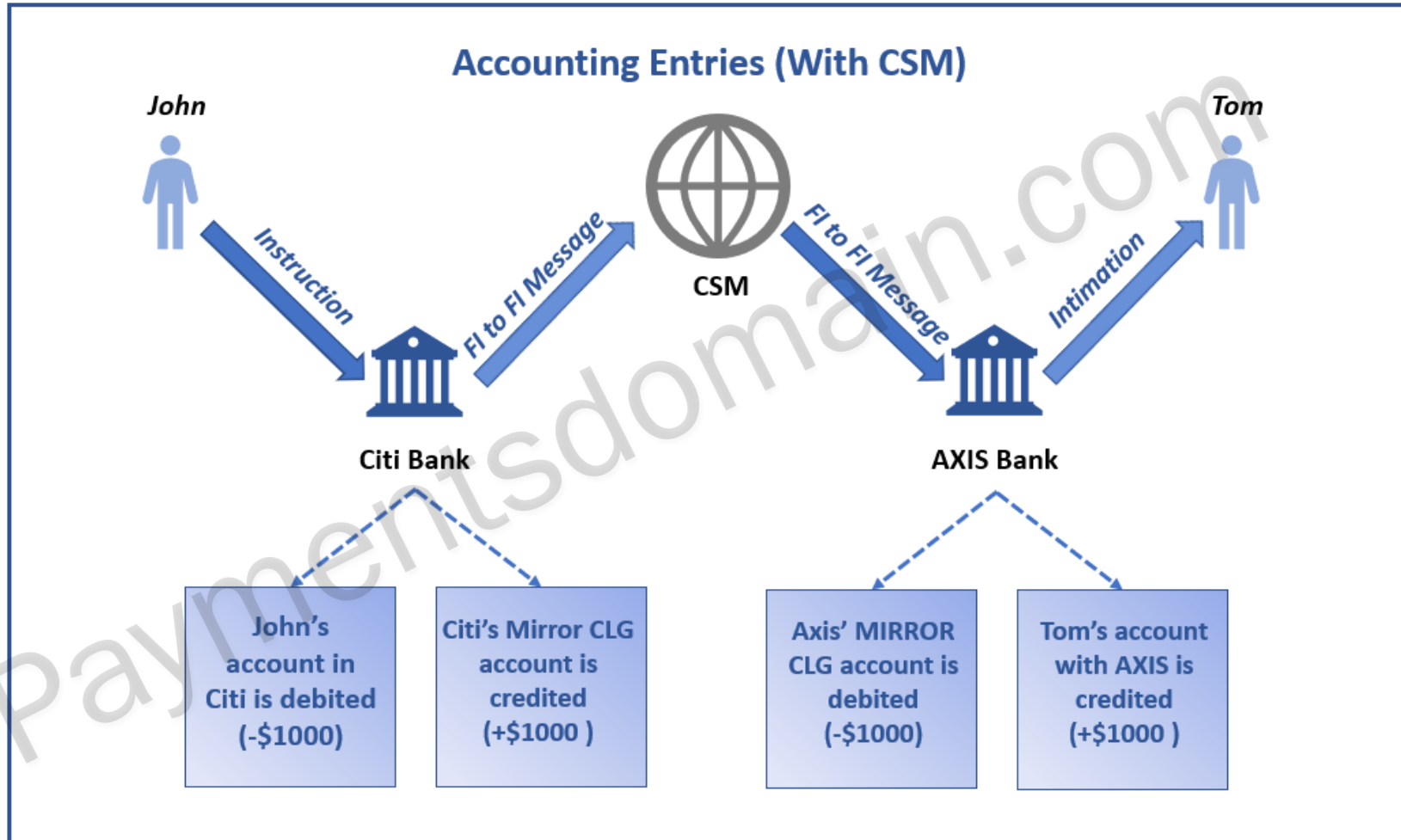
Accounting Entries

Correspondent banking
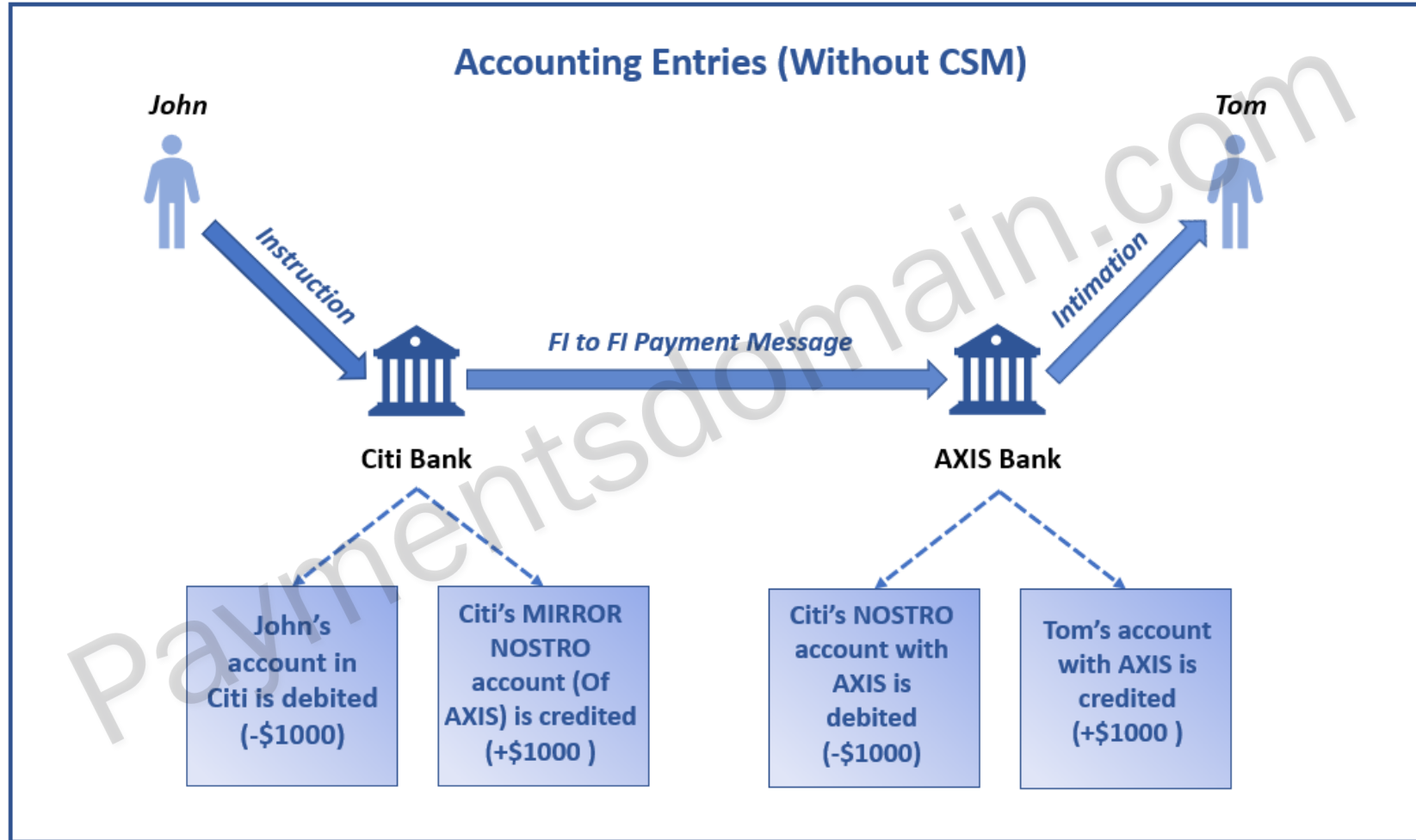
Accounting Entries

Domestic

Direct Debits

A topic for self reading ☺ In the interest of time
Will share some links for your reading

Payment Messages

They are the carriers of payment information from one party to another. They start their journey from the ordering customer and ends with the Beneficiary Customer. These message must have some standard format that all the parities in the payment system can adhere to, so that every one speaks the same language.

On a high level these messages are of two types:

1. Customer to Bank / Bank to customer (aka. Customer to FI/FI to customer)
2. Bank to Bank (FI to FI)

Reading material (To be shared)

ISO20022

The world of payments is vast and is evolving continuously. There were several attempts throughout the history of payments to come up with a one size fits all kind of solutions to standardize payments communication.

These attempts have failed due to several reasons. Cost benefit, quality of the standard, wide spread adoption were some of the reasons.

ISO20022 has succeeded in this attempt (To a certain degree). Today we will see why ISO20022 is so successful and is adopted or being adopted by all major payments systems.

What ISO20022 is ?

- It is a global standard
- It is like a dictionary that has the words of a language
- It is like the high school language grammar book that defines how the messages are to be used
- It is open source
- It covers many parts of the financial world including cards, Trade Finance, Forex, etc.
- It is a framework that different financial systems can make use of
- It is technology independent
- It is Proven, robust, and is like a universal language that all the Financial systems can understand
- It is a standard for standards
- It is/will soon be used by different payments systems
- It is a standard to which anyone can contribute
- It is evolving and will continue to do so
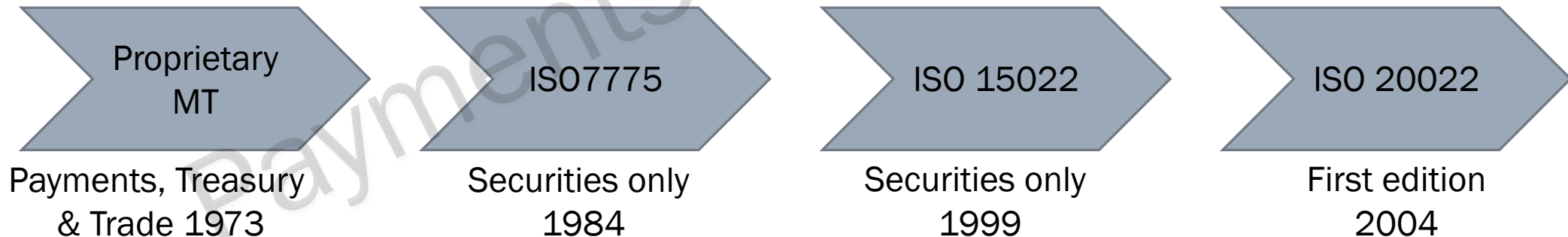
What ISO20022 is NOT

- It is not a message type
- It is not a payment system
- It is not just XML
- It is not just SWIFT MT to MX
- It is not just for SEPA/SWIFT
- It is not just for payments
- Most importantly… It is not new… It is older than teenagers
- It is not just about the mapping. In fact the mapping is not one of the not so difficult parts of a ISO20022 adoption. Mapping is an issue only where there is a co-existence

When it began

Standing in 2022/23, we clearly see that ISO20022 is the future of Global Financial Messaging Standards but it took several years to achieve this. If ISO20022 was a person then it can legally drink alcohol(In some countries)

Interesting Fact : ISO20022 was supposed to be called as ISO15022 2nd Edition

Here is a timeline of how financial messaging standards has evolved

Proprietary MT	ISO7775	ISO 15022	ISO 20022
Payments, Treasury & Trade 1973	Securities only 1984	Securities only 1999	First edition 2004

Adoption of ISO20022

ISO20022 can be adopted by both CSM and correspondent banking.

1. SEPA
2. Target 2
3. SWIFT
4. Lynx (Canadian Payments)
5. CHAPS
6. Fedwire
7. AusPay

Why ISO20022 ?

- Interoperability : When message moves from one payment system to another, it will work well together.
- Rich Data: ISO20022 has rich an better quality structured data
- High STP : "Cuba the Country" example
- Better compliance

Ok but how is ISO20022 relate to MX ? What the heck is CBPR+ ? What is HVPS+ ?? There are three layers .

1. ISO20022
2. Usage Guidelines
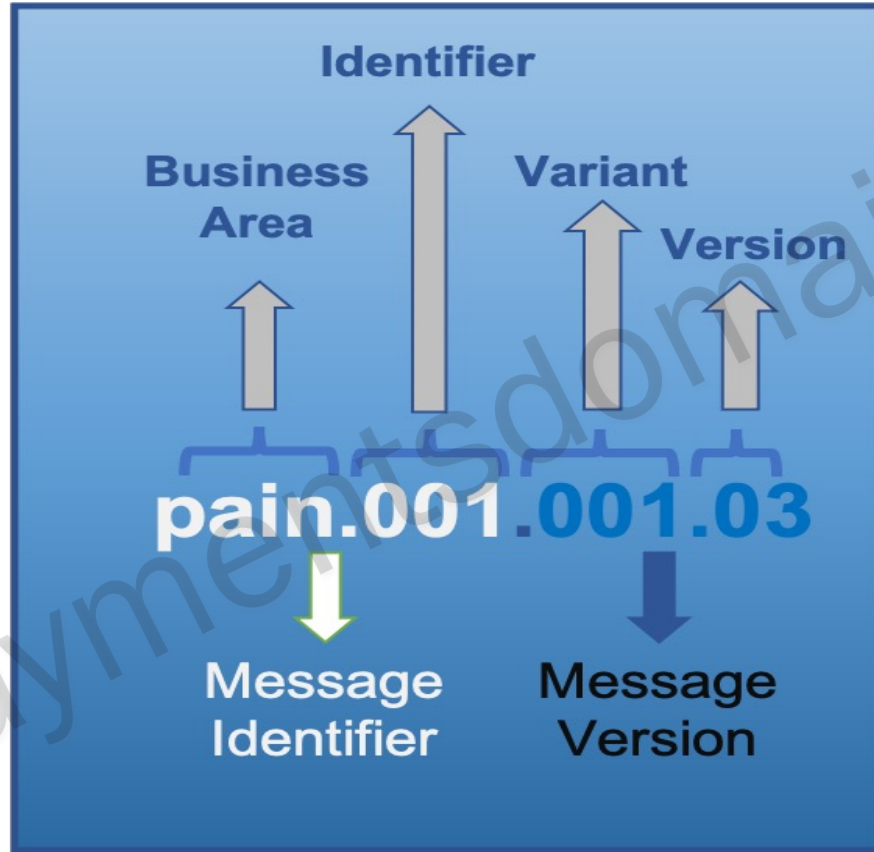3. Actual adoption

ISO20022 Structure
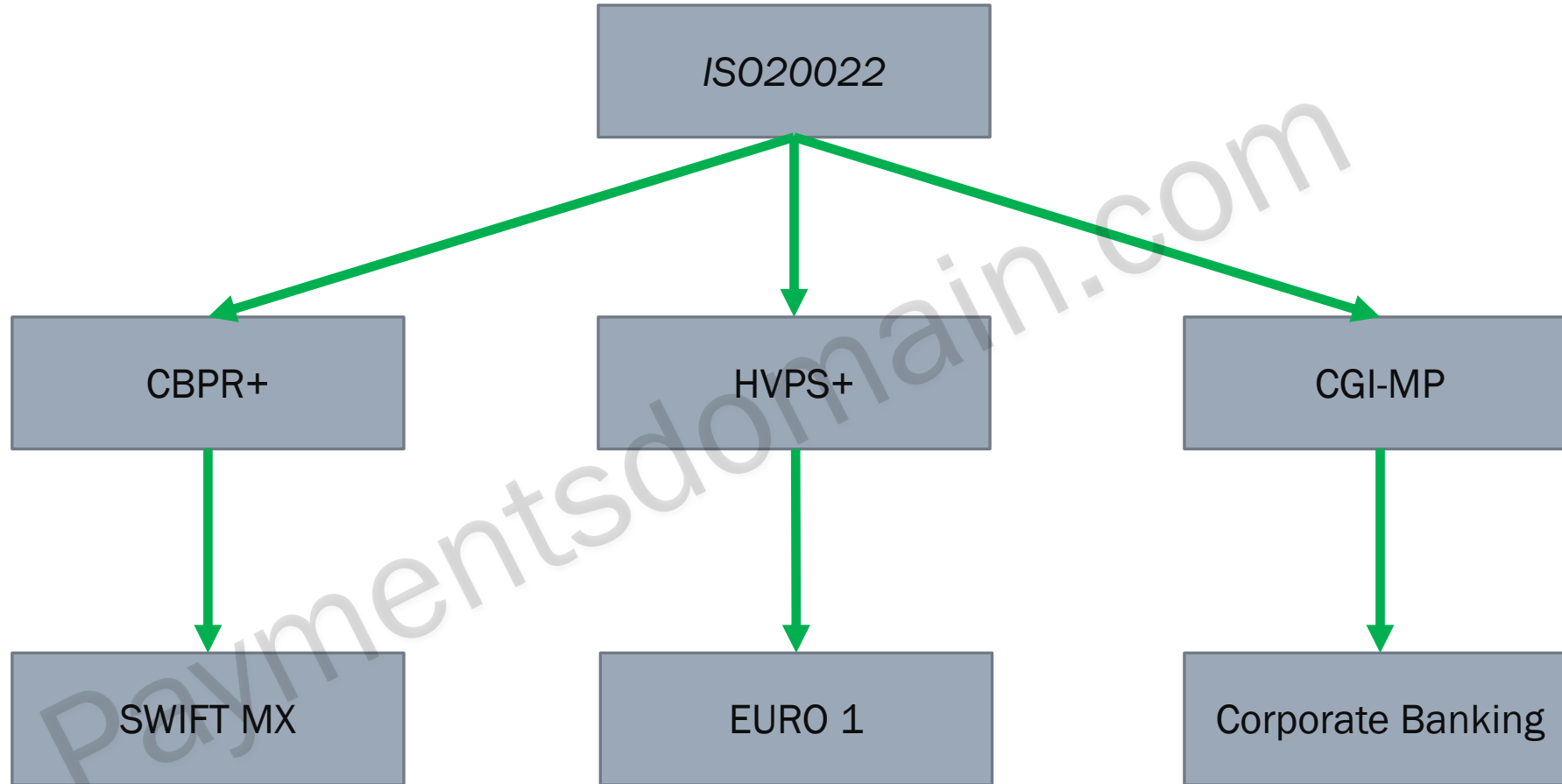
Usage Guidelines

1. CBPR+ - For cross-border payments
2. HVPS+ - For high value payment market infrastructures
3. CGI-MP – Customer to bank

CBPR+ and HVPS+ are adopted in the interbank space
CGI-MP is adopted in the customer to bank space.

All the 3 have to comply with the rules laid out in ISO20022

ISO20022 message name
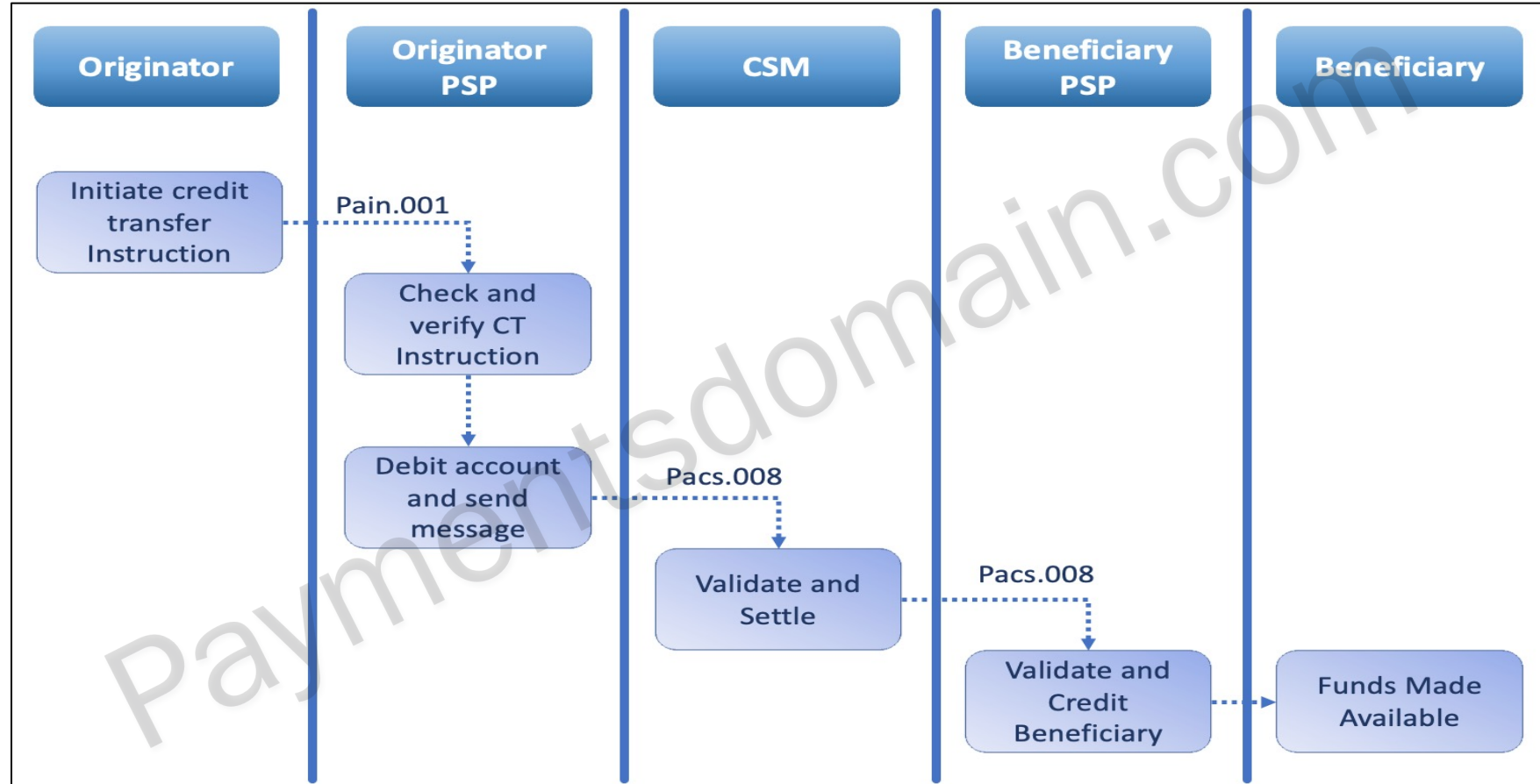
ISO20022 message walkthrough

The transfer of data has many layers. We are going to focus on what is called as the request payload

This has 2 different parts
1. Application Header
2. Business Document

ISO20022 message flow

Important Links

Multilateral Clearing : https://www.paiementor.com//clearing-and-settlement-mechanisms-multilateral-clearing/

Settlement : https://www.paiementor.com/clearing-and-settlement-mechanisms-settlement/

Payment System Models: https://www.paiementor.com/payment-systems-models/

Payment Engines: https://www.paymentsdomain.com/2021/06/05/payment-engines/

Parties : https://www.paymentsdomain.com/2021/05/14/parties-in-a-payment-system/

Payment Messages: https://www.paymentsdomain.com/2021/05/22/messages/

Direct Debits: https://www.paiementor.com/category/direct-debits/

Cross border payment: https://www.paiementor.com/category/x-border-payments/

Payments Accounting : https://www.paymentsdomain.com/2021/05/22/messages/

SEPA : https://www.paymentsdomain.com/category/sepa/

SWIFT : https://www.paymentsdomain.com/category/swift/

ISO20022 Official site : https://www.iso20022.org/

SWIFT MX: https://www2.swift.com/knowledgecentre/products/Standards%20MX

ISO20022 Tutorial: https://corporates.db.com/in-focus/Focus-topics/iso20022/tutorials

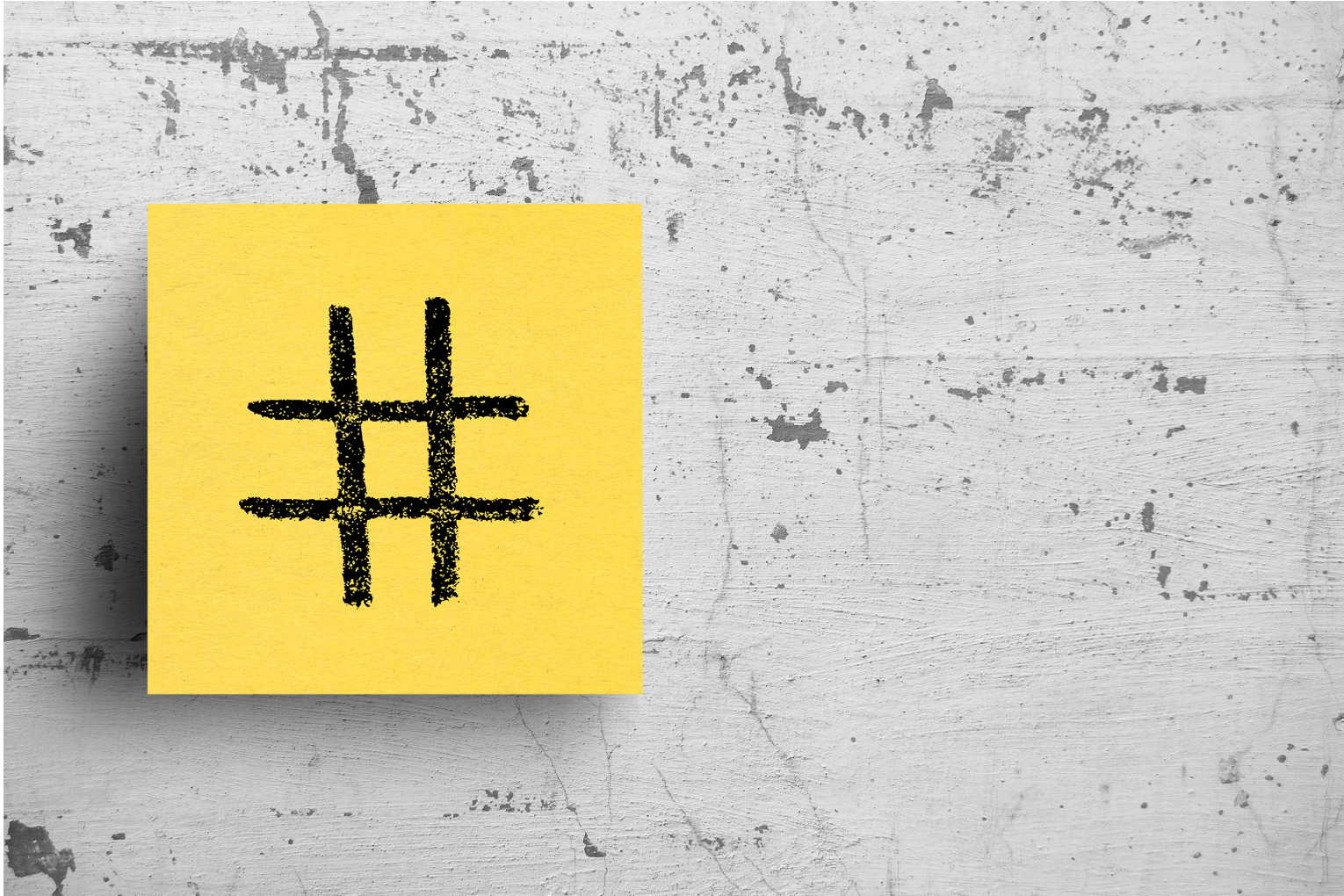Sharp Talents Course : https://sharptalents.com/course/payments-fundamentals-2/

Important Links

Citi ISO20022 Mini Series : https://www.citibank.com/tts/sa/flippingbook/2021/ISO-20022-Citi-Mini-Series-Reference-Guide-Part-3/2/

ISO20022 for Dummies (e book): https://www.swift.com/campaign/iso-20022/iso-20022-dummies

MT to MX mapping (Old rough guideline for reference only) :

https://www.bundesbank.de/resource/blob/603426/2357d10f4efa187e3f3fb56c004fbf71/mL/specification-iso-20022-migration-with-remarks-data.pdf

Feedback

Questions

Thank you !!