



Uses and classification of financial information: A Map of Financial Information

1ra. Reunión del Foro de Información Financiera. CEMLA

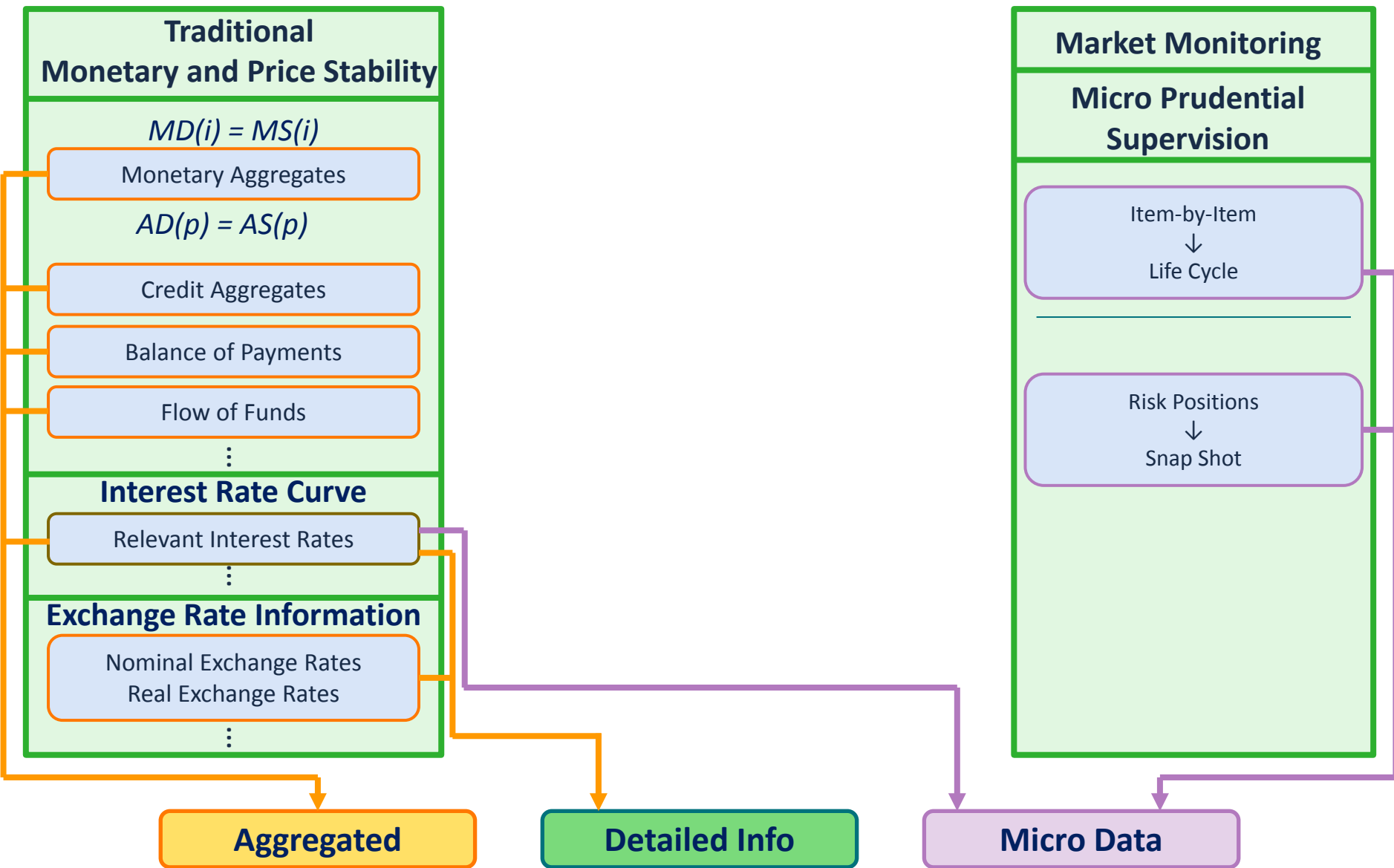
June 2015



BANCO DE MÉXICO

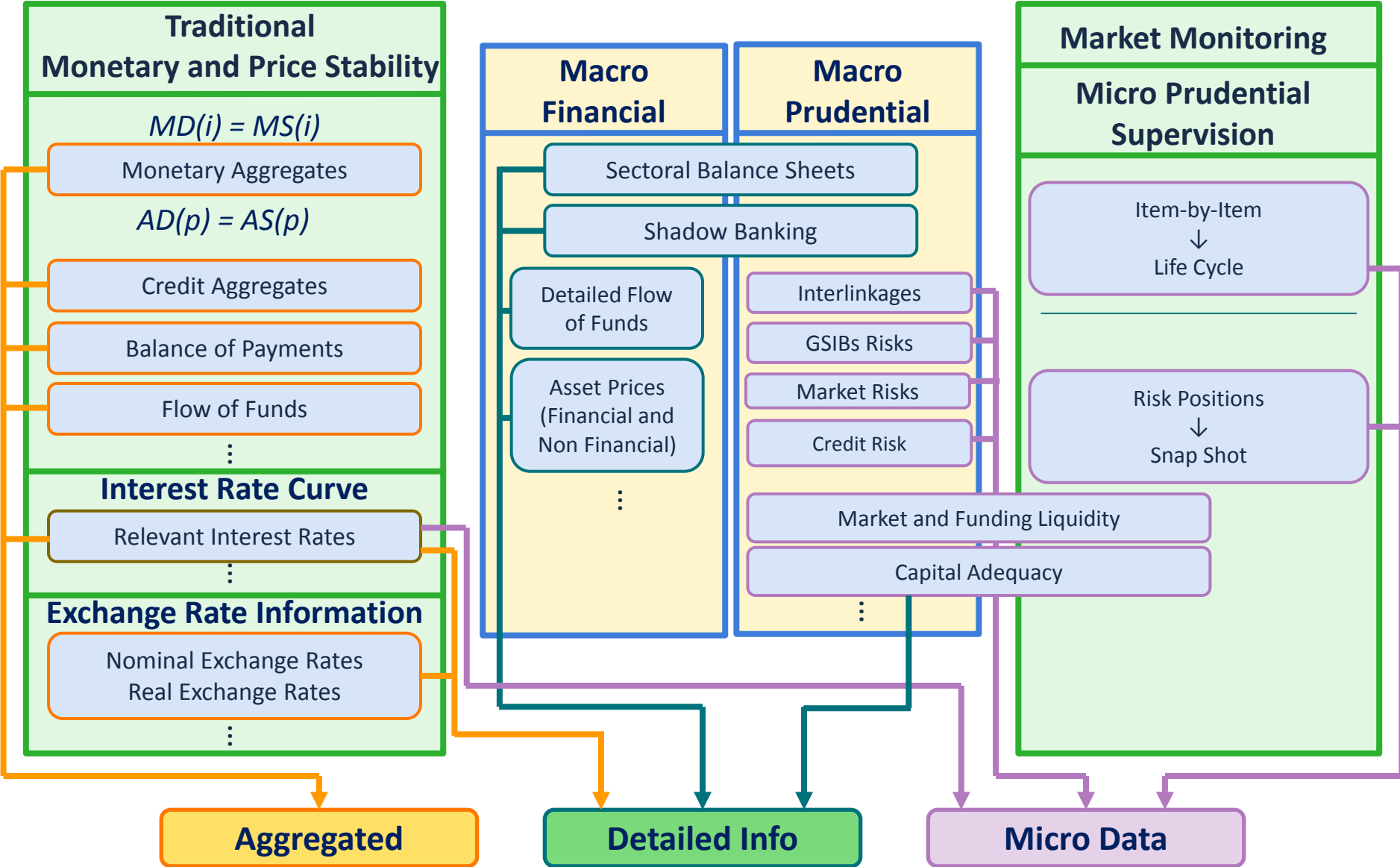
Introduction

Financial Information in Central Banks

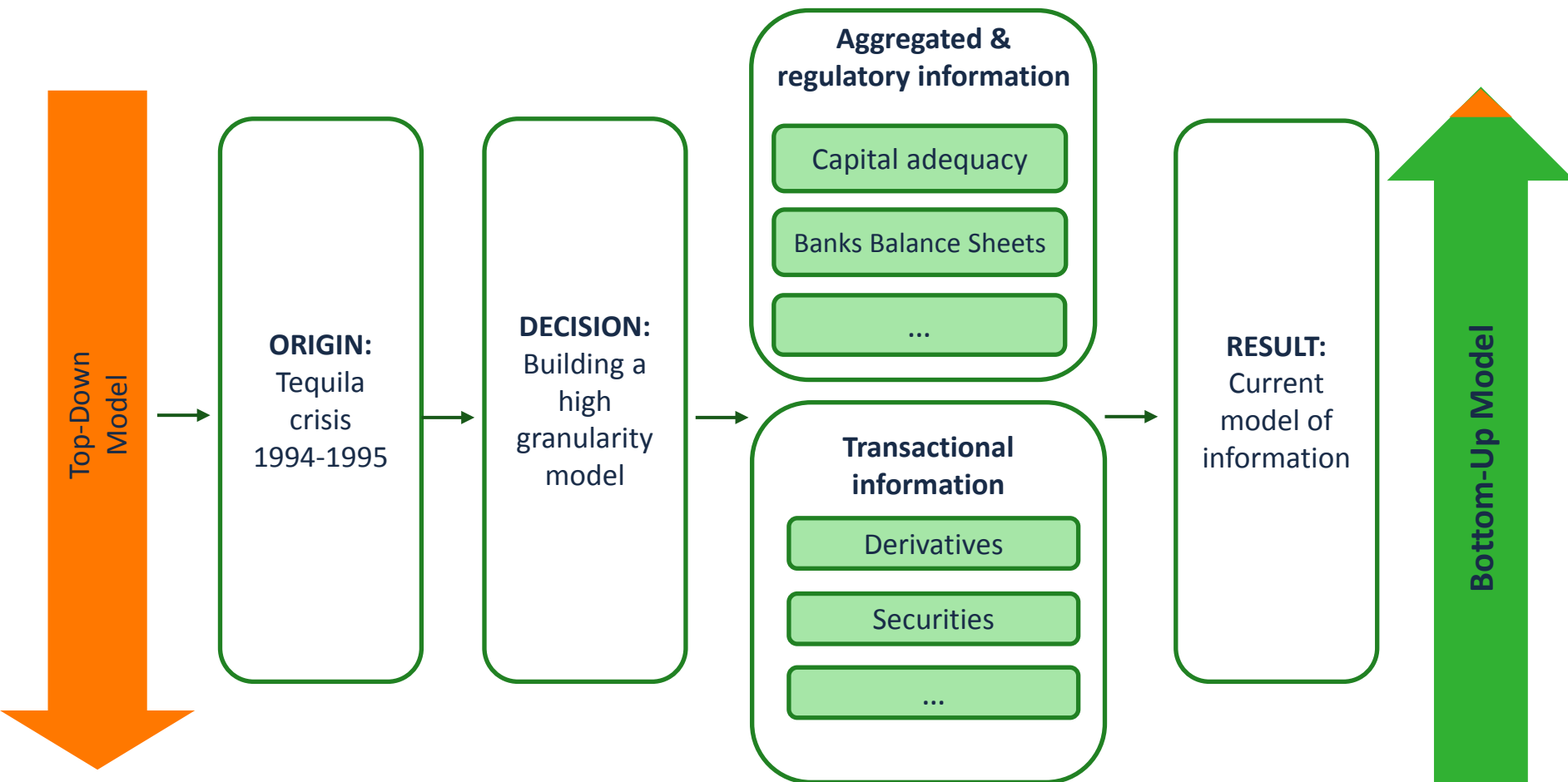


Introduction

Financial Information in Central Banks



Introduction



Introduction

Financial Information Model

Collected by BANCO DE MEXICO, directly from the institutions Commercial banks, development banks, brokerage houses, exchange houses, other regulated financial entities.											
Other financial authorities (CNBV, CNSF, CONSAR), price vendors, securities depository, credit card switches, exchanges, etc.											
Microdata (Transactional or very detailed information)								Aggregated (Granularity according to the type of information)			
Daily	Foreign Exchange Ops.	FX Claims and Liabilities	Derivatives	Securities (Repo / Buy – Sell / Security Lending)	Interbank Loans	Time Deposits	Credit & debit card transactions (switches)	Pension and Investment funds' investment portfolio	Financial Products and Services		
									Ratings, prices, indices, interest rates, economic and financial variables and risk factors		
Monthly	Commercial loans		Mortgages		Equities holdings	Credit bureau			Demand deposits	Capital adequacy	Regulated intermediaries' financial statements
									FX Cash Transactions	Liquidity	
Bi-monthly	Consumer loans (credit card, auto, personal, wage, etc.)										
Quarterly									Retail payment systems		

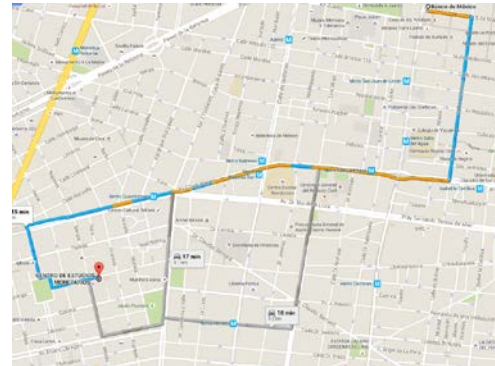
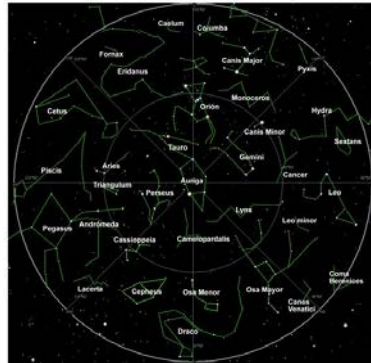
Introduction

- Richness of micro-data without a clear vision of an integrated model resulted in a case-by-case response to users' requests.
- In addition, in recent years the extraordinary increase in new data requirements has forced a revision of the model since it has become evident:
 - Duplicated information (mainly transformations),
 - Outdated classification guidelines for data dissemination,
 - Unexplored high potential of relevant new information from available data,
 - Difficulty to fill some data gaps, because of rigidity and heterogeneity in the design and structure of information,
 - Partial adoption of international standards,
 - Opportunity to increase standardization (counterparties, financial products, transactions, etc.).

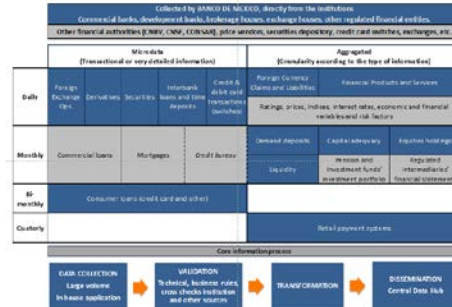
Introduction

When lost in the dark
Or lost in the sky
Always look for a...

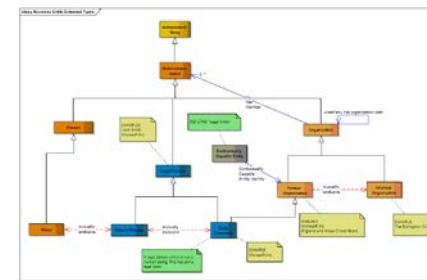
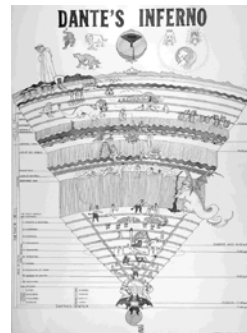
- A way to tackle some of these needs is to improve the structure and classification of information with a sort of a...



The Information Model of Banco de México



MAP



Agenda

- **Information Map**
- **A simple example of use**
- **Final remarks**

Information Map

“A representation usually on a flat surface of the whole or a part of an area” (Webster Dictionary).

“A symbolic depiction highlighting relationships between elements of some space” (Wikipedia).

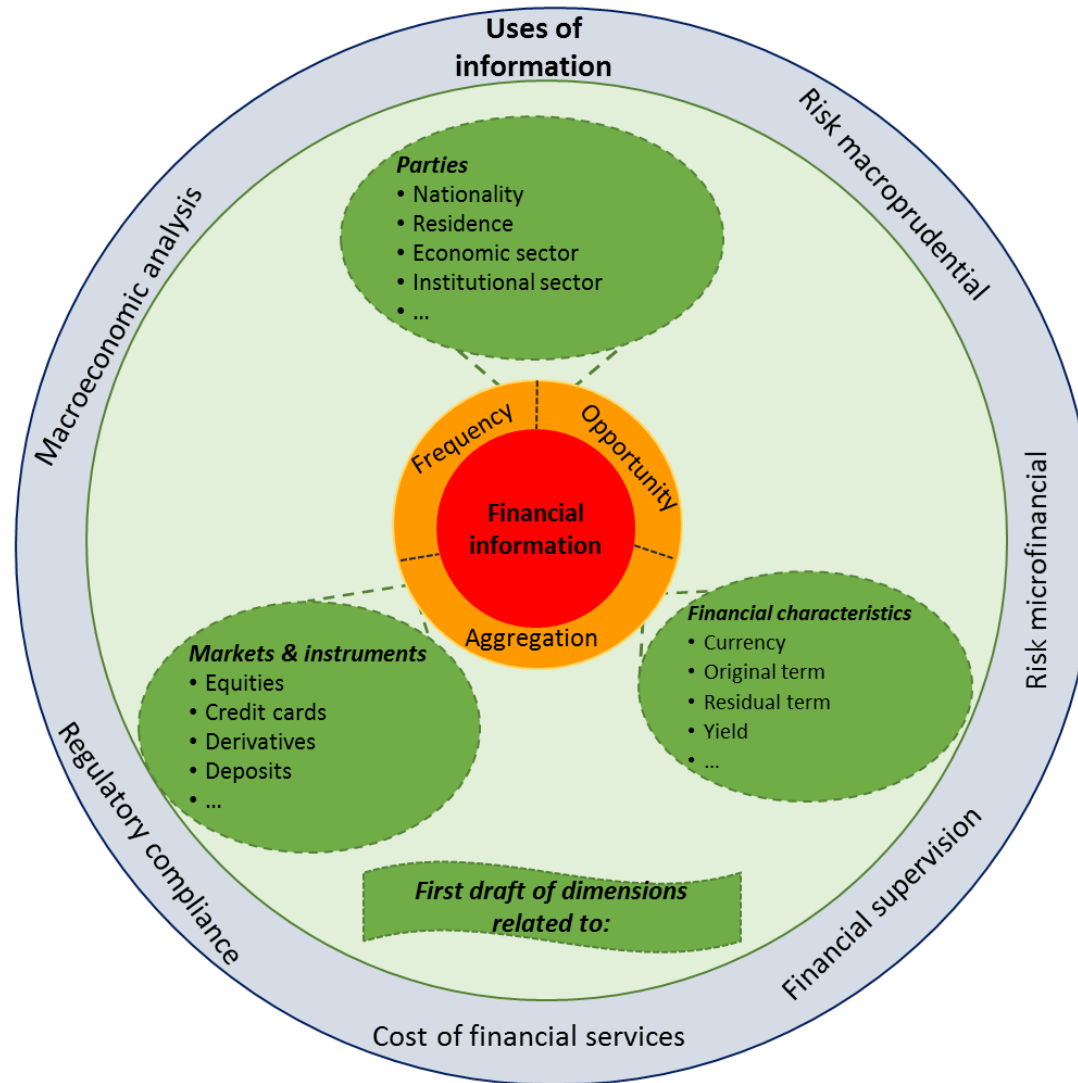
- Building a map needs to identify the relevant “dimensions” of information, those dimensions would define its “axes” (scope).
- Using data warehousing definitions, a *dimension* is: i) a collection of reference information about a measurable event; or, ii) a structure that categorizes facts and measures in order to enable users to answer business questions.

Information Map

- Dimensions are data sets of the same class composed of individual, non-overlapping data elements. They have as primary functions:
 - Provide filtering,
 - Grouping, and
 - Labelling.
- In our case, relevant measurable events are financial transactions. The different elements and characteristics of financial transactions are candidates for dimensions, for example:
 - **Markets,**
 - **Instruments,**
 - Characteristics of the **parties,**
 - **Financial characteristics.**
- Other kind of relevant dimensions are:
 - **Uses** of information, and
 - **Data attributes.**

Information Map

Simple Representation of an Information Map: Conceptual Elements



Information Map

To

Classify:

- Information available
- Potential information

Structure:

- Information requirements
- Data bases
- Catalogues
- Products

Identify:

- Relations
- Attributes
- Hierarchies
- Duplicity of information
- Product Inputs
- Needs and gaps

Useful to:

Identify new needs

Identify existing opportunities

Improved information classification

Identify information duplicities and discrepancies in catalogs

....

Increased efficiencies in the design of new requirements

Increased the value of existing information

Improved dissemination and information searching

Refine and standardize

Information Map

- Improvement in the management of catalogues...

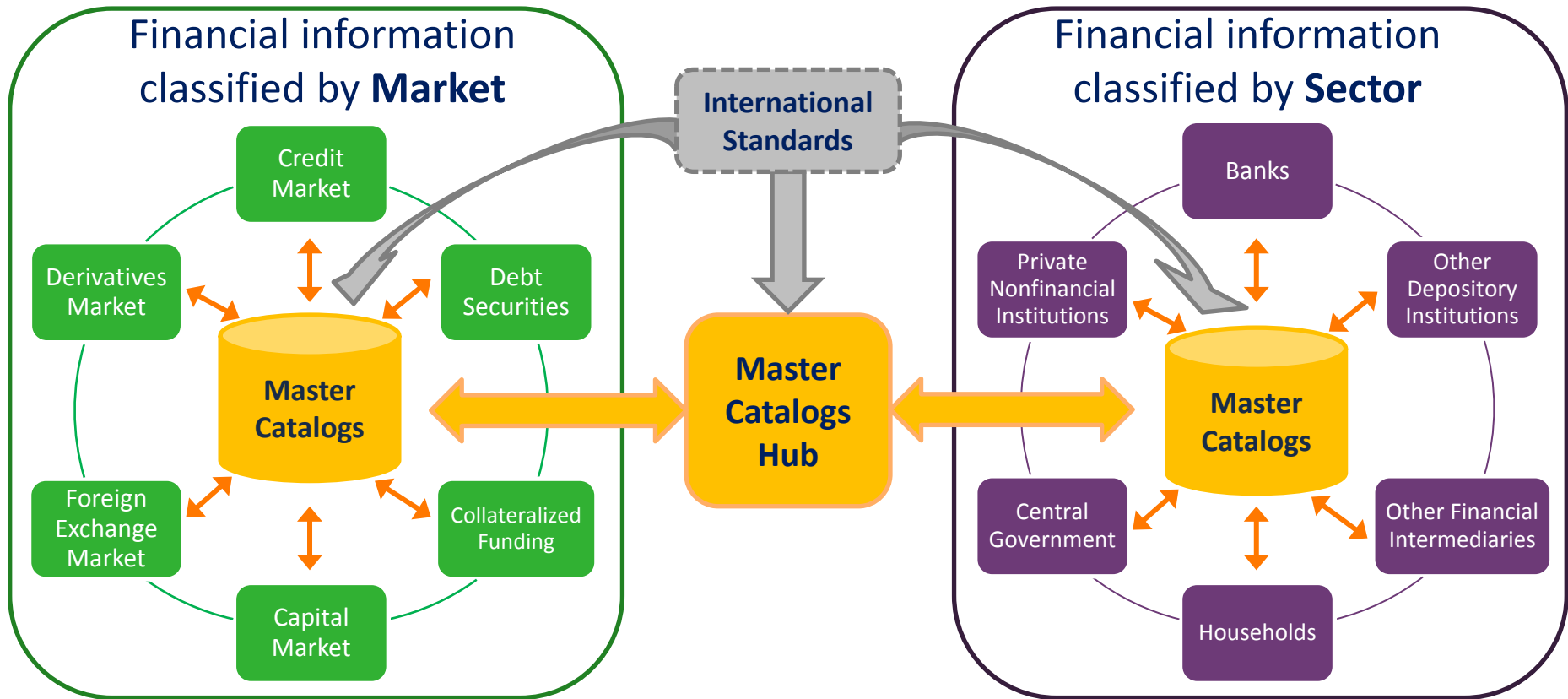
Structure:

Catalogs

Useful to:

Identify information duplicities and discrepancies in catalogs

Refine and standardize



A simple example of use

Conceptual Formulation

- Dimensions
- Classes
- Relevant crosses
- Relevant uses
- Data attributes
- Standardization
- ...



Banco de Mexico Experience

- Regulatory templates
- Inventory of transformations and information products
- Catalogs
- Other metadata
- Banxico uses
- ...

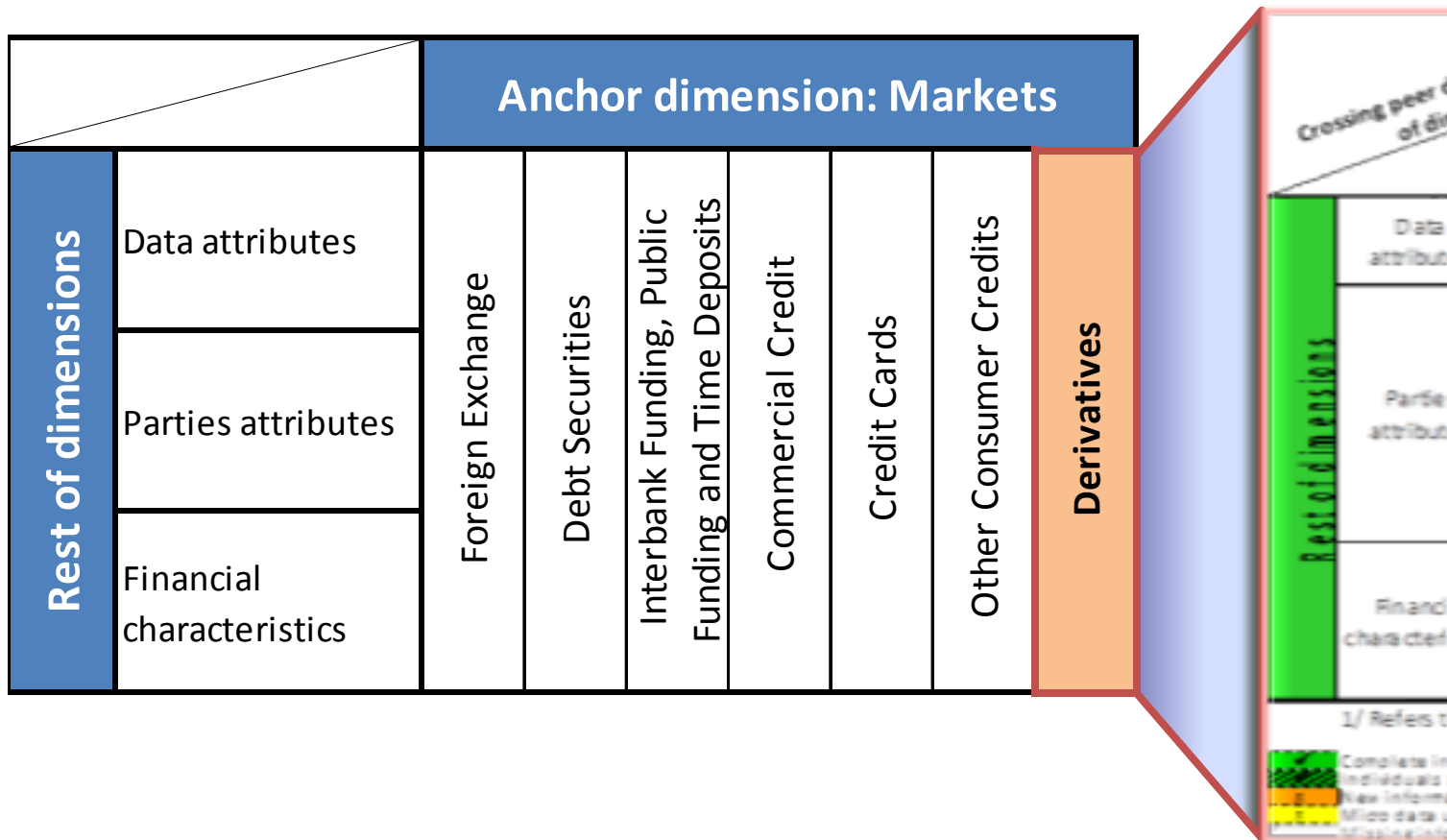


International Experiences

- FIBO
- IOSCO/CPSS/CFTC/ESMA
- ISDA
- Data repositories WG
- ISO
- GLEIS
- ...

A simple example of use

Cross dimensions: Market



A simple example of use

Data gaps and cross dimensions: Derivatives Market

Crossing anchor dimension vs rest of dimensions		Anchor dimension: Derivatives market									
		Negotiated in:									
		Exchange markets		OTC							
		Futures	Swaps	Forwards	Options	Swaps	Structured Notes ^{1/}	Credit Derivatives			
Rest of dimensions	Data attributes	Micro data	✓	✓	✓	✓	✓	✓			
		Frecuency (D=Daily basis)	D	D	D	D	D	D			
		Opportunity (D=Daily)	D	D	D	D	D	D			
	Parties attributes	Entity identifier	✓	✓	✓	✓	✓	✓	✓		
		Legal identity	✓	✓	✓	✓	✓	✓	✓		
		Nationality	Not applicable		§	§	§	§			
		Residence			✓	✓	✓	✓			
		Economic sector (NAICS)			§	§	§	§			
		Institutional sector			✓	✓	✓	✓			
		Size									
	Financial characteristics	Contract validity			✓	✓	✓	✓	✓	✓	
		Original and maturity term			✓	✓	✓	✓	✓	✓	
		Guaranty or collateral	§	§	§	§	§	§			
		Plus/minus MtM (Yield)	✓	✓	✓	✓	✓	✓			
		Currency	✓	✓	✓	✓	✓	✓			

1/ Refers the embedded derivative in the structured note.

✓	Complete information
⊠	Individuals and individuals with business activities are not identified
§	New information requirement of Banco de Mexico's derivatives trade repository
§	Micro data under the trading scheme for Guarantees and Collateral in Derivatives market
⊠	Missing information

Final Remarks

- An Information Map is defined at different levels.
- The depth of the Information Map depends on the desired uses and the characteristics of available information.
- Our Information Map is work in progress.
- *Feedback is welcome.*



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