



**RegTech and SupTech:
Where do we see the frontier?**

June 2018

RegTech & SupTech: Why are they important?

RegTech

Any application or platform that makes **regulatory compliance** more efficient, through automatized processes and at lower costs.

FinTech applications used by **supervisory authorities**.

SupTech

How do they facilitate our job as regulators and supervisors?

Mainly through KYC, that can be more efficient using automatic solutions, such as **biometrics** or **blockchain** tech.

Identity management

Identification and interpretation of **regulatory changes** and analysis of the impact on the organization.

Regulation updates

Monitoring AML/CFT is difficult, because of the low quality and large amounts of data.

Real-time monitoring

Analysis & Reporting

Advanced analytics of large volumes of data using **Big Data** technology and automatic elaboration of communications to the authorities.

Risk management

Automatic with the sources of risk using **big data**. Examples: *capital* and *liquidity* reports or stress testing.

Modelling, scenario analysis & forecasts

Required for stress testing and risk management. Due to the wide variety of risks, variables and external shocks, **it is each time more complex**.

Compliance and Vulnerability Identification

Automatic monitoring of **compliance** with the different applicable laws and regulations, from client protection procedures to tax and prudential aspects.

RegTech: areas of interest for the authorities

RegTech & SupTech solutions

- Although there are several RegTech/SupTech solutions and technologies:
 - ✓ Big data analytics.
 - ✓ Artificial intelligence.
 - ✓ Ledger distributed.
- The solution has to be at least based on **cloud computing**:
 - ✓ Migration of data to the cloud will help to have a safe information exchange.

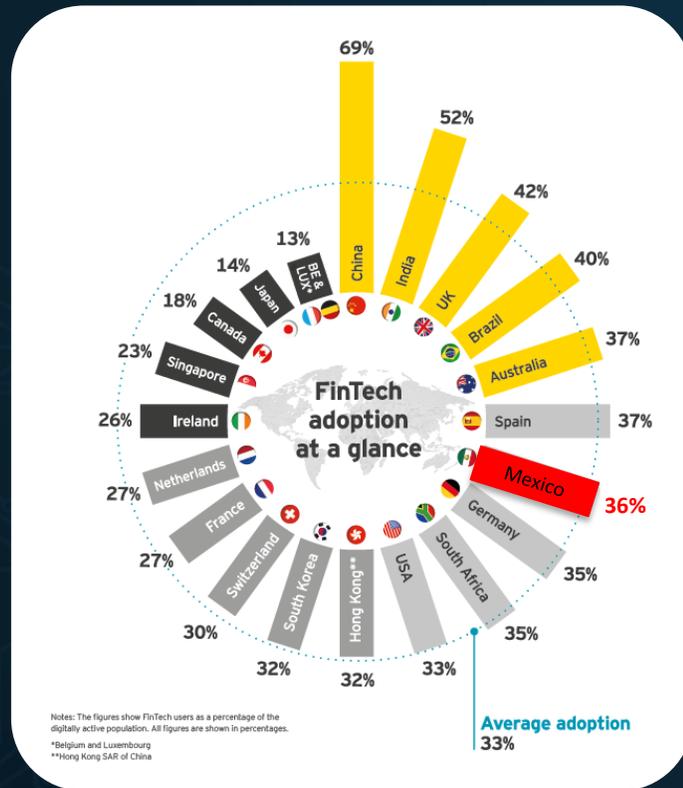


Risks

- **Concentration risk**:
 - ✓ If many financial entities are relying on one single supplier of RegTech/SupTech, it could be too risky if the supplier fails.
- **Handle of sensitive user data by the RegTech/SupTech firm**:
 - ✓ It is important for the authorities to have access to Regtech providers, in order to see how is working, as in any outsourcing process.
- As with any technological firm, the **risk of hacking** is always present.



FinTech sector in Mexico



* EY FinTech adoption index 2017, The rapid emergence of FinTech.

7th place worldwide in FinTech adoption rate
2nd place in Latin America

Derived from the approval of the FinTech Law, it is estimated an annual growth rate of 17.3% for the next five years.

Estimated value of transactions



* Statista Market Forecast - Mexico.

Nonetheless, **Mexico is considered the FinTech Hub of Latin America:**



- Number of firms: 238.
- 69% of firms is under 3 years old, and 39% has less than 10 employees.
- Main firms:

Active users: over 540 thousand.
Assets: around \$400 MXN mn.
Transactions: over \$17,400 MXN mn.
Employees: over 400.

Source: June 2017. Finnovista and IADB.

Mexico's FinTech Law

Given the risks that RegTech & SupTech poses, as well as those of the FinTech sector, **Mexico's FinTech Law** was built on 5 governing principles (to provide more flexibility), and secondary regulation which will be actively updated according to the sector needs.



The FinTech Law considers the possibility by the authorities of establishing easier ways of complying with the Law: encourage the use of new technologies.

SupTech: What is CNBV doing?

CNBV is **revamping its approach towards supervision**, beginning with Financial Technology Institutions (FTIs) regulated in FinTech Law.



CNBV will work with a third party in order to design and implement a SupTech platform for consulting the regulatory information generated by FTIs, **with the following objectives:**

1

Design of a SupTech platform in order to:

- Generate information requests for the supervised entities using APIs.
- Receive the responses of the entities through its API with the information requested.

2

Design of a process that allows the storage of information received in the CNBV's database.

3

Design of advanced analytic tools, such as algorithms, notifications and boards, in order to analyse and show core metrics obtained from the information gathered in the SupTech platform.

4

Pilot test with 3 financial institutions.

SupTech: Tools to be used

In the first stage of the project, the CNBV plans to use the financial statements of banks to calibrate models like the following:



NEURAL NETWORKS:

Given a set of financial statements, the information is entered into a neural network and the probability that they are manipulated is determined.



VECTOR SUPPORT MACHINES:

The entities can be grouped using their financial statements.

Once the segregation criteria has been determined, it can be used to detect fraud.

If an entity belongs to a certain group and after issuing new financial statements, it turns out that it no longer belongs to that group, there's a possible manipulation.



REGRESSION MODELS:

Using the financial statements, a regression model is run on a subset of accounts and the probability that the current figure is at an outlier is estimated.

RegTech & SupTech: current actions at CNBV



CNBV is working with **RegTech for Regulators Accelerator (R2A)** to develop a new data architecture for the in situ AML supervision, which will:¹

- Allow financial institutions to submit **information for AML compliance** digitally and automatically;
- **Increase** the volume, granularity and quality of data;
- Enable CNBV staff to **import historical records** into the central data storage platform, and
- Enable CNBV staff to **improve AML data validation and analysis**, and generate customized reports for policy development purposes.
- Use of **artificial intelligence** for getting knowledge of transactions and define **alerts** based on the risk profile of entities.

Expected benefits to CNBV:

- To have a **risk based** supervision approach instead of a compliance approach.
- **Reduce unnecessary inefficiencies** (reduce by half the time for each onsite inspection)
- **Generate greater analysis** to provide sharper guidance to supervised institutions to improve their AML risk management and compliance systems.

Expected benefits to financial institutions:

- **Reduce compliance costs.**
- To allow for **implementing a risk-based approach** that promotes financial inclusion while ensuring financial integrity.

¹ The solution is in collaboration with Gestell, a tech vendor.



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