

**IMPACT OF THE DIGITALISATION OF FINANCIAL SERVICES ON SUPERVISORY  
PRACTICES IN THE PRIVATE PENSION SECTOR**

**CASE STUDY: MEXICO**

**The Digitalisation of Mexico's Pension System**

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## ACRONYMS AND ABBREVIATIONS

AFORE	Pension Fund Providers
VS	Voluntary Savings
DB	Defined Benefit
IADB	Inter-American Development Bank
DC	Defined Contribution
CONSAR	National Commission of the Retirement Savings System
CUO	Operational Regulation
CURP	Population Register Code
PBS	Pension Balance Statement
IDF	Individual Digital File
IMSS	Mexican Institute of Social Security
INE	National Electoral Institute
ISSSTE	Institute for Social Security and Services for State Workers
LSAR	Retirement Savings System Law
PROCESAR	SAR National Database
RENAPO	Population National Registry
SAR	Retirement Savings System
RBS	Risk-Based Supervision
SIEFORES	Investment Funds

## THE DIGITALISATION OF MEXICO'S PENSION SYSTEM

### I. Context of the Retirement Savings System (SAR)

1. Mexico introduced a new mandatory DC system of individual accounts in 1997 for private-sector workers (IMSS) and in 2007 for public-sector workers (ISSSTE)<sup>1</sup>, both of which replaced old DB systems that had been in place since the 1940s and 1950s.

2. The new system has been relatively successful in creating a big pool of pension savings, as well as providing savers with more transparency and choice.

3. The system started out with 11.2 million accounts and USD 6 bln, inherited from the old DB system. Today the AFOREs handle 60 million accounts and invest USD 180 bln (15% of GDP).

4. Pension funds providers (AFOREs) are in charge of the administration and the investment of the workers' pension savings. They are also in charge of:

- Handling of the contributions made by workers, government and employers
- Handling of the voluntary savings made by workers
- Registering workers
- On request from a participant, transferring capital to another pension provider
- Sending a pension balance statement to savers three times a year
- Handing accrued wealth back to savers once requisite conditions have been met.

5. The investments carried out by the AFOREs are distributed among several investment funds named SIEFOREs. Each AFORE has five SIEFOREs in which savings are allocated with different risk levels according to the worker's age.

6. The AFOREs are regulated by the National Commission of the Retirement Savings System (CONSAR), an administrative body of the Ministry of Finance.

7. The operating infrastructure of the system relies heavily on the existence of PROCESAR, the institution that centralises the database of the pension system and regularly collects and disseminates individualized information to the AFOREs. It is owned by the AFOREs, but has a concession title granted by the Federal Government.

### II. Operational diagnosis in 2013

8. In 2013 CONSAR carried out a diagnosis regarding the non-financial, operational framework of the pension system. The diagnosis identified several concerns and challenges as well as many areas of opportunity: the quality of the customer service provided by the AFOREs was poor; there were deficiencies in the authentication processes of savers at the moment of enrolling and transferring to another

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<sup>1</sup> OECD Reviews of Pension Systems: Mexico, OECD 2016

pension provider; some defective commercial practices prevailed and making voluntary savings was too complicated.

9. Part of the problem was how workers' personal information was obtained and managed. When registering or switching from one AFORE to another, pension providers requested needless paperwork of the saver which was carelessly handled by their own agents, thus substantially raising the risk of misuse of information.

10. Furthermore, AFOREs employed vast resources to try to attract new clients which created a high number of workers switching from one AFORE to another. That in turn encouraged agents to find ways to transfer individual accounts from one AFORE to another, even without the worker's consent.

11. In 2013, the AFOREs invested an average 50% of their expenses in commercial activities. AFOREs employed a sales force consisting of 42 000 agents, who carried out 2.1 million transfers that year. More than half the workers that switched moved to an AFORE that offered a lower yield (negative transfers).

12. The need for new virtual channels of access to the pension system was evident, given the high reliance on physical offices and the high transactional costs for savers who came into such offices – commuting and the time spent in customer service-.

13. Voluntary savings were non-existent, notwithstanding the fact that expected replacement rates are very low due to low levels of mandatory savings.

14. Finally, CONSAR's supervision was rules-based, with insufficient tools to detect irregularities, in addition to not being strict enough with regards to malpractices during the enrolment and transfer procedure.

### **III. Operational Strategy**

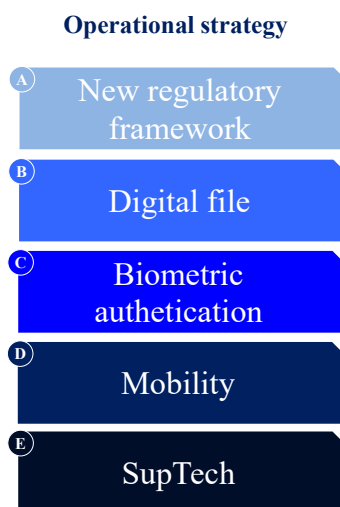
15. Two primary objectives were proposed:

- Strengthen the protection framework for the 60 million accounts
- Increase voluntary savings.

16. The strategy centred on digitalisation of the pension system. A new and more efficient regulatory framework was needed to protect workers' savings, to improve the services as well as to eliminate poor commercial practices. The new regulatory framework would allow the creation of a more open system, widening its scope with greater channels and state-of-the-art electronic means accessible to the whole population, implementing operational intelligence to provide transparent, high-quality and timely information for savers.

17. Also, the digitalisation of the system would enable more gathering of better information for the supervisory duties of CONSAR. With the new regulatory framework, the supervision would be transformed from a mode of regulatory compliance to a focus on detection and prevention of potential risks (Risk Based Supervision - RBS).

18. The strategy was set out in five steps:



### **A. Create a new Regulatory Framework**

19. In 2014, a comprehensive revision of the Operational Regulations (CUO) began in which the premises for the technological and operational transformation of the system were established.

20. The first amendments included in the new regulatory framework were:-

- The creation of an Individual Digital File
- The mandatory incorporation of Biometrics as an authentication factor of savers and sales agents
- New operational rules for attracting voluntary savings through Commercial Networks
- Stricter fines to be paid by the AFORE to savers for wrongful transfers.

21. Additional measures were adopted in relation to service improvement:-

- The launch of a new website dedicated exclusively to online services, [www.e-SAR.com.mx](http://www.e-SAR.com.mx)
- On-site visits to evaluate the quality of services of pension providers
- The creation of a new index “AFORE Services comparative index”, which allows service comparison between pension providers and offers workers additional information on choosing an AFORE.

22. During this time of regulatory overhaul, CONSAR held an open and continuous dialogue with the industry, aiming to find common solutions and to resolve divergences.

### **B. Individual Digital File (IDF)**

23. Since the start of the pension system in 1997, all the information on savers had been collected on paper.

24. The Individual Digital File (IDF) arose as substitute for the traditional paper file, which generated high costs, elevated operational risks and was commonly material for malpractices. The

introduction of an individual and portable file throughout a worker's life would reduce costs, lower risks and avoid information inconsistencies.

25. In May 2015 the procedures that were to compose the IDF became mandatory:

- The obligation to digitalise the worker's documents, including a digital picture and voice recording of the saver
- The digitalised information of the commercial agent who provided this service, as well as the place and time of the enrolment
- All the information gathered would rest in a central data-house with specific security features.

26. A factor that was critical for the creation of the IDF was PROCESAR. It certifies each and every transaction and legitimises every operation, comparing and validating it both with the information it already holds on all savers and with the database of the AFORE agents. This validation flags up potential problems, monitoring every action carried out by AFORE agents in each operational process and gathering standardised and centralised information.

### **C. Biometric Authentication**

27. Although the IDF represented meaningful progress towards improving the identification of workers, sales agents and service officers of the AFOREs, it was deemed necessary to add biometric authentication features as an additional security element for the workers' accounts and for future improvement of the services offered to them.

28. Prior to the entry of the Biometric Authentication for savers, CONSAR created a digital file of every agent and service officer of the AFOREs with biometric information, digital picture and their ten fingerprints. That process served as a pilot before launching it for workers.

29. In 2016, the process of digitalising biometric information (fingerprints and voice) of savers began. Once the biometric information of the worker is captured, the AFORE has to send it online to PROCESAR, complying with predetermined standards to make the information comparable and verifiable. The rules include parameters that prevent the AFOREs retaining information on the registered prints. Furthermore, it is mandatory that each proceeding is registered and validated with a time-stamp and geolocation factors to prevent an agent posing as a worker.

30. The fingerprint information, as well as the digital identification file is stored and handled by PROCESAR, which certifies that all operations carried out by the industry are executed according to defined guidelines and preserves such information in line with the highest security standards.

### **D. Mobility**

#### **a. Strategy to increase Voluntary Savings**

31. Saving voluntarily in an AFORE had historically been a complex and inefficient task. A worker had to go to a banking branch, fill in a document, wait in line to deposit money and then wait up to six months to receive information from his AFORE regarding that deposit. No surprise then that in 2013, 15 years after the system was created, only a very small fraction of people had saved a very small amount of money, MXN 15 bln (USD 800 mln).

32. So the first part to the “mobility” strategy focused on finding more deposit channels for voluntary savings through synergies with commercial networks in Mexico that could accept, on behalf on the AFORE, small contributions (starting from three dollars) in an effortless but secure manner.

33. CONSAR together with PROCESAR, developed the outlines and operational procedures that would allow such commercial networks to undertake the following actions:-

- Collect worker information using the Population Register Code (CURP)
- Receive savers’ money in all branches of the commercial entity
- Once the deposit is made, transfer such funds to PROCESAR, who will then distribute them to each AFORE
- Provide the saver with immediate information on his or her deposits, as well as establish the limits to comply with standards to prevent money laundering (all at no cost to the saver).

34. Thus, in 2014, the convenience store chain, 7-Eleven became the first commercial entity to receive voluntary savings in the retirement savings system. By May 2018, the network has been joined by nine other commercial networks which today offer more than 12,000 locations in Mexico where deposits can be made merely by using the worker’s national identification number or mobile phone number.

35. Additionally, through the revamped service website, e-SAR, workers can save for their retirement by using their debit card. The saver fixes the sum, the frequency and, if desired, the auto-escalation rate.

36. Both initiatives were accompanied by an aggressive publicity campaign from CONSAR.

37. Furthermore, CONSAR introduced in 2015 SARTEL USA, a call centre serving as an information channel for 12 million Mexican workers living in the US, who mostly have lost contact with the pension system. Afterwards, several conduits were opened (*Uniteller*, *Unibancard* and *Intermex*), so Mexicans could send voluntary savings from abroad. Mexicans living in the US can now send voluntary savings from abroad to their pension account using these new conduits.

38. During this process, CONSAR has created synergies with other institutions to encourage voluntary savings. With the support of several organisations and foundations, such as the Inter-American Development Bank (IADB), Ideas42, the MetLife Foundation, and Innovation for Poverty Actions (IPA), CONSAR has carried out studies and pilot projects to understand the barriers that inhibit people saving in Mexico, and to propose new ways to surmount those barriers.

#### **b. *AforeMóvil***

39. The opening of new saving channels revolutionised the conventional operation of the pension system in Mexico. Nevertheless, the process to “democratise” the retirement saving channels in the country required one step further.

40. Mobile phones are ubiquitous in this country and can be used as an inclusive tool for savings. That led CONSAR to push for a new project aimed at increasing savers’ awareness of their pension account, and at the same time, allowing them to save more via their phone.

41. *AforeMóvil*, launched in 2017, is an app for mobile devices created to include and connect Mexican people with their AFORE and make voluntary contributions wherever they may be.



42. In order to develop the app, regulation was modified and operational flows were outlined. The app is designed to allow any Mexican owning an AFORE account (60 million people) to control their savings via an Android or iOS smartphone.

43. Moreover, any Mexican (adults, children and residents in a foreign country) who currently does not own an AFORE account, can instantly open such an account using a mobile.

44. The technology used in the new app included:

- The most popular platforms in the Mexican market (79.1% Android and 12.6% iOS)
- *Push* one-way and two-way notifications for a direct communication between the saver and the AFORE
- Service integration, benefitting from PROCESAR connecting the whole AFORE industry with third-party database connections
- Authentication and security outline that enable the remote execution of operations
- The use of facial recognition to authenticate the saver
- Administration of Application Programming Interfaces. Enables new functionalities to be developed, boosting savings and services, profiting from secure authentication outline
- Analytics. The study of traffic and patterns regarding the use of *AforeMóvil* to constantly identify improvement factors

45. Multiple connections with different participants were implemented:

- With institutions like the Population National Registry (RENAPO) and the National Electoral Institute (INE) to validate the consistency of the information and verify the user's identity
- With Biometric cryptograms verification
- With the AFORE and PROCESAR to offer services directly to the user
- With commercial networks to easier locate their 12 000 stores and to show information on the deposits in real time
- With banks to enable the use of banking accounts for saving through the app
- With other participants that can propel voluntary savings through loyalty programmes.

46. The app was officially launched in August 2017 and currently offers the following services:-

- For Mexicans already registered in an AFORE, to connect with their pension account
- For Mexicans without an AFORE, the possibility for the first time of opening an account as an independent worker
- Parents can open an AFORE account for children

- Your daily balance
- Request for a statement (takes 10 seconds to receive it)
- Detail of monthly transactions, including mandatory contributions
- Deposits to your pension account through debit or credit card (automatic discount)
- Geographical location of the 12 000 stores that receive cash deposits
- Pension calculators to estimate future pension
- Updating data of your pension account (phone number, address, access code).



## E. SupTech

47. During this process, it has been a complimentary goal to create a more reliable, accurate and real-time information infrastructure of the whole pension system that would enhance CONSAR's supervision.

48. CONSAR developed a business intelligence dashboard that allows supervisors to verify online each operational transaction in the system. They also include periodic reports with aggregated and disaggregated information, to monitor and identify problems, from interruption of the services in real time to atypical operations. CONSAR has now available data to validate any operation in the system.

49. As a result, supervision has shifted from a traditional supervision predominantly in-situ and using paper to a technology-based supervision with the support of the new data infrastructure.

50. Finally, CONSAR restructured its supervision and operational inspection areas. An operational intelligence department was created to act as a risk detector. The new department analyses the control panels, and submits the findings to the other supervision areas so that they can perform a more detailed revision, and where appropriate, impose sanctions.

#### **IV. Preliminary results**

51. Preliminary results of the digitalisation project have been very positive.

**a.** With regards to the introduction of the individual digital file:-

- More than 13.5 million ID Files in three years
- Complete visibility and audit prints of all operational transactions in the system
- Greater control over sales agents
- Commercial malpractices have diminished
- Better information for workers
- Higher quality transfers
- Commercial expenses have decreased.

**b.** Regarding the introduction of biometric authentication:

- 8.2 million workers with biometrics in two years, as well as 84 000 agents and service officers of the AFORE
- Wrongful transfers have been eradicated
- Paper-based operations shifted to a 100% digitalised comprehensive system.

**c.** Regarding the new channels to deposit voluntary savings in a pension account:-

- In four years, depositors have increased by 350%
- In four years, voluntary savings increased from MXN 15 bln to MXN 65 bln in 2018.

**d.** Regarding the inception of Afore Móvil:

- Six months after the app launch, 400,000 downloads. Over 14 000 accounts belong to independent workers and 3 000 to children. Eight thousand users have carried out voluntary savings through the app.

e. Regarding the supervisory overhaul:

- Through the use of technology, better monitoring of the behaviour of the industry and its sales agents
- Higher effectiveness regarding inspection results, which now are better documented and non-refutable
- Finally, taking into consideration all the information that CONSAR possesses, new techniques such as Machine Learning and Deep Learning are being implemented, which will enable CONSAR to intensively analyse algorithmically millions of cross-checked records to identify abnormal behaviours, as well as execute behaviour predictions based on current and updated information. These tools will allow CONSAR to have a 360° vision on industry performance.

## V. Conclusions

52. The DC pension system based on individual accounts will turn 21 years of age next July. During this time, the system has grown all of its main pillars – asset allocation, diversification, corporate governance, services.

53. The operational evolution of the last five years, however, represents a turning-point for the system. The aforementioned actions not only have driven the retirement savings system to a new frontier in digital innovation, but they have also transformed habits that hitherto seemed entrenched.

54. Mexico's pension system faces immense challenges, notably a low level of savings and expected replacement rates, insufficient diversification, decreasing returns, insufficient quality of services and finally, lack of interest by most Mexican people in their pension account.

55. The actions undertaken in the last few years, nonetheless, offer an unprecedented opportunity to strengthen the pension system. On the one hand, CONSAR has gained greater internal capabilities that will enable it to better supervise the pension providers and its sales agents. On the other hand, the individual digital file and the use of biometrics will generate trust and certainty among the savers regarding their account and will also facilitate the improvement of the services offered by the pension providers. Finally, the new voluntary savings ecosystem within the system creates the opportunity to massively boost additional savings. A lot will clearly depend on the AFOREs and continuity of such policies in the future, but the infrastructure to make it happen is ready to be fully exploited.