

NATIONAL COMMISSION OF THE RETIREMENT SAVINGS SYSTEM

ASSESSMENT OF THE RETIREMENT SAVINGS SYSTEM

JUNE 2015

I.	Introduction	5
II.	Background	6
	a) Importance of demography in pension systems	6
	b) Demographic changes in Mexico	10
	c) Overview of pensions systems: the pensions pillar framework of World Bank	13
III.	The Mexican pension system	15
	a) Zero pillar	15
	b) First pillar: defined benefit	16
	c) Second pillar: defined contribution “Retirement Savings System (SAR)”	19
	d) Third pillar: individual and/or occupational voluntary savings	25
IV.	SAR Benefits	29
	a) Full ownership of resources	29
	b) Security and certainty of resources	29
	c) Mobility	29
	d) Free choice	29
	e) Financial viability of the pension system	29
	f) Transparency	30
	g) Attractive returns	30
	h) Virtuous circle of saving	30
	i) Equity	31
	j) Relevant macroeconomic impact	31
V.	Actions taken to strength the SAR 2013-2015	33
	a) Strengthening the supervision	34
	b) The SAR new operational regulation (CUO)	35
	c) New regulation for sales agents	35
	d) Decrease in level of fees	36
	e) New financial regulation (CUF)	38
	f) Changes to the investment regime	39
	g) Investment mandates	41
	h) New comparative index of AFORE Services (CAS)	41

i) Program: “Saving on your AFORE has never been any easier”	42
j) New mechanism of voluntary saving through domiciliation	42
k) New calculators to promote the voluntary saving	43
l) New individual account statement	43
m) New pension statement	44
n) Modifications to the accounts assignation and reassignment process	45
o) Modifications to the switching and registration forms	45
p) Modifications to the withdrawal for unemployment forms	46
q) SAR information	46
VI. SAR challenges	48
Importance of replacement rates (RR)	48
1. Low contributions	51
2. The challenge to incorporate Mexicans from an early age into the system	52
3. The challenge to achieve higher levels of contribution density	53
4. Increase the retirement age increases adequacy (RR)	54
5. The challenge of future returns in SAR	55
6. Lower fees will give higher RR	62
7. The challenge of coverage	65
8. The challenge of competitiveness	71
9. The challenge to increase voluntary savings	75
10. The challenge of the decumulation phase	78
11. The challenge of the financial education and savings for retirement culture	82
VII. Conclusions	85
VIII. References	87

I. Introduction

Having a robust pension system is essential to ensure that individuals have the necessary resources for their retirement to guarantee a minimum level of income and to prevent poverty in old age. Since individuals tend to worry about their old age in times close to retirement, it is required the implementation of a regulated and supervised system. In the early years, there are other priorities such as study, work, get married, family, payment of tuition, etc., so people do not to save for their retirement because they see it as an event very distant in the future. The problem is that once they are close to the retirement age, it is too late to provide for financing.

Therefore, the planning and regulation of a pension system that meets the objective of protecting the elderly population, that is financially sustainable and that provides adequate pensions, are relevant. For these reasons, the Mexican Retirement Savings System ("**SAR**", Spanish acronym) was established with responsibility and vision, in 1997 for private sector workers (IMSS) and in 2007 for public service workers (ISSSTE), based on individual accounts.

At 18 years of the implementation and about half the way before "AFORE generation" workers begin to massively retire, it is an appropriate time to make an assessment of its status. In other words, to answer questions such as: Is the system working well? Are the objectives set will be met? Do we have to make modifications in orther to meet them? What is the risk of not doing so?

This document offers a first approach to such questions in order to contribute with the debate in this topic. In section two is presented the background and the pension system framework; section three deals specifically with the pillars related with the mandatory defined contribution and the voluntary savings in the Mexican Retirement Savings System; section four is about SAR main benefits; section five shows a description of the actions that have been implemented to strengthening the SAR in recent years; in section six, the main challenges faced by the system are mentioned; in section seven, the conclusions of the assessment are presented; and finally, section eight corresponds to the References.

II. Background

a) Importance of demography in pension systems

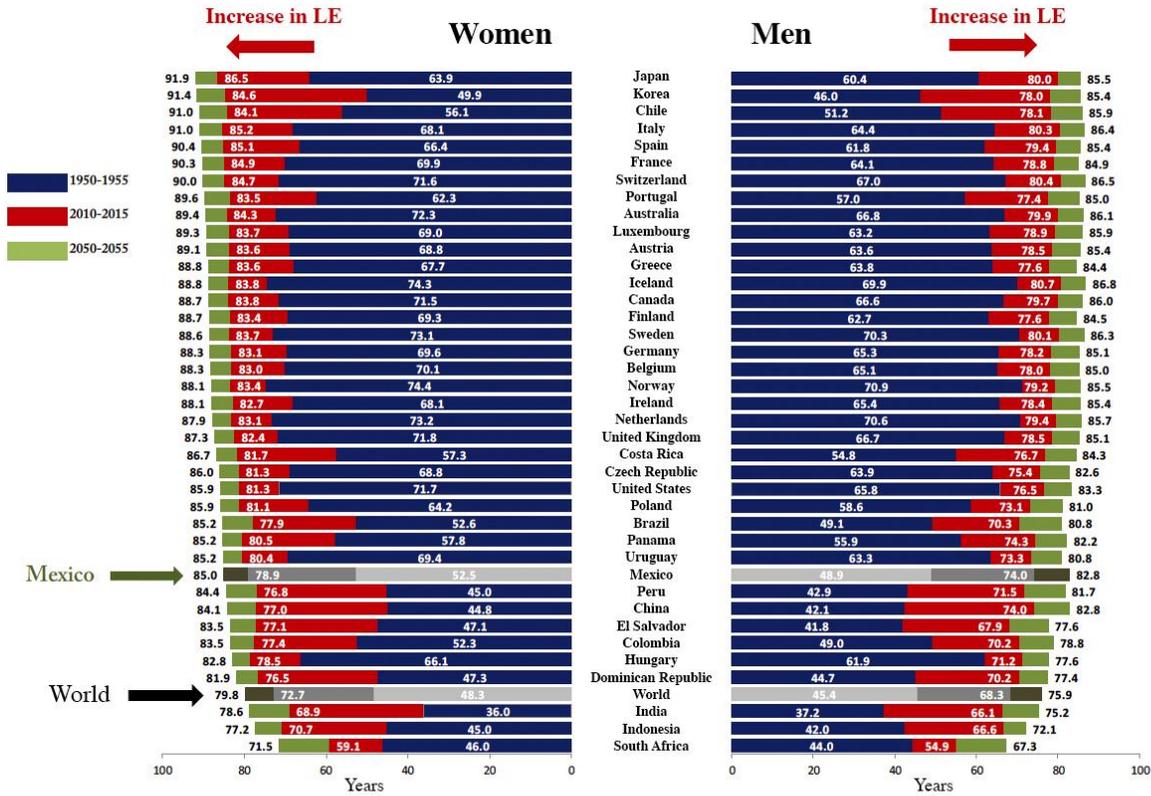
In most countries, the pension systems have their origin in the "Welfare State" that emerged at the end of the XIX Century and beginning of the XX Century. Under this architecture, for the first time, the governments compromised to provide pension benefits for old age workers. The first scheme was the pension scheme granted by Otto von Bismarck, Chancellor of the then Prussia, to the few elders at that time in order to protect them against poverty. In its origins, the pension systems were designed as defined benefit schemes known as "pay as you go (PAYG)"; i.e., they were based on intergenerational mechanism through which the pensions of retirees were paid with the contributions of active workers. That is, the model implies - to date - a transfer of resources between generations, where pensions financing depends on the proportion between the retired persons and the active workers. The demographic dynamics is essential for the financial viability of this type of systems.

With the population structure of the early XX Century, these systems were sustainable since the number of young people in the labor force was much higher than the number of retirees. In the case of the pensions system designed by Bismarck, life expectancy was 45 years, and the age requirement to obtain the pension was 70 years old, so there were few pensions to be financed which were not a burden for public finances.

However, the population structure has changed over the years as a result of changes in fertility and mortality rates. For example, an increase in life expectancy in the last decades has been registered in the world as a consequence of, among other factors, the technological changes in medicine, health care advances, and the awareness of negative factors such as smoking, alimentary disorder and obesity, which has been translated into public policies to combat them.

As seen in the following graph, in the 1950-1955 period, the world life expectancy at birth was 48.3 years for women and 45.4 for men, whereas in the 2010-2015 period it is expected to be 72.7 years for women and 68.3 for men; on the other hand, the 2050-2055 period projections shows that women will reach 79.8 years and men 75.9 years.

Graph II.1
Increase in life expectancy at birth
(1950-1955, 2010-2015 and 2050-2055)



Note: Data for the 1950-1955 period and 2010-2015 period are based on estimates; while information from 2050-2055 period is calculated on the demographic projections basis considering an average fertility.
 Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, DVD edition.

Additionally, with the fertility rate¹ decreasing, the number of people who will be incorporated into the labor force will gradually decrease, so for PAYG pension systems, it will be inevitable that the number of workers financing the retired workers' pensions will be reduced. As seen in the following graph, the overall level of the fertility rate has decreased from 4.96 children per woman in the 1950-1955 period to 2.51 in the 2010-2015 period.

¹ The average number of children that a hypothetical cohort of women would have at the end of their reproductive period if they were subject during his entire life to the fertility rates of a given period and without being subject to mortality. It is expressed as children per woman.

Graph II.2
Fertility rate at world level (1950-2015)

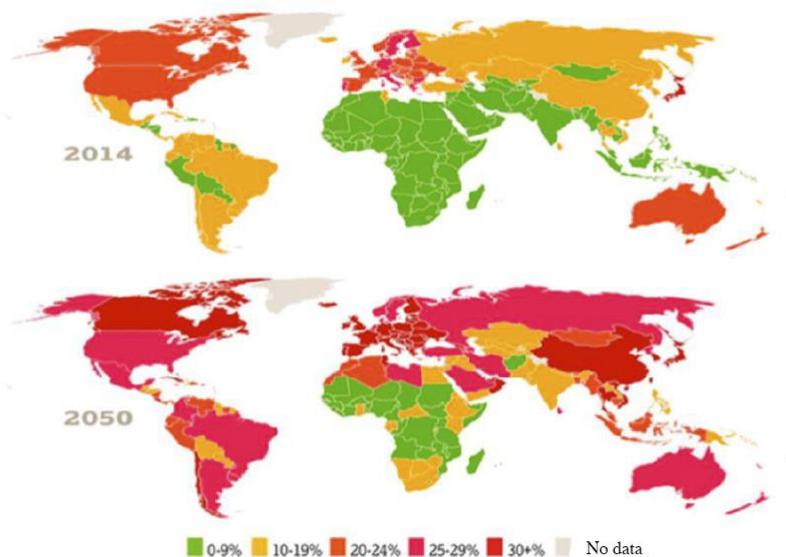


Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, DVD edition.

Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, DVD Edition.

These demographic changes have generated, as a consequence, ageing in the population as a whole and such trend will dramatically increase in the coming decades. The comparison shown in the following maps indicates the increase in the number of people aged 60 and over between 2014 and 2050.

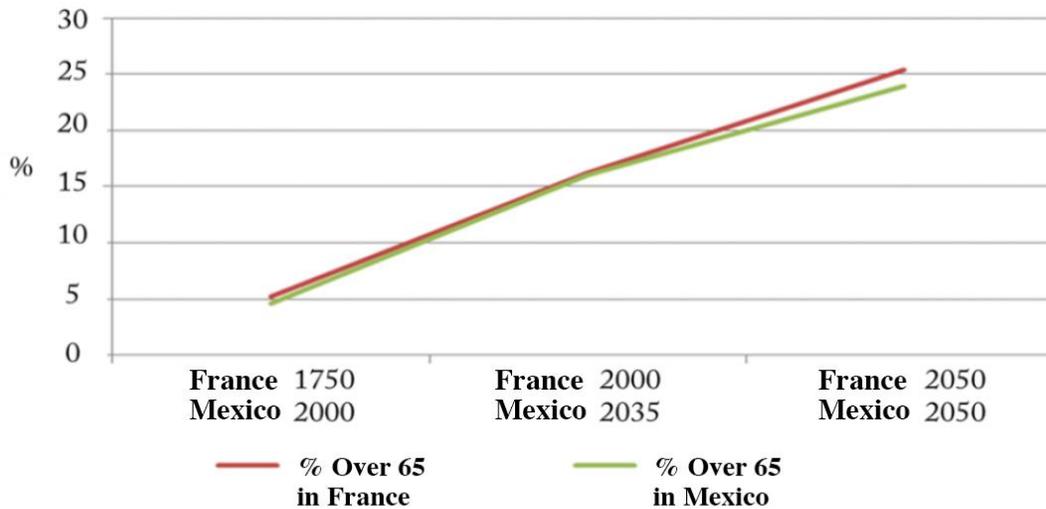
Graph II.3
Proportion of the population over 60 years (2014 and 2050)



Source: Global Age Watch Index 2014. Insight report.

It should be noted that aging in the developing countries will be much faster, in relative terms, than in the industrialized countries. For instance, the graph below shows that in France, the proportion of the total population of people over 65 years went from 5% in 1750 to 25% in 2050, a demographic transition lasting 300 years. In Mexico, this process will take only 50 years, from 2000 to 2050.

Graph II.4
Population over 65 years: Mexico and France
 (% of total population)



Source: Sinha Tapen, Curso de pensiones, Modulo I, ITAM, 2013.

For the reasons above mentioned, practically in the entire world more resources are required to be able to finance more retirement years. Most of the countries have responded either with structural changes – totally changing the traditional pension system - or through parametric reforms - changing only the system parameters, such as the retirement requirements, the contribution amount. In the first case, the previous system was replaced or supplemented by an individual accounts system also known as a defined contribution system. In the case of making parametric changes, for instance, many countries have raised the retirement age.

In general, a pension scheme of individual accounts solves the solvency and fiscal sustainability problem of the system caused by the demographic changes, since the benefits paid depends directly on the savings accumulated during each worker's career. Derived from this, there has been a worldwide trend to implement more and more obligatory or voluntary individual accounts schemes.

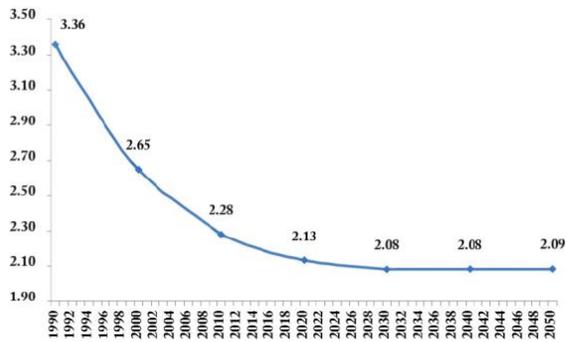
However, in the defined contribution systems there are also some challenges. For example, the demographic changes are still relevant, because in the event that the pensioners live more years than expected, the pension may result to be insufficient to properly finance the old age expenses. This is known as longevity risk, defined as the potential risk associated to the pensioners' increased life expectancy. In addition, there are other risks: the market risk, associated to the financial markets returns and volatility during the time of the saver's accumulation; the low-contribution risk occurring when people save less than what it should and therefore they accumulate resources which are insufficient to finance a pension; or the density of low contribution risk that occurs when a worker is not contributing enough time in the pension system limiting both the amount of the worker's savings and even the possibility to access a guaranteed pension.

b) Demographic changes in Mexico

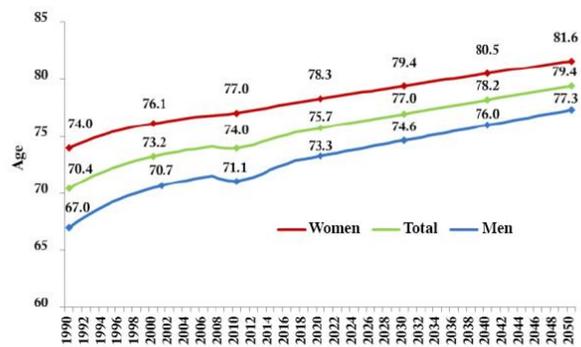
In this context of change in the demographic composition, Mexico has not been the exception. The country is experiencing a "demographic transition" characterized by inhabitants aging; mainly explained by a decrease in fertility rates and increases in life expectancy.

The fertility rate has been reduced significantly: in 1950 a woman had an average of 6.45 children, in 2000 this figure was reduced to 2.65 children, and it is expected to reach 2.09 children in 2050. On the other hand, the life expectancy at birth increased from 49.6 years in 1950 to 73.2 years in 2000, and it is projected to reach 79.4 years in 2050.

Graph II.5
Fertility rate

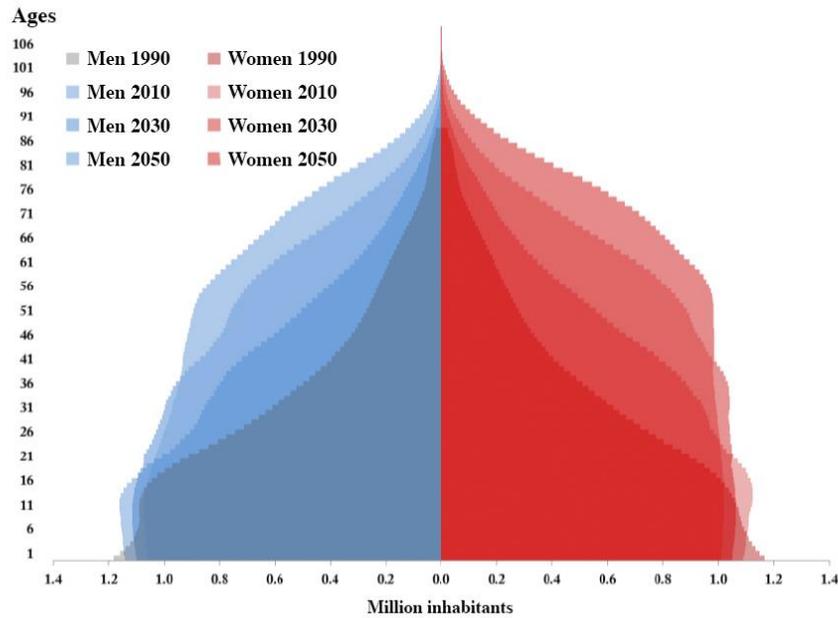


Graph II.6
Life expectancy



To the extent that adult generations will live more years and the young generations will decrease in number in comparison with previous due to lower fertility, the population as a whole will be ageing. This can be seen in the widening of the population pyramids over the years.

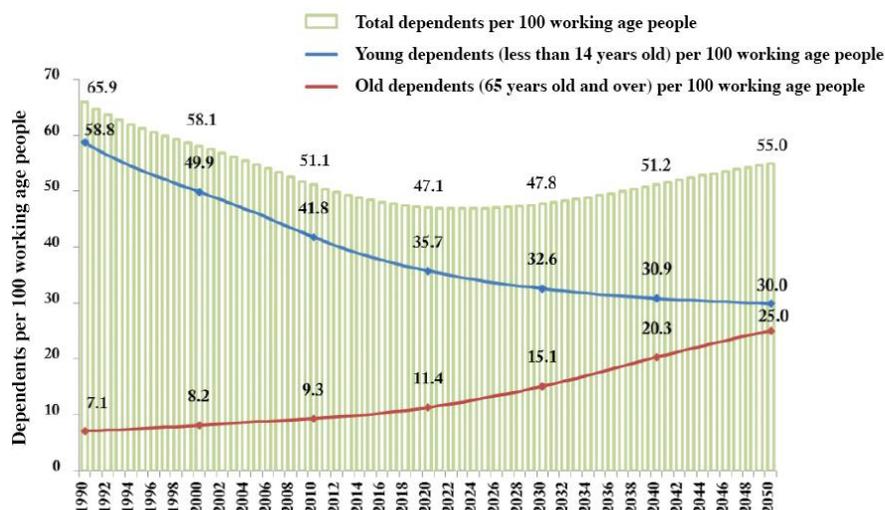
Graph II.7
Demographic pyramids



Source: Estimations based on the National Population Projections 2010-2050 and Basic Demographic Indicators 1990-2010 by CONAPO.

A consequence of demographic transition is the change in the "dependency" ratio between different generations. The demographic dependency indicator (young people less than 14 and old people 65 and over for every 100 working age people)² has a "u" form across the years (bars in the graph below); in the first stage of transition, a decrease was observed in the dependency ratios. In 1990, there were 66 dependents for every 100 working age individuals and it is expected to reach its minimum point in the year 2023 to reach 47 dependents for every 100 working age individuals. Subsequently, in the second stage when population is ageing, the number of dependents will increase up to reach 55 dependents for every 100 working age individuals in 2050.

Graph II.8
Young and old age dependents
(per 100 working age individuals)



Source: Estimations based on the National Population Projections 2010-2050 and Basic Demographic Indicators 1990-2010 by CONAPO.

The increase in the dependency ratios and the population ageing has generated significant challenges to the social security system; particularly, to the traditional pension schemes. In a PAYG system, as the demographic transition progresses, there are less and less contributions of active workers to finance the retirees' pensions. In 2010, for every 100 individuals in working age there were 9 old dependents (individuals of 65 years and over); for 2050, the ratio will increase to 25 old dependents.

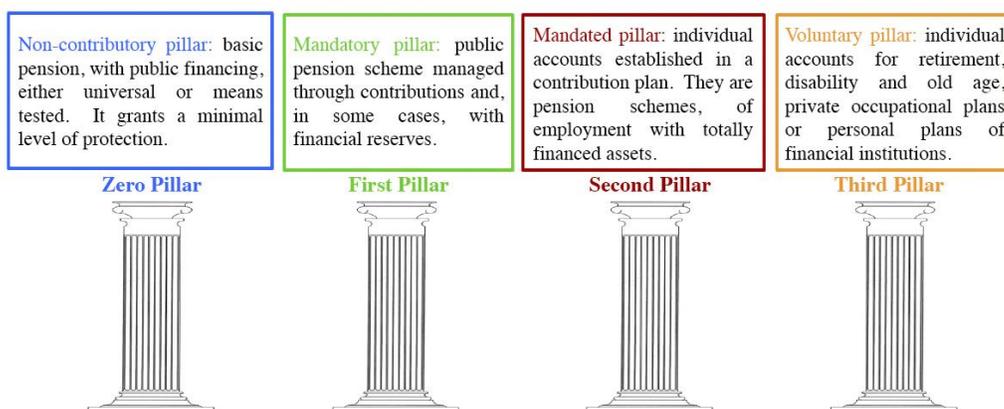
² The working age includes persons 14 to 64 years.

c) Overview of pension systems: the pensions pillars framework of World Bank.

One way to fully understand the pension system of a country is by using as a reference the analysis developed two decades ago by the World Bank, according to which there are four large pension blocks or pillars as described below³:

- **Non-contributory and universal zero pillar**, entirely financed with public resources, providing a minimum protection level to individuals during old age in order to alleviate their vulnerabilities and poverty in ages when the productive activity is dropping significantly. Sometimes, it is usually provided to targeted groups considering their characteristics (means tested and/or vulnerable individuals).
- **Mandated first pillar of defined benefit**, PAYG, funded or partially funded, which is based on contributions linked to the workers income, which are grouped into a collective account from which resources are extracted to finance the pensions. It is particularly vulnerable to demographic and political risks.
- **Mandated second pillar of defined contribution and funded**, through an individual account; it establishes ownership rights over resources and links the contributions and the investments returns to the benefits.
- **Third pillar**, can include various voluntary savings modalities such as individual accounts, private pension plans, occupational plans financed by employers; they tend to be flexible and discretionary.

Graph II.9



³ Additionally, the World Bank includes a fourth pillar which includes income from the informal support (family support), other formal social programs (health services), other individual financial and non-financial assets. See: Holzmann, R. and Hinz, R. (2005), Old Age Income Support in the 21st Century, World Bank.

Table II.1
Multipillar pension taxonomy

Pillar	Target group			Main criteria		
	Poor	Informal sector	Formal sector	Characteristics	Participation	Funding or collateral
0	XXX	XX	X	Basic or social pension with a minimum of assistance (universal or means tested).	Universal or residual	Budget or general revenues.
1			XXX	Publicly-managed public pension plans (defined benefits or notional defined contribution).	Mandatory	Contributions, and in some cases with financial reserves
2			XXX	Occupational or personal pension plans (fully funded defined benefits or fully funded defined contribution).	Mandatory	Financial assets
3	X	XXX	XXX	Occupational or personal pension plans (partially or fully funded defined benefit or funded defined contribution).	Voluntary	Financial assets

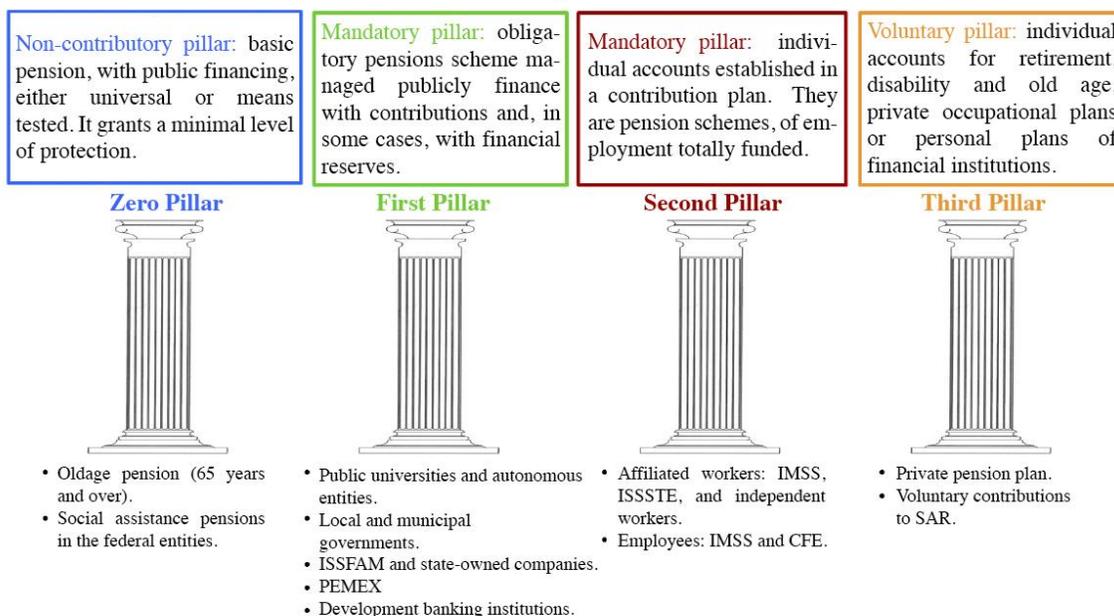
Note: The number of "X" reflects the importance of each pillar for each target group in the following increasing order of importance: X, XX, XXX.

Source: Holzmann, R. and Hinz, R. (2005), Old Age Income Support in the 21st Century, World Bank.

III. Mexican Pension System

Based on the World Bank multipillar scheme, the taxonomy of the Mexican Retirement Savings System is presented:

Graph III.1



a) Zero pillar

1. Federal program: 65 and over

In Mexico, the *Old Age Pension Program* is the nearest thing to a zero pillar in the country. It consists in economic support with a nation-wide coverage for people 65 years old and over (Mexicans by birth or people with at least 25 years of residence in the country); the transfers consist in granting financial aid of 580 pesos per month.

At the end of 2015 second quarter, the number of beneficiaries register at the nation-wide Old Age Pension Program were 5'526,053 with a modified budget for 2015 fiscal year of MEX\$ 39,015.6 million pesos⁴.

⁴ Second Quarterly Report 2015, Secretariat of Social Development, 2015.

2. Federal entities social assistance programs

Additionally, in recent years, several non-contributory social assistance programs financed by public resources have been established. These are mainly provided by states and local governments. The next table shows the main states and local entities social assistance programs:

Table III.1

Government	Program	Requirements	Support type	Monthly amount	Frequency	Beneficiaries	Approved Budget (Million pesos)
Chiapas	“Amanecer”	64 years and be resident of Chiapas	Monetary support	550	Monthly	240,000	1,438.60
Chihuahua	“Vive a plenitude”	65 years	Non-monetary support	-	-	15,000	121
Colima	Alimony to the elderly	65 years, not receiving an income or benefits from the Federal Government, 10 years of residence in Colima	-	-	-	3,000	5.1
Federal District	Alimony per older adult	68 years and be a Mexico City resident at least for 3 years	Monetary support	897.3	Monthly	473,360	5,101
Jalisco	Strategy for elderly care “Vive grande”	70 years, and living in marginalized and/or vulnerable conditions	Monetary support	1500	Quarterly	94,417	15
State of Mexico	Alimony to elderly 60-69 years	60 to 69 years, and living in alimentary poverty, marginalized, social exclusion or vulnerable conditions	Non-monetary support	Food basket	Monthly	120,000	299.7
	Alimony to the elderly	70 years, and living in alimentary poverty, marginalized, social exclusion or vulnerable conditions	Non-monetary support	Food basket	Monthly	160,912	1,150
Nayarit	Alimony for old people over 70	70 years and older	Non-monetary support	Food basket	Monthly	47,988	40
Oaxaca	Government alimony for old people with 70 years and over	70 years, living in localities having more than 30,000 inhabitants, without the benefits of the federal program “70 and over”	Monetary support	1000	Bimonthly	31,000	150.4
Puebla	Urban “70 and Over”	70 years, living in localities having more than 50,00 inhabitants	Monetary support	500	Monthly	-	-
Querétaro	Alimony program	60 years old	Non-monetary support	Food basket	Bimonthly	96,600	9.9
Quintana Roo	Monetary support program “Abuelo Estoy Contigo”	70 years, and living in vulnerable conditions, without any pension and/or benefits from state or local entities, and a residence of at least 5 years	Monetary support	850	Monthly	33,611	43.2
Sonora	“CreSer con adultos mayores”	65 to 69 years, and evidencing a residence in priority areas of attention	Monetary support	1000	Semiannual	50,500	50.5
Veracruz	Alimony for old people over 70 years.	70 years, minimal residence of 20 years and lacking any pension or social security system	Monetary support	A half of one (1) minimum salary in effect in Xalapa City, State of Veracruz	Monthly	35,699	350

Source: Evaluación Estratégica de Protección Social en México. CONEVAL, 2014.

b) First pillar of defined benefit

In Mexico, there are still a large number of pension systems under the defined benefit scheme, which are mainly provided to workers of state and municipal governments, as well as to workers of public universities and state-owned companies. Due to their special importance, some of them are listed below:

1. Workers affiliated to the Mexican Social Security Institute (**IMSS**) before July 1997 “transition generation” and who at their time of retirement may select the option of the defined benefit scheme according to such Institute Law 73.
2. Workers affiliated to the Institute of Social Security and Services of the Public Service Workers (**ISSSTE**) that according to the April-2007 Reform they stayed out the defined benefit scheme: workers under “Transitory Article 10th”.
3. Retirement and Pension System (**RJP**) for IMSS workers; this scheme was reformed to a defined contribution system in 2008 for the new workers.
4. State-owned companies: Workers of Petróleos Mexicanos (**PEMEX**) and of Federal Electric Commission (**CFE**); the latter system was reformed to a defined contribution scheme in 2008 for the new workers.
5. Social Security Institute for Mexican Military Forces (**ISSFAM**)
6. State pension institutes
7. Municipal pension institutes
8. University pension schemes
9. Others (mainly development banking institutions)

It must be said that, even though reforms have been carried out in some pension systems, there is still a long way to go⁵. It is of the utmost importance to continue with this process in order to avoid significant fiscal pressures in the future. The cost for the federal government of paying pensions and retirement expenses is shown below. There is also a table showing the pensioners number per controlled state-owned sector.

⁵ According to Aguirre (2012), about 30% of institutions and/or pension systems have been reformed.

Table III.2
Pension and retirement plans expenses
(million pesos)

Concept	2007	2008	2009	2010	2011	2012	2013	2014	2013-2014 Actual variable %
Total (GDP percentage)	2.0	2.1	2.4	2.6	2.7	2.8	2.9	3.0	
Total	232,069.1	254,207.0	289,124.5	343,317.2	387,431.5	429,497.7	467,926.4	525,443.4	8.0
Federal Government ¹	35,375.1	37,080.1	36,462.2	47,014.6	54,117.5	59,596.1	61,237.8	68,108.3	6.9
Entities and enterprises	196,694.0	217,126.8	252,662.3	296,302.6	333,314.0	369,901.6	406,688.6	457,335.1	8.1
PEMEX	24,516.8	17,930.9	20,301.0	24,786.9	28,930.5	30,922.2	33,263.8	38,098.3	10.1
CFE	9,710.6	11,115.4	13,829.5	14,839.6	17,815.6	20,162.6	22,881.7	27,861.0	17.1
IMSS	109,533.1	124,604.5	142,301.8	164,256.9	184,038.8	205,901.8	227,875.8	251,697.7	6.2
ISSSTE	52,933.5	63,476.0	76,230.1	92,419.2	102,529.0	112,915.0	122,667.3	139,678.1	9.5

¹ To make figures comparable, expending on pension and retirement plans of the Central Light and Power Company (LFC) was reclassified within into item federal government expenses.

Source: Figures 2007-2012, Federal Public Treasury Account. Figures for 2013 and 2014, Public Finance Timely Statistics.

Table III.3
Number of pensioners per controlled state-owned sector

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total	3,379,850	3,529,649	3,722,496	3,909,692	4,089,616	4,267,538	4,454,729	4,665,268	4,733,836
PEMEX	67,016	69,325	71,516	75,852	75,782	78,827	83,054	87,015	88,092
CFE	28,884	30,084	32,122	33,904	35,826	37,687	39,519	42,058	43,055
LFC	22,386	22,650	23,136						
IMSS ¹	2,651,294	2,740,936	2,866,216	2,993,155	3,135,519	3,276,596	3,423,560	3,588,964	3,622,368
ISSSTE ²	610,270	666,654	729,506	806,781	842,489	874,428	908,596	947,231	980,321

¹ It includes the affiliated private sector.

² It includes contributors in Agencies, States and Municipalities.

Source: PEMEX, CFE and LFC. Integral System of Information. ISSSTE: Rightholders Population Report as delivered by the Entity.

It must be said that the National Commission at the Retirement Savings System (**CONSAR**) is responsible of the regulation and supervision of the Retirement Savings System that corresponds to the second pillar and part of the third pillar. Therefore, this document mainly refers to such Second and Third Pillars, not without mentioning that both the Zero Pillar and the First Pillar require, by themselves, an in-depth analysis and determined actions for its strengthening⁶.

⁶ Villagómez, A. (2015). México: un esquema multipilar fragmentado, in *Cómo fortalecer los sistemas de pensiones Latinoamericanos*, Tomo II, SURA Asset Management.

c) Second pillar of defined contribution: Retirement Savings System (SAR)

The Retirement Saving System (**SAR**) is the mandatory contributive and funded pillar for workers making contributions to IMSS and ISSSTE. In 1992, the SAR was established as a mandatory employer contribution of 2% of wages and was recorded on an individual accounts system (with the retirement and housing sub-accounts), these resources were deposited in the Bank of Mexico, while the accounts were managed by the banks.

In 1994, CONSAR was created, a governmental institution that regulates and supervises this system. On July 1, 1997, the pension system is reformed when the new IMSS Law becomes effective, transforming the defined benefit PAYG scheme into a new defined contribution system through individual accounts, managed by specialized private pension managers (**AFORE**). The resources are invested in Specialized Retirement Fund Investment Companies (**SIEFORES**).

One of the determinant factors to carry out the 1997 reform was the growing fiscal cost related to the old PAYG system, that given its design and the country prevailing macroeconomic conditions, it was not funded. Since the new system implementation, several authors have estimated the difference between the fiscal cost if the old pension scheme had prevailed and the existing fiscal cost under the new law. The outcomes indicate that the fiscal cost was significantly reduced with the introduction of the individual accounts system in 1997. Estimations show that if the IMSS Law of 1997 had not been implemented, the financial deficit of this institution would have reached 141.5% of the 1994 GDP in a horizon⁷ of 74 year.

It must be recalled that the 1997 Reform entails a transition cost that must be financed with budgetary resources. In general, there are three costs related to the reform: 1) the payment of pensions under the 1973 Law; 2) the guaranteed pension of the new law; and 3) the governmental contributions to the worker's individual account, including the social quota. It is expected that fiscal cost will keep increasing, reaching a historical maximum which will be at the time that pensions obligations of the 73 Law will diminish, and so then it will begin to decrease.

⁷ Cerda, L., & Grandolini, G. (1998). The 1997 Mexican Pension Reform: Genesis and Design Features. Mimeo.

The workers affiliated to IMSS after the reform were incorporated to the SAR, where obligatory contributions were deposited in individual accounts managed by the AFORE; workers who were already affiliated previous to the entry of the new law have, at the time of retirement, the option to chose their pension either under the IMSS 73 Law or under the IMSS 97 Law.

In the case of ISSSTE, the pension system faced similar problems: the number of contributors per pensioner at ISSSTE decreased from 20 in 1975 to slightly less than 4 in 2005; in addition, the cash deficit (the Federation resources to finance the Institute deficit) grew out of control⁸.

Due to the above, the new ISSSTE Law⁹ entered into force on April 1, 2007. Public service workers already affiliated had the opportunity to decide whether to remain in the old PAYG system or to be incorporated into the new defined contribution scheme based on individual accounts. Those workers who decided to be switch to the new scheme received a seniority recognition bonus.

The 2007 ISSSTE Law was in line with the need to integrate a national pension system that would enable the portability of contributions, services and rights among the workers of both social security systems of the public and private sectors. Currently, the legislation allows the mobility of IMSS and ISSSTE workers among the different pension administrators.

The tripartite contributions deposited in the individual savings account depend on which social security institution the worker is affiliated. For those making contributions to IMSS, the total contributions are 6.5% of the basic salary, while for the ISSSTE the contributions are 11.3%. In addition to these contributions, the government provides a social fee and the employer contributes 5% for housing.

⁸ Ruling by the Joint Commissions of Finance and Public Credit and of Social Security, with a draft of Law of the Institute of Security and Social Services of the Public Service Workers. March 19, 2007.

⁹ The 2007 Law replace the old 1983 Law.

Table III.4
Contributions to the Retirement Savings System
(salary percentages, except when another unit is indicated)

IMSS-affiliated workers ¹				
Concept	Employer	Worker	Federal Government	Total
Retirement	2.000	--	--	2.000
Severance in old age and aging	3.150	1.125	0.225	4.500
Social quota ²	--	--	\$4.08 - \$4.89 daily	\$4.08 - \$4.89 daily
Housing	5.000	--	--	5.000
ISSSTE-affiliated workers ³				
Concept	Employer	Worker	Federal Government	Total
Retirement	2.000	6.125	--	8.125
Severance in old age and aging	3.175	--	--	3.175
Social quota ⁴	--	--	\$4.08 daily	\$4.08 daily
Solidarity saving ⁵	--	up to 2.000	up to 6.500	up to 8.500
Housing	5.000	--	--	5.000

¹ Percentages of basic salary.

² This amount is contributed per each contributed day's pay and it is quarterly updated according to inflation. The social quota (CS) in force for the 2015 May-June period (1 MW-\$4.89495, between 1.01 to 4 (MW-\$4.69099, between 4.01 to 7 MW-\$4.48703, between 7.01 to 10 MW-\$4.28308 between 10.01 to 15 MW-\$4.07912, more than 15 MW without CS).

³ Percentages of integrated salary.

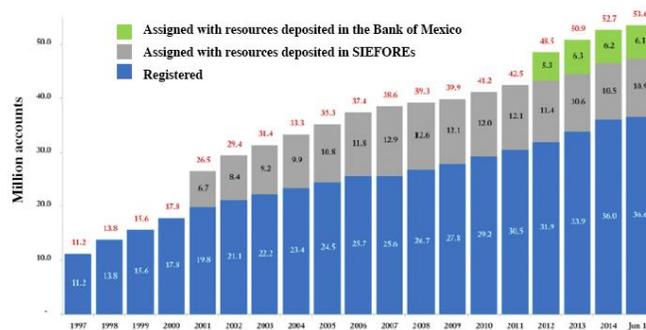
⁴ The CS is equivalent to 5.5% of MW in force in Mexico City, since July, 1997, quarterly updated according to the National Consumer Price Index (INPC). The amount in force for the 2015 May-June period is \$4.07912 per contributed day.

⁵ According to ISSSTE Law, the workers can provide on a voluntary basis, either 1% or 2% of their salaries; in exchange, the government will provide \$3.25 for every peso or \$6.50, respectively.

Source: CONSAR.

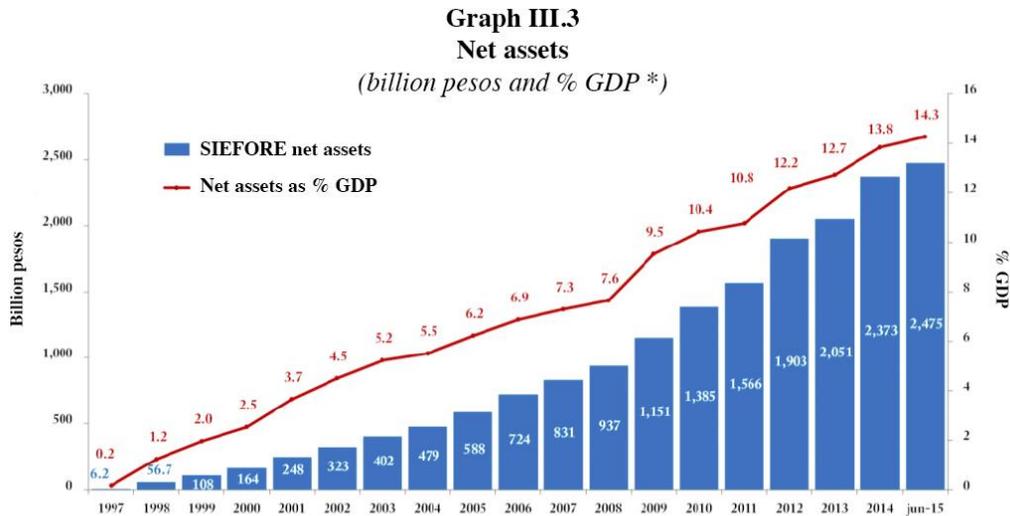
At 18 years of its implementation, the SAR has been rapidly growing, both in affiliates and in assets. In June 2015, the number of individual accounts was 53,583,133; 52,005,223 of them corresponds to IMSS workers, out of which 6,117,444 are workers assigned with resources deposited in the Bank of Mexico; 1,314,190 accounts correspond to ISSSTE workers, and 263,720 belong to independent workers.

Graph III.2
Evolution of accounts managed by AFORE



Source: CONSAR.

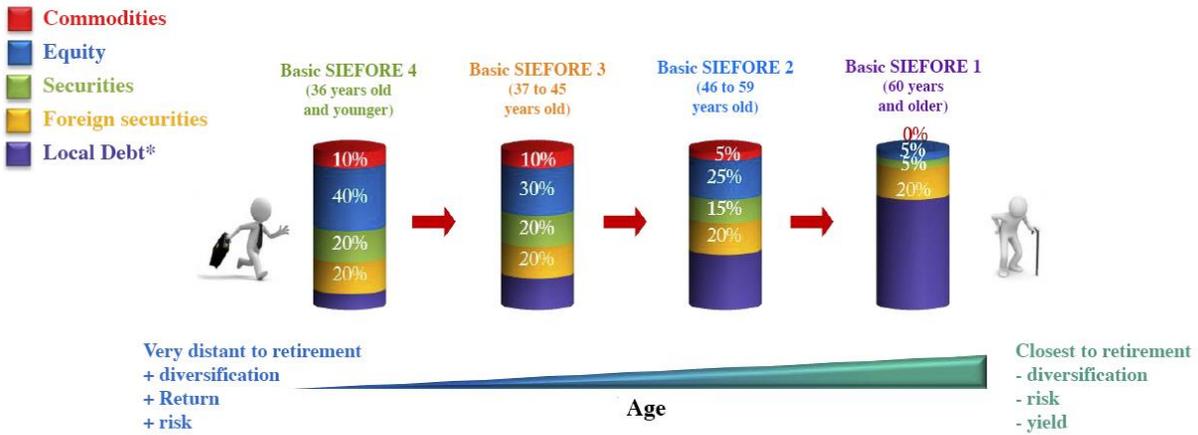
CONSAR is responsible for regulating and supervising the system in which each saver may build his/her pension patrimony. In June 2015, the net assets accumulation in the system was 2,475 thousand million pesos, equivalent to 14.3% of GDP. In addition to being saving for the workers' retirement, such resources finance several projects, they generate jobs and they are a source of stability for the economy. In addition, their growth has resulted on a greater financial system deepening.



Source: CONSAR and INEGI. *Average nominal GDP of 2008 basic, of the four quarters of each year. For 2015, the last four quarters average is considered, until first quarter of 2015. The preliminary figures are subject to revision at the close of June, 2015.

The workers' resources are invested in SIEFORE using the "life cycle" approach, i.e. resources of the youngest people are invested in a diversified portfolio with greater exposure to long-term assets. In contrast, the resources of workers who are closest to retirement are mainly invested in fixed income instruments (lower proportion of variable income), which involves less risk and performance.

Graph III.4
SIEFORE life cycle and investment limits
(%)



*In the graph, the local debt proportion for each SIEFORE is only illustrative.

Source: CONSAR, June, 2015.

The net assets distribution per SIEFORE is shown below:

Graph III.5
SIEFORE net assets
(million pesos, June, 2015)



Source: CONSAR.

Part of the workers' assets is used to finance productive activities in the country. In June 2015, the SIEFORE invested 803,573 million pesos in Mexican companies of different sectors of the economic activity. Out of them, 136,164 million pesos were invested in structured securities (exclusively national); 174,643 million pesos were invested in national equity; and 492,766 million pesos were for private debt.

It is worth noting that the SIEFORE resources are financing 24.9% of the total amount of long-term private local debt.

Graph III.6
SIEFORE financing to different sectors of economic activity
(million pesos)



Source: CONSAR.

SIEFORE participation in housing, state-owned companies and infrastructure sectors amounts to 265,372 million pesos, fostering the local, state and national development and welfare. SIEFORE investment in these sectors is equivalent to 20.5% of the total financing of this sectors. Particularly, in the housing sector, the SIEFORE maintain an investment amount of 56,325 million pesos.

Table III.5
Investment in the housing, state-owned companies and infrastructure sectors, and in state and local entities
(million pesos)



Figures at June 2015.
Source: CONSAR.

Sectors	SIEFORE holding	Total in Circulation	Holding Percentage
SOFOL HIPOTECARIA	772	7,431	10.39%
INFONAVIT	25,120	66,729	37.64%
FOVISSSTE	26,589	78,698	33.79%
BORHIS	3,844	22,559	17.04%
CFE	44,113	206,310	21.38%
PEMEX	69,022	639,423	10.79%
Highways, States and Municipalities	70,009	238,571	29.35%
STRUCTURED SECURITIES	25,903	35,676	72.61%
TOTAL	265,372	1,295,396	20.49%

It is important to highlight AFORE investments in CKDs and FIBRAS (Mexican Private Equity Funds and REIT's- Real Estate Trusts), which constitute important financial instruments in medium- and long-term domestic productive activities. The AFORE have invested 123,402 million pesos to finance these instruments (80,867 million in CKDs and 42,535 million in FIBRAS).

When investing the workers' resources, they get important returns that significantly contribute to increase the assets that will be used to finance their pensions. The portfolios diversification has resulted in annual nominal returns of 12.3% and real returns of 6.1% since the beginning of the system at June 2015. The investment of workers' resources has generated over 1,103.0 billion pesos of accumulated returns net of commissions, representing 44.6% of the total assets of the system.

Graph III.7
Contributions and system returns
(billion pesos)



Source: CONSAR.

d) Third pillar of individual and/or occupational voluntary saving

In addition to the obligatory saving, the voluntary saving is an essential element to complement workers resources for their retirement (including workers who are not in the formal sector or are independent).

There are different voluntary saving modalities through which the workers can increase their accumulated resources for old age. The modalities for voluntary contributions in the SAR individual account, as well as the management of resources of the social welfare funds and the affiliation to occupational pension plans are described below.

1. Voluntary contributions to an individual account and solidarity saving (ISSSTE)

Workers with an individual account may chose to make voluntary contributions additional in order to complement their savings. In addition, independent workers can open an individual account with any administrator and make voluntarily savings. There are different voluntary savings modalities (depending on each AFORE): short-term, medium-term and long-term options. The difference remains in the permanence period of the resources in the account and in the fiscal benefits. The worker selects the amount and the term.

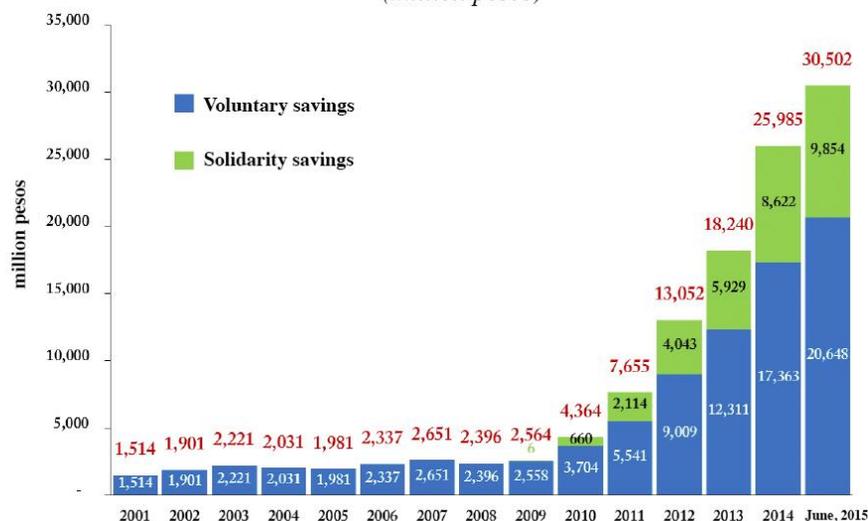
Table III.6

Subaccount/Type of Voluntary Contribution (VC)	Characteristics	Requirement to dispose of the voluntary saving
Short term (VC)	No fiscal benefits. Upon withdrawal, a tax withholding is applied to returns of investments.	Minimum time of 2 or 6 months after the first deposit or the last withdrawal.
Long-term saving (ALP)	After 5 years of the deposit, it is possible to withdrawal resources. An income tax withholding is applied to returns of investments. If the withdrawal is made before 5-year term, the withholding tax is greater.	Maintenance over 5 years.
With a Long-Term Saving Perspective (AVLP) and Retirement Supplementary Savings (ACR)	This saving purpose is to increase resources to finance the worker's pension; the accumulated balance will be withdrawal at retirement. The contributions are deductibles from the taxable income (ISR) up to 10% of the worker's income up to a maximum of 5 minimum wages (in April 1, 2015, equivalent to \$127,932.50 for the A zone and of \$124,611 for the B zone).	It is necessary to have a pension or a pension refusal or being at least 65 years old.

Public service workers affiliated to ISSSTE under the new law (2007) have the option to increase their pension resources through the Solidarity Saving modality, which is a government matching fund: the employee decides whether he/she contributes an additional 1% or 2% of his/her contribution basic salary and for every saved peso, the government provides 3.25 pesos.

In recent years, contributions to voluntary and solidarity savings subaccounts have increased considerably. In June 2015, the total balance of voluntary and solidarity savings in AFORE was 30,502 million pesos. In addition, there were 2,395,735 voluntary savings accounts and 347,303 solidarity savings accounts.

Graph III.8
Voluntary and solidarity savings accumulated in the system
(million pesos)



Source: CONSAR.

Although the voluntary and solidarity savings have grown in recent years, they represent a very small proportion of the total resources managed by the AFORE (1.2% in May, 2015). Therefore, it is important to continue with the effort of promoting these mechanisms for workers to attain higher pensions.

2. Social welfare funds

The AFORE can manage Social Welfare Funds resources of public and private entities used to finance personnel pension or retirement, seniority premiums, as well as the workers' savings funds. Resources of the voluntary savings accounts and the Social Welfare Funds are invested in additional SIEFORE and supervised by CONSAR¹⁰. This is for instance the case of the State of Nuevo Leon (workers affiliated to ISSSTELEON), the State of Mexico and its municipalities (public servants affiliated to ISSEMYM), as well as in the state-owned PEMEX or its subsidiary entities (unionized or trustworthy workers).

¹⁰ In the event that the AFORE does not have an Additional SIEFORE, the resources are invested in the Basic SIEFORE.

3. Occupational plans

On the other hand, some companies offer to employees, additional pension plans as part of their benefits in order to retain valuable human capital¹¹. These plans can be of defined benefit, of defined contribution, or hybrid plans. Even though these resources are not part of the SAR, CONSAR keeps a voluntary electronic registry of these plans¹², having 1,967 plans registered at the close of May 2015. The registered plans cover 1,380,048 people, out of which 1,284,292 are active employees, 71,245 are pensioners and 24,511 are inactive employees having acquired rights. In addition, the total financial resources managed by them are 504,292 million pesos, equivalent to 2.9 of GDP¹³.

During the last years, a registration of defined benefit occupational plans reduction has been noted, and on the other hand there has been an increase of the defined contribution plans and hybrid plans.

Otherwise, some insurance companies or financial groups offer personal retirement insurance with several modalities. The contributions made to these plans can be deducted from tax payments up to the amount authorized by the Income Tax Law¹⁴. In general, deposits are made to this financial institution and when reaching a certain age, the resources can be withdrawn as a lump sum or through a life annuity.

¹¹ Mexican Social Security Law, article 27(VIII). This Law provides incentives to the companies so that they may establish and provide their workers with private pension plans, with the option that when certain requirements are met, the employers make contributions to the established plans, and are not considered as a part of the basic salary, reducing the benefit cost.

¹² CONSAR. Electronic Registration Statistics of Private Pension Plans 2014: <https://www.consar.gob.mx/sirepp/>

¹³ Estimated 2014 GDP: \$17.096 billion pesos, according to the General Criteria of Economic Policy 2015.

¹⁴ Mexican Income Tax Law, articles 151 and 185.

IV. SAR Benefits

At 18 years of its establishment, the pension system of individual accounts shows important developments; its savers have obtained significant benefits, achieving also a series of rights not included in the previous pension system. Some of the main ones are:

a) Full ownership of resources

The individual accounts system sets aside each worker's assets granting them full ownership of such resources. These resources will be used to finance his/her pension and, in the event that the worker does not meet the associated requirements, his/her resources will be returned to him/her. Moreover, the workers' savings are inheritable.

b) Security and certainty of resources

In the current pension system, CONSAR is responsible for daily supervising of the investment of resources. The AFORE must strictly follow the investment system established by the regulatory body. Notwithstanding there may be volatility periods in the financial markets, the system design has proved its capacity of eventually recovering from any transitional period of losses, as it occurred in 2008 and 2013.

c) Mobility

The worker may work in different companies and/or agencies in both public and private sector and maintain his/her same account, allowing him/her to continue accumulating savings without losing his/her contributions.

d) Free choice

The saver may choose his/her preferred AFORE and may select once a year another one if needed, or twice a year when the second change is made to an AFORE offering greater net returns.

e) Financial viability of the pension system

The SAR is a funded system by definition. The resources to be used to finance every worker's pension come from the tripartite contributions, plus the returns earned while invested in SIEFORE. This financial viability of the system does not depend on the demographic transition, and it is not even subject to possible political decisions in respect of the use of resources.

f) Transparency

Unlike the PAYG arrangements, the individual accounts system allows to daily observe the origin, operation and destination of the resources. The workers receive their statements three times a year, showing them their balance and in which kind of fund are invested their resources. On the other hand, on the CONSAR website, along with various statistics, it is possible to see the AFORE accounting.

g) Attractive returns

The investment horizon and the increase on diversification of the investment regime of the SAR have given workers competitive returns over time. In June, 2015, the system historical yield (i.e., after inflation) was 6.13% per year; in addition, the net returns accumulated (net of fees) in these 18 years already represent 44.6% of the system balance. The SAR allows workers to participate in the financial system as investors, earning for their savings one of the more attractive returns in comparison with other investment instruments.

h) Savings virtuous circle

Part of the workers' savings are invested in productive and infrastructure projects triggering employment and economic growth in the country and, at the same time, gives them better returns. In this way, employment, productivity, investment strengthening and an increased economic activity is generated through a virtuous circle. Thus, through the SAR million of Mexicans foster the country economic development and they also benefit from this.

Graph IV.1
Virtuous circle of the individual accounts System



i) Equality

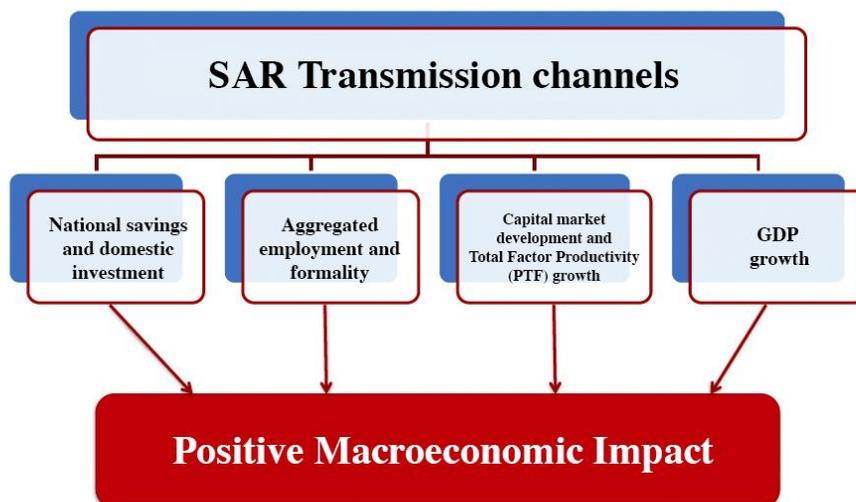
Under the new system, pensions grow by the accumulated contributions and by the returns generated through savers working life, and not through regressive subsidies coming from general taxation and benefiting those with higher incomes. In fact, through the social quota, the State supports those workers with lower incomes.

j) Relevant macroeconomic impact

In addition to accumulating resources to finance the workers' pensions, the SAR has contributed to the country macroeconomic stability. A research performed by Villagómez and Anton indicates that there are several transmission channels through which SAR has positively contributed to the country, which are shown in the diagram below¹⁵:

¹⁵ Villagómez, Alejandro y Arturo Antón, México: Impacto Macroeconómico de la Reforma de Pensiones, CIDE (2013).

Graph IV.2



*Villagómez, Alejandro y Arturo Antón, México: Impacto Macroeconómico de la Reforma de Pensiones, CIDE (2013).

*Villagómez, Alejandro y Arturo Antón, México: Impacto Macroeconómico de la Reforma de Pensiones, CIDE (2013).

The authors found evidence of a positive effect on contractual savings, private savings and investment. They also indicate that out of the 22.2 percentage points of the financial savings growth, 17.9 points correspond to the SAR accumulation. They proved in such way the existence of the system’s positive effect in the financial deepening between 16.9% and 25.7% in the last fifteen years since the reform.

On the other hand, a recent ITESM study confirms the above mentioned positive effects that contribute to the macroeconomic stability¹⁶. In sum, the Reform of the pension system generated fiscal viability, through a funded scheme that does not depend on the population dynamics. This scheme granted the resources ownership to the worker with the possibility to inherit them; it established a guaranteed pension to workers meeting the requirement of contribution weeks, but whose accumulated resources are not enough to solve a pension equivalent to the guaranteed pension, and eliminates the old system inequities that most affected women and lower-earning workers.

¹⁶ Fuentes, et. al., Impacto Macroeconómico de la Reforma Pensionaria en México, ITESM (2014).

V. Actions taken to strength the SAR 2013-2015

On September 8, 2013, President Enrique Peña Nieto submitted an important initiative to reform social security. This Reform consists of three elements: create a universal pension, introduce unemployment insurance and various reforms to the SAR Law. The Lower Chamber approved this initiative and it is currently pending in the Senate. In this document we only proposed detailed reforms to the SAR Law.

Among the objectives of this Reform is the strengthening of the SAR through the following proposals¹⁷:

- i. Adoption of a new switching model of individual accounts.
- ii. Changes to the scheme of fees of the AFORE.
- iii. New assignment rules for the new incoming workers to the system to induce lower fees.
- iv. Strengthening of AFORE corporate governance and expansion of its object.
- v. New operating obligations for AFORE and new CONSAR powers for their supervision.
- vi. Attention and services to workers.
- vii. Incentives for voluntary savings.
- viii. Greater legal certainty and ease for beneficiaries.
- ix. Operational changes to SIEFORE investment system.

Without prejudice to the importance of performing legal Reforms to SAR, CONSAR has undertaken regulatory actions that do not require amendments to the law. These actions are on line the pension system regulation and supervision more efficient and effective, in addition to encourage the workers to be more involved in the system.

¹⁷ In this document, the main elements of this initiative are only enumerated. For a summary, see the previous quarterly reports at: http://www.gob.mx/cms/uploads/attachment/file/61267/2013_19_trimestre_3.pdf

Among the most prominent are the following¹⁸:

a) Strengthening the supervision

Due to the assets growth and the increased sophistication, some modifications to the supervision model have been necessary in order to strengthen it. CONSAR financial and operational supervision is based on a timely risks detection to meet the following objectives: to focus the supervision activities to the critical points of the processes, optimizing the use of human capital; identify vulnerabilities, in respect of how participants manage risks and internal controls in their main processes, promoting their correction and continuous improvement; and finally, to define subsequent supervision plans per participant, according to findings that are detected in previous reviews.

In particular, it is intended to establish standardized mechanisms of supervision to identify, monitor, control and mitigate the most critical risks of the SAR operational processes. The changes were based on the following principles:

1. Increased CONSAR presence in AFORE.
2. Standardization of the supervision process. Provide of homogeneous protocols and adopt best practices in financial and operation matters.
3. A greater coordination between CONSAR supervisory and legal areas. A greater efficiency during the whole supervisor and sanctioning process, from the detection of an irregularity to the applicable sanction.

In order to develop an appropriate risk-based financial and operation supervision, there are performance matrix to identify those AFORE having the higher and the lower risk in the management of their investment and operation processes, as well as those critical areas or processes needing immediate improvements.

¹⁸ In this document, the main elements of the actions taken are only enumerated. For a summary, see the first quarterly report issued to the Congress for 2015 and the fourth quarterly report to the Congress for 2014 at: http://www.gob.mx/cms/uploads/attachment/file/61273/2015_25_trimestre_1.pdf, and at http://www.gob.mx/cms/uploads/attachment/file/61272/2014_24_trimestre_4.pdf, respectively,

The main purpose of the changes made to the supervision methodology is the achievement of a greater supervisory effectiveness of CONSAR. Through changes in the regulation, more emphasis is given to prevention among the participants, as well as a greater enforcement effect by strengthening the institution penalty powers.

b) The SAR new operational regulations (CUO)

On March 2, 2015, several regulatory modifications of the operational regime (CUO) came into force. The main modifications to the operational processes established in the CUO are enlisted below:

- All switches in the SAR must be accompanied by a prior notification via SMS validating that is the saver who is making the process and that such saver freely decided to do it. In addition, the saver shall sign the new switching form that aims to guide him/her about the decision he/she is taking. The format shows the IRN (Net Yield Indicator) per AFORE alerting the saver on the switch quality.
- The recertification process for sales agents is established in order to modify their incentives by changing from a model based on the accounts switching promotion to another one focused on the client retention.
- A unique electronic file is created for every worker that will accompany him/her during his/her entire working life.
- The SAR will begin to work for the first time with personal biometric data of savers and of the sales agents. This scheme shall be composed of fingerprints and voice, which will serve as the unique identifier.

For the details of the modifications, see the following links:

http://www.gob.mx/cms/uploads/attachment/file/155362/Disposiciones_en_materia_de_operaciones_COMPILADO_20161018.pdf

http://www.gob.mx/cms/uploads/attachment/file/61609/bol_04-15_Nueva_regulacion_operativa_del_SAR.pdf

c) New regulation for sales agents

In January, 2015, the new sales agents regulation came into force introducing operational changes, among the main:

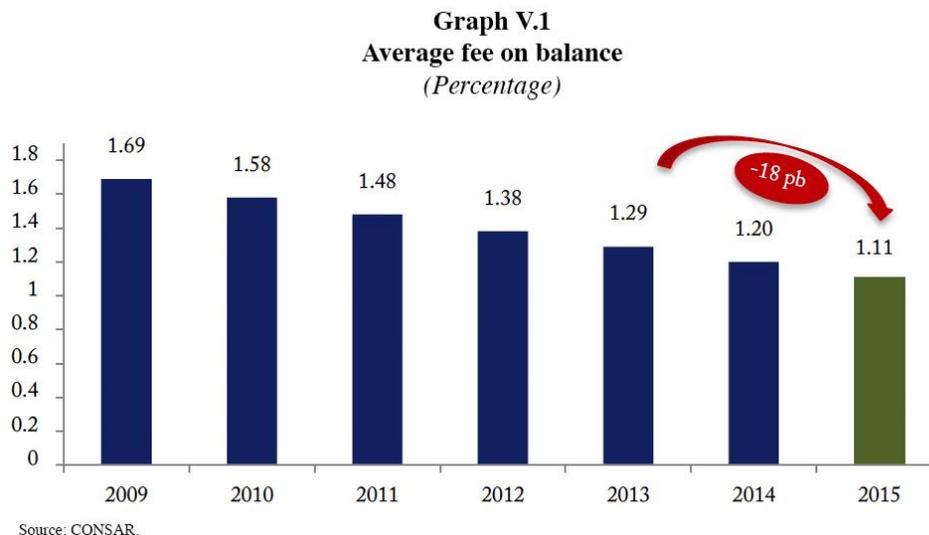
- AFORE mandatory integration of a unique electronic record for all its sales agents. Each file shall contain the digital handwritten signature, fingerprints and voice recognition.
- An essential prerequisite is to have achieved a high school degree or equivalent studies, and have quality training, as well as to be certified and registered in the database.
- The certification examinations will be performed by an independent third party. The validation and revalidation examinations will guarantee a minimum of technical knowledge and a solid ethical basis.
- The regulation includes the obligation that payment of commissions to sales agents regarding switches should contain a factor of permanence of the worker's account in the AFORE.

For more details on new regulation, see the press release:

http://www.gob.mx/cms/uploads/attachment/file/61611/bol_05-15_Regulacion_agentes_promotores.pdf

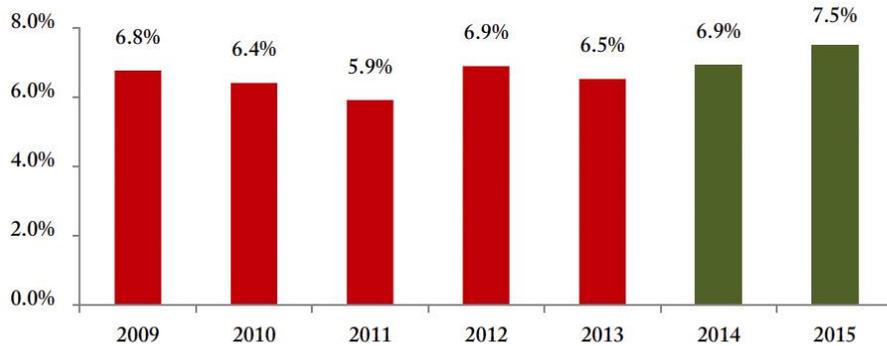
d) Decrease in level of fees

CONSAR's Governing Board has fully exercised its power to authorize the fees to be charged by the AFORE during the next year. It is pointed out that between 2013 and 2015 the average fee was reduced in 18 pb going from 1.29 to 1.11.



In addition, in 2015, the highest fee reduction was achieved since the Governing Board was granted the with power to authorize the fee level for each year (7.5% in comparison with the previous year).

Graph V.2
Fee reduction
(2009-2015, percentage in respect with the previous year)

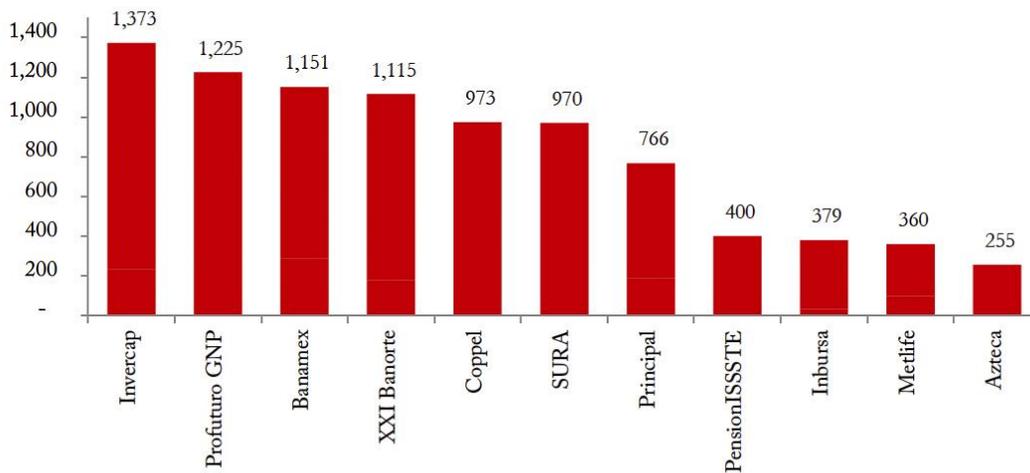


Source: CONSAR.

Additionally, the fee dispersion has been reduced. Since 2013, the gap between the highest and lowest fee has been reduced 22 pb, from 50 to 28 pb.

It is worth mentioning that in the first two years of this administration have been achieve savings for workers by 8,969 million pesos.

Graph V.3
Estimated savings in fees paid by AFORE 2015 – 2018
(2014-2018 present net value, million pesos)



Source: CONSAR.

e) New financial regulation (CUF)

In order to obtain higher returns in the medium- and long-term for workers savings in the SAR, strengthening both the prudential regulation and the financial risk management, as well as provide more legal certainty regarding the regulatory and financial supervision frameworks in which AFORE operate during the second quarter of 2015, CONSAR amended the "Financial general provisions of the Retirement Savings System" (CUF), published in the Mexican Official Gazette on August 11, 2015, and entering into force in January 2016.

This is the first integral modification made to the CUF since its creation in 2011, which will give a more flexible criteria in order to allow AFORE to engage in a more active investment in productive projects, strengthening the selection and certification criteria for the pension fund managers, and improvement of the AFORE corporate governance, all of which will lead to better investment decisions.

Although the aim of the modifications made to the CUF is to protect the assets of more than 53 million workers members of the SAR and to reach higher medium- and long-term returns for their savings, the modifications made to CUF are related to four specific objectives, which contribute to the first one:

- Strengthening AFORE human capital.
- Flexibilize criteria to allow AFORE engage in more active investment in productive projects.
- Strengthening AFORE corporate governance in order to strenght the investment decisions.
- Simplify and deregulate processes to expedite the AFORE investment decision-making.

Thus, the changes made to CUF respond to the increased sophistication acquired by AFORE, enabling the industry to work based on the best international financial practices. Although the changes cover different areas, they can be classified under the following main topics:

i. High officers certification

- Establish a certification requirement for all high officials of the AFORE participating in the investment process.
- Establish incentives for officials who are directly or indirectly involved in the investment process to obtain international certifications.

ii. Investment in structured securities

- Deregulation of the procedure in AFORE of the investment decision making process, in order to make it more efficient.
- Different requirements for diverse type of structured securities (i.e. CKDs, FIBRAS, REITs and real assets).
- More clarity in the eligibility policies of the structured securities manager.
- Promote the adoption of international practices with respect of information disclosure and scenario and risk analyses.

iii. Corporate governance

- Strengthening requirements of AFORE corporate governance in order to establish a better balance between the workers interests and those of the pension funds administrators.
- The government body of the AFORE must approve good practices and ethics codes.
- Strengthening of the role of Independent Board Member and Comptroller Officer.
- Reinforcement of the responsibilities of the Risk Committee and the Management Unit for Integral Risk Administration.
- Clarification of the responsibilities of the investment, and risk Directors.

f) Changes to the investment regime

During 2013 and 2014, major regulatory changes to the investment process of AFORE were made and they aim to better align AFORE incentives for the managers to invest the workers' resources with a medium- and long-term vision and generate the highest returns for workers:

i. Eligible countries for SIEFORE investments

From 2013 to date, Colombia and Peru as Member States of the Alianza del Pacífico (Pacific Alliance) were incorporated as investments eligible countries, in addition to South Korea, Iceland and Singapore.

ii. Benchmark portfolio

It was established AFORE obligation to define a reference portfolio to be used in their investments management (usually called a *benchmark*) for each SIEFORE. This portfolio is use so: (i) each SIEFORE has an investment objective according to the investment horizon; (ii) each AFORE promotes a prudent and efficient management of workers' resources; (iii) it contributes to develop AFORE investment capacities; iv) the alignment of managers incentives with workers medium- and long-term interests is promoted; and (v) objective and comparative information is provided in respect to pension fund performance.

iii. Promote a better performance of AFORE in the medium- and long-term

In order to encourage that AFORE privilege medium- and long-term scenarios in their investments, the term of the IRN (Net Yield Indicator) of the SIEFORE for younger savers was increased. As a result, the term of the indicator is increase up to 7 years for SB4 and SB3. On the other hand, for SB2 the term horizon is maintained in 5 years, and for the SB1 is reduced from 5 to 3 years. Finally, for the SB1, IRN will have a horizon of 1 year.

iv. Creation of a new retirement pension fund for workers close to retirement (SB0)

To secure interests of those savers closer to retirement, the Basic Pension Retirement Fund SIEFORE Básica Cero (**SB0**) was created. This fund will invest the resources from savers closer to retirement (over 63 years) in traditional instruments in order to protect the retirement savings from any volatility cycle in the international and national financial markets. The workers who are eligible for this SB0 fund will be those workers who are close to make a total withdrawal in respect of pension or pension refusal, or ISSSTE workers having redeemed bonus.

g) Investment mandates

The first investment mandate was authorized in 2013, which is an investment vehicle that promotes a greater diversification of global investments by AFORE. Through mandates, SAR savers can have access to investments in international markets with more specialized teams in investments and more experienced in financial risks management at a global level. AFORE have invested 30,660.9 million pesos¹⁹ in 7 mandates with 5 different Managers.

Table V.1
Investment mandates
(Million pesos, June 29, 2015)

		Net asset value			
AFORE	Managers	Basic 2	Basic 3	Basic 4	TOTAL*
Banamex	Schroders Equity	811.4	1,184.5	1,637.9	3,633.9
Banamex	Schroders Equity U.E.	2,097.4	2,412.1	2,621.8	7,131.3
Banamex	Pionner equity U.E.	1,788.0	2,234.9	2,458.3	6,481.2
Banamex	Banque Paribas Equity	644.0	876.5	983.9	2,504.3
Banamex	Franklin Templeton equity	820.5	1,105.9	1,284.2	3,210.6
Banamex	BlackRock, Inc. Equity	793.6	1,158.6	1,602.1	3,554.3
Banamex	BlackRock, Inc. Equity U.E.	828.7	1,159.2	2,157.5	4,145.3
TOTAL*		7,783.6	10,131.7	12,745.7	30,660.9

* Totals may not coincide with sum due to rounding.

Source: CONSAR.

h) New services comparative index of AFORE (CAS)

In February 2015, CONSAR launched a new indicator, the AFORE Services comparative index (CAS), which ranks AFORE considering the quality and the quantity of services they provide to their customers, which constitutes an important factor for savers. With this additional indicator, now there are three comparison elements to select an AFORE: the returns, the commission and the services.

¹⁹ Preliminary figures.

Table V.2
AFORE Services comparative index (CAS)



AFORE	POSITION
Banamex	1
Invercap	2
SURA	3
Profuturo GNP	4
Principal	5
Metlife	6
XXI Banorte	7
Coppel	8
PensionISSSTE	9
Inbursa	10
Azteca	11

July-December, 2014 comparative element

Vertical arrows on the left and right sides of the table indicate that positions 1-5 represent 'GREATER SERVICES' and positions 6-11 represent 'MINOR SERVICES'.

Source: CONSAR.

The methodological note for CAS Index construction can be consulted in the following link:

http://www.gob.mx/cms/uploads/attachment/file/61007/nota_met_CAS.pdf

(i) "Saving on your AFORE have never been more easy" Program

In order to foster voluntary savings, CONSAR implemented the program called "Saving on your AFORE have never been more easy". Since October 2014, the savers in SAR can make voluntary contributions, nationwide, in any of the branches of *7-Eleven* stores, starting from 50 pesos and as frequently as they wish. In June 2015, this scheme included TELECOMM branches. This facilitates the voluntary savings mechanism for workers with individual accounts in order for them to be able to increase their accumulated balance and increase their pensions.

For further details follow this link:

http://www.gob.mx/cms/uploads/attachment/file/61635/bol_24-14_Ahorrar_en_tu_afore_nunca_fue_tan_fa_cil.pdf

(j) New mechanism of voluntary saving through domiciliation

In October 2014 and August 2015, CONSAR implemented a new voluntary savings mechanism through the domiciliation service via debit card and/or checking accounts, which is simple, fast and without any cost to the saver.

For further details see the following link:

http://www.gob.mx/cms/uploads/attachment/file/61589/bol_26-15_Nuevo_portal_oara_domiciliar.pdf

(k) New calculators to promote voluntary savings

In November 2014, CONSAR introduced two new savings calculators on its website for IMSS affiliates and the independent workers. They estimate, considering some assumptions, the pension amount a worker will have at the end of his/her working life, as well as the impact of making voluntary contributions on their pension.

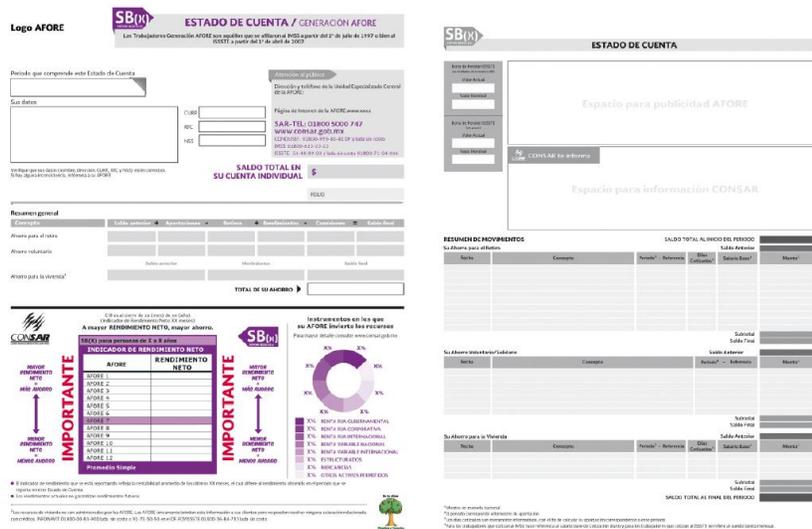
These calculators and their methodology can be consulted in this link:

<http://www.gob.mx/consar/acciones-y-programas/calculadoras-de-ahorro-y-retiro?idiom=es>

(l) New individual account statement

In first quarter of 2014, some modifications were made to the statements that AFORE must send to the savers. The changes provide more accessible and detailed information about the management of the account resources in the AFORE, in order to facilitate the saver's understanding and supervision of them. In June, the new statements were sent.

Graph V.4
New individual account statement
(AFORE generation)



For more details, the following link can be consulted:

http://www.gob.mx/cms/uploads/attachment/file/61693/bol_13-14_Nuevo_estado_de_cuenta_de_Afore.pdf

m) New pension statement

In September 2014, the account holders received for the first time a personalized estimate of the impact of voluntary savings on their pensions. This is intended to raise awareness of the importance of making voluntary savings given the low levels of contribution in the SAR. The next pension statement will be distributed in January 2016.

Graph V.5
New pension statement
(IMSS)

1 ESTIMADO XXXXX: Edad: _____
Número de Seguridad Social (NSS): _____
CURP: _____
Año de ingreso al IMSS: _____
Salario base: _____
Fecha de corte: _____

ACTUALMENTE TIENES UN SALDO DE AHORRO EN TU CUENTA INDIVIDUAL AFORE DE: **\$ 000.00¹**

2 ¿TE HAS PREGUNTADO SI ESTE DINERO SERÁ SUFICIENTE* PARA TU RETIRO?
*Considera que las personas cada vez viven más años, por lo que se requerirá un mayor ahorro.

3 ¿SABES CUÁNTO APORTAS HOY A TU AFORE?*
*Conforme a la Ley, se aporta bimestralmente en tu cuenta AFORE SXX (el 6.5% de tu salario base mensual, compuesto por aportaciones tuyas, de tu patrón y del Gobierno Federal, más Cuota Social).

4 HOY PUEDES INCREMENTAR TU AHORRO EN TU AFORE. DECIDE AUMENTAR TU APORTACIÓN Y AL FINAL DE TU VIDA LABORAL TENDRÁS UNA MAYOR PENSIÓN. ESTÁS A TIEMPO ¡ACTÚA YA!

Ahorro mensual adicional	Bevarás tu probable pensión mensual en*
1% \$	\$ 000.00
3% \$	\$ 000.00
5% \$	\$ 000.00

La mayoría de las AFORE han otorgado rendimientos atractivos a lo largo de 17 años de operación, ubicándose como una de las mejores alternativas de ahorro en el país.

*Este ejercicio tiene un carácter informativo y no garantiza el monto definitivo de la pensión a obtener en el futuro.

Es importante que incrementes el saldo de tu cuenta AFORE realizando **ahorro adicional**. Puedes realizarlo vía depósitos en ventanilla, descuento de nómina, transferencia electrónica, domiciliando tu ahorro y depósitos en tiendas comerciales. Tú decides cuánto y las veces que quieres ahorrar. Puedes retirar tu ahorro a los 2 o 6 meses, o bien al momento de tu retiro. Consulta a tu AFORE. Llama a SARTEL al 01 800 5000 747. Si quieres realizar más ejemplos de ahorro, consulta la **Calculadora de retiro** en www.consar.gob.mx

¡El futuro está en tus manos, empieza hoy!

TU PENSIÓN DEPENDE DE MUCHOS FACTORES. TE PRESENTAMOS LOS QUE DEBES TOMAR EN CUENTA PARA AUMENTARLA.

- Si eliges una AFORE que te dé mejor rendimiento → **MAYOR PENSIÓN**
- Si eliges una AFORE que te cobre menor comisión → **MAYOR PENSIÓN**
- Si aumentas tu ahorro a la AFORE → **MAYOR PENSIÓN**
- Si cotizas más tiempo en el mercado formal → **MAYOR PENSIÓN**
- Si te retiras después de los 65 años → **MAYOR PENSIÓN**

Para conocer más sobre cómo impacta cada uno de estos factores en tu pensión, consulta www.consar.gob.mx

Cifras al cierre de su (mes) de su (año) (Indicador de Rendimiento Neto (IRN) mensual)

A mayor RENDIMIENTO NETO, mayor ahorro.

INDICADOR DE RENDIMIENTO NETO	RENDIMIENTO NETO
AFORE 1	
AFORE 2	
AFORE 3	
AFORE 4	
AFORE 5	
AFORE 6	
AFORE 7	
AFORE 8	
AFORE 9	
AFORE 10	
AFORE 11	
Promedio Simple	

SB(x)

Consulta los datos de las AFORE en http://www.consar.gob.mx/ligas_afores/ligas_afores.aspx

Notas:

- Se incluyen los saldos de las subcuentas de Retiro, Cencantía en Edad Avanzada y Vejez (RCV) IMSS e SSSTE, así como de Ahorro Voluntario (no incluye el saldo de la subcuenta de Vivienda, ni el SAR 92)
- La estimación del aumento a la pensión con ahorro adicional utiliza los siguientes supuestos:
 - Que el trabajador cotiza el 80% de los meses que le faltan para cumplir los 65 años y se pensiona a esa edad; b) Se mantiene fijo el valor de la comisión cobrada por cada AFORE en 2014; c) Un rendimiento real de 4.00% anual (antes del cobro de la comisión) y d) Que el trabajador mantiene el nivel salarial al momento del cálculo (último salario base de cotización, de los últimos 3 años, actualizado con el índice de precios al consumidor disponible al cierre de agosto de 2014. En caso de no existir aportaciones en los últimos 3 años, se considerará un salario mínimo vigente a agosto de 2014). Con los supuestos referidos se estima un rango de pensión para cada nivel de ahorro adicional, bajo la modalidad de Retiro Programado durante el primer año del retiro del trabajador, sin considerar a sus beneficiarios ni el costo del seguro de sobrevivencia que serviría para cubrir las pensiones de sus beneficiarios en caso de fallecimiento. El aumento de la pensión que recibas al momento de retirarte, derivado de tu ahorro voluntario, dependerá del saldo acumulado en tu cuenta individual, grupo familiar y modalidad de pensión elegida.

Archives esta información previa consentimiento de los Órganos de Gobierno de la CONSAR. Los cálculos de este documento se realizaron de acuerdo con la metodología determinada por la CONSAR.

For more details, the following links can be consulted:

http://www.gob.mx/cms/uploads/attachment/file/61634/bol_24-14_Afores_enviara_n_estimacion_personal.pdf

<http://www.gob.mx/consar/articulos/tomar-el-control-de-tu-ahorro-para-el-futuro-el-estado-de-cuenta-afore>

n) **Modifications to the accounts assignation and reassignment process**

The change in the assignation and reassignment process of account gives the individual accounts administration (belonging to workers who have not selected an AFORE) exclusively to managers with the better performance in SAR. In this way, AFORE with the first places of performance in the system are rewarded, so incentives are provide to improve their performance on returns to be awarded in this type of accounts. These modifications shall enter into force in January, 2016.

For methodology details, see the following link:

http://www.gob.mx/cms/uploads/attachment/file/64265/Disposiciones_IRN_compiladas_20151014.pdf

o) **Modifications to the switching and registration forms**

In order to strenght savers' decision-making process, modifications to the accounts switching and registration forms were made. The performance position of the transferring and receiving AFORE is now identified according to the net yield, highlighting the change towards a better or worse position and it includes a section where the worker signs his/her consent for an AFORE change.

Graph V.6
New switching form

Graph V.7
New registration form

p) Modifications to the withdrawal for unemployment form

Modifications to the withdrawal for unemployment form were made to make the worker aware of the negative implications of losing contribution weeks when he/she withdrawal. The worker is also informed that the withdrawal for unemployment will reduce the savings amount, which will negatively impact on the possibility of achieving a pension.

Graph V.8
Form for unemployment partial withdrawal



q) SAR information

CONSAR communication efforts has been intensified to promote savings and to make workers to be really involved with their individual accounts and to have a better pension. Some actions are:

i. Creation of a new blog “*Cómo entender tu ahorro para el futuro*” (“How to understand your saving for the future”) in order to encourage a greater communication with savers. For more details, refer to the following link:

<http://www.gob.mx/consar/acciones-y-programas/como-entender-tu-ahorro-para-el-futuro?idiom=es>

ii. Release of the new free application for mobile phones with important information for savers. For further details, see the following link:

http://www.gob.mx/cms/uploads/attachment/file/61697/bol_16-14_Nueva_APP_deL_sar.pdf

- iii. Design of various infographs to didactically explain in detail each form of the new statement and audiovisuals.
- iv. New web page: www.gob.mx/consar
- v. New SAR website for electronic transactions: www.e-sar.com.mx
- vi. New section in SAR web page: “*Como elegir la mejor AFORE*” (How to choose the best AFORE).
For further details, refer to the following link:
<http://www.gob.mx/consar/acciones-y-programas/como-elegir-la-mejor-afore?idiom=es>
- vii. New section: “*Todo sobre el Ahorro Voluntario*” (All about the Voluntary Saving), at:
<http://www.gob.mx/consar/acciones-y-programas/todo-sobre-el-ahorro-voluntario?idiom=es>
- viii. New workers’ attention service through SAR chats.
- ix. New SAR guide with basic topics allowing savers to know in a fast, simple and understandable way the life cycle of their AFORE account.
- x. Survey for affiliated workers and independent workers.

VI. SAR challenges

There is not a “single model” or a perfect model for pension system. The great challenge faced by all countries in respect of pension matters is to find an appropriate combination of their different pillars in accordance with the institutional and economic context of the country.

SAR is now 18 years. Despite its undeniable progress, the system is facing a series of important challenges, which are briefly described below:

Importance of replacement rates

The main purpose of pension systems is to provide adequate pensions, and the replacement rate (**RR**) is the ideal indicator to evaluate it, which allows to know the pension amount to be received at the time of retirement and whether it is adequate or not. The RR concept refers to the relationship between the pension level and a certain level of income (for instance, the last salary). In other words, it is the percentage representing the pension over the income earned by the worker.

In spite of the fact that RR is a standard measurement and it is widely used throughout the world, there is not a consensus about the denominator frequency and concept of use. Several international entities have studied this matter. For instance, the World Bank points out that the RR refers to the pension value as a proportion of the worker’s salary during a basic period, such as the averages of the last year or of the last five years prior to retirement, or the average salary received during an entire working life. On the other hand, the Organization for Economic Cooperation and Development (OECD) recommends using a concept of gross RR, which is defined as the gross pension divided by the last salary previous to retirement. Another option is to use a similar after-tax RR.

The commonly used approach to calculate the RR is to compare the last salary with the pension received.

In general, RR is defined as:

$$RR = \frac{\text{Pension}}{\text{Salary}} * 100$$

For instance, if the last monthly salary received by a worker before the retirement is 10,000 pesos and his/her pension is 6,000 pesos, then his/her RR will be 60%.

Common sense would dictate that the ideal RR is 100%; nevertheless, it should be considered that the people's consumption basket components gradually change and, at the time of retirement, the needs and life style are different. For instance, it is assumed that a person at retirement age will not probably face any longer expenses related to minor children maintenance since by then they are likely to be part of the labor force. Accordingly, the international trend of a suitable RR fluctuates from 50 to 70%²⁰.

Replacement rates have multiple determinants; the most important are:

- i. The amount of mandatory contributions
- ii. The worker's contribution density, which depends on both the labor market structure and on each worker's stability
- iii. The age of retirement
- iv. The number of working years
- v. The workers' salary evolution
- vi. The system-generated returns²¹
- vii. The fees charged by the pension funds, and
- viii. The amount of voluntary savings²²

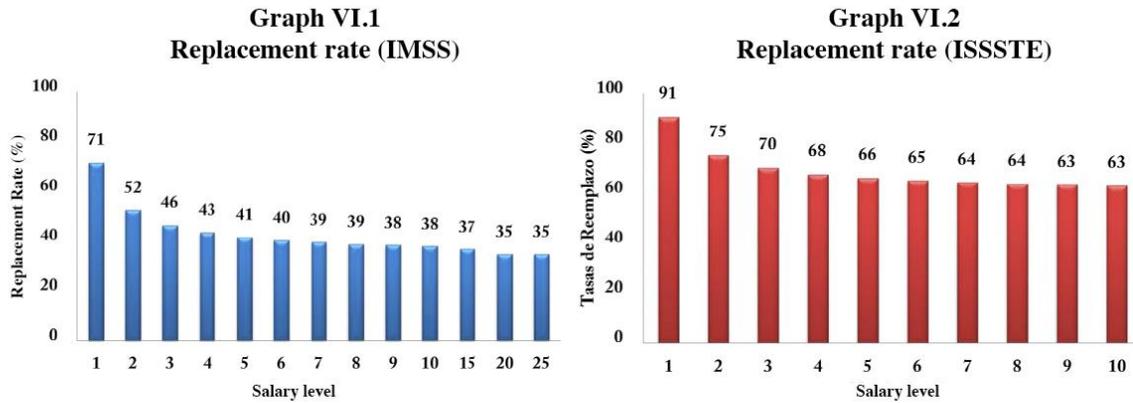
Each of these factors impact distinctly and with different magnitude to the RR. It is possible to have some influence on some of these variables through public policies or changes in the legislation.

²⁰ For instance, the International Labor Organization (ILO) and the OECD (in respect of Central Europe countries) recognize that 50% is a proper RR. For all countries, OECD recommends a TR 70%, considering all the pension pillars (universal pension plus pensions from IMSS, ISSSTE or from other social security schemes, plus pensions from private plans of occupational pensions, and supplementary pensions from voluntary savings proceeds).

²¹ The yields generated by a pension system largely depend on the evolution of national and international financial markets and on the authorized investment regime.

²² The voluntary savings also depend on factors which are exogenous to the pension system such as the fiscal framework of the long-term savings and the conditions proper of the family economy.

The following graphs show some estimates of RR prepared by CONSAR for IMSS-affiliated and ISSSTE-affiliated workers, according to different salary levels and under certain assumptions:



Assumptions: Retirement Age: 65 years. Working years: 40 years. Flat salary career. IMSS contribution: 6.5% of the Contribution Base Salary (SBC) + progressive Social Quota for the July-October, 2015 period (1 minimum wage (MW)-\$4.86603, between 1.01 to 4 MW-\$4.66330, between 4.01 to 7 MW -\$4.46050, between 7.01 to 10 MW -\$4.25780 between 10.01 to 15 MW -\$4.05500, more than 15 MW without CS). ISSSTE contribution: 11.3% of SBC + Social Quota for the July-October 2015 period (\$4.05500). Fee: 1.11% annually. Real net return: 5.11% annually. Life annuity unit (URV) of August 17 2015.

* To reach the 1,250 weeks of contributions required by IMSS Law and to qualify for a pension, it is necessary a minimum contribution density of 60.1% during a 40-year period.

** To reach the 25-year contribution required by ISSSTE Law and to qualify for a pension, it is necessary a minimum contribution density of 62.5% during a 40-year period.

Preliminary figures.

Source: CONSAR.

The impact of several changes in the key parameters on the above-mentioned replacement rates is shown below²³.

²³ The assumptions used here are: retirement at 65 years, working years of 40 years, contribution density of 100%, salaries three times the minimum wage, flat salary career, real annual net return of 3.5% for the individual account balance, and the social quota is not included. The estimates are individually made for each variable, keeping the others constant.

This section is based on the document “¿Qué factores determinan mi pensión? Una visión sobre las tasas de reemplazo” (What factors are determining my pension? A vision on the replacement rates), which is found in the section “Como entender tu ahorro para el retiro (Blog)” (How to understand your savings for retirement (Blog)) on CONSAR website:

<http://www.gob.mx/consar/articulos/que-factores-determinan-mi-pension-una-vision-sobre-las-tasas-de-reemplazo>

1. Low contributions

The amount of contributions for retirement is essential for the balance accumulation that will allow the worker to obtain a decent pension. If the contributions are low, by definition and even though there is a welfare state with good intentions, it is not mathematically possible to get an enough accumulated amount. This is particularly important since there has been an increased in life expectancy in the last decades, so that the accumulated balance must be enough to finance pensions during a greater number of years.

In Mexico, contributions for IMSS-affiliated workers have been constant since the system start in 1997, at a level of 6.5% of the basic salary. This is a very low rate compared with other countries schemes which are similar to the Mexican Pension Saving System, as it is shown in the table below.

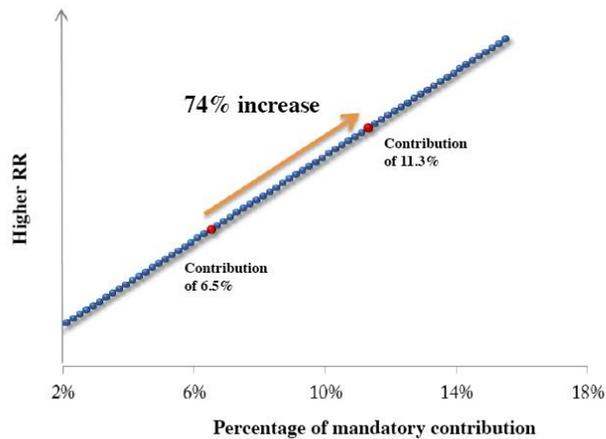
Table VI.1
Pension systems contribution rates
(countries with DC system)

Country	Contribution Rate
Sweden	17.2
Colombia	16.0
Israel	15.0
El Salvador	13.0
Australia	12.0
Denmark	10.8
Chile	10.0
Peru	10.0
Dominican Republic	10.0
Mexico	6.5
Costa Rica	4.3

Source: Prepared by CONSAR with OECD and AIOS data.

The following graph shows the positive relationship between RR and an increased in the contribution percentage; for instance, if the contribution had an increase from 6.5% to 11.3%, then RR would increase in 74%.

Graph VI.3
Replacement rates with different contribution rates



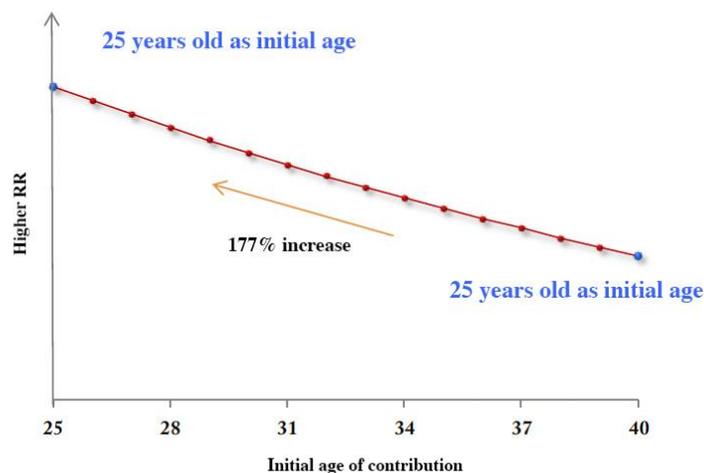
Source: CONSAR.

Although an increase in mandatory contributions has never been an easy option, it is the only alternative to raise the future workers' pensions. Diverse experiences in the world have shown that if this alternative is implemented in a gradual way and offering also some options to savers, the goal of raising pensions can be achieved without affecting the personal expenses and/or the labor market conditions.

2. The challenge to incorporate the Mexicans from an early age into the system

Population in Mexico includes a high number of young people. In order for them to eventually receive good pensions, it is essential that they are incorporated as soon as possible to the labor market and that they begin to contribute. A greater number of working years will allow them to accumulate larger resources in their individual accounts, which will be reinvested allowing them to obtain a higher accumulated balance and therefore a better RR. For instance, if you begin to contribute at 25 years old, at the end of working life, the RR will be 177% more than if you began to work at 40 years old.

Graph VI.4
Replacement rate with different initial ages of contribution



Source: CONSAR.

3. The challenge to achieve higher levels of contribution density

The Mexican labor market is characterized by high mobility of workers between the formal and informal sectors. This circumstance implies that workers may not be covered by social security during a good part of their working lives. The foregoing has a clear impact on the possibility of getting a pension when reducing the number of contribution weeks, as well as to the accumulated amount with a less number of contributions to conform the balance.

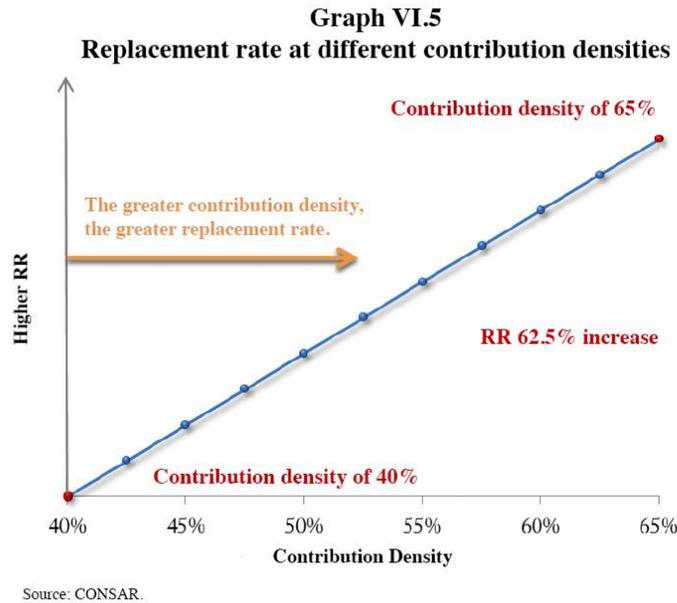
A frequently used indicator to determine the pension a worker may receive is the contribution density, which refers to the total number of years contributed to SAR as a proportion of the total working years. A consistently formal worker will have a higher contribution density. On the opposite case, a worker in the informal labor market will have a lower density of contribution and a lower RR.

When considering the workers who had at least a contribution in the last 36 months until the second quarter of 2015, the average contribution density is 68.7% for the IMSS-affiliated workers, while for ISSSTE-affiliated workers is 76.1%.

On the other hand, a recent analysis with a long-term perspective shows that the average contribution density for IMSS-affiliated workers was 44.4% in December 2013. However, the contribution density is not uniform among the different workers groups: The indicator is 47.2% for the transition generation and of 42.6% for

the workers of the so called "AFORE generation". Besides, in this latter group, the contribution density was higher for males (54.1%) than for women (47.7%)²⁴.

The graph below shows a contribution density passing from 40% to 65%, and the RR increasing to 62.5%.



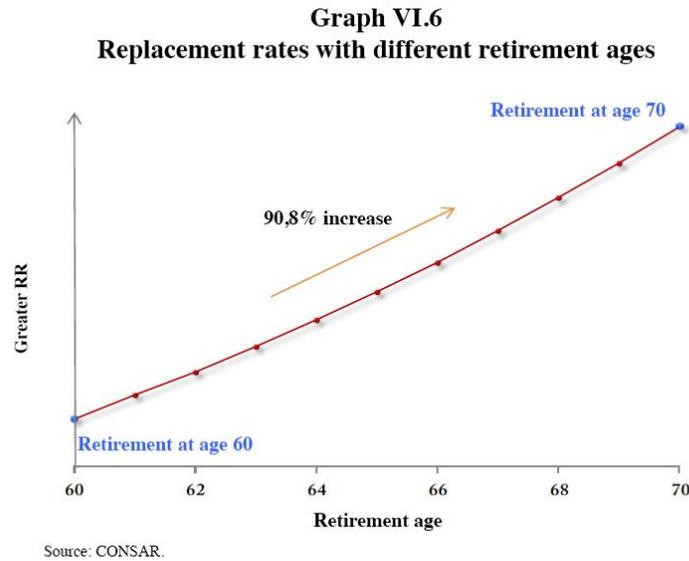
4. Increase in the retirement age increases adequacy (RR)

The age at which people retire is another factor that determines the replacement rate, since it is a variable factor upon which the number of years a pension should be paid is established. In Mexico, during the January-June 2015 period, the IMSS contributor's retirement age was 60 years on average.

As first mentioned herein above, the life expectancy has increased in the last decades, whereby the savings needed to cover the retirement stage have also grown. With an increased life expectancy, the worker may continue his/her productive stage during more years. In this respect, it must be said that most of OECD countries has increased the legal age of retirement.

²⁴ For the assigned workers, it is not possible to determine the sex since no CURP (personal identification number) data are available. In every such case, the contribution density is 31.9%.

For instance, raising the retirement age from 60 to 70 years - for a worker who began his/her work record at 20 years old - would result in an increase of the RR of 90.8%. This significant increase is partly due to a greater number of years contributing, as well as to a compound interest on resources during the additional years²⁵.



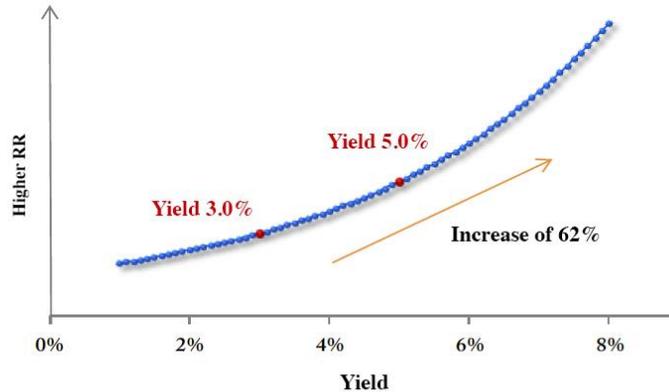
5. The challenge of future returns in SAR

The individual accounts balance obtains a yield derived from investments made by SIEFORE in the name of the holder. Such yield is characterized for depending, in addition to the market conditions, on the investment regime, on the portfolios diversification and on the risk exposure. It is worth highlighting the compound interest importance, which has given returns net of fees accumulated to June this year of 44.6% of the system total net assets.

The graph below shows RR sensitivity to increases in returns. For instance, if the returns increase from 3 to 5%, RR will increase in 62%.

²⁵ Assumptions: Flat salary career three times the minimum wages, contribution density of 100%, real annual net return of 3.5%, contributions of 6.5%, without considering the social quota. A 40-year work record against a 50-year work record is compared.

GRAPH VI.7
Replacement rate at different rates of return

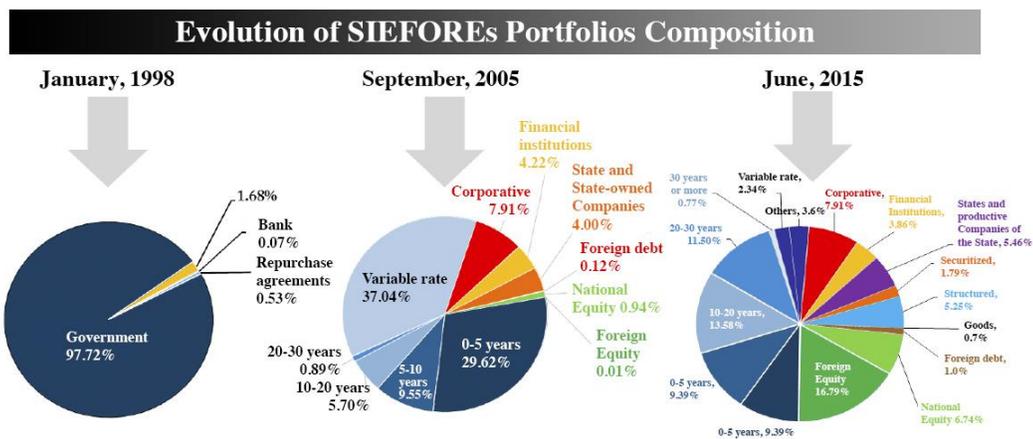


Source: CONSAR.

The investment regime is the main mechanism to promote that the workers' resources are invested in instruments and projects providing competitive returns and so increase their individual account balance and, consequently, their pension.

Since SAR creation, the regime has been gradually broadening, incorporating assets so that a higher investments diversification allows for a higher yield under a controlled risk. At the beginning, and due to a low deepening of the Mexican financial system, most of the resources were invested in government instruments. As seen in the following graph, the regime has been incorporating a greater number of assets classes.

Graph VI.8



Figures at the end of June 2015.

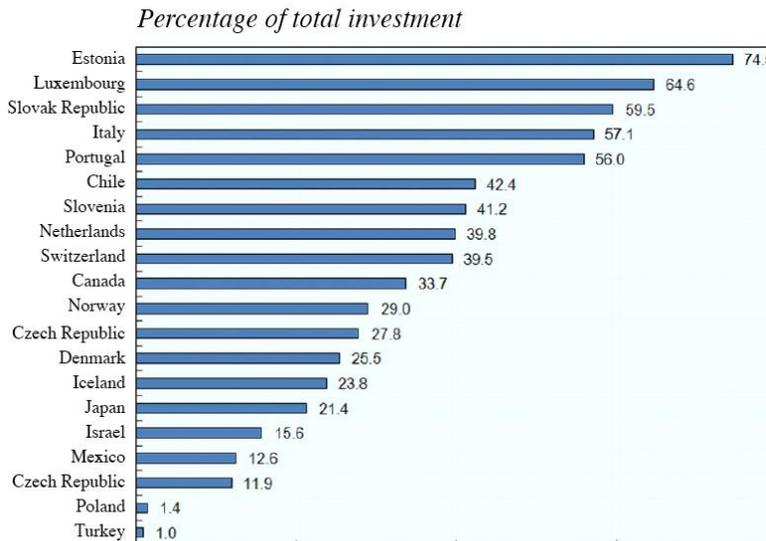
Source: CONSAR.

Although this document is not intended to describe in detail every change made to the regime, it is necessary to point out the fact that its gradual opening must be a continuous process and that, given the current international financial environment, diversification should continue since there are indications that the current investment regime is restrictive and could undermine the workers' assets future returns.

Since in the future the US Federal Reserve Board is expected to begin the normalization of the monetary policy used to promote the economic activity in the country during the Great Crisis, it is not excluded that the financial markets register volatility in which the returns of certain instruments can diminish. For this reason, it is essential to continue with the diversification process and the investment regime broadening in order for returns to continue contributing to the growth in pension balances.

The AFORE's 20% foreign investment limit is very low in respect to international standards, and it has not been modified since 2002. At the beginning of the system, the arguments used to allow a lower level of foreign investment have been exceeded today with a macroeconomic and financial stability, as well as with a liquid foreign exchange market. The debt market has developed significantly and although the capital market should continue being developed, it must not be based on SAR.

Graph VI.9
Pension funds foreign investment in OECD countries, 2013



Source: Pension Market in Focus 2014, OECD.

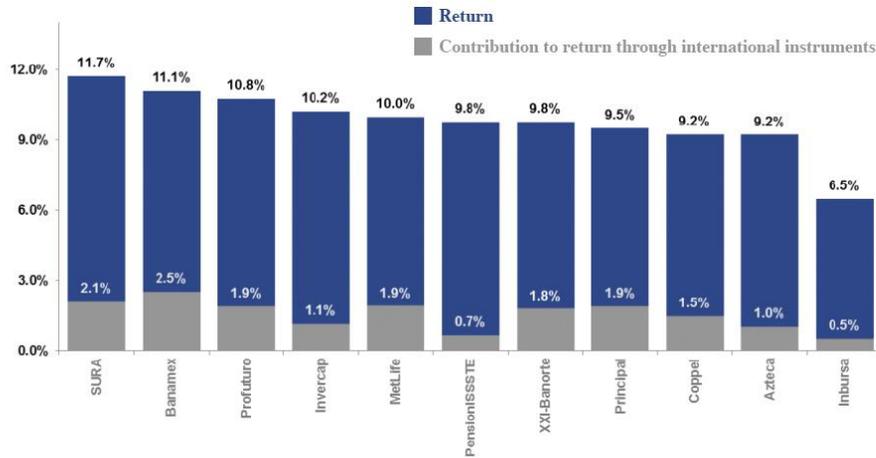
Actually, most of the developed countries and a similar part of the developing countries have not established regulatory limits on this matter for their pension funds and have delegated the responsibility for the foreign markets investment to fund administrators. At the end, the main purpose is to get the highest possible return for savers, and this can only be achieved by offering the pension funds managers an adequate framework for action. The only exception to this rule is the Latin American countries, Chile, Peru, Colombia and Mexico. As shown in the following table, Chile has a maximum limit for foreign investment of 80% for the sum of all funds, while in Peru is 50%. In the case of Colombia, it depends on the fund, but goes between 40% and 70%.

Table VI.2
International Comparison of Foreign Assets Consumption and Limits (OECD)
(2013 for Mexico, 2011 for the rest of countries)

Countries	Foreign Securities Consumption (% of Assets)	Global Regulatory Limit in foreign assets
Estonia	76.4	Without Regulatory Limit
Portugal	55.4	Without Regulatory Limit
Netherlands	42.9	Without Regulatory Limit
Slovak Republic	41.6	Without Regulatory Limit
Canada	29.6	Without Regulatory Limit
Norway	26.8	Without Regulatory Limit
Japan	19.8	Without Regulatory Limit
U.S.A. (BD plans)	19.6	Without Regulatory Limit
Slovenia	41.5	Without Regulatory Limit for EU and OECD countries
Denmark	26.8	Without Regulatory Limit for OECD countries
Switzerland	37.8	Without Regulatory Limit, limit per currency 30% (permitted coverage)
Luxembourg	56.7	SEPCAV and ASSEP System: Without Regulatory Limit Supervised by CAA System: Without Regulatory Limit
Iceland	24.9	Investment in assets of OECD countries is only permitted
Czech Republic	13.9	Without Global Regulatory Limit, there are limits within specific assets
Chile	36.5	It depends on fund: A: 100%, B: 90%, C: 75%, D: 45% and fund E: 35% There is a limit as to all the funds sum (80%)
Peru	27.7	30% of operating limit, although there is a legal limit of 50%
Colombia	15.5	It depends on Fund: A: 40%, B: 60%, C: 70% and D: 40%
Mexico	14.8	20%, regardless of the asset class
Average Consumption	33.8	

As shown in the following graph, even though with a low limit, the inclusion of investments in foreign instruments has significantly contributed to the workers' resources yield. The purpose must be to have this potential extended.

GRAPH VI.10
Annualized returns according to type of investment,
for the period January 2009 to June 2015

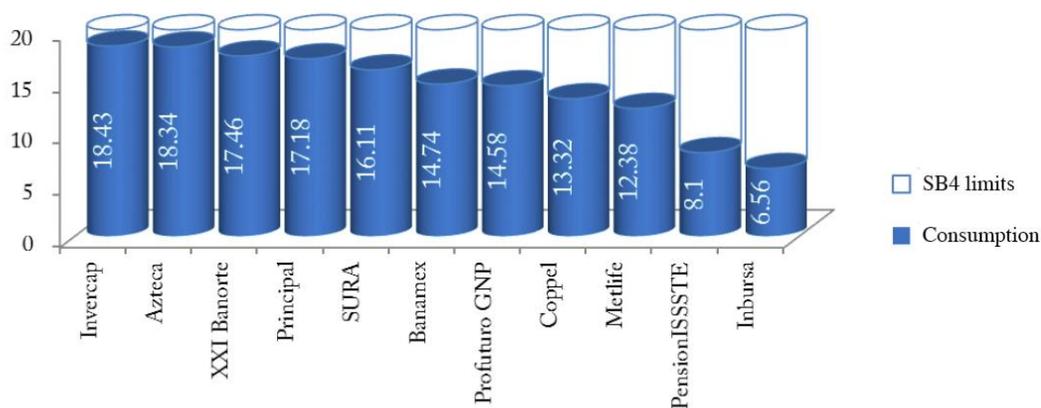


Note: Weighted average yield by net assets. Returns calculated through management prices.
 Figures at the end of June 2015.
 Figures calculated from the first day of 2009.
 Source: CONSAR.

Although in Mexico the investment regime has been gradually opened, some AFORE are now very close to the 20% limit of investment in foreign securities, something which hinders their possibilities to continue diversifying and increase returns. It is highlighted that some of them are the largest and with a higher level of financial sophistication. In other words, the limit is affecting those AFORE that have invested more in human and technological capital to achieve a better financial management of the pension resources.

The graph below shows the limits and consumption of the Basic SIEFORE 4 (SB4), and the fact that the majority of AFORE could reach soon the regulatory limit:

Graph VI.11
Foreign securities consumption and limit
(SB4 in percent, June, 2015)



Source: CONSAR.

A higher international diversification through more investment in foreign securities implies a lower risk for workers' resources by reducing the portfolio country risk. CONSAR has strict filters and requirements to determine which countries are eligible for SAR investment; they need to have regulated and supervised markets according to the best standards. The current 20% limit entails a sub-optimal portfolio, with the consequent loss of higher returns. Onwards, such trend is predictably exacerbating. An increase in the limits would expand the investment possibilities, which would increase the opportunities to achieve best returns/risks combinations.

Moreover, in the event that the limits to the foreign securities investment are not modified, a double cost for workers may arise:

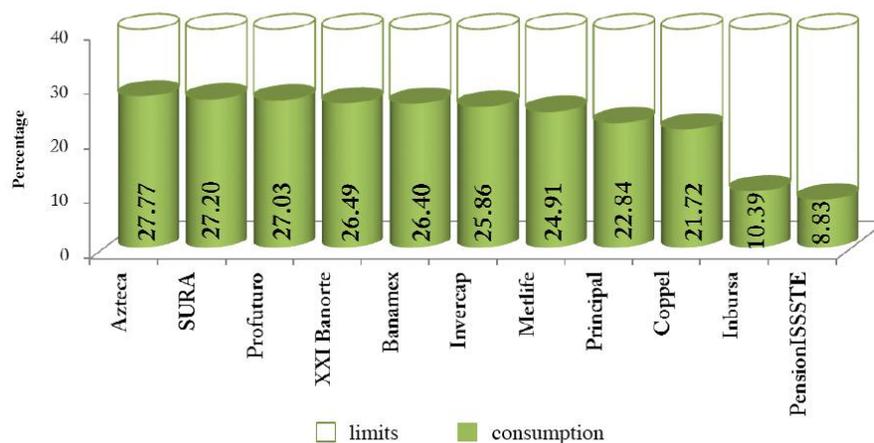
- An over-exposure to a value loss of the fixed-income instruments due to the current concentration in such asset type.
- An opportunity cost of not investing in assets whose returns are linked to the growth of the developed countries and emerging countries.

Overall, both costs could lead savers to obtain lower net returns in the coming years and, as a consequence, a lower pension in their retirement, which would imply a greater fiscal cost to the Federal Government.

Moreover, the fact of not increasing the indicated limits can generate other major risks.

- i. The investments channeled to the domestic market can affect the prices of domestic financial assets, with the risk of generating speculative bubbles. This can cause that the prices of different assets and securities of the domestic market increase above their fundamentals.
- ii. Also, the high concentration of domestic bonds increases the Pension Saving System risk due to the high correlation among domestic assets. A portfolio with higher proportion of foreign securities would have a minor correlation and could help reduce the portfolio risk.
- iii. On the other hand, the fact that AFORE are rapidly reaching the investment limit in foreign securities is more important, given that pension funds have also virtually reached their investment limit in equity, a key element for diversifying any pension fund. Although this limit could be modified through a secondary regulation, doing so without modifying the foreign securities limit would lead to a concentration in the domestic stock market.

Graph VI.12
Equity consumption and limit
(SB4 in percent, June, 2015)



Source: CONSAR.

- iv. Due to a favorable demographic dynamic, it is expected that the accumulation of resources phase continues for about 15 years. It is important to ask where AFORE will invest the future resources if the foreign securities limit is reached and there is a shortage of public offerings by new companies, CKD's and FIBRAS. This could lead to force AFORE to invest in instruments which would not be their first option in normal conditions.

- v. An additional risk is that a lack of the diversification in the portfolios can lead to an unclear differentiation of SIEFORE portfolios, which would also be reflected in less competition in the system.

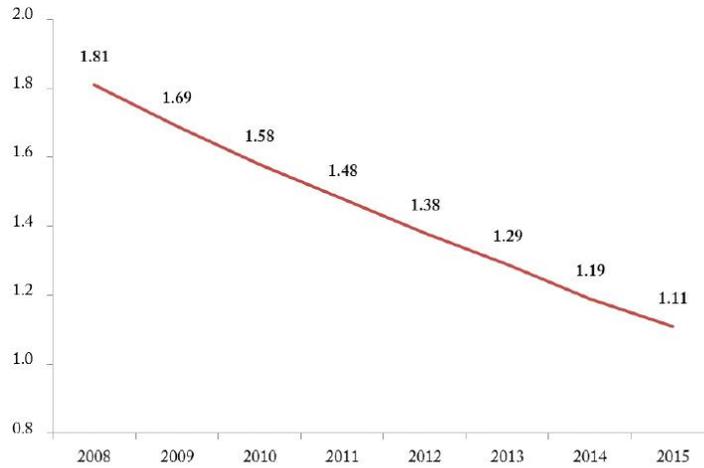
Finally, there is empirical evidence showing that a greater freedom to invest abroad is not associated with an effect of total displacement of the domestic investment. Authors French and Poterba prove that investors, both in developed financial markets and in poorly developed markets, show a persistent home bias ("home bias") in the portfolios composition²⁶. It is therefore expected that a flexible regulatory limit in international securities which is applicable to SIEFORE entails a gradual increase in the foreign securities consumption without any loss of capacity or interest by AFORE in continuing to contribute to the financing of the country development. Additionally, the openness can be carried out as gradually as desired.

6. Lower fees will give higher RR

In the same way like brokers and fund managers charge their clients a fee in order to manage their resources, AFORE charge a fee for investing the workers' resources. These fees have a negative impact on the balance available for workers to finance their pension. For this reason, in recent years, CONSAR has focus in diminishing the fees charge in order to make them fair and consistent both with the expenses made by AFORE and with the fees charged for this type of financial service. From 2008 to date, the industry average fee has been reduced by nearly 40% (70 pb).

²⁶ French, Kenneth and James Poterba (1991). Investor Diversification and International Equity Markets.

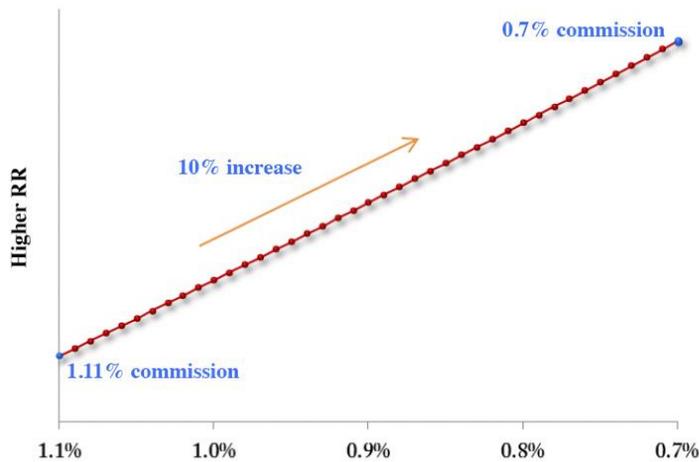
Graph VI.13
Fee over balance
(percentage over balance)



Source: CONSAR.

Due to the fact that resources have steadily increased since the beginning of SAR and will continue to do so during several years, there is scope to continue with reduction of such fee. For instance, if the system average fee is reduced from the current 1.11% to 0.7%, the workers would get a RR 10% higher.

Graph VI.14
Replacement rate at different levels of commission

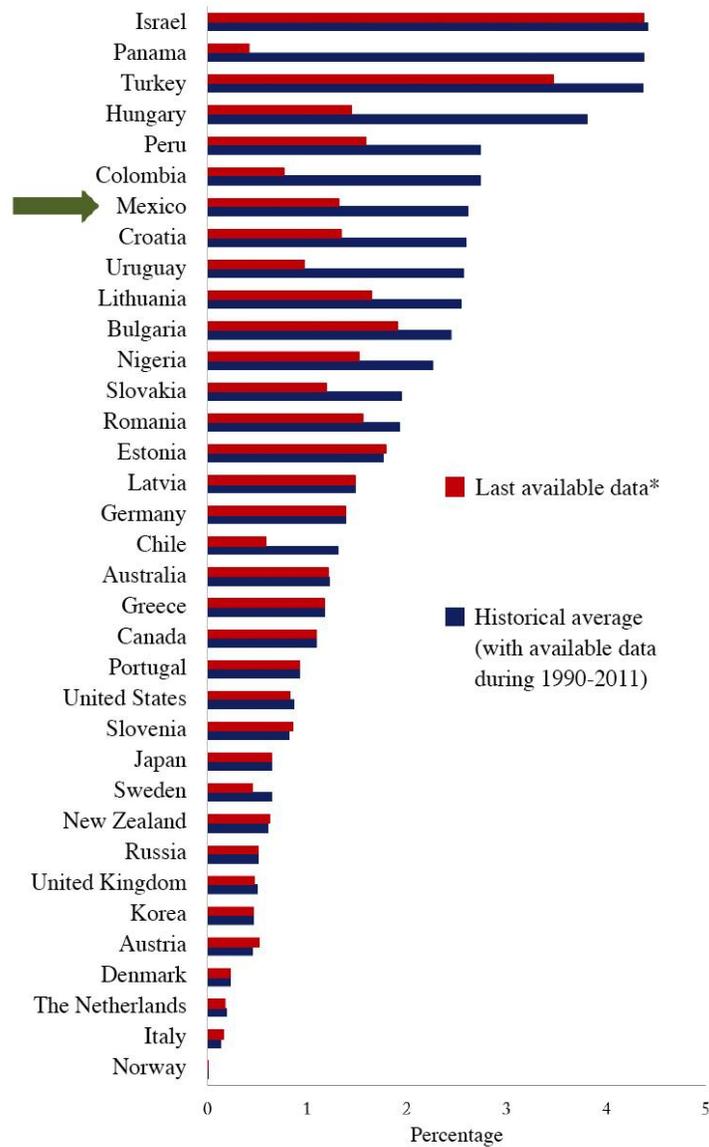


Source: CONSAR.

If Mexico is compared with other countries, it can be seen that while the fee in Mexico is no longer at the highest levels, there is a clear margin for further decrease.

An international comparison of pension funds fees' income in different selected countries is found below (as a percentage of the managed resources).

Graph VI.15
Pension funds commission income
(percentage of managed resources)



Source: Tuesta (2014). Factors behind the administrative commission of private pension systems: an international analysis.

* The last available data correspond to: 2011 (Israel, Bulgaria, United States, New Zealand, United Kingdom, Chile, Colombia, Peru and Mexico), 2010 (Panama, Turkey, Romania, Slovenia, Austria and Italy), 2009 (Nigeria, Hungary and the Netherlands), 2008 (Australia and Norway), 2007 (Estonia, Slovakia, Greece, Canada, Portugal, Russia, Korea, Sweden and Denmark), and 2006 (Lithuania, Latvia, Germany, Croatia, Uruguay and Japan).

In the annual process of fees authorization by the Governing Board, the cost structure of each AFORE is considered among other variables to analyze the margin for fee reduction. There is a possibility to reject a fee proposal. In that case the AFORE should charge the market average fee. However, in the case where the fee is already below the average, it is not easy to make them reduce their fee even further. It is therefore important to provide CONSAR with better tools that will allow it to continue the reduction of fees by the AFORE group.

In summary, theoretical exercises shown above illustrates the RR sensitivity to changes in the factors that determine it. The following table gives an idea of the order of magnitude of the changes to be expected in the RR when the determinants are changed:

Table VI.3
Variation in TR

Alleged modification	Percentage variation in TR
Contribution increase from 6.5% to 11.3%	74%
Initial age from 40 to 25 years old	177%
Contribution density goes from 40% to 65%	63%
Retirement age increases from 60 to 70 years old	91%
Yield increases from 3% to 5%	62%
Commissions reduction from 1.11% to 0.7%	10%

Source: CONSAR.

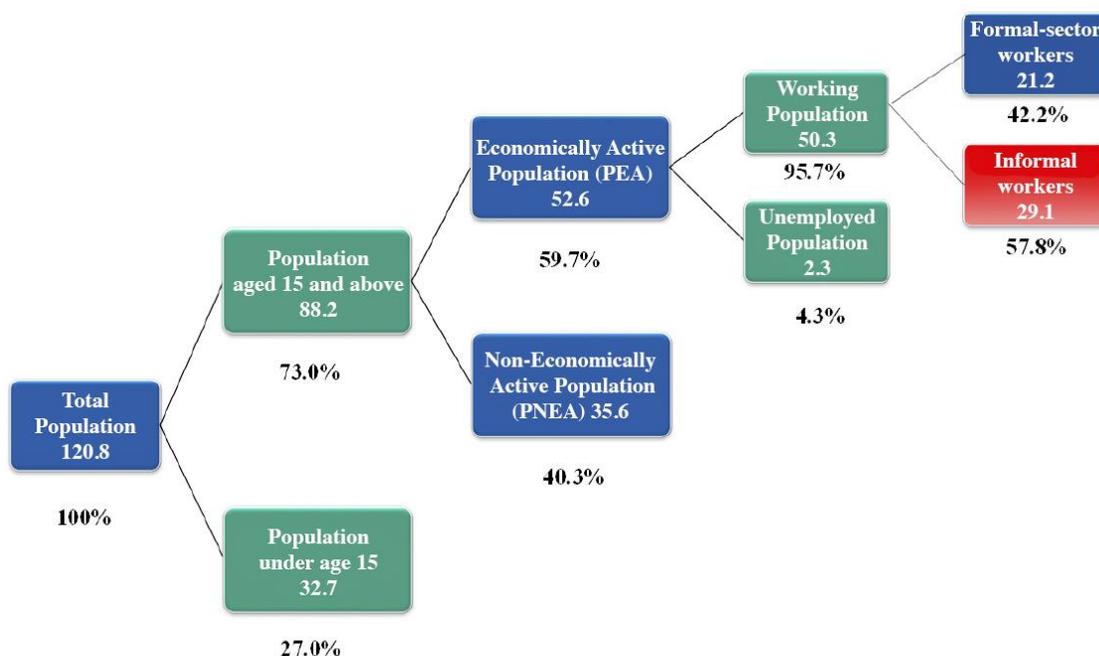
From the above, it is concluded that key variables changes are required in order to be able to offer higher pensions to workers. It is worth noting that a combination of various proposals could provide significant increases in the replacement rate.

7. The challenge of coverage

CONSAR mission includes helping each worker to build his/her pension assets; however, due to labor market dynamics, not all workers contribute to SAR and therefore they are not covered by the scheme. In social security programs, the most common definition of coverage refers to the proportion of people receiving a benefit in respect of a target population. In pension system coverage, it can be calculated in two ways: the proportion of the elderly receiving a pension and the proportion of workers contributing to a social security system.

Mexico's total population was estimated at 120.8 million people during second quarter of 2015; out of them, 73% were 15 years old or more, according to data from the National Institute of Statistics and Geography (INEGI) and the population projections as updated by the National Population Council (CONAPO). As a part of the population of more than 15 years old, there are the Economically Active Population (PEA) and the Non-Economically Active Population (PNEA), who were 52.6 million and 35.6 million, respectively.

Graph VI.16
Structure of the Mexican population
(Second quarter, 2015)



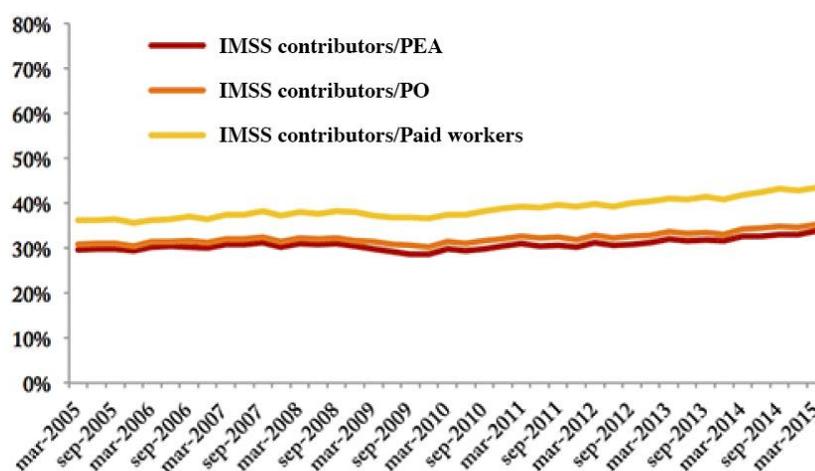
Source: INEGI with information to the second quarter of 2015.

Likewise, 95.75% of PEA was conformed by the working population (PO), while 4.3% belonged to the unemployed population. Within PO, it is highlighted that 57.8% work in the informal sector. It must be noted that 6 out of 10 workers in the working population are in the informal sector and that they do not have access to the social security.

It is important to point out that the informality rates have declined in recent years; in 2015 second quarter, the informal labor represented 57.8% of PO (29.1 million people), a lower level in comparison with previous years. Besides, an increase in the number of formal workers has been observed; at the end of June 2015, 17.7 million workers were affiliated to IMSS. In the last twelve months, almost 766 thousand workers were affiliated to the Institute, in net terms.

Even though the number of people formally working is known, not all of them are the same from one period to another. This phenomenon is due to the fact that workers transit between the formal and informal sectors and this is the main factor causing a low contribution density and workers difficulty to meet the contribution week's requirement. An available indicator to calculate the coverage in SAR is to use the IMSS-insured workers and distribute them among the different labor market indicators. The calculation shows that less than a half of the working population is covered by the system.

Graph VI.17
Coverage rates of IMSS contributors

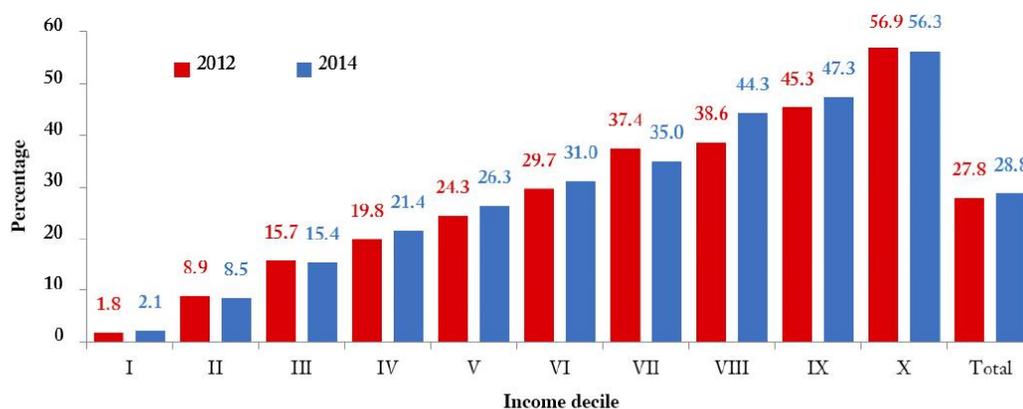


Figures to 2015 first quarter.

Source: Own preparation based on INEGI data.

In relation to the proportion of the elderly receiving a pension, according to the National Survey of Household Income and Expenditures (**ENIGH**), in 2014, only about 30% of the population has a pension granted by a social security institute to finance their old age. It was also noted that those who have such pension are concentrated in the highest income deciles.

Graph VI.18
Population 65 years and over with pension
 (percentage per income decile)



Own preparation based on CONEVAL microdata for measure of poverty, 2012 and 2014 basis.

In respect of other Latin American countries, Mexico has a coverage close to the average; this is not applicable if compared with OECD Member States, where our country has the lowest coverage level.

Table VI.4
Coverage of workers affiliated to social security
 (percentage)

OECD selected countries	Contributors/ PEA	Latin American countries	Contributors/ PEA
The Netherlands	100.0	Uruguay	66.8
Sweden	92.8	Costa Rica	66.5
Japan	84.9	Brazil	52.0
United States	78.5	Panama	49.1
United Kingdom	71.4	Argentina	47.8
Australia	69.6	Colombia	32.7
Canada	68.4	Ecuador	30.4
France	66.2	El Salvador	28.6
Spain	66.0	Dominican Republic	25.0
Germany	59.9	Peru	18.5
Portugal	58.6	Paraguay	16.9
Italy	58.2		
Chile	40.4		
Mexico*	33.1		

* For the contributors data in Mexico, the information of IMSS-Insured workers at the closing of 2014 was used.

Source: ILO (2014). Social protection for older persons: Key policy trends and statistics.

Oliveri, L. and Rofman, R. (2012). "Pension coverage in Latin America: Trends and determinants", World Bank.

There are two main mechanisms to increase coverage in a pension system. On one hand, policies seeking to increase the pension savings during the worker's working life, and on the other hand, the policies that provide non-contributory benefits to the elderly.

Among the former ones are:

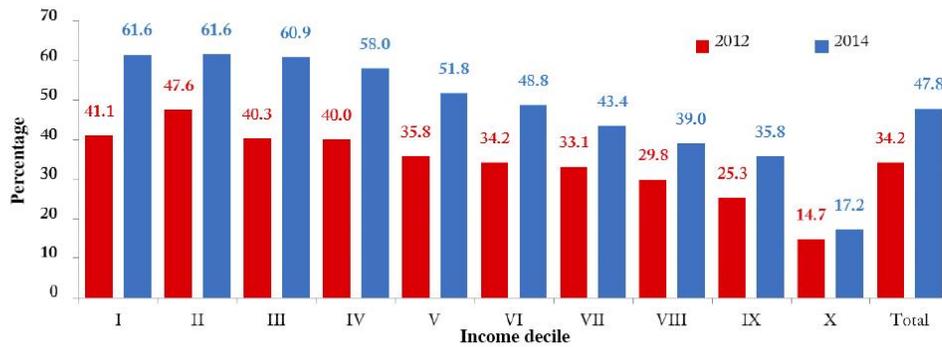
- (a) Automatic affiliation. The employers automatically affiliate their workers to voluntary pension schemes.
- (b) Obligatory affiliation of independent workers. Those workers who are currently in compliance with their fiscal contributions are obliged to contribute
- (c) Mechanisms fostering the formalization at early ages. Subsidies designed to encourage the formal employment among the young.
- (d) *Pari passu* contributions. If the workers make voluntary contributions to some pension plans, the Government and/or the employer will contribute with a proportion of such saving.
- (e) Tax incentives. To attract the largest number of possible savers to the Pension Saving System by granting tax incentives to the workers' voluntary savings.
- (f) Sweepstakes and raffles. Prizes or rights are awarded to participate in sweepstakes or lotteries to those who affiliate to the Pension Saving System.

In respect of the policies providing non-contributory benefits to the elderly, there are three pension modalities:

1. Universal pension. It is intended for the entire population of a country; this pension regularly requires an eligible minimum age only and/or a certain number of residence years in order to be a beneficiary.
2. Target pension. It is targeted at a specific segment of the population, for instance, elderly people living in rural areas, old people with a low income and older people in extreme poverty.
3. Pension subject to receive no other pension. There are programs granting a benefit to all those who come to the old age without the protection of a contributory pension.

It is worth noting that so far in this administration, the increase in the social programs for the elderly has been significant, particularly for the lower income deciles. For instance, the coverage of these programs increased from 41.1% to 61.6% between 2012 and 2014 for the first decile.

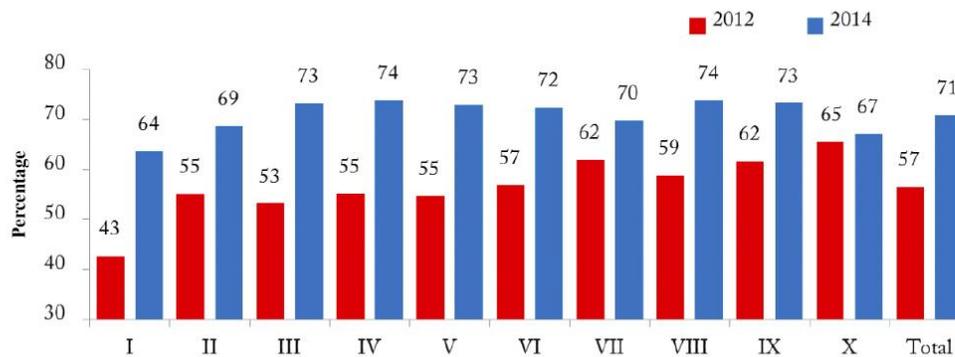
Graph VI.19
Population aged 65 and over having benefits from social programs for the elderly
(percentage per income decile)



Own preparation based on CONEVAL microdata for measure of poverty, 2012 and 2014 bases.

The graph below shows the aggregate number of persons aged 65 and over having one or both sources of funding for the old age: either pension or some benefit from social programs for the elderly. As can be observed, there was in 2014 a greater number of people receiving some type of pensions or benefits for the elderly in comparison with 2012. As already mentioned, this is mainly due to the fact that in recent years the social programs for the elderly have been increased.

Graph VI.20
Percentage of the population aged 65 and over with a coverage
(Pension/retirement and programs of the elderly, per income decile)



Own preparation based on CONEVAL microdata for measure of poverty, 2012 and 2014 bases.

Increasing the coverage is vitally important to guarantee a dignified old age for million people reaching the age of 65 and over, and who will have a greater life expectancy in the coming years. This is not easy to accomplish, mainly because the traditional pension systems were thought to grant a coverage to workers in the formal sector, leaving out all workers not being part of that sector.

Although the international experience has shown that there are various mechanisms to increase coverage, it must be considered that having all these instruments implemented is not enough to guarantee access to a pension, since a given program can interfere with the correct operation of another program. In this respect, the international agencies point out that a pension system design, in addition to include various pillars, should seek the integration of them. This will create the appropriate incentives to formalize the employment, to increase the voluntary participation and to avoid poverty in old age.

8. The challenge of competitiveness

In order to assess and analyze the competition in the AFORE market, it is important to consider that SAR is not a traditional market. The existence of individual accounts arises from an obligation included in the labor contract, in which the employers are bound to deposit their employees pensions contributions. For their part, AFORE were created to manage these accounts privately.

As a result of and in accordance with the Behavioral Economics theory, the workers do not often and actively participate in the decisions on their individual accounts since this represents forced savings that will be only enjoyed in the long term. Although they have a notion of their individual account ownership, they do not react to changes in price and quality. In addition, as these resources will used only to finance their pensions and the individual workers see their retirement as something distant on time, they don't have incentives to engage themselves in some decision-making at this moment.

AFORE income comes from the charging of a fee charged on the balance of the individual accounts and, therefore, they tend to focus their business model to the commercial aspects, since as they obtain more individual accounts (resources under management), their income increases.

In the absence of a real market discipline due to the industry characteristics, not all AFORE are forced to invest the resources in the most efficient manner since they do not face the costs of offering minor returns or charging more or providing poor-quality services. Therefore, they do not incur in costs related to improving human capital necessary to establish better investment strategies.

Additionally, there are significant economies of scale in the industry which often leads toward concentration. The consequences and risks of both the system industrial organization design and a lack of competition among AFOREs result into costs for the workers:

Excessive switches

In a study conducted by CONSAR, it was found that 12,561,076 switches were settled from 2009 to 2014, representing about 45% of all historical switches. The amounts switched during this period amounted \$1,300 billion pesos, and their purchase and sale entailed a high transaction cost.

Graph VI.21
Switches evolution, 2009-2014

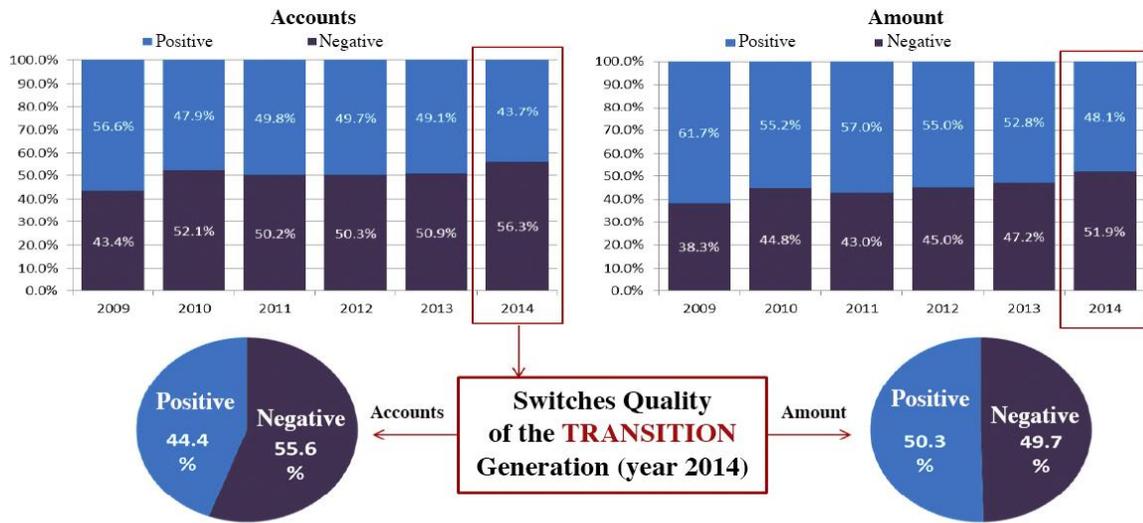


Source: CONSAR.

Switches without added value

According to a study conducted by CONSAR between 2009 and 2014, a very significant number of switches were from an AFORE with higher returns (IRN) to an AFORE with lower returns (negative). During 2014, 56.3% of the settled switches were moved to an AFORE offering a lower IRN, which represents 51.9% of the transferred amount.

Graph VI.22
Switches settled due to quality



Source: CONSAR.

Most of the switches correspond to the “transition generation” accounts, whose owners will not receive a pension with the resources of their individual accounts: 2 out of 3 switches and 4 out of 5 settled pesos were associated to the “transition generation” workers.

Additionally, AFORE do not seem to have the incentives to create a link with the transition workers or be interested in maintaining a lasting relationship. Between 2009 and 2014, 45% of the switches were made prior a 3-year stay in an AFORE.

Graph VI.23
Amounts switches from 2009 to 2014
(million pesos)

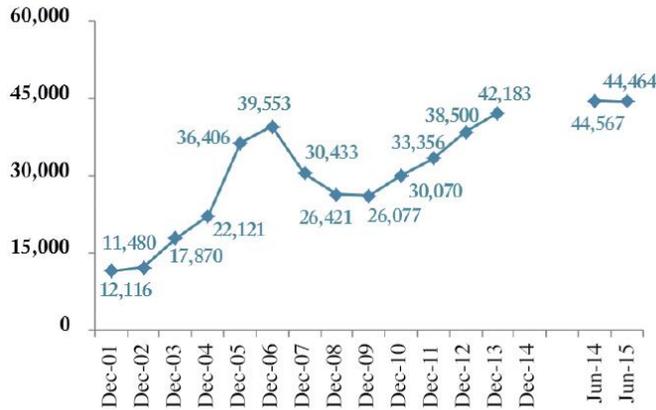


Source: CONSAR.

Sales agents

Some AFORE’s business model is based on attracting a greater number of accounts. For this purpose, they recruit many sales agents dedicated to convince the workers to switch their accounts, although not being necessarily convenient to the worker. At the end of June 2015, SAR has 44,464 sales agents.

**Graph VI.24
Number of sales agents**



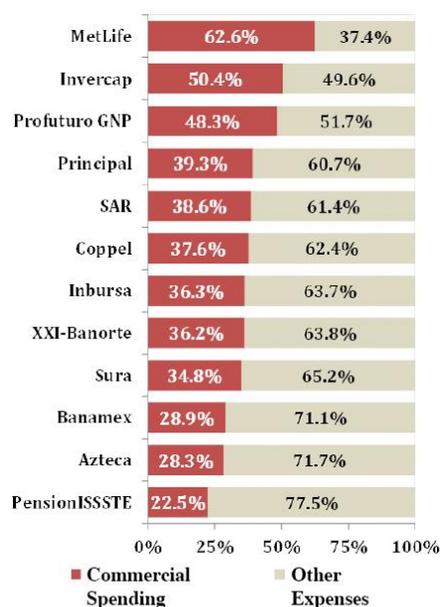
Source: CONSAR.

As noted in the previous paragraph, most of the switched accounts correspond to the transition generation workers since they have a higher balance. At a cost of 2% per switch, the sales agents generated revenues of about 25 billion pesos in the 2009-2014 period, out of which 20,000 million pesos are from the transition generation.

High commercial expenditure

All this is reflected in a high commercial expenditure. AFORE’s commercial spending constituted 38.6% of total expenses made in June 2015. These resources could be used in a better way by the managers, for instance in human capital investment in order to have a better administration and investment of resources.

Graph VI.25
Commercial expenditure
(percentage of total spending, June, 2015)



Source: CONSAR.

On the other hand, accounts switched and high commercial spending by managers are not the only costs, since the sub-optimal decisions to chose an AFORE result into fewer resources for the worker’s future pension, as well as in a greater fiscal cost to the federal government, since in the case of the transition generation, it will receive fewer resources to complete the pensions.

9. The challenge to increase the voluntary savings

The voluntary savings is an essential element in the pension systems. Its purpose is to complement the pension amount that will be obtained from the mandatory pension system²⁷. So, such with additional savings, the workers will increase the accumulated balance intended to finance their retirement and, consequently they will increase their replacement rate.

It is important to recall that in Mexico the mandatory contribution percentage is one of the lowest at international level, therefore it is expected that the accumulated pension amount and, accordingly, the replacement rate that workers will have at the end of their working life will be insufficient. All this, despite

²⁷For a further discussion see: Holzmann, R. & Hinz, R. (2005). Old Age Income Support in the 21st Century. World Bank.

the fact that the returns obtained by AFORE have been above the returns granted by other investment alternatives.

Nevertheless, despite the growth registered during the last years, the voluntary savings represent only 1.2 % of the system net assets in June 2015. The causes for the low voluntary contributions in SAR are diverse, and one of the most important is the society savings capacity. There are others, however, with some possible solutions. These ones and some possible solutions are summarized in the following table:

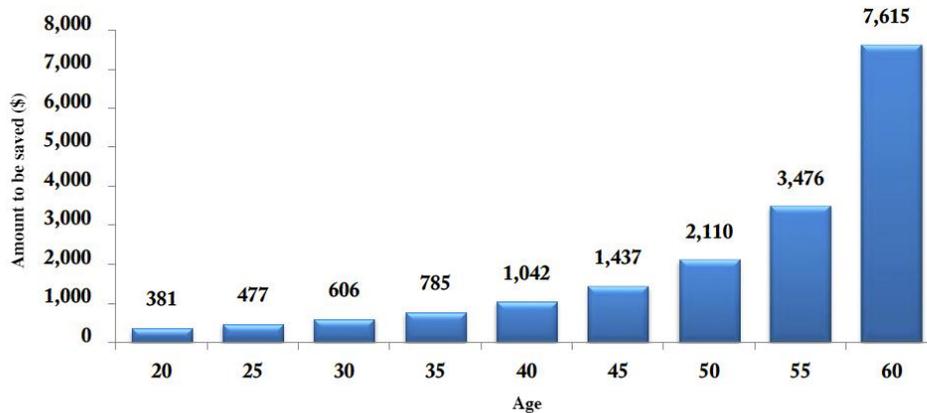
Table VI.5

Cause	Responsibility	Solution
1. Lack of monetary and non-monetary incentives.	Executive and Legislative Power/ Companies.	<i>Pari passu</i> contributions / sweepstakes/ lotteries.
2. Process for voluntary contributions is complex.	CONSAR and AFORE.	To offer modern, easy and accessible methods to all workers in the country.
3. Lack of wider dissemination about the voluntary saving importance.	CONSAR and AFORE; labor and employer sector.	To provide further information to raise awareness about the voluntary savings importance.
4. Lack of important fiscal incentives for the voluntary savings.	Executive and Legislative Power.	To increase the ceiling for the deduction of the voluntary contributions.
5. Companies have a low participation on the promotion of the retirement voluntary savings.	Business sector.	To facilitate savings of affiliated workers.
6. It is necessary to learn more deeply about why people do not save for their retirement.	CONSAR and AFORE; labor and employer sector.	Research projects directed to understand the workers' behavior in respect of retirement savings.

Since the mandatory pension savings will not be sufficient to achieve an adequate replacement rate, it is necessary to promote the saving of additional resources for the retirement on a voluntary basis and that these savings start as soon as possible. Not to do so and to postpone the decision to save would have an important impact on the accumulated balance. Assuming that one wishes to collect \$500 thousand at age 65, to achieve this goal one must save \$381 per month if one starts contributing at age 20. However, if the decision to save is taken when being 50 years old, the corresponding figure for monthly savings would increase to \$2, 110.²⁸

²⁸ For this example, a rate of return on annual constant savings of 3.5% is assumed.

Graph VI.26
How much should one save each month to accumulate 500 thousand at age 65?
(pesos)



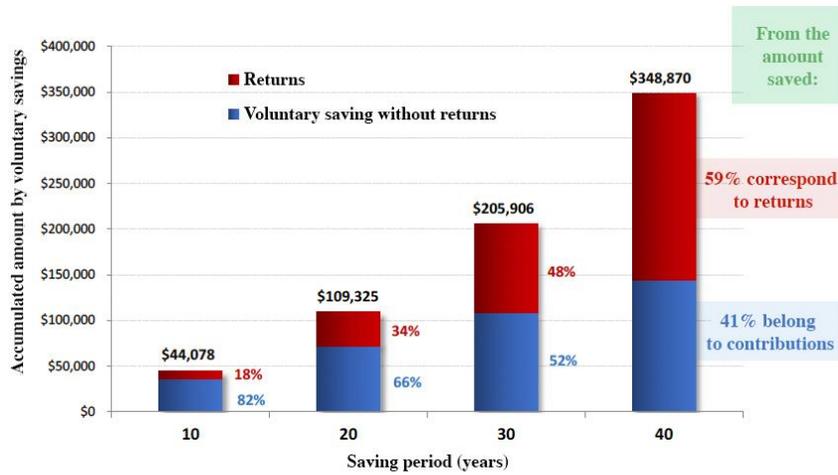
Source: CONSAR.

CONSAR has established a set of simple and reliable mechanisms for workers, so that they have the opportunity to make additional pension deposits in their individual accounts. CONSAR recently formalized strategic alliances allowing the workers to make voluntary contributions in the branches of Telecomm and in 7-Eleven stores. In a simple way, any person, i.e. including those workers who are not part of the formal economy, may go to deposit small amounts that in the long run will make a difference.

In order to illustrate the above, the institution has recently launched an advertising campaign called "10 pesitos al día" (10 pesos per day). It is intended to encourage the voluntary savings among workers, particularly for young people, making them aware of the active role they must play in the resources accumulation they will have available for their retirement. If one may think that ten pesos a day is a relatively small amount, voluntarily and periodically saving such amount and during a long time horizon could significantly increase the pension the workers would get at the end of their working life, in addition to fostering the culture of retirement savings.

The following table shows the amount accumulated by a worker that saves ten pesos per day during different time horizons. It is noted that the longer the period of savings, the greater the accumulated amount; in this example it can save 349 thousand pesos after 40 years, in comparison with 44 thousand pesos during 10 years.

Graph VI.27
Accumulated amount by voluntary savings (\$10 per day)



Source: CONSAR.

Note: The exercise assumes an annual rate of return of 4% and 30-day months.

On the other hand, CONSAR has implemented a simple mechanism of debit card domiciliation, by which in a safe manner and from the comfort of their homes, the workers can make voluntary contributions through the centralized website e-sar.

It should be noted the need for a greater participation of all SAR-involved parties: the government, the private companies and the savers, in order to increase the voluntary contributions amount in Mexico. For its part, CONSAR will foster the legal and regulatory changes required to take advantage of the enormous potential of the voluntary pillar in the SAR.

10. The challenge of the decumulation phase

Although SAR is currently under a full expansion phase, the decumulation phase will initiate in about 10 years from now.

Questions arise in relation to the insurer's capacity to manage a greater flow of resources, as well as the competition among the insurance companies offering products for retirement and the suitability of them, and if other instruments, already existing in other countries, should be offered. CONSAR is aware of the diverse features of the retirement products, and also of the assumptions behind them that can make a big difference in the workers' pensions.

The retirement products are designed taking into account several risks: (i) longevity risk, that is to say that an individual lives more than expected against the financing capacity of his/her resources; (ii) market risk, which refers to the difference between the discount rate used to calculate the pension and the interest rate observed in the market; and (iii) inflation risk, which implies that the consumption basket price during the retirement period increased by a higher rate than the pension.

In Mexico, there are only available two retirement products: tradicional life annuities and programmed withdrawals. There are diverse problems related to annuities:

- The life annuities market in Mexico is underdeveloped; the Law permits only one financial product, which means that there are only four insurance companies currently offering annuities for retirement, so restricting competition in the sector.
- There are only two products available for the retirement:
 - i. Life annuities
 - ii. The programmed withdrawals.
- Insurers have "advisors", in charge of promoting their company services.
- Advice is not always objective, so that one may select an expensive product, both for the social security institutes and for pensioners.
- Lack of a broader range of retirement products that could be combined with each other, in order to better face the market and longevity risks with lower prices. The inclusion of new instruments could definitely improve the decumulation phase conditions.
- Lack of information for workers, that difficults them to take good decisions.

The insurance companies offer life annuities, which are intended to provide an income flow for life, and indexed to inflation, in exchange for the worker's resources ownership. They comply with the aim of absorbing most of the risks the pensioners are exposed to and the income provided by them depends on two technical variables: the interest rate (or a discount rate) and the mortality table.

The interest rate indicates the returns that the worker will be obtaining from the delivered resources as assumed by the insurer, so that the greater the rate, the greater life annuity they will be receiving. However, if when the worker is buying a life annuity the level of real long-term interest rates is very low, as it is today, the worker could assess the possibility of postponing his/her retirement at a time in which the rates have a higher level.

The mortality table shows the horizon during which the pension will be paid, i.e. the life expectancy at the time of receiving a pension. Because of this, the greater the worker's age, the greater life annuity he/she will be expected to receive. This table is periodically updated and in countries like Mexico, where tables are distinctly used for men and women, the fact that the latter have a greater life expectancy results in a lower life annuity for women. In addition, since the insurance companies do not have the medical records of each individual to know their life expectancy, they use conservative mortality tables²⁹.

An additional factor negatively impacting on the individuals to buy life annuities is the fact that they cannot be reversed, so that the pensioner waive diverse possibilities, for instance to leave a legacy, to maintain a reserve amount for contingencies or investment.

For most people, the life annuity offerings are difficult to assess and compare. Once hired, there is limited information about them and most workers do not have the required knowledge to understand the information provided. There are also psychological effects and biases in the individuals' decision-making as well as a lack of decision-making consistency that indicate a general rejection towards acquire a life annuity. A psychological barrier has been found to deliver a significant amount of money in exchange of small and periodical money flows, when people in general prefer a present consumption. One last factor related to life annuities is the risk that the insurer goes bankrupt and does not comply with the promised payments. This possibility is known as counterparty risk.

In order to facilitate the life annuities purchase procedure, an electronic auction mechanism system was established in 2009, through which the insurers present their life annuity proposal. Each worker is given a document of choice containing the diverse life annuity offers. It is necessary to work on the simplification and improvement of the information supplied to the workers so that they can make a good decision.

²⁹ In Mexico, insurers use the principle of "biometric bases more conservative than the technical reserves", which considers the longevity aggregate risk materialization (i.e., all pensioners end up living more than expected). This behavior responds to the opportunity cost imposed on them by the legislation, which permits that the required reserves amount depends on the assumptions used to evaluate the liabilities so incurred. This means that, to the extent in which the insurance companies use more conservative mortality tables, they end up reserving less capital.

The other pension product is the programmed withdrawal, in which AFORE provide a monthly income according to a given number of years, with a recalculation of the amount every year, taking into account the life expectancy. The resources remain invested and individuals have the option to buy a life annuity later on. The resources ownership remains with the worker, so they can inherit the remaining resources.

Since CONSAR determines the methodology for calculating the monthly amount of the programmed withdrawal, the payment will be the same in the first year regardless of the AFORE in which his/her resources are deposited. However, since they are still being invested, it is important to select an AFORE giving good returns and then being able to improve his/her prospects of pension.

It is interesting to comment that the pensioner may live longer than estimated and, therefore, the resources are depleted. If in the annually recalculation the remaining resources are lower than the guaranteed pension, the AFORE must pay monthly payments equivalent to the PG until the resources are completely depleted.

In comparison with a life annuity, the programmed withdrawals offer the advantage of a life annuity purchase deferral in the event that interest rates are extraordinarily low; as well as keeping ownership of resources, with the possibility of inheriting the remaining resources; and of participating in the profits (and risks) of financial markets. While among SIEFORE the investment regime in which these resources can be invested is the most conservative, it is less strict than the insurers option, so that it is possible to obtain higher returns.

In the proposal for the Reform of the Social Security Law and the ISSSTE Law, the combination of the life annuities and programmed withdrawals schemes has been considered, since they are complementary and not mere substitutes, which would optimize the resources use.

As long as a greater number of workers of the “AFORE generation” is close to retirement, it would be desirable to include a wider range of retirement products, which could be complemented now with the existing products, like:

- **Deferred Annuities.** The benefit payment starts a number of years after its purchase. Its cost is less than the immediate life annuities and these ones can complement the programmed withdrawals by covering the longevity risk,

- Temporary Annuities. They only pay benefits during a certain period of time. They do not cover the longevity risk, but they cover the financial risk.

In Mexico, the total withdrawal of resources exists when the worker has not reached the required weeks of contributions. By making a total withdrawal, the worker is exposed to all the risks of the retirement stage, so the proposal of Reform of SAR Law contemplates that those workers who receive a pension refusal may only use their resources to acquire either a life annuity or a programmed withdrawal.

Therefore, in order to ensure that the AFORE generation, at the time they start to massively retire (in 2030 and onwards), may have suitable resources to enjoy better pensions, it is necessary to redouble efforts to further develop the life annuities market in the country.

11. The challenge of the financial education and savings for retirement culture

The decisions related to finance and retirement are complicated for common people. Although they seem to be simple issues, even individuals with a relatively high level of education do not take good financial decisions. This may be due to diverse reasons, the lack of financial education and savings for retirement culture is one of them, as well as to certain economic behavior characteristics that make us take decisions which are not always "rational".

It has been found that a greater financial education is related both to a higher level of savings and to better pensions. One of CONSAR's challenges is to promote a greater financial and savings for retirement education and to involve more the workers with their individual accounts and their retirement.

The main obstacles to make the savers involved with their pension funds are:

1. The general level of financial education and savings for retirement culture
2. Financial myopia

3. Inertia/procrastination
4. Mistrust
5. Risk aversion
6. System complexity
7. Lack of information

There are important issues in SAR, in which the worker requires a greater financial education and savings for retirement culture in order to take appropriate decisions and to have a better retirement. Among some of the decisions to be taken by the worker are:

1. **Registration.** The lack of a financial education or of any interest in their individual accounts makes that many workers are not interested in knowing the AFORE in which they are included and therefore they are not registered. The registration brings important benefits such as being able to receive a higher return or services from the administrator.
2. **Returns.** Many workers are not aware of the returns importance in the balance accumulation, and they do not look at the return offered by their AFORE. Knowing the difference in the replacement rate obtained for the workers having the same characteristics but that are in different AFORE is essential.
3. **Fees.** The fees charged by some managers are very high, and a good part of workers choose AFORE without considering this element that literally eats part of their balance. A greater financial education could result in a better decision-making and hence to a greater pension and replacement rate.
4. **Switches.** An AFORE change is one of the main decisions related to an individual account. Unfortunately, due to the lack of financial education many workers accept to be "guided" by the sales agents who invite them to switch their accounts to an AFORE with not a better net yield. About 50% of the switches made in the last five years has been to an AFORE offering lower net returns, resulting in an important cost to the worker.

5. **Withdrawal for unemployment.** Since there is no unemployment insurance in Mexico, SAR permits to support the worker who complies with certain requirements during unemployment periods. However, the lack of a financial education does not allow the worker to see that he/she is exercising a preference for a present consumption rather than for a future consumption. Making withdrawals for unemployment reduces their individual account balance and reduces the number of contribution weeks, something which seriously affects their possibility to achieve a pension. A greater financial education would allow them to exercise this right only in cases of emergency and not, as currently observed, with the desire to recover resources from the AFORE thereby affecting their future.
6. **Statements of accounts.** These are the main instrument to provide the worker with information on his/her individual account, although many workers are not unfortunately interested in knowing it because they regard the retirement as something very distant.
7. **Voluntary savings.** This is the main instrument that can be used to improve the pension. A greater financial and savings for retirement culture, increases the chance that savers get aware of the importance of this decision.
8. **Beneficiary designation.** On many occasions, due to lack of information, the workers do not designate the beneficiaries of their resources, a fact that complicates the procedures in the event of death.
9. **Independent workers.** While not being affiliated to IMSS or ISSSTE, the independent workers have the possibility of investing their resources in SAR. Notwithstanding, due to a lack of information and financial education, very few independent workers have opened an AFORE account.
10. **Retirement.** Most people think in the present and not in the future. Retirement is regarded as something very far, which will be resolved at a later date. Since the country is in a stage of aging, which will be dramatically accelerated, it is crucial to generate a savings for retirement culture.

At the beginning of this administration, CONSAR established as a priority the promotion of a of medium-term strategy of financial education and savings for retirement culture. However, there is much to be done which requires a greater involvement of AFORE, companies, trade unions, the media, and the government itself.

VII. Conclusions

In this document an assessment of SAR was presented, in which the system main benefits and progress in the course of its 18 years of life have been highlighted. As shown in this text, the achievements are innumerable. Likewise, the main challenges that must be attended to consolidate a national Pension Saving System were discussed so that each worker may build his/her pension heritage. Some important actions that could contribute to SAR strengthening are listed below:

- To adopt a genuine non-contributory "Zero pillar" for all Mexicans.
- To integrate the define benefits pension systems to SAR that still prevail in many Mexican states and in public universities.
- To evaluate the convenience of increasing the mandatory contributions.
- To continue establishing mechanisms to stimulate the voluntary savings, especially through appropriate fiscal incentives and pari passu schemes.
- To seek incentives to enroll independent workers to the SAR.
- It is essential to continue with policies that encourage a greater hiring or permanence in the economy formal sector and so to increase SAR coverage.
- It is urgent to continue making the investment regime more flexible, in particular to increase the investment limit of 20% in foreign securities, as well as the 40% on equity (SB4).
- To continue with the reduction on fees.
- To deepen in the financial education and savings for retirement culture.
- To take steps to induce a greater and better competition among AFORE.
- To link the retirement age with the increased in life expectancy.
- To expand the available products at the time of retirement.

In order to confront these challenges and to consolidate the Pension Saving System, it is imperative to establish a social and political dialog to achieve the required consensus. By implementing the above-mentioned proposals, the coverage and the pensions may be increased. The main beneficiary of these changes would be the worker.

With this assessment work, CONSAR reiterates its intention to lay the grounds for a constructive exchange of ideas and proposals among the different players related to the pensions. In this way, the institution confirms its commitment to consolidate a reliable and inclusive Pension Saving System, a preponderant pillar for the heritage of the retirement savers.

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