

Economic Watch

Pensions

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Economic Analysis

Pensions
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Regulatory and Market Changes in the Retirement Savings System (SAR) in Mexico towards the right direction

- **In recent years, regulatory changes in the Retirement Savings System (SAR) have been a gradual process to encourage greater growth in savings, increase profitability to accomplish better pensions for members, and recruit more workers to the defined contribution scheme (eg ISSSTE).** Although, challenges still remain for a better SAR, these changes can be viewed positively and are towards the right direction.
- **Funds under management by the Afores as of January 2012 amount to 11.8% of the GDP,** at a total of 1,640,892 million pesos that demonstrates a strong growth trend, in which the last 3 years have increased to an average of 1.6% of GDP annually.
- **Due to the increase of savings, 2011 has been a successful year.** For example, voluntary savings nearly tripled in comparison to the previous year at 12 billion pesos. In 2011, mandatory savings for retirement increased by 12.6% in nominal terms.
- **The SAR has obtained good returns;** gross returns over the last 24 months were a nominal 10.2% compared to the last 36 months which was 10.43%, while the historical gross performance over the 14 years of the system is an annual average of 13.37% nominally and 6.54% in real terms.
- **Regulatory changes have helped optimize the risk-return profile of the SAR,** thanks to the introduction of the multi-fund scheme linked to the life cycle of the worker, the more flexible investment regime of the Pension Funds (Siefores), and the construction of a long-term performance indicator to boost competition in the market.
- **The reduction in fees charged by Afores** has been gradual but constant over the last five years.
- **Transfers between Afores and the assignation of non-registered accounts** are subject to criteria that allow the worker to maintain his or her savings invested in Afores that have consistently provided good returns.
- **The Net Return Indicator (IRN)** helps the worker to objectively compare the returns from the different Afores.
- **Recent regulatory changes allow greater diversification of investments,** which will benefit workers by making it possible to obtain better returns on pension savings.

Retirement saving increases

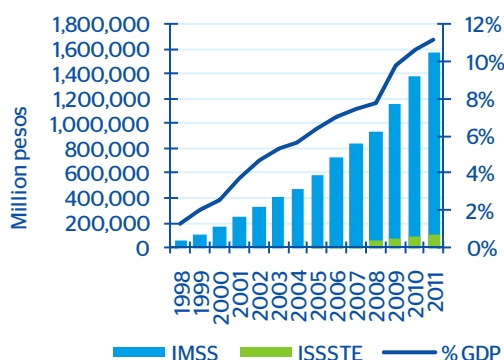
At the close of January 2012, assets under management by Afores totaled 1,640,892 million pesos, while the number of accounts managed surpassed 42.5 million. As a percentage of GDP, pension funds in Mexico have risen from 1.4% at the end of 1998 to 11.8% at the close of January 2012. In the last three years, there has been a fast growth of more than 1% of GDP annually. This growth has facilitated with the defined contribution scheme for state workers (ISSSTE) and the returns obtained in that period.

The average annual growth of assets under management by Afores over the last ten years has been 20.4%. In particular, in 2011 the increase in mandatory savings was equivalent to 1.3% of GDP (12.6% up on the figure for 2010), while voluntary savings almost tripled in 2011 compared to the previous year.

The increase in voluntary savings is attributed to many factors; an increase in financial education in the population, tax incentives for recruitment, more effort in promoting the benefits in savings by the Afore, and also the growth of assets in the Joint Savings¹ scheme of the ISSSTE pensions system (14% of the total of voluntary savings).

Chart 1

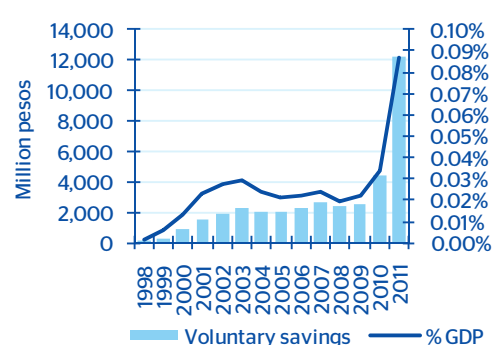
Assets under management by Afores
(Million pesos and % GDP, December 2011)



Source: BBVA Research with CONSAR data

Chart 2

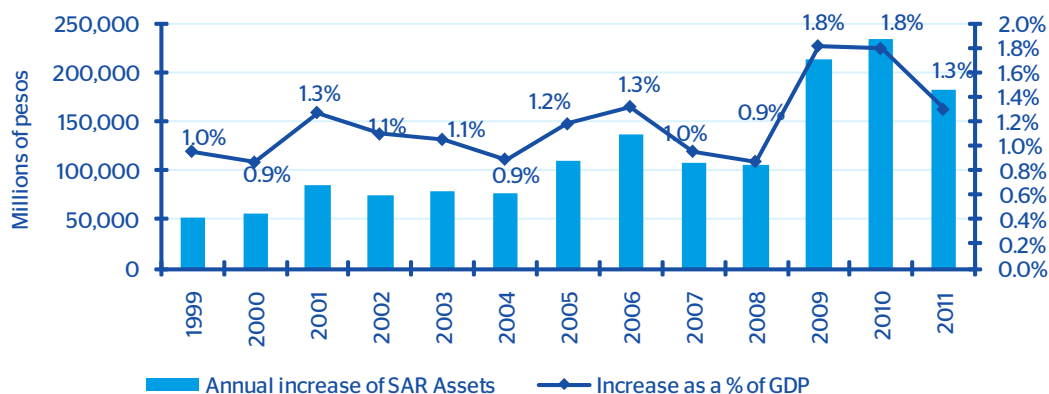
Voluntary savings in the SAR
(Million pesos and % GDP, December 2011)



Source: BBVA Research with CONSAR data

Chart 3

Annual asset growth of SAR (in millions of pesos and % of GDP)



Source: BBVA Research with CONSAR data

1: Ahorro Solidario (Joint Savings) is a voluntary scheme for ISSSTE (the public-sector workers' social security system) contributors that is supported by the Federal Government and in which the agency contributes 3.25 pesos for each peso contributed by the worker (maximum contribution by the worker is up to 2% of the base contribution salary).

Table 1

Assets under management by the Afores (January 2011)

Assets managed by Afores	Million Pesos	As a % of GDP
Total	1,640,892	11.8%
IMSS	1,470,587	10.5%
ISSSTE	125,674	0.9%
Voluntary Savings ¹	13,934	0.1%
Private Pension Funds ²	13,317	0.1%
Capital of the Afores ³	17,380	0.1%

¹ Includes voluntary contributions, complementary pension contributions, long-term savings, and the Joint Savings scheme.

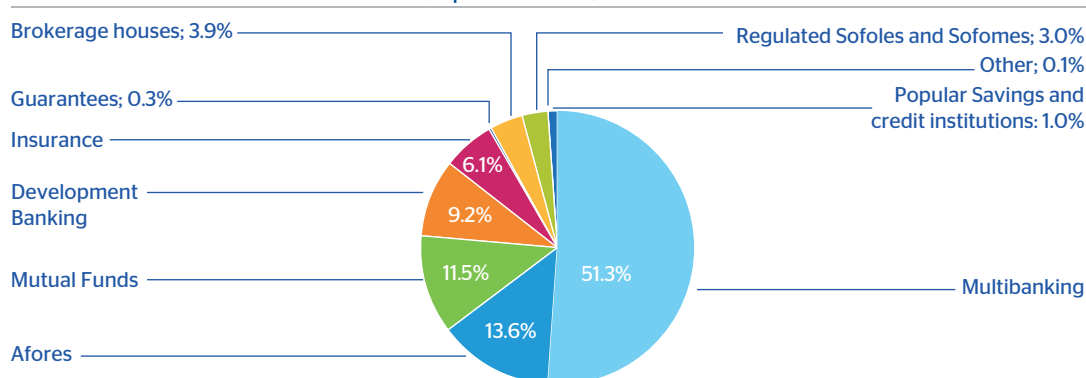
² Social insurance fund assets of public and private-sector entities administered by the Afores.

³ Assets managed by Afores that, in keeping with capitalization rules, they must keep invested in the Siefors.

Source: BBVA Research with CONSAR data

The growth of assets in the SAR has led to the Afores becoming the second biggest financial intermediaries after multiple banking. They now manage 13.6% of the funds in the Mexican financial system.

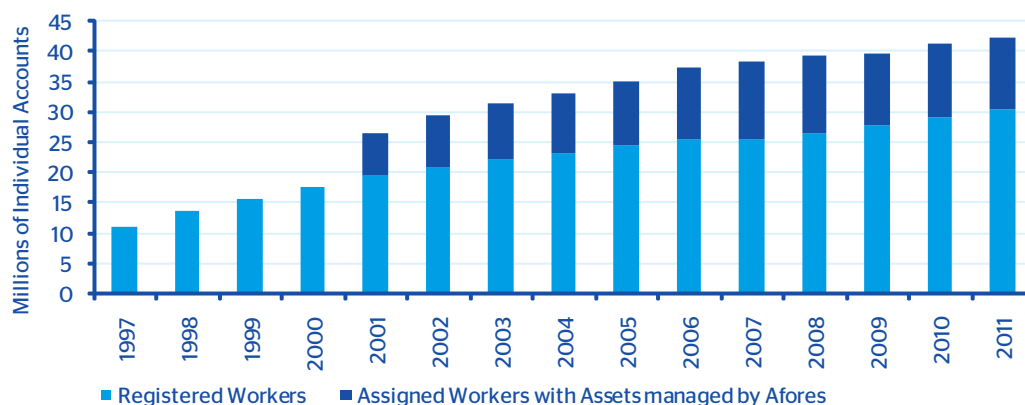
Chart 4

Financial institutions and market share (September 2011)

Source: BBVA Research with data from the Central Bank. Report on the Mexican Financial System, September 2011

Regarding the number of individual accounts at the end of January 2012, the Afores managed the assets of over 42.5 million accounts, while another 4 million accounts correspond to workers who did not choose Afore, but are waiting to be assigned as their assets are deposited in the Bank of Mexico.

Chart 5

Individual accounts administered by SAR (millions of accounts)

Source: BBVA Research with CONSAR data

The SAR obtains good returns

The rapid accumulation of pensioner's assets together with a gradual maturation of the Retirement Savings agents have fostered changes in financial and operational regulations which have permitted Afores to retain good yields, given the risk profile of workers.

According to CONSAR, as of January 2012, the average net return (before fees) of SAR in the last 24 months was nominal 10.2% compared to the last 36 months which was 10.43%, while the historical performance over the 14 years of the system is an annual average of 13.37% nominally and 6.54% in real terms.

Table 2

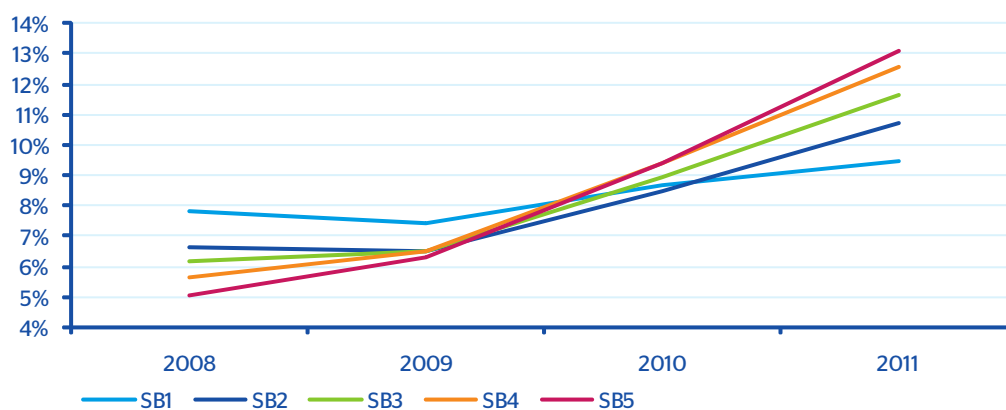
36 months nominal yields (before fees)

	Dec-08	Dec-09	Dec-10	Dec-11
SB1	7.8%	7.5%	8.7%	9.5%
SB2	6.6%	6.5%	8.5%	10.7%
SB3	6.2%	6.5%	8.9%	11.7%
SB4	5.6%	6.5%	9.4%	12.6%
SB5	5.1%	6.3%	9.4%	13.1%
Average SAR	6.3%	6.7%	9.0%	11.5%
10-year M bonds	8.0%	7.8%	7.2%	6.5%

Source: BBVA Research with CONSAR data

Chart 6

36 months nominal yields (before fees)



Source: BBVA Research with CONSAR data

As of December 2011, the weighted average maturity (WAM) of Siefores' investments is 11.64 years (4,248 days), which reflects a horizontal investment much longer than the supply of government securities, whose average maturity is 7.5 years (2,751 days).

Table 3

Weighted Average Maturity (WAM) of Investments (in years, as of December 2011)

	WAM in years
SB1	9.13
SB2	10.80
SB3	12.31
SB4	12.97
SB5	12.82
Total	11.64

Source: BBVA Research with CONSAR data

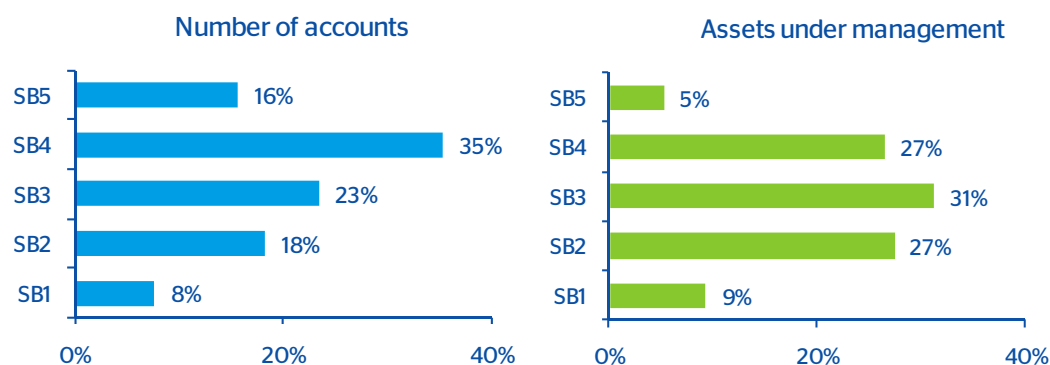
Major regulatory changes in Siefors that allow for a more diversified investment and therefore help obtain higher yields and longer maturities include:

a) Changes in the age structure of the multi-funds

Since 2005, the SAR has a multi-funds scheme that operates under a life cycle, according to the worker's age. This motivates members to start at an earlier age in order to achieve higher yields and as the account holder approaches retirement age, his or her savings are invested in portfolios with a lower proportion of equity, in order to reduce the volatility of their returns.

- Between 2005 and 2008 there were two funds, called Basic Siefors (SB): SB1 administered the funds of workers aged 56 and over, while SB2 those of workers under 56.
- Starting in 2008, the number of funds was increased to five: SB1 for workers aged over 55, SB2 ages 46 to 55, SB3 for ages 37 to 45, SB4 for ages 27 to 36, and SB5 for workers under 27.
- Finally, in 2011, the age bands for workers closest to retirement were modified, and the band for SB2 is now from 46 to 59 years, while SB1 is for workers aged 60 or over. This adjustment means that workers close to retirement age can enjoy the advantages offered by the more diversified investments of SB2 for longer.

Chart 7

Number of accounts and assets under management by type of fund (% of total, December 2011)

Source: BBVA Research with CONSAR data

Table 4

Number of accounts and assets under management by type of fund (% of total, January 2012)

Age	Siefore	Number of Accounts (millions)		Net Assets (millions of pesos)	
			% of total		% of total
Over 60 years	SB1	3.1	8%	147,584	9%
46-59 years	SB2	7.5	18%	448,332	27%
37-59 years	SB3	9.6	23%	504,066	31%
27-36 years	SB4	14.5	35%	431,083	26%
Under 27 years	SB5	6.4	16%	87,524	5%
Additional Siefores				22,304	1%
Total		41.2		1,640,892	

Source: BBVA Research with CONSAR data

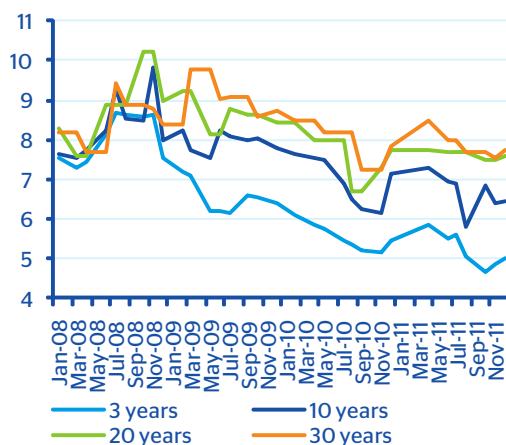
b) More flexible investment rules

The investment rules (IR) of the Siefores have changed over time: although during their initial years the IR were very restrictive with a high concentration of government debt, however over recent years regulation has made it possible to make the funds more varied and offer workers good returns in a sustainable manner over the long term..

More flexible investment rules have been of particular importance in optimizing the performance of the pension funds, given that the government securities have had low interest rates and have not been easily available.

Chart 8

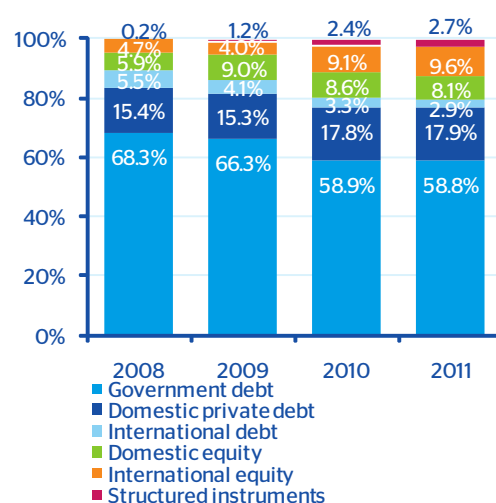
Government bond yields at different maturity rates (Bonds M) (%)



Source: BBVA Research with Banco de México data

Chart 9

Investments of Afores by asset class (SAR average)



Source: BBVA Research with Banco de México data

The following are the changes made in 2011 to the investment rules of the Siefores that have made possible greater diversification of investment:

1. Quantitative adjustments to IR limits:

- Equity investment limits were raised for all funds (SB1 to 5):

Table 5

Changes to investment limits in equity

Equity limit	SB1	SB2	SB3	SB4	SB5
Previous	0%	20%	25%	35%	35%
New	5%	25%	30%	40%	40%

Source: BBVA Research with CONSAR data

- An **adjustment was made to the** global control parameter, **Value at Risk (VaR)**, in order to seize upon the investment rules:

Table 6

Changes to VaR limits

VaR limit	SB1	SB2	SB3	SB4	SB5
Previous	0.6%	1.0%	1.3%	1.6%	2.0%
New	0.7%	1.1%	1.4%	2.1%	2.1%

Source: BBVA Research with CONSAR data

2. The range of investment vehicles was extended:

- Investment was authorized in **mutual funds** whose underlying assets are authorized by the investment rules.
- Outsourcing of Siefore investments** through **investment mandates** that comply with the investment rules was authorized, in keeping with minimum legal, financial, and prudential limits with regard to investments and risk management.

3. A new asset class was introduced:

- Permission was granted for investment in **commodities** through underlying assets authorized by the Central Bank, as well as underlying assets included in the market's major commodities indices (only for the replication of these indices). Exposure to commodities may be through:
 - Derivatives authorized under the investment rules (futures, forwards, options, swaps).
 - Authorized vehicles: simple commodity-linked debt structures, investment vehicles (ETFs) or investment mandates.

Table 7

Investment limits in commodities

SB1	SB2	SB3	SB4	SB5
0%	5%	10%	10%	10%

Source: BBVA Research with CONSAR data

4. Other adjustments:

- New countries eligible for investment were included (Chile, Israel and Norway), with the aim that Afores can invest in all OECD countries, or with those with which Mexico has a free-trade agreement. This measure helps diversify the Siefors in economies that have deep financial markets and financial supervision meeting international standards.
- New foreign investments were authorized in addition to those already permitted (dollar, yen and euro): i) For purposes of acquisition and coverage, all currencies in compliance with IR, ii) In order to take foreign exchange positions: Pound Sterling, Swiss franc, Australian dollar, Canadian dollar.
- Adjustments were made to investment in **Development Capital Certificates (CKDs)**:
 - The requirement for capital protection at maturity was eliminated.
 - CKDs were allowed to invest in companies listed on the Mexican stock exchange (previously CKDs could not invest in these types of companies).

- Afores were authorized to acquire more than 35% of a CKD issue (on behalf of all Siefores), as long as there were Mexican or foreign co-investors.
- CKDs are not included in the calculation of the portfolio's VaR (given that they are held-to-maturity investments).

Table 8

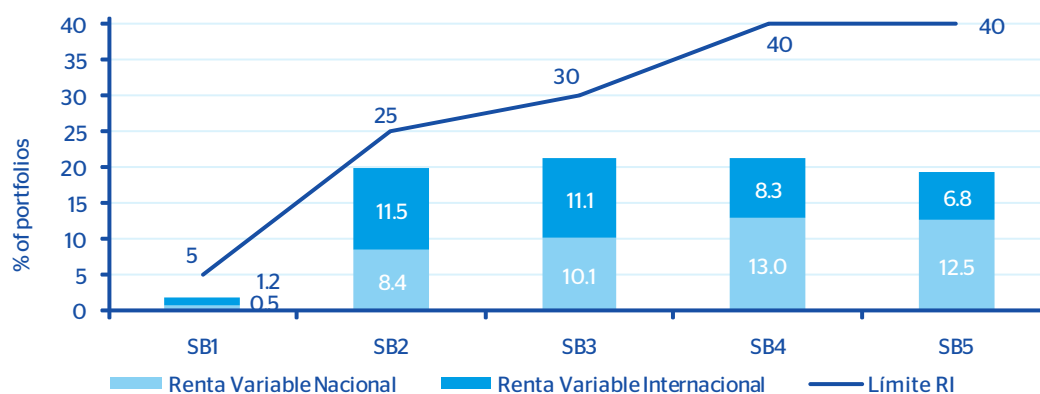
Summary of the Limits under the Siefores Investment Rules

			Limits by Type of Basic Siefore				
			1	2	3	4	5
Market risk	Value at Risk		0.7%	11%	14%	21%	21%
	Equity		5%	25%	30%	40%	40%
	Foreign-currency instruments		30%	30%	30%	30%	30%
	Derivatives		Yes	Yes	Yes	Yes	Yes
Concentration risk by issuer and counterparty	Domestic	MXN instruments: AAA; foreign-currency: BBB+	5%	5%	5%	5%	5%
		MXN instruments: AA; foreign-currency: BBB-	3%	3%	3%	3%	3%
		MXN instruments: A	2%	2%	2%	2%	2%
		MXN instruments: BBB; foreign-currency: BB	1%	1%	1%	1%	1%
	International	Foreign A- rated securities, one issuer or counterparty	5%	5%	5%	5%	5%
	On the same issue		Maximum (35%, 300 million pesos)				
Other limits	Foreign securities (if debt, minimum A-)		20%	20%	20%	20%	20%
	Asset-backed securities		10%	15%	20%	30%	40%
	Structured Instruments		0%	10%	15%	15%	15%
	Inflation protection		Yes (Min. 51%)	No	No	No	No
	Commodities		0%	5%	10%	10%	10%
Conflicts of interest	Related-party financial instruments		15%	15%	15%	15%	15%
	Instruments of parties with assets related to the Afore		5%	5%	5%	5%	5%
Mandates			Yes	Yes	Yes	Yes	Yes

Source: CONSAR

Chart 10

Equity Investment by type of fund (December 2011)



Source: BBVA Research with CONSAR data

c) Indicator of long-term returns

The 2008 financial crisis provided some valuable lessons on how pension funds operate in Mexico. The high level of volatility in the financial markets put to test the effectiveness of the Net Return Indicator (IRN), which is the main driver of competition in the market and a determining factor in transfers by making it easier for workers to compare the performance of the Afores.

The objective of this indicator is to provide the worker with a measure of the performance of the Afores in the long term. However, at the time of its creation in 2008, the information available on the returns of the five basic Siefores (in existence since 2005) only allowed observations to be extended a maximum of 36 months.

In addition, the high-volatility episodes in the financial markets during the recent crisis revealed some problems in the operation of this indicator:

- It was sensitive to the volatility of the financial markets.
- The volatility of the IRN was passed on to the ranking of the Siefores. As a result, some workers made incorrect decisions to transfer at inconvenient times (buy high, sell low). In addition, faced with high-volatility episodes such as those of the financial crisis of 2008, the indicator did not capture the long-term management capacity of the Siefores.
- It did not reflect the fees actually charged by Afores, as it was calculated at gross 36-month returns minus the current fee, with the result that the workers could not know the actual net return.

As a result, the following changes were introduced to the way the IRN is calculated to make it more robust and efficient:

- The **calculation period will be gradually extended from 3 to 5 years²**.
- In order to minimize the effects of volatility in the financial markets, 6-month moving averages will be used to capture trends in returns and avoid sudden movements in the ranking of the Afores.
- In order to reflect the fees actually charged during the period, the IRN will be calculated according to the stock-market prices of the Siefores.

The redesign of the IRN will create incentives for the Afores to focus on investment strategies with a longer-term horizon, in line with the nature of pension savings, eliminate existing distortions and substantially improve the ability of each worker to decide which Afore will best manage his or her retirement assets.

Afores fees are falling, gradually but steadily

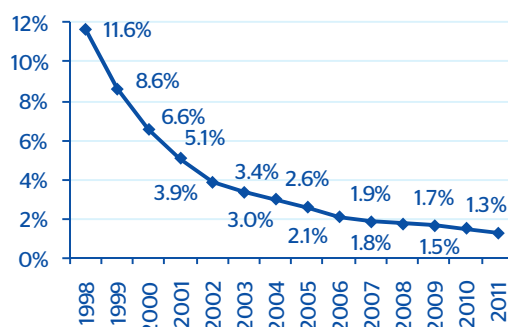
Another factor that has helped generate increased growth in pension fund assets has been the slow but steady decrease in fees on assets charged by the Afores over recent years.

Since the start of the SAR, the fees system has evolved over time:

- From 1997 to February 2008, Afores could establish a mixed fee scheme, in which fees could be charged on contributions and total assets. Discounts could also be applied for long-term contributors to the Afore. It was therefore difficult to compare the charges levied by the different fund administrators.
- Since March 2008, the SAR Law only allows fees to be charged on the balance of the assets under management; in addition, the CONSAR governing board is empowered to revise and authorize annually the fees that Afores will charge.

2: The full implementation of this change will take 30 months which means by June 2014 the IRN will refer to a 5 year term

Chart 11

Implicit Fee¹ on fund balance

¹ Income from fees/Workers' assets (annual average)
Source: BBVA Research with CONSAR data

Table 9

Fees on Assets under management (%)

Afore	2011	2012
PensionISSSTE	1.00	0.99
Inbursa	1.17	1.17
Banamex	1.45	1.28
Bancomer	1.40	1.28
ING	1.48	1.31
XXI	1.40	1.33
Profuturo GNP	1.53	1.39
Principal	1.52	1.48
Afirme Bajío	1.51	1.50
Azteca	1.67	1.52
Metlife	1.69	1.54
Invercap	1.72	1.59
Coppel	1.70	1.59
Simple average	1.48	1.38

Source: BBVA Research with CONSAR data

These regulatory changes, combined with a significant decrease in fund transfers, encouraged Afores to reduce their fees. Since SAR assets have been growing, and the fee scheme is based on the balance of assets under management, a dynamic on progressive reduction of fees has been generated.

Over the last five years, the average fees in the system have diminished by over 63%, which according to CONSAR has resulted in savings for workers of 4,915 million pesos in the last year.

The simple average of the fees charged by the Afores on the balance of assets will charge in 2012 will be reduced from 1.48% to 1.38%.

Modifications of the rules on funds transfers and reassignment of non-registered accounts

Recent modifications to the rules on funds transfers and reassignment of workers are focused on creating incentives for workers to keep their savings invested in Afores that have consistently performed well, and thus encourage Afores to design longer-term investment strategies.

a) Transfers

During the initial years that the SAR was in operation workers could freely change Afore, as there were no specific rules on transfers. However, in practice the process was complicated and therefore the number of transfers in the first five years of the system was limited.

From 2002 on, regulatory changes in the SAR Law came into making the transfer process simpler. The aim was to facilitate workers' movement between Afores and promote competition in the industry. This implied a very significant increase in transfers (influenced mainly by promoting agents) that did not necessarily benefit the workers and created an increase in the publicity costs of the Afores.

In 2005, regulations were introduced to limit the number of transfers. They established that workers could change to the Afore of their choice once a year; however, until the worker had been in a particular Afore for 12 months, the transfer could only be to another Afore with lower fees.

In 2008, the criterion for allowing transfers within 12 months changed. The creation of the IRN meant that the main driving force for competition between funds was net returns and not only

fees. It was therefore established that transfers before 12 months could only take place to Afores with a higher IRN, as determined by the criteria of the CONSAR board, which have changed over time:

- In 2008, the worker could change before 12 months to an Afore whose IRN was **at least 105% higher than the current Afore**. This policy did not always benefit the workers, as in periods of volatility in the financial markets, an Afore could for a time be among the best ranked, but this did not necessarily reflect a good performance in terms of long-term returns that give rise to higher replacement rates. In addition, in periods of financial instability, the dispersion of the IRN levels of the Afores tends to be very large, so transfers are more likely during what are unfavorable times in terms of the financial markets.
- In December 2011, CONSAR established new rules for the retention and reception of accounts. The aim is to encourage workers to remain in Afores that have consistently **good returns** and prevent transfers to Afores with a poor historical performance record. The new criteria are as follows:
 - Afores that may retain accounts (for transfers before 12 months) are those whose returns have been average or above for at least 70% of the previous 24 months, and whose returns have not been below the fourth quartile for 20% or more in the same period.
 - Afores that are eligible to receive transfers before 12 months may not have had returns below the lowest tercile for more than 30% of the previous 24 months.

In this way, workers are protected from taking incorrect transfer decisions at the most inconvenient times, thereby avoiding losses in their pension fund assets.

b) Reassignment

The assignment process for individual accounts of workers who do not chose an Afore is as follows:

- Initially the savings of these workers are administered by the Central Bank, while the record keeping and control of their individual accounts is handled by a Service Provider Afore³.
- Once a year, individual accounts showing consecutive contributions during the previous six two-month periods are **assigned** to the Afores with the highest IRN scores.
- The Afores that receive assigned accounts have a period of two years to locate and register workers. If they do not do so, the accounts are **reassigned** to other Afores. The reassignment criteria were modified in 2011. These accounts may now be administered by the Afores that have consistently generated good returns, as follows:
 - An Afore may retain assigned accounts that it has not registered if its IRN has been average or above average for 70% of the previous 24 months and has not been in the first quartile for 20% or more of this period.
 - The Afores that may receive reassigned accounts are those that have remained in the top tercile in terms of returns over the 24 preceding months.
- The reassignment of accounts was carried out for the first time on January 31, 2012. It involved 11.9 million accounts (28.4% of the total of accounts administered by the Afores), representing over 59 billion pesos (almost 4% of all of the assets under management in the SAR).

3: The Afore is chosen as service provider by a bidding process. It is currently Afore XXI-Banorte.

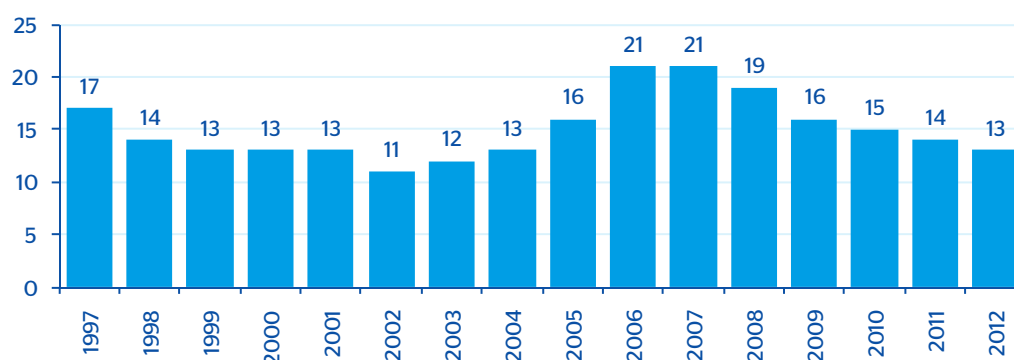
Competition grows

During the fourteen years that the SAR has been in existence, the Afore industry has undergone radical changes. Some Afores have left the market and others have merged. While in 1997 the industry numbered 17 Afores, by 2002 this figure had already dropped to 11. After this cycle, a new expansion took place, and in 2007 there were 21 Afores. Then there was a further reduction starting in 2008 to the current 13 Afores in the SAR⁴.

The increased competition has been the result of the gradual reduction in fees charged by the Afores, combined with the role of the IRN in providing a simple and transparent way for workers to compare Afores.

Chart 12

Number of Afores in the SAR



Source: BBVA Research with CONSAR data

Table 10

Market share (February 2012 after the reallocation)

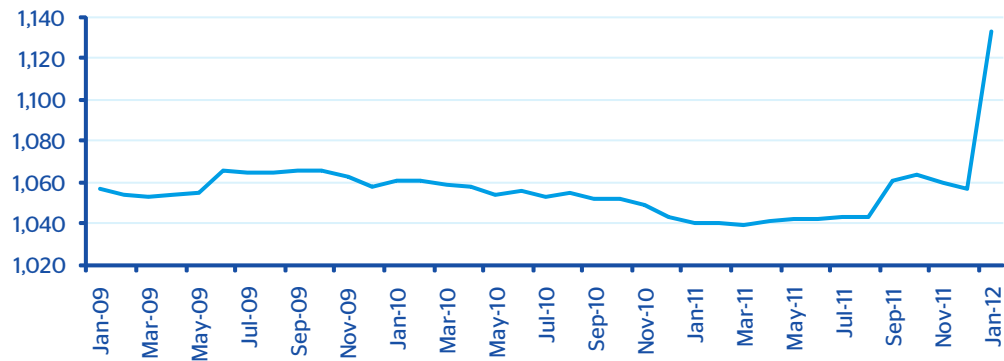
Afore	% Assets under management	% Accounts managed
Banamex	17.1%	18.8%
Bancomer	15.2%	10.7%
SURA	13.8%	14.9%
XXI Banorte	13.0%	17.1%
Profuturo GNP	10.8%	7.4%
Pensionissste	6.6%	2.3%
Principal	6.6%	9.5%
Inbursa	6.1%	2.8%
Invercap	4.4%	6.5%
Coppel	2.9%	6.9%
Metlife	2.6%	2.5%
Azteca	0.5%	0.4%
Afirme Bajio	0.3%	0.3%

Source: BBVA Research with CONSAR data

The five largest Afores, in terms of assets under management, make up 70% of the total assets in the system, while the remaining eight participants manage 30% of pensioner savings. Moreover, the Hirschman-Herfindahl index for January 2012 has a value of 1,133, reflecting a moderate market concentration and indicates that there is competition in the market.

4: The most recent changes to the structure of the SAR occurred in January 2012: the purchase of ING Afore by the South American Investment Group (Group SURA) and the merging of Afore XXI with Afore Banorte-Generalli to create the new Afore XXI-Banorte

Chart 13

Market concentration (Hirschman-Herfindahl Index)

Source: BBVA Research with CONSAR data

Assessment

In general, the regulatory and market changes have positively enhanced the Retirement Savings System (SAR). In particular:

- A. The changes made to the Afores investment rules provide more flexibility for investment, with the aim of generating better returns on retirement savings. The inclusion of new types of assets and investment vehicles, as well as new eligible countries and currencies, create greater portfolio diversification in domestic and international markets alike.
- B. At the same time, the changes made to the IRN indicator of returns help the worker to compare more objectively the performance provided by the various Afores, while modifications to the criteria for the transfer and reassignment of individual accounts will ensure that funds will be administered by Afores that have provided consistently good returns.
- C. The combination of more flexible investment rules and a reduction in the fees charged by the Afores will boost the returns on investment. This will benefit workers and allow them to obtain a bigger pension when the time comes for them to retire

References

www.consar.gob.mx, accessed March 3, 2012.

www.banxico.gob.mx accessed February 8, 2012.

Financial System Report, September 2011, Banco de Mexico.

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