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A Decade of Government-Mandated Privately Run Pensions in Mexico: What Have We Learned?

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Chapter 10

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In 1942 social security became compulsory in Mexico. Administered by the Instituto Mexicano del Seguro Social (IMSS) and known as Seguro de Invalidez, Vejez, Cesancía en Edad Avanzada y Muerte (IVCM, or Disability, Old Age, and Death Security), the program covered the following risks for all workers in the formal sector: accidents at work and sickness caused by work; maternity and sickness unrelated to work; life insurance and incapacity; and old-age pension (at the age of 60).

On July 1, 1997, a new privatized pension plan—called the Seguro de Retiro, Cesantía en Edad Avanzada y Vejez (RCV, or Retirement and Old Age Insurance)—took effect, replacing the old system for new entrants to the labor market. Also introduced was a separate component, the Seguros de Invalidez y Vida (IV, or Life and Disability Insurance). Under the new system, the old IVCM PAYGO system was abandoned. Workers entering the labor force after July 1, 1997 had to join the new plan (about one million workers enter the labor force every year). Workers who were already in the labor market can choose between the old and new plans at retirement.

The reforms were instituted with the purported purpose of rescuing the old system from fiscal unsustainability (IMSS 1995). The IMSS claimed that

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by 2003 the system would produce deficits. Unfortunately, the assumptions behind the model used for these projections were never fully disclosed. This muddled and hurried reform has given birth to a new system in which many affiliates may end up with very little in their accounts, and the government may have to bail them out by paying the minimum pension. This chapter shows that the transition costs could be high, and that management fees have taken a big bite out of retirees' savings (about 20% of their benefits).

This chapter first provides a short description of the new system with special attention to the *cuota social*, or social quota, and the housing subaccount. It then discusses the coverage issue in the context of the government's claim that higher coverage would be an important advantage of the new system. It then looks at the market structure of the pension funds in Mexico and investment portfolios, and tackles the cost structure of running the funds, transition costs, and cost of the payout phase, noting the inequality between men and women in terms of the pension payout in the future. Finally, it reviews the conditions that will lead low-income affiliates to fall back on the minimum pension guaranteed by the reform.

Contribution Rates Under the Old and New Systems

Under the old system, total contributions were 8.5 percent of base salary, with a tripartite split among employers (5.95%), employees (2.125%), and the government (0.425%). There was an additional payment of 2 percent of base salary into the Sistema Para el Retiro (SAR, or the retirement account). The maximum included in the base salary was equal to ten times the minimum wage.

The IV has a premium of 2.5 percent of wage, of which the employer pays 1.75 percent, the worker pays 0.625 percent, and the government pays 0.125 percent. Since the 1997 reform, the government has contributed an additional amount independent of the wage of the person. Called the cuota social, this additional amount is set at 5.5 percent of the minimum salary in the Federal District of Mexico. For workers earning one minimum wage or less, the social quota is enormously important: it is equivalent to 90 percent of the minimum wage. Even for affiliates earning 3 times the minimum wage, the social quota still accounts for almost 30 percent of their total contribution to retirement savings under a publicly mandated but privately managed fund called an Administradora de Fondos de Retiro (AFORE). For affiliates earning 10 times the minimum wage, the social quota equals almost 9 percent of the contribution—a figure that actually understates the importance of the social quota because by law, no fee can be charged on its flow. However, it does not prevent funds from charging fees on the balance.

Subaccounts

Each affiliate must contribute to two principal subaccounts: the Sistema de Ahorro para el Retiro (SAR, or the Retirement Savings System) and the Instituto de Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT, or the government-run housing credit agency). Affiliates can also make voluntary contributions to SAR on top of their required contribution. During the period 2001–5, SAR received about 65 percent of total contributions, and the rest went to the housing subaccount. Policymakers had hoped that workers would make substantial contributions to the voluntary account, given the tax break, but total contributions so far have been relatively small, less than half a percent of total contribution.

Coverage

Historically, most PAYGO pensions systems in industrialized countries have covered the vast majority of workers—but not in Mexico. When social security became compulsory in Mexico in 1942, it had very low rates of coverage of the labor force: in 1946, less than 3 percent. By 1952 coverage was still less than 5 percent, and in 1970 it was a little more than 25 percent. By the mid-1990s, the IVCM still covered only about 30 percent of workers (an additional 8% of the labor force was covered by special regimes for government employees). These figures stand in sharp contrast to coverage in more developed countries. In the USA, for example, social security coverage from 1935 to 1940 went from 0 to 63.7 percent, and by 1951, it was 93.7 percent.

When the new system was instituted in 1997, it started with less than 30 percent of the EAP—in the same range as the old IVCM. However, over the next 8 years the number of affiliates grew tremendously, both in absolute numbers and as a percentage of the labor force (see Table 10-1). By the end of 2006, 87 percent of the labor force was affiliated with AFOREs, a remarkable figure considering the slow progress of coverage over the previous 60 years.

Distribution of Unattached Accounts

A closer examination of the rapid growth of coverage reveals a different picture. For example, from 2000 to 2001, the number of affiliates rose from almost 18 million to more than 26.5 million, a steep rise. Table 10-2 contains monthly data from December 2000 to December 2001. During most months in this period, the number of affiliates did not rise more than 2.5 percent—with one stark exception. In the month of June 2001 the number of affiliates rose a whopping 35 percent.

TABLE 10-1 Affiliation and the Labor Force

End year	*Affiliates*	*EAP[a]*	*Affiliates/EAP[a] (%)*
1997	11,188,144	38,584,394	29
1998	13,827,674	39,562,404	35
1999	15,594,503	39,648,333	39
2000	17,844,956	40,161,543	44
2001	26,518,534	40,072,856	66
2002	29,421,202	41,085,736	72
2003	31,398,282	41,515,672	76
2004	33,316,492	43,398,755	77
2005	35,276,277	41,880,800	84
2006	37,408,828	42,846,100	87

Sources: CONSAR and INEGI.

[a] EAP is an abbreviation for economically active population.

To see why, we have to go back to the regulatory changes that took place in 1997, when the government allowed each worker to choose his or her own AFORE. Many workers made no selection, so their accounts were put into a separate 'concentrated account' (*cuenta concentradora*), administered by the Banco de Mexico (Mexican Central Bank). In June 2001, the Bank announced that it would transfer these concentrated accounts to the AFOREs by the end of the month. The Comisión Nacional del Sistema de Ahorro para el Retiro (CONSAR) devised a formula for distributing these accounts to the 25 percent least expensive AFOREs. Congress

TABLE 10-2 Monthly Rise in Affiliates (12/00–12/01)

Month	*Affiliates*	*Growth (%)*
December 2000	17,844,956	1.28
January 2001	18,018,358	0.97
February 2001	18,221,289	1.13
March 2001	18,444,190	1.22
April 2001	18,657,474	1.16
May 2001	18,865,906	1.12
June 2001	25,555,664	35.46
July 2001	25,665,592	0.43
August 2001	26,297,659	2.46
September 2001	26,353,396	0.21
October 2001	26,417,113	0.24
November 2001	26,471,301	0.21
December 2001	26,518,534	0.18

Sources: CONSAR and IMSS.

modified this formula in March 2007, stipulating that the assignment must take into account not just the management fees but also the AFOREs' rates of return.

From 2002 to 2004, more than one-and-a-half million accounts were distributed to the lowest cost AFOREs; during 2005 to 2006, another million and a half accounts were distributed. Did these accounts have anything in common? Most of them, as it turned out, had small balances along with low density of contributions. Contributions to them had been sporadic, because workers had either been working temporary jobs or switching back and forth between the formal and informal sectors. Theoretically, each person should have just one account, but evidence exists that several million workers have more than one. Consequently, the number of accounts does not necessarily correspond to the number of affiliates.

CONSAR's tabulations also reveal that these accounts have had low density of contributions. Specifically, more than 85 percent of the assigned affiliates have contributed less than 50 percent of the time. Given such infrequency, these workers will never have enough money to retire.[1]

A closer study of these assigned accounts also reveals that the affiliates are not necessarily receiving the lowest cost funds. The formula that CONSAR devised to allocate affiliates ranked all funds according to their charges for one year. However, the calculations do not account for the fact that companies with the lowest charge for a year do not necessarily have the lowest charges over longer periods—charges over a period of twenty-five years might show a very different picture. For example, as Table 10-16 shows, Inbursa had the lowest equivalent charges on balance over one year as of December 2006. However, if the period of affiliation goes up to twenty-five years, the equivalent charge on the balance would make Inbursa one of the more costly AFOREs. Given that affiliates tend to stick to default options, these assignments can have important ramifications, even when affiliates have the option to change their funds.

Affiliate Contributions

In addition to coverage, it is important for a pension system to achieve regular contributions by affiliates—an area where we see a divergence between the number of affiliates and the number of contributors (see Table 10-3). Soon after the 1997 reform, more than 60 percent of affiliates contributed regularly to the system. However, this proportion has since fallen to less than 40 percent. The number of regular contributors has stayed stubbornly under fourteen million while the number of affiliates by the end of 2006 soared to over thirty-seven million, compared to the twelve million in the old system in 1996. This sharp rise in the number of affiliates contrasts with

TABLE 10-3 Affiliates versus Contributors (1997–2006)

	Contributors (C)	*Affiliates (A)*	*Ratio of C over A (%)*
1997	7,769	11,188	69.0
1998	879,979	13,827,674	64.0
1999	948,855	15,594,503	61.0
2000	10,379,823	17,844,956	58.0
2001	11,864,672	26,518,534	45.0
2002	12,292,152	29,421,202	42.0
2003	12,660,999	31,398,282	40.3
2004	13,042,997	33,316,492	39.1
2005	13,557,086	35,276,277	38.4
2006	13,919,377	37,408,828	37.2

Sources: CONSAR and AMAFORE (Association of AFOREs).

the number of people contributing to the system. Specifically, the labor force rose by over four million while contributors rose by two million, an indicator that the informal sector is employing more people than is the formal sector.

Table 10-4 shows that not all AFORE affiliates contribute at the same rate. For example, Principal is one of the largest AFOREs in terms of affiliates, with more than 3.3 million affiliates at the end of 2006. However, only 23.4 percent of its affiliates contribute, compared to 40.7 percent of Banamex affiliates. Some AFOREs that started operations in 2006—such as Coppel and Scotia—initially showed contribution rates of 100 percent. However, these high rates were expected to diminish substantially over time.

Distribution of Funds

Table 10-5 provides the market share for each AFORE in terms of funds rather than the number of affiliates or contributors for that year. Banamex and Bancomer emerged as the largest AFOREs in 1997 and continue to dominate the market.

Table 10-6 shows how much money each affiliate had on average in each AFORE in December 2006. To allow comparison across countries, the figures are expressed in US dollars. The large funds—Bancomer, Banamex, Inbursa, ING, and Profuturo—have the largest balances on average per affiliate. Large AFOREs seem to contain a larger proportion of affiliates contributing regularly, suggesting that bigger funds have managed to attract clients with more consistent employment. Newer funds are also showing large balances, which will decline over time as their proportion of contributors fall.

TABLE 10-4 Affiliates versus Contributors (2006)

AFORE	*Total Registered*	*% of Contributing*
Actinver	1,248,442	35.2
Afirme Bajío	422,615	55.2
Ahorra Ahora	155,942	65.8
Argos[a]	No account yet	n/a
Azteca	1,270,951	41.3
Banamex	5,596,232	40.7
Bancomer	4,255,568	41.4
Banorte Generali	3,282,539	37.9
Coppel	203,834	62.5
De la Gente[b]	21	100.0
HSBC	1,767,775	41.7
Inbursa	3,630,280	37.4
ING	2,314,651	30.3
Invercap	833,415	57.7
Ixe	184,673	36.5
Metlife	112,833	88.7
Principal	3,326,545	23.4
Profuturo GNP	3,403,090	40.3
Santander	2,996,067	31.9
Scotia[c]	673	100.0
XXI	2,402,682	20.8
Total	37,408,828	36.8

Sources: Various.
Note: Figures are for December 31, 2006.
[a] Argos started operations on December 7, 2006.
[b] De la Gente started operations on November 15, 2006.
[c] Scotia started operations on November 1, 2006.

Examining all AFOREs that existed at the end of 2006 in terms of contributors rather than affiliates reveals that the average balance per contributor is US$4,625,[2] compared to US$1,721 for an average account balance for all affiliates. This nearly threefold increase in balances is not surprising given that there are almost three times as many affiliates as contributors (as shown in Table 10-3).

Number of Companies

The number of pension fund firms has fluctuated over the past decade. Out of the initial forty-four applicants, seventeen started operating when the system was inaugurated in July 1997; fifteen were operating in 2005. Five new funds have been given permission to operate during 2006: Coppel, de

TABLE 10-5 Market Share for Each AFORE (in %) (2001–6)

AFORE	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
Actinver	0	0	0	0	1	3
Afirme Bajío	—	—	—	—	—	1
Ahorra Ahora	—	—	—	—	—	0
Allianz Dresdner	4	4	3	0	0	0
Argos	—	—	—	—	—	0
Azteca	0	0	0	1	1	3
Banamex Aegon	15	24	23	22	21	15
Bancomer	22	22	21	20	20	11
Banorte Generali	6	6	6	7	7	9
Coppel	—	—	—	—	—	1
De la Gente	—	—	—	—	—	0
HSBC	0	0	0	4	4	5
Garante	9	0	0	0	0	0
Inbursa	7	7	7	8	9	10
ING	9	9	9	10	9	6
INVERCAP	0	0	0	0	0	2
IXE	0	0	0	0	0	0
METLIFE	0	0	0	0	0	0
Principal	2	3	4	4	5	9
Profuturo GNP	10	10	10	10	10	9
Santander Mexicano	9	9	9	8	8	8
Scotia	—	—	—	—	—	0
Tepeyac	1	1	0	0	0	0
XXI	6	6	7	6	6	6
Zurich	1	0	0	0	0	0
Total	100	100	100	100	100	100

Source: CONSAR.

Note: A figure of 0% may mean that the AFORE did not exist for that particular year.

la Gente, Ahorra Ahora, Scotia, and Argos. The total number of AFOREs is now twenty-one. At the end of 2005 Metlife was given permission to operate.

Originally, each AFORE was allowed to have only one investment portfolio (known as a Sociedad de Inversion en Fondos de Retiro, or SIEFORE) (see Table 10-7). Starting in 1999, AFOREs could offer funds for voluntary contributions (with tax breaks added in 2003). The larger companies Banamex, Bancomer, and Profuturo were the first to do so. Then in 2004 AFOREs were allowed a second SIEFORE, and investment funds followed suit. Basic SIEFORE 2 has a less restrictive investment regime than does Basic SIEFORE 1. While each fund can invest in stocks and foreign debt instruments, they cannot do so directly. Rather, they must invest using derivative instruments (or structured notes) as long as the principal is

TABLE 10-6 Balance in Each Fund (2006)

Fund	*Amount (thousands of US$)*	*Affiliates*	*$ per Affiliate*
Actinver	797,936	1,248,442	639
Afirme Bajío	150,086	422,615	355
Ahorra Ahora	7,000	155,942	45
Argos	—	—	
Azteca	1,364,866	1,270,951	1,074
Banamex	11,970,446	5,596,232	2,139
Bancomer	10,923,333	4,255,568	2,567
Banorte Generali	4,484,208	3,282,539	1,366
Coppel	48,532	203,834	238
De la Gente	331	21	15,762
HSBC	2,628,937	1,767,775	1,487
Inbursa	7,682,668	3,630,280	2,116
ING	4,589,110	2,314,651	1,983
Invercap	826,684	833,415	992
Ixe	240,327	184,673	1,301
Metlife	974,294	112,833	8,635
Principal	2,854,169	3,326,545	858
Profuturo GNP	6,758,434	3,403,090	1,986
Santander	4,240,470	2,996,067	1,415
Scotia	7,704	673	11,448
XXI	3,824,206	2,402,682	1,592
Total	64,373,740	37,408,828	1,721

Source: CONSAR.

Notes: The table does not include INFONAVIT funds. Rate of exchange is 11.1MXP per US dollar.

TABLE 10-7 Types of Funds at the End of Each Year

Year Year	*Basic SIEFORE 1*	*Voluntary SIEFOREs*	*Basic SIEFORE 2*
1998	17	n/a	n/a
1999	14	3	n/a
2000	13	3	n/a
2001	13	3	n/a
2002	11	3	n/a
2003	12	3	n/a
2004	13	3	13
2005	15	3	15
2006	17	6	17

Source: CONSAR.

TABLE 10-8 Evolution of Market Share of Number of Affiliates (%) (1997–2000)

Fund	*02/1997*	*07/1997*	*12/1997*	*12/1998*	*06/1999*	*06/2000*
Atlantico	0.00	1.38	1.77	1.03	*	*
Banamex	31.31	16.12	12.23	11.34	11.65	12.24
Bancomer	28.28	22.23	16.76	16.10	15.85	16.06
Bancrecer	0.06	4.07	4.67	4.39	4.22	3.90
Bital	4.00	9.84	9.20	9.44	9.92	10.20
Capitaliza	0.00	0.07	*	*	*	*
Garante	0.78	8.32	10.96	11.09	11.00	10.83
Genesis	0.04	0.67	1.06	*	*	*
Inbursa	0.49	2.62	2.63	2.68	2.58	2.36
Previnter	0.04	2.07	2.33	*	*	*
Principal	0.00	0.48	0.61	2.18	2.89	2.88
Profuturo	16.03	11.79	12.55	13.96	13.57	12.62
Santander	13.99	12.46	14.73	14.24	13.79	13.99
SBN[a]	4.99	4.89	6.76	8.61	8.49	8.82
Tepeyac	0.00	0.52	0.85	1.02	1.42	1.69
XXI	0.00	2.22	2.71	3.06	3.09	3.14
Zurich	0.00	0.25	0.18	0.86	1.24	1.27
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: CONSAR.

Note: An asterisk (*) indicates that the fund ceased to exist independently.

[a] SBN = Solida Banorte Generali.

protected. (Very few AFOREs have used this instrument.) In addition, only workers who are younger than 55 years can participate in them.

Table 10-8 shows the evolution of market share in the first four years of the operation of the new privatized pension system. (Some funds, like Atlantico, Genesis, Previnter, Tepeyac, and Zurich, never captured significant market share and folded.) In an effort to ensure a competitive market, CONSAR stipulated that the market share of any AFORE could not exceed 17 percent of affiliates. However, using headcounts rather than portfolio value is a misguided way to enforce competition, given the wide range in account balances. For example, Bancomer had 21.7 percent of total affiliates, thus temporarily exceeding the market share limit imposed by CONSAR. Table 10-9 shows that the top 4 firms had nearly 54 percent of the market in 2002, but by December 2006 their share had fallen somewhat to 45.60 percent.

Distribution of Contributors

It is critical to know the distribution of the contributors in terms of salary levels because ultimately what retirees will receive depends on what they

TABLE 10-9 Evolution of Market Share (%) (2002–6)

AFORE	*2002*	*2003*	*2004*	*2005*	*2006*
Actinver	*	1.24	2.21	2.51	3.4
Afirme Bajío	*	*	*	*	1.1
Allianz	4.28	3.92	*	*	*
Ahorra Ahora	*	*	*	*	0.4
Argos	*	*	*	*	*
Azteca	*	1.42	2.47	2.84	3.4
Banamex	17.91	17.87	17.48	16.93	15.1
Bancomer	14.8	13.79	12.98	12.67	11.5
Banorte	8.87	8.87	8.71	8.67	8.8
HSBC	*	*	4.3	4.66	4.8
Garante	*	*	*	*	*
Coppel	*	*	*	*	0.5
De la Gente	*	*	*	*	0.0
Inbursa	6.57	6.76	7.54	8.07	9.8
ING	9.21	8.57	7.88	7.4	6.2
Invercap	*	*	*	0.36	2.2
IXE	*	*	0.49	0.54	0.5
MetLife	*	*	*	0.04	0.3
Principal	7.47	10.22	9.69	9.63	9.0
Profuturo GNP	9.95	9.95	10.09	10.06	9.2
Santander	11	10.33	9.53	9.06	8.1
Scotia	*	*	*	*	0.0
Tepeyac	3.2	*	*	*	*
XXI	6.74	7.07	6.64	6.57	6.5
Zurich	*	*	*	*	*
Top 4	53.66	52.21	50.63	48.72	45.60

Source: CONSAR.

Notes: For each year during 2001–6, percentages are measured at the end of December. An asterisk (*) indicates that the fund does not exist independently. The potential market estimated by CONSAR as of December 2006 is US$36,097,411.

contribute. Table 10-10 shows that in 2005 nearly 33 percent of contributors earned less than 2 times the minimum salary, and almost 55 percent earned less than 3 times the minimum salary. At 5.5 percent of the minimum salary, the government contribution for the majority of contributors is therefore significant.

AFORE Transfers

Table 10-11 shows the transfers that have occurred each year as a percentage of the number of affiliates. In 1998 only 0.03 percent of affiliates

TABLE 10-10 Distribution of Contributors by Salary Level (2005)

Salary	*Contributors*	*Percentage*
0 to 1	153,674	1.20
1 to 2	4,179,468	32.67
2 to 3	2,820,322	22.05
3 to 4	1,592,271	12.45
4 to 5	999,463	7.81
5 to 6	700,488	5.48
6 to 7	443,700	3.47
7 to 8	362,324	2.83
8 to 9	254,860	1.99
9 to 10	183,627	1.44
10 to 11	145,153	1.13
11 to 12	125,036	0.98
13 or more	832,295	6.51
Total	12,792,681	100.00

Source: IMSS.
Note: Salary is expressed in multiples of minimum salary.

transferred, but by 2006 a substantial 9.15 percent had. If we calculate the transfers as a percentage of contributors, nearly one in four contributors have transferred from one AFORE to another. The number of transfers is gaining momentum now that the process has since been simplified and the penalty for moving from one fund to another has been reduced to a minimum.

TABLE 10-11 Transfers as a Percentage of Affiliates (1998–2006)

Year	*Transfers*	*Affiliates*	*Percentage of Affiliates Transferred*	*Contributors*	*Percentage of Contributors Transferred*
1998	3,535	13,827,674	0.03	879,979	0.40
1999	44,038	15,594,503	0.28	948,855	4.64
2000	91,653	17,844,956	0.51	10,379,823	0.88
2001	106,220	26,518,534	0.40	11,864,672	0.90
2002	120,089	29,421,202	0.41	12,292,152	0.98
2003	420,791	31,398,282	1.34	12,577,265	3.35
2004	1,199,293	33,316,492	3.60	12,751,029	9.41
2005	2,819,444	35,276,277	7.99	13,557,086	20.80
2006	3,423,554	37,408,828	9.15	13,919,377	24.60

Source: CONSAR.

TABLE 10-12 Pension Funds in 2001

AFORE	*SIEFORE*	*Value*	*Share*
Allianz Dresdner	Allianz Dresdner I-1	8,930.9	3.6
Banamex Aegon	Banamex No. 1	36,997.0	14.9
Bancomer	Bancomer Real	53,843.8	21.7
Banorte Generali	Fondo Sólida Banorte Generali	14,092.1	5.7
Garante	Garante 1	21,598.9	8.7
Inbursa	Inbursa	18,327.4	7.4
ING	ING	21,430.1	8.6
Principal	Principal	6,081.3	2.5
Profuturo GNP	Fondo Profuturo	23,648.6	9.5
Santander Mexicano	Ahorro Santander Mexicano	22,605.5	9.1
Tepeyac	Tepeyac	2,825.9	1.1
XXI	XXI	15,472.0	6.2
Zurich	Zurich	2,322.5	0.9
Total		248,176.1	100.0

Source: Notisar (2001). (Notisar was a precursor of CONSAR.)

Where are affiliates moving? A report by CONSAR suggests that over 80 percent are moving to cheaper AFOREs in terms of fees, and nearly 20 percent are moving in the opposite direction. There are two possible reasons why an affiliate might go to a more expensive fund. First, the costlier funds might be offering higher returns. Second, they may be offering better service. Of course, there may be a third reason: the expensive funds may be marketing their AFOREs more successfully.

Portfolios of AFOREs

When AFOREs first formed, they were allowed to have one SIEFORE each, and they had to have most of their investments in short-term government bonds. However, over the past eight years, the investment regimen has been relaxed. Table 10-12 shows the market share of each fund in 2001. As noted earlier, the market share according to the value of each AFORE does not correspond to the market share according to the number of affiliates. For example, while Bancomer had less than 13 percent of the affiliates, it controlled 21 percent of the market with respect to investments.

Table 10-13, which shows the investment profile for each AFORE in 2006, reveals that over 75 percent of all investment was in government bonds, largely in an indexed, short-term bond called Bonde 91. Private-bond investment was 8 percent of the total, lower than what was actually allowed by law, even though private bonds had much higher rates of return. The reason private-bond investment is low is because investment was only

TABLE 10-13 Investment Profile (2006)

AFORE	*SIEFORE*	*Value*	*Share*	*Govt.*	*Private*	*Bank*	*Others*[a]
Actinver	Actinver 1	2,381.3	3.32	94.3	0.7	1.5	3.5
Afirme Bajío	Afirme Bajío Siefore Básica 1	502.3	0.70	87.2	—	3.3	9.5
Ahorra Ahora	Ahorra Ahora 1	109.4	0.15	96.7	—	—	3.3
Argos	Argos 1	9.5	0.01	100.0	—	—	—
Azteca	Azteca Básica 1	2,397.2	3.34	84.5	5.5	2.1	7.9
Banamex	Banamex Básica 1	8,105.8	11.29	76.7	4.9	4.9	13.5
Bancomer	Bancomer Protege	10,175.7	14.17	76.9	12.8	3.3	7.1
Banorte Generali	Fondo Sólida Banorte Generali Uno	4,051.7	5.64	67.0	10.8	11.5	10.8
Coppel	Coppel Básica 1	147.6	0.21	74.8	9.3	9.2	6.6
De la Gente	De la Gente Básica 1	22.7	0.03	93.2	—	—	6.8
HSBC	HSBC-B1	3,025.5	4.21	85.3	7.6	3.8	3.3
Inbursa	Inbursa Básica	11,218.1	15.62	88.7	4.5	1.9	4.8
ING	ING Básica 1	4,493.0	6.26	70.0	8.5	9.0	12.5
Invercap	Invercap	1,143.3	1.59	34.4	22.3	22.5	20.7
Ixe	Ixe 1	462.5	0.64	93.0	—	4.5	2.5
Metlife	Metlife Met1	627.3	0.87	67.9	8.0	12.8	11.3
Principal	Principal 1	7,120.3	9.91	75.7	8.2	5.6	10.5
Profuturo GNP	Fondo Profuturo1	4,927.9	6.86	51.8	12.3	12.7	23.2
Santander	Ahorro Santander Básica 1	3,961.9	5.52	74.7	8.0	4.6	12.7
Scotia	Scotia Siefore Básica 1	23.6	0.03	91.0	—	6.0	3.1
XXI	XXI SB1	6,918.9	9.63	65.7	8.3	14.4	11.7
Total	—	71,825.4	100.00	75.3	8.1	6.4	10.2

Source: CONSAR.

[a] Includes government papers and instruments issued by states, municipalities, and government-related companies, as well as international papers.

possible in mxAAA- or better-rated private bonds, which are in short supply.

Thus, by 2006, AFOREs had reduced their holdings of government bonds from 88 to 75 percent, a proportion similar to that in El Salvador and Uruguay but much larger than in Argentina, Bolivia, and Chile.

TABLE 10-14a Accumulated Funds in AFOREs (2006)

AFORE	*Obligatory*	*Voluntary*	*Voluntary/ Obligatory (%)*
Actinver	4,648.3	29.6	0.64
Afirme Bajío	6.2	0.1	0.80
Azteca	8,637.2	6.4	0.07
Banamex	114,721.9	462.1	0.40
Bancomer	109,159.7	499.5	0.46
Banorte Generali	38,274.7	114.3	0.30
HSBC	24,973.5	18.3	0.07
Inbursa	61,171.6	201.8	0.33
ING	47,154.0	81.2	0.17
Invercap	1,798.3	0.9	0.05
IXE	1,206.9	4.0	0.33
Metlife	4,206.0	8.3	0.20
Principal	26,369.4	18.2	0.07
Profuturo GNP	57,462.8	169.6	0.30
Santander Mexicano	42,467.9	72.5	0.17
XXI	34,750.3	309.8	0.89
Total	577,008.7	1,996.5	0.35

Source: CONSAR.

Notes: Figures are in thousands of pesos. Includes only retirement funds.

Voluntary Contributions

Since 2003 affiliates have been able to invest in one of two voluntary funds. They can invest beyond the 6.5 percent of salary stipulated by law in the AFORE accounts that they already have or in a separate voluntary account (discussed above). Tables 10-14a and 10.14b examine additional voluntary contributions in the existing obligatory accounts. For the system as a whole, the voluntary contribution is very small: only 0.3 percent of total contribution comes as voluntary contributions.

What are the benefits of the separate voluntary fund? Because contributions are tax-deductible up to a limit, this segment was created to encourage workers to save more for retirement. Under current law workers can withdraw the funds after 6 months with a penalty of 20 percent tax payment, which means that individuals with a higher than 20 percent marginal tax rate can use this fund to reduce their tax burden.

Cost of the New System

There are different ways to examine the new system's costs:

1. At the basic level are the commissions charged by AFOREs.

TABLE 10-14b Investment Regimes of Voluntary Accounts (2006)

Fund	*Value*	*Percentage*	*Government Bonds*	*Financial Institutions*
Actinver 3	57.5	8.96	93.1	—
Banamex de Aportaciones Voluntarias	198.2	30.92	100.0	—
Banamex de Aportaciones Voluntarias Plus	0.7	0.10	100.0	—
Ahorro Individual Bancomer	235.5	36.72	100.0	—
ING AV3	23.0	3.59	92.6	6.0
Metlife Met3	30.4	4.74	100.0	—
Fondo Profuturo 2	93.9	14.65	89.0	0.4
Fondo Profuturo 3	2.1	0.32	100.0	—
Total	641.2	100.00	97.5	0.3

Source: CONSAR.

Notes: Figures are in millions of pesos. Investment portfolios are expressed as a percentage of total.

2. At the macro level is the cost of transitioning from the old to the new. The introduction of the new system means that those now receiving benefits under the old system will not be contributing. Consequently, substantial resources must be allocated to these retirees.
3. The new system also promises a floor plan. Those who would not have enough in their account under the new system will receive a minimum guaranteed pension.

Commissions

Commissions can be assessed over the flow of funds, on account balances, and over the rate of return. In 1997 most funds charged commissions on flow. Some funds charged on both the flow of funds and account balance. Inbursa charged only on the real rate of return, not charging anything if the real rate was negative. However, in 2000 Inbursa changed its commission structure. As the current structure stands, the commissions are not constant over time; they vary with the number of years an affiliate stays in the fund. AFOREs offer a discount for loyalty, which can accumulate for 25 years or more, depending on the fund.

Because charges are assessed differently from AFORE to AFORE, it is not easy to compare charges. Table 10-15 illustrates the charges as advertised by each fund. In 2006 each AFORE charged on flow (contribution) and, in most cases, on the balance as well. Principal, for example, charged 1.6 percent of wages and an additional 0.35 percent on the account balance.

TABLE 10-15. Commission Structure (2006)

AFORE	*Commission on Contribution*	*Commission on Balance*
Actinver	1.02	0.20
Afirme Bajío	0.62	0.24
Ahorra Ahora	0.90	0.20
Argos	1.07	0.33
Azteca	0.90	0.40
Banamex	0.75	1.48
Bancomer	1.20	0.50
Banorte Generali	1.25	0.40
Coppel	0.92	0.30
De la Gente	0.90	0.31
HSBC	1.40	0.40
Inbursa	0.50	0.50
ING	1.32	0.30
Invercap	1.03	0.20
IXE	1.10	0.33
Metlife	1.23	0.25
Principal	1.60	0.35
Profuturo GNP	1.64	0.50
Santander	1.28	0.50
Scotia	1.22	0.26
XXI	1.30	0.20

Source: CONSAR.

Note: Charges are expressed as a percentage of income in the case of contribution and on the balance in the last column.

For each additional year, an affiliate stays with Principal, these charges are reduced. With such a fee structure, it is clearly no easy task to compare the charges across AFOREs, although some direct comparison is possible.

In general, commission charges on balances increase over time as affiliates accumulate more wealth. For example, XXI charges lower commissions than does Profuturo on both contributions and balances. Thus, we can clearly rank XXI above Profuturo in terms of commissions. Using the same criterion, we can rank Actinver over XXI. However, given the variable discount structures of fees, any comparison must be specific to scenarios that depend on many factors, including initial balance, base wage, wage growth rate, interest rates over time, and inflation rate. Sinha, Martinez, and Barrios (1999) performed such a comparison using different scenarios in Mexico. However, because the number of AFOREs has changed over time, such calculations are moving targets.

To get an idea how much an affiliate pays in commissions, consider the following simple example. Suppose that a person earns the average wage (around 3 times the legal minimum wage in Mexico) and pays the 6.5 percent contribution to his or her retirement fund. Banamex would charge 1.68 percent of salary. Therefore, as a percentage of contribution, the charges would amount to 25.85 percent (1.68/6.5). However, it would be wrong to assign 25.85 percent as charges because there is the social quota—5.5 percent of minimum wage—that must also be considered. For this worker, who earns three times the minimum wage, the social quota would amount to 1.83 percent (5.5/3) of salary. This person's actual contribution is 6.5% + 1.83% = 8.33%. By law, charges do not apply to the social quota, so the actual charges amount to 20.17 percent (1.68/8.33) of the flow. Further complicating the picture is the discount AFOREs give depending on the number of years a worker stays with a fund, which means that this charge would fall over time. Flores (2004) devised a crude calculation showing that commissions as a fraction of contributions averaged around 19 percent during 1999–2004.

CONSAR provides information from each AFORE on how much they will charge in the form of an equivalent to a percentage of salary (but not as a percentage of contribution). Table 10-16 shows that, for some AFOREs, equivalent commissions rise over time. Others, like Banamex, fall over time because they charge only on flow, and this amount decreases as an affiliate stays with Banamex. The complexity of the charges makes a simple rule of thumb useless. Consider the following example. For Actinver, the commission equivalent first falls and then rises. For Profuturo, on the other hand, the commission equivalent keeps rising as a percentage of base salary. However, it is impossible to guess such outcomes simply by examining the fees structures.

In 2004 CONSAR emphasized how charges are falling over time, advertising it as a triumph of free market competition (Budebo 2004). For example, Pineda (2005) quotes Budebo, saying that this dramatic fall can be ascribed both to more competition among AFOREs and to the regulatory change that has allowed easier movement from AFORE to AFORE. The claim behind CONSAR's reports of falling charges is flawed for several reasons. First, the average charges reported are not for the date on which it is reported. Specifically, charges reported in Figure 10-1 for January 2002 do not apply during January 2002. Rather, they are the average charges that would apply (expressed as an equivalent of charges on the balance) if the affiliate were to stay with the same AFORE for the next 25 years. Thus, a new entrant to the system in January 2002 would pay much more than Figure 10-1 reports.

Second, as the law stood in January 2002, jumping from one AFORE to another meant that an affiliate would lose the discount for staying with the

TABLE 10-16. Commission Equivalent as a Percentage of Base Salary (2006)

Fund	*1 Year*	*5 Years*	*10 Years*	*20 Years*	*25 Years*
Actinver	0.94	0.95	0.94	0.99	1.05
Afirme Bajío	0.73	0.76	0.80	0.91	0.96
Ahorra Ahora	0.95	0.93	0.92	0.97	1.02
Argos	1.23	1.21	1.20	1.20	1.24
Azteca	0.94	1.00	1.01	0.97	0.98
Banamex	1.16	1.10	1.10	1.05	1.07
Bancomer	0.95	1.05	1.18	1.27	1.37
Banorte Generali	1.14	1.19	1.26	1.41	1.50
Coppel	1.06	1.12	1.20	1.34	1.42
De la Gente	1.05	1.11	1.19	1.34	1.41
HSBC	1.47	1.47	1.43	1.32	1.27
Inbursa	0.74	0.84	0.98	1.15	1.26
ING	1.43	1.39	1.38	1.39	1.47
Invercap	1.05	1.05	1.06	1.10	1.13
Ixe	1.16	1.17	1.18	1.27	1.34
Metlife	1.29	1.30	1.29	1.26	1.29
Principal	1.68	1.67	1.65	1.61	1.62
Profuturo GNP	1.41	1.50	1.63	1.81	1.91
Santander	1.52	1.45	1.33	1.33	1.42
Scotia	1.28	1.33	1.40	1.32	1.35
XXI	1.40	1.40	1.40	1.44	1.47
Simple average	1.17	1.19	1.21	1.26	1.31

Source: CONSAR.

Note: These figures are calculated for a person earning average salary with a real rate of return of 5%.

same AFORE. Thus, any movement would have meant a higher charge. If changing a provider causes a person to pay higher fees, in what sense would the standard argument of price competition apply? However, a 2004 change in law removed penalties for workers who switch but stay in the system, but every new entrant still must pay the highest possible fee of that AFORE.

Third, the average charges do not take into account the number of affiliates in each AFORE. Thus, a new AFORE gets the same weight as the established old AFOREs with millions of accounts. In reality, the average charges are not falling that rapidly for the affiliates and the charges will only be as reported in Figure 10-1 over a period of twenty-five years if there are no new entrants to the system.

What this all means is that charges with the discount do not apply to the time frame they refer to, and it is therefore not possible to compare these charges with other countries, as other countries do not report them in the prospective basis of the next twenty-five years.

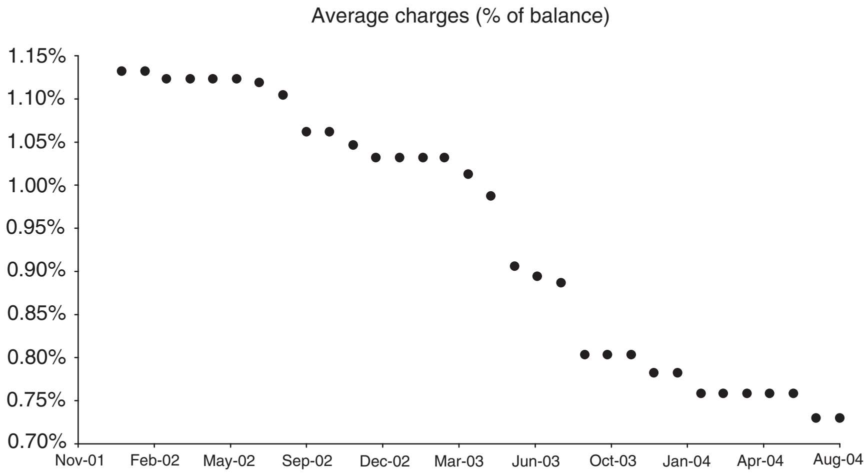

Figure 10-1. Reported average charges (01/02–08/04) (*Source*: CONSAR).

On March 29, 2007, Congress passed a law making charges on flow illegal. If the law is not overturned in the courts by an AFORE legal challenge, the structure of management fees will change dramatically.

Transition Costs

Moving from the old to the new system requires payment to two populations: (*a*) all the people owed benefits under the old system, and (*b*) all the affiliates under the new system who would not have accumulated enough capital in their savings accounts to receive a pension equal to one minimum wage (as determined in July 1997). Note that CONSAR forecasts assume a 5 percent annual real rate of return, as well as a flat 5 percent real rate of return. The forecasts concerning transition costs also require a rate of growth of wages over time as well as the rate of growth of real GDP.

CONSAR reported two series of payments over the next fifty years. A close look at the series shows that the cost is higher during the first two decades of the reform, then it falls below the forecast without the reform. Without reform, the cost is low at the beginning and gradually rises over the decades (see Sinha 2005). The only way to compare these numbers is to convert the series into their present values. However, we have no clear guide to choosing the discount rates. Table 10-17 reports the present value with different discount rates. Strikingly, for any discount rate above 3 percent,

TABLE 10-17. Present Value of Cost Without and With Reform

Discount Rate (%)	*Without Reform*	*With Reform*
0	$10,679.41	$4,462.17
3	1,965.85	1,984.38
6	776.09	1,338.12
10	361.55	690.01

Source: Authors' calculations, based on CONSAR's figures.

the present value of cost without reform is lower than the present value of cost with reform. This raises an important question: Was the reform financially a necessary one from a macroeconomic point of view? Casal and Hoyo (2007) recalculate the cost of the reform. They show that under a discount rate of 3.5 percent the transition seems to save around 20 percent of GDP. Since they assume a different discount rate (3.5%) and consider a different number of years (starting in 2006 and ending in 2090), the information that Table 10-17 presents is not strictly comparable.

Cost of the Guarantees

As noted above, the government offers two kinds of guarantees. First, for the transition workers (those who joined the system before July 1, 1997), the government guarantees that if an annuity bought by the affiliate using the AFORE balance does not exceed what he or she would have received under the old regime, the affiliate can choose to retire under the old regime. In this context, Feldstein (2005: 47–8) notes the incentive problem this guarantee creates:

> The notoriously high administrative costs in some Latin American countries reflect an incentive structure that causes individuals to disregard costs when choosing among plans.... Since someone who was 50 years old or older when the new system began could not possibly accumulate more in his investment account than he would be entitled to under the old rules, the cost and return in the personal accounts was irrelevant. Any promotional gift or other incentive to choose a particular plan or to change plans could therefore draw individuals to a high cost plan.

This guarantee does not apply to affiliates who join on or after July 1, 1997. However, these workers have a different guarantee: they will receive at least the equivalent of one minimum salary prevailing on July 1, 1997, adjusted for inflation. This guarantee amounts to a floor value of the new pension plans under the AFOREs. From the government's point of view,

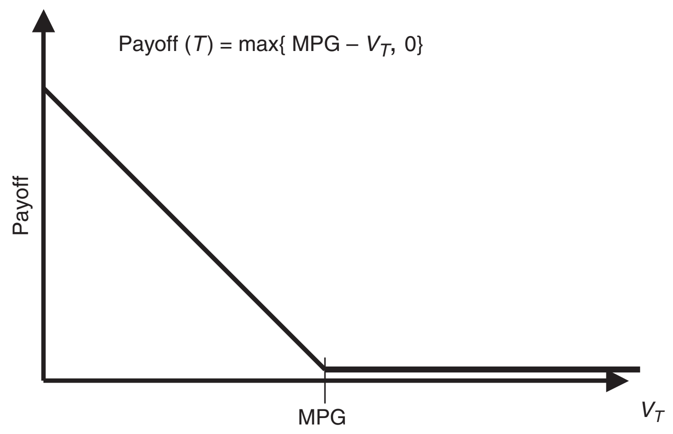

Figure 10-2. MPG as an option. (*Source*: authors' own calculation.)

this guarantee is equivalent to a standard put option, where the strike value is the MPG offered by the government. If the accumulated value is such that it amounts to a life annuity of the minimum pension, the government has zero liability. However, as Figure 10-2 illustrates, if the accumulated amount is less than what would amount to a minimum salary, the government has to make up the deficit.

Will the government have to chip in to make good the promise? Obviously, the answer to this will depend on the income levels of the affiliates. Intuitively, if affiliates have high incomes, the money in their accounts would be sufficient to pay for the minimum pension. To get a feel for the rate of return required at each level of salary, we calculated that rate for three different levels of salary for workers with contributions over twenty-five years—the minimum period of contribution to have the right to the MPG (see Table 10-18). For workers earning one minimum salary, the required real rate of return is 14 percent annually. For workers earning twice the minimum salary, the required rate of return is still 11.6 percent. For workers with the economywide average salary of 3 times the minimum salary, the required rate of return is 9.8 percent. To put it differently, it is likely that for more than half the people in the system, the government will have to top up the minimum pension, as promised under the new system. At present, no provision is being made for such financial contingencies in the government budget.

So far, we have not addressed the variability of the rate of return, nor the question about the likelihood of the government stepping in (from a probabilistic point of view). The next section explores this question further.

TABLE 10-18. Return Required to Receive the MPG

Multiples of Minimum Wage	*RRR*[a]
1	14.0
2	11.6
3	9.8

Source: CONSAR.

Note: Calculations are based on twenty-five years of contributions, with the assumption that a married couple receives the benefits, and the wife is five years younger than the husband.

[a] Required rate of return.

Investment Regimes

This section explores investment regimes in more detail, including how they have changed over time and how Mexico's investment regime compares with those in other countries.

Returns versus Fees

Do charges in different AFOREs justify their higher fees? Some AFOREs have argued that their higher charges are justified because they offer higher returns. As noted earlier, the charges are moving targets. However, this exercise takes the average charges of each AFORE over a period of twenty-five years. Because not all AFOREs have been around since 1997—making it difficult to compare performances—we consider only those that have been in existence since the beginning. Figure 10-3, which plots the twenty-five-year commission for each AFORE against its gross real rate of return over the past eight years, shows a positive relationship between charges and returns. It is clear that higher rates of return are associated with AFOREs with higher fees.

Does that mean that affiliates should be happier with the AFOREs that charge more because they get higher rates of return? The real issue is whether the extra return more than compensates for the higher fees. The answer is *no*. Any additional benefits offered in the form of higher returns are more than offset by higher fees. Each percentage point rise in rate of return requires a 50 percent rise in fees. Affiliates clearly would be better off by staying with the AFOREs that charge the lowest fees. Moreover, the higher returns also come with higher risks (Sinha 2002). Note that the fund with the lowest fee depends on the specific circumstances of the affiliates: salary level, growth of salary, time spent in the system, and real rate of return all can affect the value of the benefits.

Figure 10-3. Relation between commissions and returns of the AFOREs. (*Source*: authors' own calculation.)

Structured Notes

In 2004, a new investment regime for the AFOREs took effect. With the new regime, AFOREs can now invest in domestic and foreign stock market indexes along with derivative instruments (they cannot invest directly in derivatives). Specifically, AFOREs can have two separate portfolios for each affiliate. The first portfolio is more conservative than the second, which can be invested not only in bonds but also stocks along with derivatives. Only workers aged 55 or younger are eligible to choose Fund 2, and there are restrictions on the investments in the stock markets. The AFOREs have to ensure that such investments guarantee the value of the principal. In other words, if 100 pesos are invested, the maximum that an affiliate can lose is the return earned over 100 pesos. This regime is called 'structured notes'. Perhaps because of the complexity, the AFOREs have not invested more than 1 percent of their portfolio in structured notes.

Payout Phase

The success of any pension system depends on how well it delivers benefits. Therefore, it is critical to examine how the payout phase is functioning. The system in Mexico is still immature, so it is not possible to see all the elements of the payout phase. Nevertheless, examining the basic building blocks of the payout phase can be revealing. This section examines the

TABLE 10-19. Number of Annuities Authorized by IMSS

Year	*Total Number*
1997	4,213
1998	23,257
1999	24,680
2000	27,108
2001	30,621
2002	15,361
2003	5,798
2004	6,124
2005	7,921
2006	7,828

Source: AMIS.

annuities markets, the results of the different rates of contribution for men and women, and future risks of insufficient money in the AFOREs.

Annuities Markets

The development of an annuities market is a critical element of any private system. When the new system began, the IMSS was supposed to buy a single premium annuity for everyone who became eligible. The rules stated that eligible workers would solicit offers from among the dozen insurance companies who offered the annuities. The eligible worker would then pick an offer, which would be communicated to the IMSS, who would then authorize a single premium for the annuity. To make the deal attractive, insurance companies offered various additional benefits.

Table 10-19 shows the number of people who became eligible. There were 4,213 annuities during 1997, the first year. By 2001, this number had reached 30,621. Approximately half of the benefits were authorized to persons with total and permanent disabilities. Another half of the benefits were authorized to widows and orphans of affiliates.

Something peculiar began to happen in 2002. Instead of rising, as we would expect with a maturing system, the number of authorized annuities started to fall dramatically, then seems to have stabilized after 2003. The reason for this unexpected decrease lies with the rules of annuities authorization. During the first four years, the IMSS authorized annuities without any delay. However, starting in 2002, the agency introduced a two-year probationary period for most cases. This meant that for the short run, the IMSS would not make a large single premium payment on behalf of

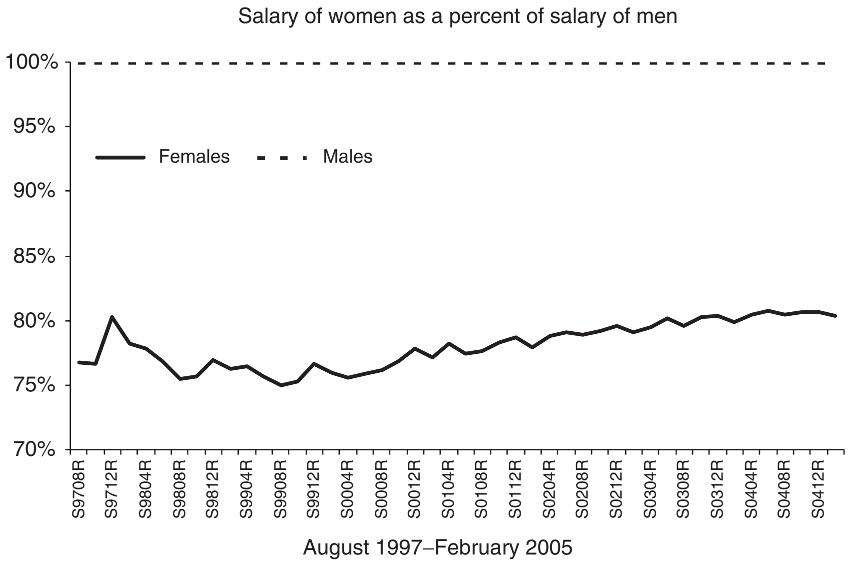

Figure 10-4. Average salary of women in AFOREs (08/1997–02/2005). (*Source*: authors' own calculation.)

these annuitants to the firms selling annuities. Rather, they simply made the payment themselves to eligible individuals from its current budget on a PAYGO basis. Given that the IMSS had lost a major segment of its income stream after the introduction of individual accounts, it has sought various ways to reduce current expenditures. Many observers in the industry see this clampdown as a direct result of such belt-tightening.

The Gender Issue

In many countries, women, on average, earn less than men. Mexico is no exception. CONSAR made a special tabulation of salaries of all persons who have contributed regularly during 1997–2005 (the tabulation excludes everyone who has contributed to their AFOREs only intermittently), separating them by gender. Figure 10-4 displays the average salary of men as 100 percent and calculates the average salary of women for each 2 months. During the 8 years, the average salary of women fluctuated between 75 and 80 percent of the average salary of men, which implies that at best, the average pension for women would be no larger than the corresponding average pension of men. In fact, the pension would be lower, as women have greater longevity. The annuity women can buy will take into account their greater longevity and therefore pay lower benefits per year, on the order of another 20 percent. Ultimately, this means that women with the same contribution density as men will receive a 40 percent smaller pension.

Likelihood of Future Shortfalls

The section above that discussed the cost of the guarantees examined how a number of affiliates (depending on their level of salary) would end up without enough capital in their accounts to ensure a minimum salary. In this section, we report the results of Sinha and Renteria (2006), who discuss the likelihood of this shortfall depending on investment patterns and levels of salary. The results of this study are discussed below.

This exercise requires that we make a number of assumptions about the investment regimes. We consider only AFOREs that can invest in different proportions in stocks and bonds without restrictions, and assume that the future rates of return of the stocks and bonds in Mexico (in real terms) will follow exactly the same pattern as during the past 8 years.

Suppose the affiliate (male with a wife four years younger) spends forty years in the system. The results show that if this affiliate has less than two times the minimum salary and if his or her investment regime allows investment only in Mexican government bonds, the likelihood that he will not have at least a minimum salary equivalent of retirement benefits is equal to one. This likelihood falls rapidly as the proportion of investment in the stock market rises.

If we repeat this exercise for an affiliate with 25 years in the system and an income of less than 2 times the minimum wage, we find that the likelihood of this person's not having enough to get the minimum guarantee is higher than 50 percent for all levels of investment in the stock market. Thus, amplification of the investment regime is unlikely to solve the problem for low-income individuals. It is realistic to assume that many low-income individuals will not spend the required minimum of twenty-five years in the formal labor market. Indeed, other studies have demonstrated that individuals with low income go in and out of the formal labor market (Maloney 1999). Perhaps the only reason why the MPG might not be expensive for the government would be because many low-income affiliates will not meet the twenty-five-year contribution minimum. Levy (2006: Table 5) calculates that the density of workers with 2 times the minimum salary is less than 47 percent, which means that workers at this level of income will need to be in the labor force for more than 50 years to be eligible for the minimum guaranteed pension.

Conclusions and Recommendations

When the new system was introduced, the federal government emphasized certain benefits that it would offer. However, many of the benefits have not materialized, despite some claims to the contrary. In fact, in many ways, the new system may be no more efficient than the old. To sum up:

1. The new pension system was supposed to reduce the informal segment of the market and increase coverage, historically low in Mexico. Indeed, a simple headcount of AFORE affiliates shows that the formal sector does appear to have grown significantly since the reform. Yet a closer examination of the proportion of affiliates who actually contribute reveals that the numbers of covered individuals are actually falling.
2. Creation of a voluntary account to encourage contribution has not worked very well. The voluntary accounts are empty for most people. Only those who seem to be contributing are the ones who could get some immediate tax benefits.
3. The new system was designed to allow workers to provide contributions to finance their own retirement, at least in the long run. As in Chile, it was felt that this factor would be incentive enough to bring more workers into the formal system. However, it is becoming clear that many low-income individuals will not have enough in their own accounts to support themselves in retirement—leaving the government to cover the deficit. To date, no financial provisions have been made to meet this impending shortfall.
4. The new system was intended to reduce costs associated with retirement but has proven to be costly. Approximately 20 percent of the resources are being eaten up in commissions during the buildup phase (both on flow of funds and on balance in the accounts).
5. Privatization of Mexico's pension system was projected to lighten the fiscal burden of the government. There are two ways this could be undermined: (*a*) the transition costs could turn out higher than anticipated, and (*b*) government guarantees may prove to be costlier than anticipated. It is still unclear how much more than what has been budgeted it will cost at the payout phase if the government has to provide a subsidy for the low-income affiliates without enough in their accounts to get one minimum salary equivalent.
6. A comparison of the transition costs of the new system to the costs of the old system indicates that the new system might not save much money in the long run, and in fact may turn out to be more expensive.

Notes

[1] i.e. enough in the sense of achieving the minimum salary equivalent promised by the government for all affiliates who comply with the minimum twenty-five-year contribution period.

[2] The 13,919,377 contributors (see Table 10-3) had a total contribution of $64,373,740,000 (see Table 10-6), making the average balance per contributor US$4,625.

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