

Evaluating Administrative Costs in Mexico's AFORES Pension System

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Abstract

Mexico has recently mandated a national defined contribution pension program known as the AFORES system, modeled on but somewhat different from the privatization models implemented elsewhere in Latin America. This study examines evidence on administrative costs of the AFORES experienced during the program's start-up phase. We explore interactions between program design and program expenses and evaluate likely developments that could alter administrative costs in the future.

We find that administrative expenses of the Mexican AFORES will probably change in next few years: they could fall if the program grows quickly to produce scale economies and start-up costs are amortized rapidly, but they may rise if services and reporting requirements are expanded. Policy recommendations emphasize cost reduction but not at the expense of pension plan performance.

Evaluating Administrative Costs in Mexico's AFORES Pension System

In 1997 Mexico adopted a mandatory, funded, defined contribution pension plan program known as the AFORES system (“Administradoras de Fondos para el Retiro”). Under this new structure, one that privatizes many tasks previously taken on by the old national pay-as-you-go social security system, formal-sector employees contribute to funded pension accounts invested by private (licensed) money managers.¹ One powerful appeal of the new AFORES system is that it promises to eventually generate more generous retirement benefits than offered by the old insolvent national social security program. In this regard, the new Mexican program resulted from the same factors driving social security “privatization” reforms elsewhere in Latin America.² But though many elements of the Mexican AFORES system are comparable to those of other Latin nations, Mexico's plan handles some structural design issues differently from its predecessors. In this paper we investigate what these design features are, and whether the AFORES administrative costs might be reduced with further design changes without undercutting the pension system services of most importance to the program.

¹ In this paper we focus on the old-age benefits provided by the AFORES pension system; for a discussion other social insurance benefits (see Bertin and Perrotto 1997).

² For recent reviews of developments in Chile see Arrau et al. (1993); Bustamante (1996); Edwards (1998); Valdes (1994); and Vittas (1995). On Argentina see Bour and Urbiztondo (1994) and Rofman and Bertin (1996). On Peru and Colombia see Ayala (1995); von Gersdorff (1997); and Quessar (1997). On Uruguay see Mitchell (1996). Recent reviews of world-wide pension reform include Bertin and Perrotto (1997); Demirguc-Kunt and Schwarz (1996); Interamerican Development Bank (1996); Mitchell and Barreto (1997); Mitchell (1996), and World Bank (1994).

As one might expect, the players in the AFORES reform – workers, employers, banks, insurers, and government agencies – underwent substantial learning during the first year of the reform. It stands to reason, therefore, that some costs would be expected to decline as the mechanics of the system are routinized, as pension fund managers learn-by-doing, and as the regulatory and oversight structures mature. There is also reason to worry that pension costs could rise in the future if, for instance, money managers begin to increase services to participants or if regulations increase the costs of doing business.

Rationale for Attention to Pension Administrative Expenses

In the case of a mandatory individual accounts pension system such as the Mexican AFORES program, pension costs demand attention for several reasons:³

- A system that costs more to administer generates smaller net investments during the worklife and hence produces lower retiree benefits (other things equal). Plan designers wanting to enhance retirement income security will therefore seek to reduce pension administrative costs.
- High administrative costs raise equity concerns regarding low-wage workers. A government that mandates a pension system will seek to avoid the perception that low-wage workers' contributions are more heavily "taxed" by administrative costs that in turn cut their eventual retirement benefits.
- Higher pension administrative costs can raise retiree claims on future government revenues. This is because some countries guarantee minimum retirement benefits to workers with inadequate pension accounts; more people will be eligible for guaranteed benefits, the higher are costs associated with the individual accounts.
- Higher pension expenses increase incentives for low-wage workers to evade the pension system. That is, once a minimum wage worker has contributed enough years to be assured the minimum guaranteed benefit at retirement age, additional contributions will be perceived as a pure tax.

³ Comparative studies on cross-national public and private pension costs include Mitchell (1996); Mitchell, Sunden, and Hsin (1994); Queissar (1997), and Valdes (1993, 1994). See also Mitchell (1996), James and Palacios (1995).

- Economic efficiency concerns imply that pension system charges should reflect the value of resources used to mount and sustain the pension system. Otherwise system participants may over- or under-consume retirement saving as compared to other economic activities.

Having concluded that one must understand what and how a pension plan incurs expenses, and the services it delivers, it is next important to ask how effective a pension system is in meeting its goals, and whether its costs adequately reflect the economic resources used to provide the services rendered (Mitchell and Sunden 1994). Accordingly we begin by identifying the four key functions central to any pension plan, namely *financing, recordkeeping, money management, and benefit payouts*. While these functions are common to all pensions, the way in which each function is carried out varies from one plan and country to the next (and sometimes even across time periods). Depending on the plan design, for instance, some tasks may be handled privately and others by the public sector. What matters, of course, is which expenses are associated with administering a pension plan and what services are received in return.

The way a pension system is *financed* can have important cost and performance implications. For example in Mexico, the individual-account pension system relies on payroll taxes gathered from employee payroll via the national tax authority.⁴ The fact that the taxes are gathered using a centralized mechanism suggests that pension contribution collection costs would be lower than in Chile, where individual workers must be contacted frequently by thousands of private

⁴ The Mexican Social Security Institute (IMSS) collaborates with the AFORES system, so that both social insurance and pension contributions are gathered using a common centralized tax collection authority.

pension marketing and collection agents. That is, a central mechanism for collection of contributions is expected to be less costly than fully “outsourced” private agent collection system. Of course the potential for scale economies depends on the credibility and effectiveness of the tax authority; if it is unable to collect all taxes due, a private sector counterpart might have more incentive and perhaps better tracking powers with which to gather requisite contributions.⁵

A second set of design issues has to do with *record-keeping* for pension purposes. In some countries workers must maintain their own work and contribution records over their worklives, an inefficient practice that results in retirees failing to be certified as eligible to receive benefits if they lose their recordbooks. Here the cost of recordkeeping falls on participants; while it might “appear” inexpensive, in fact the effect of decentralization is to hurt performance. By contrast, a centralized recordkeeping system might do a better job of keeping records as in Mexico, where a central data management group is operated by the private sector (described in more detail below). Important scale economies are likely in this venue.

An additional key function of an individual account pension system is the *money management* task. This is an area where some assert that governments can invest less expensively than can private investment experts, while others conclude that private sector managers have superior service and reap higher rewards – a practice that may offset higher expenses.

⁵ For a discussion of pension tax evasion see Manchester (forthcoming).

Similarly with regard to *benefit payouts*, some argue that a government provider can offer lower cost service than a private provider, while others contend that a private provider will be more service oriented and possibly less costly due to competitive pressures.

As is readily seen, one reason it is difficult to compare administrative expenses across publicly versus privately managed systems is that different services are generally provided. Also, when a government takes on one or more of the four pension functions, the full cost of the function may not always be fully accounted for. This is particularly a problem when a government does not fully capture the economic resource values of the tasks undertaken by its employees.⁶ In the Mexican context, for instance, the process of collecting pension contributions is overseen by the central tax authority for a fixed per-worker fee (see Appendix). This per-worker fee may or may not accurately reflect current collection costs, and because it is centrally set it cannot change in response to competition.⁷

Understanding Commissions and Fees in the AFORES System

⁶ As Reid and Mitchell (1995) point out, “privately-managed pension plans face strong incentives to keep track of costs, especially if they are free-standing rather than being an arm of another business...By contrast, publicly-run systems are less likely to value their costs at market rates to the extent that they do not buy their inputs directly...For all these reasons, publicly-managed old-age programs could tend to appear less expensive than they actually are, relative to privately managed plans.”

⁷ By comparison, the Argentinian AFJP pension plans are not responsible for any tax collection costs incurred by the government tax authority, so the pension system is heavily subsidized by the federal government (Rofman 1997). In Chile, pension contribution costs are fully tracked and accounted for since private pension fund agents gather the funds from each contributor. In the US, corporate pension contributions are typically gathered via the employer, a practice that affords participants of important scale economies not available in the Chilean case. Indeed

Mexico's new pension system consists of a first-pillar minimum benefit guaranteed by the state, and a second-pillar program with an individually-owned mandatory defined contribution (DC) account.⁸ This DC account is financed by with a 6.5% employee payroll tax plus an additional "social quota" provided by the government from general revenues worth about 2.2% of a low-earner's wage.⁹ Payroll taxes are collected from employers under the supervision of the government national social security system (IMSS); these monies are deposited in designated "receiving banks" (Entidades Receptoras) that then transfer the funds to the Central Bank of Mexico. Subsequently these funds are deposited within a specified time period at the privately-operated pension fund manager selected by each worker.

legislation pending in Chile would permit employers to collect contributions and negotiate commissions with the AFPs (Valdes 1997a).

⁸ For a detailed discussion of the recent Mexican reforms see Cerda and Grandolini (1997); Sales and Solis (1998); IMSS (1997), and World Bank (1996). It is worth noting that the government social security agency (IMSS) retains several important roles under the Mexican reform, including the guarantee of a minimum benefit equivalent to the minimum wage in the capital city, and also the provision of disability and health insurance. Having the government play a key role in maintaining a first-pillar old-age benefit is a common pattern in the Latin American countries that have implemented individual account pensions (Mitchell and Barreto 1997). Costs associated with the administrative costs of the first pillar system are not the focus of the present paper but in Chile were similar to those of the privatized plan (Reid and Mitchell 1995).

⁹Effective year-end 1997, the law has allowed workers to rollover both SAR and INFONAVIT funds saved prior to 1998 into their AFORES accounts. The former refers to a previous and now-terminated effort to get workers to pay into government-managed funds; the latter refers to a mandatory 5% of pay contribution to INFONAVIT, a national scheme to foster saving for home purchase. At retirement these SAR and INFONAVIT funds will be available as a lump sum or as an increment to pension benefits. It is expected that future SAR and INFONAVIT contributions will become fully integrated into the AFORES accounts are treated like regular accumulations (CONSAR 1998).

The pension plans, of which 17 were licensed at the system's inception, are called AFORES ("Administradoras de Fondos para el Retiro").¹⁰ These AFORES may invest pension monies in high-quality Mexican public and private financial assets; while the funds currently hold mostly indexed government bonds, the plan is to liberalize these limits over time. Nevertheless foreign investments are prohibited, along with a range of other limitations on portfolio composition.¹¹ During the first year of operations, participants were required to remain with the initially-elected AFORE so as to discourage turnover and to preserve scale economies.¹² System reporting is handled by a privately-managed data collection firm (PROCESAR) that receives daily information on fund flows and affiliates, and supervisory responsibility is the charge of a new government pension agency (CONSAR) that oversees the entire private pension structure.

To retire under the new system after a full work career, a worker must be at least 65 years old and must have contributed at least 24 years to the plan.¹³ At that point, the retiree's benefit depends on his AFORE accumulation which in turn varies

¹⁰ One pension plan, AFORE Preventir, is being liquidated as of 11/98; see www.notisar.com/noticias.

¹¹ No AFORE may hold over 15% of any one issuer's paper; the limit is 5% if the firm is linked financially to the AFORE. Other limits also exist, including on the maximum amount of the portfolio that can be held in domestic equities; maximums for any single company; prohibitions on a pension fund owning a controlling interest in a company; only highly rated private paper and bank deposits are permitted; and Mexican company shares issued on international capital markets will be permitted only if they meet rating criteria (CONSAR 1998, and Mitchell and Barreto 1997).

¹² New rules permitting worker transfer across pension funds were recently promulgated.

¹³ Workers having accumulated years of service under the old system will be able to elect a benefit payable under the old system, or their new-system benefit, whichever

with plan contributions and investment returns on these contributions over time. The retiree is allowed to use his AFORE accumulation to purchase an annuity from a private insurance company, or alternatively he may receive a programmed withdrawal as long as his monthly payment is at least as large as a minimum pension guaranteed by the government. The guaranteed minimum pension is equal to the minimum wage in Mexico City or about 40% of the average wage (1 minimum salary is currently P\$24 daily, or about US\$3.10).¹⁴ Early retirement is permitted if the worker's AFORES benefit can purchase a benefit at least 130% of the minimum pension.

Benefits may become higher to the extent that two other accounts are expected to be melded with the AFORES accounts in the future. First, participants in the old Mexican SAR system accumulated funds that are gradually being amalgamated into the new individual pensions. Second, the AFORES are expected to take over management of a separate 5% payroll tax currently devoted to a national housing account (known as INFONAVIT). Completing these efforts will contribute importantly to the amount of the program's eventual private pension benefit.

Mexico's First Year of Pension System Operations

The Mexican AFORES system began to operate in the spring of 1997, with 17 pension plans entering the market and enrolling participants in anticipation of the first contribution date in October of 1997. At the system's inception it was expected

is greater. See Cerda and Grandolini (1997) and Sales and Solis (1996) for more detail on the Mexican reform.

that there would be approximately 11 million eligible workers – those who had been contributing under the old social security system – and of these, approximately 10.7 million chose an AFORE into which their pension taxes began to be paid during the program’s first year.¹⁵ By the spring of 1998, it was determined that an additional number of people who were not actively in the private sector had also started up AFORES accounts, often to consolidate their preexisting SAR accounts, or to start accounts financed by voluntary contributions. As a result of this group’s entrance to the system, the government raised its target of potentially eligible persons to 14.8 million, and the system’s total number of affiliates now stands at about 13 million workers.¹⁶

In terms of financial flows, the initial deposit of contributions as of end-November 1997 totaled USD\$331M, of which \$260M resulted from workers’ payroll taxes and \$72M from the government “social quota” (CONSAR 1997a). This amounted to an average bi-monthly contribution per active worker of USD\$49, translating to an eventual annual flow into the pension system of \$294 per worker (in ’97 dollars).¹⁷ During 1998 (through September), monthly AFORES mandatory contributions averaged about US\$542M per month, with fund totals standing at

¹⁴ Throughout this paper we use the exchange rate prevailing around December 1, 1997, which was P\$8=US\$1.

¹⁵ See CONSAR 1997a; this includes participants that did not elect a pension and were allocated to a government account that guarantees a 2% real return per annum.

¹⁶ Reported by AFORE Profuturo at www.gnp.com.mx, as of August 1998.

¹⁷ Voluntary additional contributions are also permitted, though these are not expected to amount to much until their tax status is clarified

about US\$5.4B.¹⁸ Experts anticipate that the Mexican pension system will manage at least US\$10B by the year 2000 (Werner 1997).

Affiliation of participants across AFOREs was uneven in the system's first year of operation (see Table 1). In late 1997, total affiliation stood at about 10.7 million participants, with five funds attracting over one million affiliates each; at the same time the smallest plans had only 16-19 thousand participants. The system is now larger after one year of operation: seven funds have attracted over one million participants and two are around the two million mark (see Table 2). Nevertheless there remain several small plans with fewer than 100,000 participants, plans that may be too small to remain freestanding over time. Substantial variability is also evident in terms of the types of participants attracted to the different AFOREs. For instance at inception the system boasted about 80% active participants, with the rest being nonworking individuals, but the range ran from 62% to 94%.¹⁹ Table 1 also reveals plan-specific patterns in pay levels; for instance one fund had 20% of its participants earning 1 minimum salary or less, while many other plans reported under one percent of affiliates in this category. Conversely, the fraction of affiliates earning 16-25 minimum salaries is also variable, ranging from close to 0 to as high as 30%. Since account balances will clearly grow faster for plans with more highly-paid contributors, individual AFOREs have an interest in boosting the fraction of high earners participating in their plans.

¹⁸ Recent data on affiliates and fund totals may be found at www.consar.gob.mx/pages/estadisticas.

¹⁹ More recent data are not available; also the fraction of active affiliates for AFORE XXI is probably low (communication from the General Manager, AFORE XXI, 9/97).

AFORES Expenses and Commissions

Pension managers commonly charge for services rendered while managing a pension fund. These commissions and expenses can take many different forms, with some managers electing to levy a one-time frontload on invested assets; others take a fraction of returns or a percent of assets under management; and still others have combinations of these expense arrangements.

The Mexican government has permitted each AFORE to design its own approach to commissions, in contrast to reforms in other countries.²⁰ The typical pattern that has emerged among AFORES is a one-time up-front fee on contributions; as Table 3 shows, seven of the 17 AFORES selected to levy only a front load averaging 1.67% of covered pay. But the table also shows that another seven plans imposed both a one-time pay-based charge totaling 1.27% of pay and an additional annual 1.03% of assets. The remaining three plans charged either an annual percent of assets alone (4.75%), a fraction of annual real returns alone (33%), or a commission levied on both contribution amounts and returns. It should be noted that these commissions correspond to first-year rates only; that is, the AFORES promise to reduce commissions for loyal participants who remain over a longer period of time. The declining commission pattern is intended to discourage workers from moving their money into a new AFORE when cross-fund transfers are permitted.

What do these AFORE commissions cover? In principle, they are intended to compensate the pension fund system for the entire range of expenses that the

²⁰ In Chile, for example, only one-time front loads are permitted.

AFORES must pay in the process of carrying out the four key functions of a pension plan, namely the collection of contributions, money management, recordkeeping, and benefit payouts. In addition, of course, these commissions should include normal profit given that the AFORES are private sector firms, and they will also include some fraction of start-up costs as amortized over some longer period. An important yet delicate issue is to determine which costs might properly be considered “start-up” costs and thus nonrecurring, versus which should be considered long-term. For instance, during 1997 the Mexican AFORES engaged a total of 83,000 agents to solicit potential affiliates as the system was launched, for an average of 130 affiliates per agent (Table 4). Advertising costs at start-up totaled over half a billion US dollars or US\$85 per affiliate (the range was from \$14 to \$340). Most of the advertising costs at start-up (72%) were devoted to television commercials (Table 5), but strategies varied tremendously across plans with some AFORES doing virtually no advertising via the press.

Signing up new participants should become more routine, and hence less expensive, over time. But other expenses will be ongoing, such as those pertaining to money collection and investment procedures. The Mexican social security agency (IMSS) currently helps the AFORES system by working with employers to collect contributions in a central and computerized way. For this service the IMSS charges AFORES a support service fee of US\$2.20/account/year (see Appendix). Employers must then deposit funds with a nongovernmental bank (Entidad Receptor) that serves as a fund conduit for employers’ payroll tax deposits; these banks charge the AFORES US\$0.37/account/year for handling the money. The

Central Bank of Mexico collects the funds at the next step and passes them to nongovernmental banks; it pays a real interest rate of 2% on accumulated funds. These nongovernmental banks (Bancos Liquidadores) disburse workers' funds to each AFOREs, a service for which they charge US\$2.80 per deposit (or \$16.80 per year assuming 6 annual deposits). Data collection is also an ongoing expense; PROCESAR, the privately managed information-gathering firm, charges US\$2.5/account/year to the AFORES for servicing employee accounts and data collection (1997).

The system has tried hard to track many of the potential charges under the current regulatory structure, but it appears that some have not yet been included in cost estimates (see Appendix). One item not currently included in AFORES charges is the cost of the supervisory agency CONSAR. This agency's budget of US\$22M was subsidized by the central government and international lending agencies during the start-up year. If CONSAR's budget remained constant and if it were spread over the approximately 11M participants, additional supervisory costs might total approximately \$2/affiliate/year. These clearly will not rise linearly with participant size, so scale economies are to be expected in the future. Also few AFORES participants are near retirement age, so virtually no costs are now devoted to managing the benefit payout process. As a result, current AFORES administrative charges do not now include charges for establishing retirees' eligibility, determining the value of lump sum or programmed withdrawal payouts (if these are chosen), and for those deciding to purchase annuities, the cost associated with annuitizing the pension benefit at retirement. These expenses will rise in the future. Finally,

costs of other regulatory/supervisory entities are apparently not presently levied against the AFORES system, though the pension funds certainly rely on them to a large degree (e.g. the insurance commission, the securities and exchange commission, the rating agency). These may fall as the program grows.

Comparing Commissions Across Pension Funds

Before further assessing AFORES expense, it is useful to acknowledge that the AFORES commissions are difficult to compare across different funds in Mexico (Table 3). That is, one must determine how to evaluate a wide range of front-loaded, asset-based, and return-based commissions; furthermore, the fees charged change the longer a participant leaves his monies in a given account. To make these fees comparable, CONSAR, the government supervisory agency, has simulated commissions paid and benefits received under the different AFORES commission structures (1997a). This exercise requires assuming (1) a wage level and hence a contribution level, (2) a holding period, and (3) a real rate of return and wage growth rate. For the results reported here, we focus on a hypothetical average worker earning three times the minimum wage (average earnings for AFORES-covered workers). The results also assume zero real pay growth and real annual investment returns are set at either 3.5% or 5%. Two holding periods considered are 25 and 40 years, respectively. These computations also assume that the government's additional "social quota" is not included in the contribution amount, and that the participant has a SAR accumulation of \$4,000, immediately transferred into the AFORES plan.²¹

²¹ As noted above, the transferal of SAR funds began only in recent months.

Illustrative comparisons of average commissions charged under the various AFORES appear in Table 6. Here the average commission is computed as the *present value* of annual commissions cumulated over the holding period in each AFORE. For the hypothetical average worker, the front-loaded AFORES commission equals 1.9% of pay on a one-time basis; this assumes that the worker contributes over a 25-year period and earns a 3.5% real interest rate on contributions. If the worker instead faced a 40-year period and invested at the same interest rate, the resulting AFORES commission is higher, at 2.5% of pay. This is the result of nonlinear commission charges that change over time. If the investment return were instead 5%, average commissions would grow to between 2.26-2.7% of pay. These commissions can alternatively be converted to a fraction of the worker's annual contribution, instead of assuming a full frontload. From this perspective, commissions are equivalent to a 30-40% cut in the worker's new contribution to the AFORES account ($=.025$ or $0.020/.065$).²² Conversely, if commissions are instead amortized over the worklife, average commissions are equal to a one-third cut in the participant's annual real investment return.²³

This average also conceals cross-fund variation in costs. Thus the commission charged by the most expensive pension plan is twice that of the least expensive AFORE, suggesting that a careful consumer could save much more by comparison shopping across funds. And because the commissions rise with real

²² For consistency this computation excludes the social quota, as do all the CONSAR computations.

²³ A cost normalization concept more familiar to developed country readers is the percentage charge on assets, these would equal 1.3 to 1.4% of assets annually (or 130-140 basis points) on average; see Consar 1997a.

return and the length of time the monies are left in the pension plan, long-term participants during high-return periods would benefit the most from “shopping around”. Plan rankings by commissions prove rather stable across simulated holding periods and interest rates.²⁴

Ultimately commissions will reduce the amount of assets available to pay retiree benefits. Assuming that an AFORE could earn a real 3.5% return on assets over 25 years, the average participant would accumulate a total of US\$10,800 (or US\$13,400 at a 5% real return). This accrual would be worth 78% (77%) of the value of what the retiree could have accumulated if no pension commissions were charged. In other words, the accumulated commission would amount to about one-quarter the terminal value of a fund that charged no commissions. This exercise is purely academic, of course, since a funded system could not operate at a zero commission level. Over a 40-year holding period the simulated net accumulation would be larger – US\$21,000 -31,000 – but the reduction due to the commission now approaches 30% of the final sum. Again, the range of costs shown should be noted, with the net balance reduced by 16% in the least-cost case, and by 42% in the highest-cost instance. Correlations across plans are as before, in the 0.9 range, indicating consistency of plan cost rankings within the range of simulated outcomes given here.

One reason that analysts find it interesting to examine commissions in this way is that the Mexican government guarantees a minimum benefit if a worker’s AFORES account proves to be too small. Further, this minimum guaranteed benefit

²⁴ However actual returns across AFOREs are not all the same, implying that commissions should be computed for different realized return patterns.

is financed in part from general revenue, so higher administration costs could result in potentially higher costs for the government. It has been estimated that an average-wage worker in the system for 25 years would have to earn a real return of 6.35% on his pension assets, given the average AFORE commission, for him to accumulate enough to pay a benefit that exceeds the government guaranteed pension.²⁵ Actual AFORES investment returns were above this threshold during the system's first year of operation but fell below the hurdle rate in 1998.²⁶ Future returns will depend importantly on lowering commissions and expanding investment options. Without this, real net returns may not be high enough permit average and low-wage workers to amass an individual account paying over the guaranteed minimum.²⁷

²⁵ If the pension commission were 2.5%, the hurdle rate required to beat the government guarantee would be even higher – 6.92% – for the average-wage employee (required returns are even higher for someone paid only one minimum salary); see CONSAR (1997b).

²⁶ The real rate of return paid to the AFORES funds through 1997 was 8.1% (CONSAR 1998) and during the first 8 months of 1998 it was 2.26% (www.consar.gob.mx).

²⁷ Periods of unemployment will also reduce the worker's accumulation amount as well as his chances of receiving the guaranteed minimum benefit. Partida-Bush (1997) predicts that the typical male covered by the AFORES system will not work enough years in covered employment to qualify for the minimum pension (and work histories for women are even less propitious). This concern is recognized by CONSAR (1998) which acknowledges that workers average 21 years in covered employment by age 65 at present, fewer than the 24 required under the new law to obtain the minimum pension. Of course participants will still have access to benefits payable from their AFORES accounts, even if they are not eligible for the guaranteed minimum.

Start-up versus Long Run Considerations

Because the Mexican AFORES system is still young, it is difficult to determine exactly how much of the first-year costs incurred will diminish through time. Nevertheless AFORES expenses should fall for several reasons:

- Actual commissions as a fraction of assets are lower than those just described because the CONSAR calculations exclude the “social quota” contribution deposited by the government for low-wage workers totaling 2.2% of their pay. Including this additional contribution reduces pension commissions from 30-40% of the first-year’s contribution to about 23-29%.
- As SAR and INFONAVIT funds are transferred to AFORES accounts, scale economies should reduce commissions. This influx of funds is a critical element in supporting rapid growth in AFORES accounts.
- Expenses charged should fall as costs incurred at start-up diminish, due to system growth and learning-by-doing. For instance, it is expected that the pension sales force can shrink and advertising drop once most participants select an AFORE. Participants will also become better informed about AFORE performance once CONSAR’s methodology becomes widely used to report gross and net returns on AFORE investments.
- AFORES costs can fall if the government reduces its charges for tax collection and bank handling of funds. As employers, banks, the pension funds, and the government become more adept handling contributions, record-keeping, and investing of funds, lower fees may be feasible.
- New technology should lower pension collection costs. Larger employers will soon be able to deposit payroll tax contributions via electronic fund transfer with the “Entidades Receptoras”, and this should lower the cost of handling these accounts. The IMSS collection fee, the “Banco Liquidador” fee, and the PROCESAR handling fee could likewise become the subject of renegotiation.
- Some of the larger AFORES may benefit from cost-reductions sooner than the smaller ones, and may pass these savings on to participants. However, current rules prohibit any one AFORE from having more than 20% of the pension market, a practice that limits scale economies. A process to raise this size cap should be implemented to reward more efficient providers.

Lest it be thought that current AFORES commissions will inevitably fall through time, it is worth drawing attention to factors pushing commissions up in the future. These include the following:

- The system will soon allow more than a single fund (SIEFORE) per AFORE. This will reduce workers' incentives to transfer across plans, cutting transfer costs, but multiple funds in one pension plan will boost service costs due to multiple investment options.
- As additional investment options per AFORE are permitted, more time and money must be devoted to investor education and retirement financial planning, raising expenses.²⁸
- Under current rules, transfers across AFORES are permitted only once per year; there is some concern that AFORES costs would rise if workers were permitted to move their funds several times per year.²⁹ On the other hand, commissions might fall if daily transfers were permitted, since sales' agents would benefit little by getting workers to switch funds (Shah 1997).
- Expenses will rise as the AFORES investment options are broadened to a larger set of assets. This can be moderated if low-cost indexed portfolios are selected.
- Pension system costs may rise if the AFORES are asked to cover the CONSAR budget, as those costs are not presently paid for within the system.
- Expenses will rise as the system matures and workers reach retirement age, since plans must gain expertise and provide expanded service in establishing participant eligibility for benefits (including survivor benefits), the actual payment of retirement income, and linkage with the IMSS minimum benefit guarantee .
- AFORES do not currently account for insurance loads associated with buying a retirement annuity. Some propose adding this cost into the expenses of managing an individual account pension system.

²⁸ US defined contribution plans report spending almost \$6/participant/year on this effort currently; see *Plan Sponsor* (1997).

²⁹ In Chile, 50% of workers transfer their money from one plan to another annually costing a very high \$120/transfer fee per worker per year (Valdes 1997b). By contrast in Argentina turnover is much lower – only 12% of plan participants moved in 1996 – and the rate is expected to fall due to regulations limiting fund switching (Superintendencia de AFJP 1997).

Administrative Costs in Other Systems

One way to evaluate whether Mexican pension system costs might rise or fall in the future is to compare these with costs in other pension models. For example, other countries have adopted individual account pensions, including Chile, Argentina, Peru, and Bolivia; private sector pension alternatives are also frequently offered as benchmarks for comparison purposes.

One difficulty with such comparisons is that other pension systems are generally structured differently from the Mexican program, with different services and sometimes receive subsidies from the government. Take for example the *tax collection* function. In Mexico, as noted above, tax collection for the AFORES is handled by the central tax authority in exchange for a government-set collection cost fee. By contrast, the government tax authority in Argentina does not charge a collection fee to the AFJP pensions; as a result, reported collection expenses are artificially low (Rofman 1997). In Chile, contributions are collected by individual agents, an approach that is apparently more costly than a central collection authority; also competitive pressures have not been effective in driving down commissions over time (Valdes 1997a). In the US, corporate and public sector pension contributions are typically gathered via the employer, a practice that affords participants of important scale economies not available in the Chilean case.³⁰

³⁰ Pending legislation would permit Chilean employers to collect contributions and negotiate commissions with the AFPs directly, which may lower collection costs in that nation (Valdes 1997a). For a comparison of US public and private pension plans see Mitchell and Carr (1996).

Money management services and investment behavior also differ across pension systems, policies that in turn influence pension expense comparisons. Research shows that an active asset management policy produces higher administrative charges as compared to an indexed portfolio (Mitchell 1998a). Money management costs also depend importantly on scale: investment expenses are less for larger funds than for smaller ones (Mitchell and Andrews 1981). Consequently, newer and actively managed pension systems such as the AFORES will experience higher management costs simply by virtue of their smaller size, as compared to older, more established funds.

Pension plan costs differ according to their *record-keeping* and *payout* functions as well, differences that also must be taken into account when comparing pension plans of different types and in different countries. For example, in Chile, the individual account pension system permits a range of options for benefit payment, ranging from mandated real annuities to lump-sum payouts (Mitchell and Barreto 1997). Allowing more options will be more expensive than requiring all benefits to be paid in a single format.³¹ Also some national pension systems, most notably in Chile, Peru, and Argentina, must handle workers' Recognition Bonds issued under the old national pay-as-you-go plan. This raises costs for the additional record-keeping, transactions, determination of eligibility, and payout services that other nations' systems do not handle. In countries where the old-system transition liabilities remain with the government social security system as in

³¹ Also permitting multiple payout options opens the possibility of adverse selection; see Mitchell, Poterba, Warshasky, and Brown (forthcoming).

Mexico, the funded pension accounts will be relieved of these additional tasks and related charges.³²

Keeping in mind these service and performance differences, it is still of some interest to ask how the individual-account components of national pension systems compare across countries. One approach converts all reported expenses into a single, one-time, front load as a fraction of pay. According to this calculation, the Mexican AFORES administrative costs at 1.9% of payroll are below those of the individual account programs in Argentina, Chile, Peru and Uruguay (2.4%, 2.4%, 2.4% and 2.1% respectively; CONSAR 1997a). It is somewhat fortuitous that these figures are as close to one another as they are, since only the Chilean system has been around long enough to argue that start-up costs have been amortized, while the other systems are still experiencing start-up expenses. If the relative ranking is taken seriously, it appears that the streamlined design of the Mexican pension system may have contributed to lower expenses, even during the first year of the program.

Other pension programs may also be explored for cost comparisons. The US social security system currently boasts of very low costs – annual administrative expenses under 1% of contributions – but this is an old, large system (140M employees) and it has virtually no money management costs by virtue of it being mainly pay-as-you-go. Funded institutional pensions in the US charge about \$50/participant/year in record-keeping fees and 20-50 basis points per year or less

³² Some plans continue to permit workers to participate in a national pay-as-you-go program, either on a transitional basis, as in Chile, or on an ongoing basis. Maintaining parallel systems will almost certainly produce higher overall retirement system costs for the multiple-tier system as a whole.

in money management fees (0.2%-0.5% of assets; Mitchell 1998a). The Mexican pension system's charges of approximately 120 to 150 basis points annually exceed the US funded plan charge, but are well below Chilean mutual fund costs of over 500 basis points (Valdes 1997b) and Mexican mutual fund costs of 200-250 basis points per year (CONSAR 1997a). Hence, at present, the costs of operating the Mexican AFORES system are not as low as those of the very large US institutional pension plans, but they are well under those charged by several other pension and similar institutions in Latin America.

Identifying Cost-Cutting Opportunities without Prejudicing Pension

Performance

It should be recalled that cost-cutting should not be the goal of pension system design. Rather, it is a means to an end – namely boosting pension payouts to participants (given contribution levels).³³ But judging the eventual payout of a pension system can take decades, which is one reason it is difficult to assess how a particular cost-cutting measure will influence pension outcomes. For this reason, pension practitioners often adopt a variety of interim performance standards, criteria that are useful for monitoring plan performance over the shorter run. Having such performance standards clearly spelled out reduces the chance that an agency charged with pension oversight focuses overly on cost-reduction while overlooking service delivery issues. We discuss several useful benchmarks in turn.

³³ Some governments see pensions as meeting a wide range of goals including financing budget deficits and/or funding social investments. However if a pension system is to keep participants' interests topmost, social activism in the pension fund must be discouraged (Fields and Mitchell 1993). Indeed, investment returns fall when pension investments are limited to assets "targeted" for social purposes (Mitchell and Hsin 1997).

Investment Benchmarks

Pension fiduciaries are charged with setting and then ensuring that money managers meet investment performance standards. In the US, defined contribution participants generally can select which assets to include in their own portfolios; for them, conventional wisdom suggests that the appropriate performance benchmark is a market index that compares most closely to the “style” of fund selected. A benchmark for a stock fund might be the Standard & Poor’s 500 Stock Index (S&P 500), or for a bond fund the Shearson Lehman Hutton Government-Corporate Bond Index, or for a government securities fund, the return on short-term Treasury bills.³⁴ Generally investors are advised to compare net returns – after administrative expenses – with the relevant index to determine whether investment performance is up to par.

While these are sensible benchmarks in the US, it is less clear what investment performance standards should be held up for government-sponsored national defined contribution pension plans in other countries. When governments restrict investments to domestic assets, as in the case of Mexico, global net return benchmarks will almost certainly not be met and there is little a participant can do to diversify holdings and hence alter risk-adjusted returns. In the future, as additional asset pools are added to the AFORES accounts, participants will naturally seek advice on which performance benchmarks their fund investments should equal or

³⁴ A more sophisticated approach would take into account a pension plan’s actual portfolio mix and compare the actual to risk-adjusted benchmark returns when assessing the efficacy of investment strategies. Pension investment strategies are discussed in Berkowitz et al. (1988); Good and Love (1990); Logue (1991); and Logue and Rader (1997).

beat. One investment performance criterion that could be adopted for this purpose might be the risk-adjusted real return on a nationally diversified portfolio of marketable stocks and bonds. Another reasonable criterion when investments are permitted outside of Mexico would be a risk-adjusted return on an internationally diversified global portfolio.

Regardless of the standard chosen, AFORES participants will benefit from the government continuing to play an active role in standardizing the reporting of net returns on investments. This helps the less financially literate participants assess the long-run impact of AFORES commission structures on retirement accumulations. Others have suggested that all funds be forced to use the same commission structure such as a yearly asset-based fee (Valdes 1997a).³⁵

Pension Plan Service Benchmarks: Tax Collection, Recordkeeping, Benefit Payouts

Since pension systems produce a number of services in addition to money management, participants would benefit from having a set of indicators to judge how well each pension plan is performing on non-financial criteria. For example, the CONSAR system currently tracks how quickly and accurately taxes are collected and invested. Down the road it should also evaluate customer satisfaction, including how quickly and satisfactorily an AFORE responds to participant queries, how long it takes claimants to determine eligibility for benefits and start receiving checks, and how the system detects and corrects fraud. Related issues include how well the system can acquire SAR and INFONAVIT funds, and whether people

³⁵ Requiring all funds to charge an annual percent of assets still allows AFORES to compete on price, but it does not levy disproportionately high charges on workers with low pension accumulations. It also increases an AFORE manager's incentive to grow the participants' assets more than does a front-load commission.

add their own voluntary contributions on top of the mandated sums.³⁶ PROCESAR and CONSAR have implemented an impressive data gathering effort that answers some of these questions; additional consumer satisfaction surveys are likely worth doing. In addition reporting and disclosure efforts, as well as participant education, will demand additional commitments of time and money over the next several years.

Pension System Design Issues

In addition to investment and service benchmarks, there are several system design issues that must receive special attention going forward, to ensure that administrative costs are reduced as much as possible. As has already been seen, the smaller AFORES are probably not financially viable and may need to be absorbed by larger plans. This process of consolidation must be managed so as to minimize workers' concern that the entire system might come under threat. Rules permitting workers to switch pension funds may also impact costs.

Specific Proposals for Mexico's AFORES System

While pension expenses in Mexico may fall over time of their own accord as the system gains in participants, assets, and expertise, it is worth asking how the AFORES framework could be further adapted to lower administrative costs in the future – without prejudicing performance. We organize our discussion around each of the pension functions in turn.

³⁶ In addition, it would be enormously useful to track the integration between the retirement system and the Mexican Disability and Survivor insurance system. Again, CONSAR could play a key role in developing service benchmarks and publicizing these on an annual basis.

Tax Collection

The basic tax collection activity for pension funds in Mexico requires that a covered sector employer determines what each employee owes, and then the firm must deduct this amount from each employee's gross salary. At month's end, and within a determinate number of working days, the employer must deposit the amount owed at special authorized banks approved by the social security system. Individual AFORES and their agents do not have an active role to play in the week-in and week-out grass-roots tax collection effort in Mexico (unlike in Chile).

Given this already fairly streamlined structure, how could tax collection be made more efficient? Several suggestions for reform are offered, though we note that some might potentially raise, rather than curtail, costs.

- The IMSS currently subsidizes the computation of payroll tax obligations by helping firms do their calculations in the IMSS regional offices free of charge. This subsidy is probably greater for small firms that are not computerized, and is likely more modest for large technologically sophisticated firms. Charging fees for this assistance would make the system better reflect the "resource costs" of the IMSS help, though it would also likely reduce utilization and possibly participation among low-wage employers.
- The IMSS has outsourced the pension payroll tax collection function by awarding several nongovernmental banks four-year contracts (solicited through a competitive process and to be rebid at the end of the period). These "Entidades Receptoras" charge AFORES an annual fee of P\$2.93/act (US\$0.37), admittedly a low per-capita figure, but one that could conceivably be further reduced in the future. Other fee structures should be examined, including making the annual fee a (declining) function of the return on assets.
- Payroll tax collection costs are not competitively set, and this fee should be renegotiated downward over time. Also the private banks managing this function may be willing to reduce their fee if they are successful in cross-selling products (e.g. voluntary saving accounts).
- Additional computerization of the payroll tax collection process could drive down Mexican collection costs in the future. Larger firms are already discussing with the government the possibility of using electronic fund transfer for employer

deposits; further efforts along these lines would be beneficial. Conversely, it might be feasible to allow price discrimination by employer size, so that the larger employers would pay less due to their economies of scale. It would also be useful to allow employers of any size, and particularly smaller firms, to affiliate with a clearing-house or affinity group so as to be charged lower tax collection fees. If this latter step were taken, it would be essential to implement prudential regulation so that these entities would have to properly account for the funds.

- Because tax collection and flow of funds management is not costless, performance standards should be continually reassessed and a cost-benefit tradeoff function devised. Participants in a defined contribution pension system tend to expect that the transfer of their funds from payroll to investment markets will happen with some alacrity and accuracy. But in Mexico now, a full month or more may pass before the employee's funds are actually invested by the AFORES. Mechanisms should be instituted to reward the faster investment of funds.
- The Mexican pension system seems to be working relatively well at present, though in Chile there are charges of tax evasion, questions about the effectiveness of pension plan advertising, rumors about agents "pressuring" participants to join their plan, and other questionable practices. Collection problems should be monitored, publicized, and be brought to a neutral grievance authority for resolution in short order.

Money Management

Turning now to the money management function, there are several steps that the Mexican government could do to encourage better information and perhaps induce cuts in pension administration expenses:

- Mexican pension participants would benefit from a periodic review of fees charged by the various players to the AFORES system, including the collecting banks, IMSS, and other parties. Further, it would be useful to schedule a periodic re-negotiation of these fees, since otherwise start-up costs may become embedded in the system more permanently.
- The AFORES offer only a limited investment portfolio at present, and for the most part there are few important cross-pension differences in services. Thus money management fees are the main area where competition can occur in the short run, and this is facilitated by standardized reporting and dissemination of expense information.

- Mexican money management costs should fall with time as a result of the rapid growth of the pension fund assets. Scale economies will be better served by rapid integration of outstanding SAR and INFONAVIT funds, and by removing the size cap on the largest pension funds.
- As pension portfolios are liberalized, SIEFORES must be asked to compare their investment performance with reasonable benchmarks. The government should examine and recommend a range of such benchmarks to facilitate discussion for the relatively uneducated.

Recordkeeping

One impressive aspect of the AFORES system is its attention to recordkeeping. This was facilitated by the decision to adopt a computerized payroll taxes reporting system, daily computerized portfolio composition reporting by the pension funds, and numerous other technologically advanced oversight methods.

Some additional steps would include the following:

- The supervisory agency, CONSAR, should require that AFORES publish annual standardized reports providing pension gross and net flows, investment patterns, retirement and other payouts, and expenses.
- Participants could be charged according to the services they use, a practice that would raise charges for some but would greatly reduce cross-subsidization (Valdes 1997b). For example, an AFORES could charge all participants a (low) one-time annual report fee and an additional charge for those wanting personalized reports on pension assets and retirement benefit calculations. In addition the funds could charge separate fees to those seeking financial planning, help on divorce or invalidity and survivor benefits, and transfers.

Benefit Eligibility & Payouts

Because of the newness of the Mexican AFORES system, few participants are in the payout phase. When the system matures, however, there will be costs for determining participant eligibility and benefit amounts, computing minimum benefit guarantees, and handling funds for the disabled and survivor plan beneficiaries.

Efforts to reduce costs here could include some of the following:

- It would be useful to centralized and streamline the issuance of birth certificates and social security identification numbers on a national basis. This would help tax collection and record-keeping when young people enter the labor market. Similarly, a study should be done on the way workers' contribution and eligibility determination records are kept, as well as retirement and death events, to see what could be done to make this component of recordkeeping more efficient.
- To reduce cross-subsidization of different payout activities, the AFORES could be permitted to charge a separate fee to cover lump sum or programmed withdrawal benefits. For example, the AFORES are responsible for computing a disabled worker's lump sum amount that is then used to buy a life annuity from a private insurer. Similarly, survivors of insured workers may receive a lump sum from the AFORES. Currently these services are provided free of charge, and it would be useful to estimate these cross-subsidies. More generally, it would be useful to have a study on the different benefit delivery options, justified by an analysis of service inputs and other input costs.
- It would be useful to prepare a study of the annuity market in Mexico to ascertain what likely annuity loads will be charged by private insurers. These charges should be compared with those levied by insurers in other countries to see how comparable they are, and what changes in the insurance market may be needed to reduce these eventual charges.
- The government should conduct a study of the disability and survivors insurance market in Mexico, to ascertain what pricing techniques are used to determine premiums and how these compare with those of disability and survivor insurance in other countries. It is possible that some changes in the insurance market may be useful in reducing these charges. Since the disabled and surviving dependents are currently receiving AFORES payouts, attention to this set of questions will be important in the short run.³⁷

On some of these points, there is concern that reforming expenses under the AFORES system might make it more expensive for the poor. Currently the average worker's annual AFORES contribution (gross of fees) is estimated at about US\$360/year (8.7% of \$350/mo including the social quota). In even the rosier scenario – one consistent with rates at the lowest-cost institutional US mutual funds – a low-cost AFORE might charge an administrative fee of \$50 with investment

³⁷ An initial investigation into the Mexican disability insurance system appears in Mitchell (1998b).

costs close to zero. In this event, the average Mexican worker would be left with only around \$300 to invest in his pension each year; a minimum-wage earner would fare correspondingly worse. Such low investments will not guarantee a comfortable retirement, even with reasonable real returns and a relatively long work period prior to retirement. One potential answer would be to subsidize commissions for the poor, a policy that would achieve greater equity under the system without unduly interfering with pricing information provided by market-based AFORES commissions. Indeed the government's current "social quota" contribution already performs this function in part, inasmuch as it is targeted primarily at employees with low wages.

Conclusion

Many have hailed the Mexican AFORES system as a tremendous success during its first year of implementation. Enrollment has soared, many AFORES are now competing for market share, the supervisory system involving PROCESAR and CONSAR appears to be functioning well, and substantial funds have flowed into the Mexican capital market. And even during this initial start-up phase, the good news is that expenses appear to be lower than older, more established, individual account pension systems in sister Latin American nations.

Nevertheless questions remain about the future path of administrative expenses, and indeed about how the system itself will evolve through time. We have shown that expenses may fall for several compelling reasons, but there are also reasons that costs could rise unless a concerted effort is devoted to keeping them down. One way costs can be lowered and benefits boosted is to increase the

size of the AFORES system, an outcome that depends on rapidly transferring SAR and INFONAVIT assets to the new program. In addition, expanding investment options will permit higher risk-adjusted returns, requiring international diversification of pension investments. Ultimately, more generous retirement benefits depend on the size of the investment, and the net investment earnings on these accounts, both of which depend on a more efficient pension administrative system.

Table 1.
1997 AFORES Affiliates, % Active Affiliates, and Pay Levels of
Actives

<u>AFORE</u>	[a] <u>Total</u> <u>Affiliates</u>	[b] <u>%Active</u> <u>Affil's</u>	[b]* <u>Percent</u> <u>Low wage</u>	[b]** <u>Percent</u> <u>High Wage</u>
Total	10,732,375			
Average	631,316	81	6.0%	5.9%
Atlantico	158,146	91	1.3%	1.0%
Banamex	1,354,504	91	14.3%	18.6%
Bancomer	1,870,677	90	20.0%	30.1%
Bancrecer	486,513	86	4.3%	2.1%
Banorte	652,428	89	5.7%	2.9%
Bital	970,326	90	11.7%	5.5%
Capitaliza	16,048	89	0.0%	0.1%
Confia	63,128	91	0.4%	0.5%
Garante	1,151,129	79	8.2%	6.7%
Genesis	109,134	84	0.8%	0.4%
Inbursa	284,717	96	1.3%	19.1%
Previnter	246,937	91	4.3%	3.4%
Profuturo GNP	1,367,780	62	13.8%	3.5%
Santander	1,610,919	74	15.1%	4.9%
Tepeyac	92,516	62	0.4%	0.3%
XXI	277,901	21	0.3%	0.5%
Zurich	19,572	94	0.3%	0.1%

Source:

[a] CONSAR statistics as of Nov. 1997

[b] CONSAR statistics as of July 8, 1997

Notes: Average daily pay ~ 3.2 minimum salaries (1 minimum = P24.65 or ~\$3.10 US).

*AFORE share of affiliated lowest-wage group; lowest group earns 0 to 1 minimum salary.

**AFORE share of affiliated highest wage group; highest group earns 16-25 minimum salaries

Table 2.
1998 AFORES Affiliates by Market
Share

<u>AFORE</u>	<u>Total</u>	<u>Market Share</u>
	<u>Affiliates</u>	
Total	13,305,606	
Average	782,683	5.9%
Atlantico Promex	188,202	1.4%
Banamex	1,504,226	11.3%
Bancomer	2,146,395	16.1%
Bancrecer Dresdener	596,590	4.5%
Solida Banorte Generali	1,143,907	8.6%
Bital	1,237,761	9.3%
Capitaliza	52,895	0.4%
Confia/Principal	99,220	0.7%
Garante	1,497,705	11.3%
Genesis Metropolitan	141,236	1.1%
Inbursa	311,598	2.3%
Previnter	305,582	2.3%
Profuturo GNP	1,586,393	11.9%
Santander Mexicano	1,925,409	14.5%
Tepeyac	113,608	0.9%
XXI	400,346	3.0%
Zurich	54,533	0.4%

Source:
www.notisar.com/afore/consar9891_hm
 Sept. 1998

Table 3.
AFORES Commissions on Active Pension
Accounts

<u>AFORE</u>	<u>Front-load</u> <u>% of Pay</u>	<u>Note</u>	<u>Annual</u> <u>% of Assets</u>	<u>Note</u>	<u>Annual</u> <u>% on Real</u> <u>ROR</u>
Average	1.29		0.71		3.12
Atlantico	1.40		0.00		20.00
Banamex	1.70	, ***	0.00		0.00
Bancomer	1.70	***	0.00		0.00
Bancrecer	0.00		4.75	**	0.00
Banorte	1.00		1.50	**	0.00
Bital	1.68	***	0.00		0.00
Capitaliza	1.60		0.00		0.00
Confia	0.90	***	1.00		0.00
Garante	1.68		0.00		0.00
Genesis	1.65		0.00		0.00
Inbursa	0.00		0.00		33.00
Previnter	1.55		0.00		0.00
Profuturo	1.70		0.50		0.00
GNP					
Santander	1.70		1.00		0.00
Tepeyac	1.17		1.00		0.00
XXI	1.50		0.99		0.00
Zurich	0.95		1.25	**	0.00

Source: CONSAR July 1997; 1998 commissions virtually identical (www.notisar.com)

Notes:

* Initial rate is 0.2% of pay rising to 1.7% by March of 1998.

** Charge on assets to fall over time if participant remains in that AFORE.

*** Charge to fall over time if participant remains in that AFORE.

Table 4.
AFORES Expenses and Agents at Start-Up

	[a] <u># Agents</u>	[b] <u>#Affiliates</u>	<u>Affil</u> <u>/Agent</u>	[c] <u>Startup</u> <u>Costs (000P)</u>	(Pesos) [c] <u>Startup</u> <u>Costs/Affil</u>	(US\$) [d] <u>Startup</u> <u>Costs/Affiliate</u>
<i>Total</i>	82,523	10,732,375		\$4,230,895		
<i>Average</i>	4,854		130		\$680	\$85

Source: [a] CONSAR statistics 11/97

[b] PROCESAR (1997)

[c] AMAFORES statistics 8/1997 (000 pesos)

[d] (Previous column)/8 pesos per \$1US

Table 5.
AFORES Advertising Expenses by Type at Start-Up

	<u>TV Ads</u>	<u>Radio Ads</u>	<u>Press</u> <u>Ads</u>	% of Budget to:	
				<u>Magazine</u>	<u>Total Adv. Budget</u>
<i>Average</i>	72	16	12	0	US\$14.6M
<i>Minimum</i>	0	0	0	0	
<i>Maximum</i>	94	78	75	0	

Source: CONSAR statistics 1997

Table 6.
AFORES Commissions Expressed as 1-Time Front-loaded Amount
 (charge as % of Pay; by return and holding period)

	[a]	[b]	[c]	[d]
	25-year Holding Period		40-year Holding Period	
	<u>r=3.5</u>	<u>r=5</u>	<u>r=3.5</u>	<u>r=5</u>
Average	2.06	2.16	2.47	2.65
Minimum	1.45	1.52	1.42	1.45
Maximum	2.78	2.85	3.53	3.81
St. Dev.	0.45	0.46	0.69	0.77
Correlation	0.94		0.95	
by Holding Period				

Source: CONSAR (Oct. 1997), [a] p.7; [b] p.8, [c] p.9, [d] p.10

Note: Computations assume worker earns 3 minimum salaries, initial SAR worth \$4,000, real pay increase =0; r is real interest rate.

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Appendix: Mexico's AFORES Structure, Management, Responsibilities, and Charges

I. Reported charges for Mexico's AFORES system

(see below for glossary)

-- Employee makes pension fund selection	NC
-- IMSS set employer payroll tax obligation	NC
-- "Entidades Receptoras", charge to AFORES	P\$2.93/act/yr (US\$0.37)
-- Central Bank of Mexico, charge to AFORES	NC (float?)
-- IMSS fund collection, handling fee	P\$16.9/act/year (US\$2.20)
-- "Banco Licuador", handling fee	P\$20/deposit (US\$2.80; 16.80/year)
-- AFORES Commissions, charged to participants insurance	2% of pay, excludes
-- INFONAVIT charges to participants	NA
-- CONSAR monitoring costs	NC
-- PROCESAR handling fee	P\$20/acct/yr (US\$2.5)
-- Insurance Company annuity fee to retirees	NA
-- Other supervisory agencies:	NA
-- Other groups – SAR charges to participants (not now part of AFORES system)	0.8% of assets

[NA = not available; NC = no direct charge levied]

II. Stakeholders under Mexican AFORE system

A. Employee selects pension fund (AFORE):

- Worker selects initial AFORE by signing up with pension agent.
- Once per year, worker may switch to another AFORE (details on ease of and cost of transfers currently under discussion; all funds must be switched to a new fund, at once).
- Worker may determine whether any additional "voluntary" savings to go to that AFORE (funds in addition to mandatory amount).

B. Employer Payroll Tax Obligation:

- Each month, employer determines mandatory contributions to SAR, INFONAVIT, and IMSS payroll tax due government using supplied software program (SUA) and each worker's (unique) ID number (help offered by IMSS agents in each local IMSS office as needed, free of charge). Voluntary contributions are also tracked and may be deposited by employer this way.
- Payments for IMSS taxes are deposited monthly at one of 12 "authorized banks" with outlets in IMSS offices; bimonthly for SAR and INFONAVIT taxes to same authorities. (Monthly payments due by 17th day of following month; bimonthly payments due in Jan., Mar., May, July, Sept., and Nov.) Total retirement contribution is 6.5% (total allocated as 5.15% employer, 1.125% employee, and

government adds 0.225% of covered pay plus 5.5% of the Mexico City minimum wage (CONSAR 1997a). INFONAVIT contribution is 5% of covered pay.

- Electronic data transfer on flow of funds to PROCESAR via diskette.
 - IMSS does not charge employer for payroll tax computations; employer does not charge employee for administration. This represents a subsidy to the system that will likely fall over time as all become more adept; however subsidy is currently probably larger for small firms since these most likely to have problems at start-up. On the other hand the employer gets the float on the employee AFORES contributions for about a month – the time between when the worker earns the money (on average mid month) and the time the employer must send off the funds (middle of next month); and for up to two months for INFONAVIT funds. Value of this float likely to rise with firm-size and pay level.
- C. “Entidades Receptoras” (ER’s) – Authorized Receiving Banks:
- IMSS selected with competitive process for 4-year period; new competition envisioned in 2001.
 - Collect employer/employee funds monthly from employers; within 2 days must pass funds to the Central Bank of Mexico; presumably banks make money from the float,
 - Report to PROCESAR on flow of funds.
 - “ER’s” charge P\$19.80 plus IVA/employer every 2 months (for a total of P\$22.57 ~US\$2.80) for fund transfer from employers to receivers (IMSS pays 2/3 of cost, INFONAVIT and AFORES each pay 16%0 or P\$17.59 per worker per year (~US\$2.25). Amount charged to AFORES is P\$2.93 (US\$0.37) per account per year (CONSAR 1997a). These costs should fall with larger scale, in the future; however charges are not anticipated to fall under current contract.
- D. Central Bank of Mexico:
- Collects employer funds monthly from authorized retail banks and IMSS.
 - Forwards required amounts to IMSS for disability and survivors’ insurance, INFONAVIT for housing fund, and SAR.
 - Forwards employees’ and government’s contribution to the AFORE selected by each worker.
 - Bank pays 2% real return to funds.
- E. IMSS:
- Helps companies determine employer payroll tax obligations for IMSS, AFORES, INFONAVIT systems.
 - Must pay government share of monthly pension obligation to AFORES (“cuota social”).
 - Receives disability and survivor system contributions, contracts with national health insurance system to determine eligibility for these programs, and tops up AFORES accumulation at eligibility for those who require it (i.e. for those whose AFORES benefit < SI or DI benefit). Turns over funds to private insurer who will handle future SI/DI benefits.

- Pays retirees old-system defined benefit pension; offers transition workers defined benefit pension if this exceeds AFORES amount; in future will also pay minimum pension guarantee to those with AFORES accruals too small to cover minimum pension guarantee.
- Handles grievances under pension and DI/SI system; currently access free.
- Pays retiree medical benefits to covered workers (those who paid into system 15+ years).
- Charges:
 - IMSS charges AFORES an amount of P\$16.9/account/year (~US\$2.20) for fund collection, data checking, and handling fee (PROCESAR 1997).
 - Estimated as under 10% of collection costs (IMSS picks up 84%, and 7% is charged to INFONAVIT (CONSAR 1997a).
 - These charges are not scheduled to change in near term, though again one would anticipate scale economies and learning should cut costs.

F. “Banco Liquidador” – Dispersing Bank:

- On approval from PROCESAR, funds are transferred from the Central Bank to this dispersal bank that in turn transfers the funds to each of the AFORES. The bank gets a float on the funds, likely to rise over time.
- Dispersing bank charges PROCESAR P\$20/deposit (~US\$2.80/deposit or \$16.80/year assuming 6 deposits/yr; PROCESAR 1997). This is likely to fall with pension plan size in future. PROCESAR in turn charges AFORES (see below).

G. AFORE

- Attracts system participants to that AFORE by hiring/training agents, checking with PROCESAR regarding employee enrollment records prior to enrollment in AFORE.
- An AFORE receives funds from several sources:
 - Every month receives employee funds (“aportaciones”) and government contribution (“cuota social”) from Central Bank; invests these within 9 days as per government regulation.
 - Within 4 years should receive SAR funds from old system.
 - At worker retirement, should receive INFONAVIT accruals to add to retirement account.
- Reports:
 - daily to CONSAR regarding cash flows and investments.
 - periodically to PROCESAR regarding employee turnover.
 - at least once a year to participants regarding the account balance.
- Services:
 - To date, mostly information and investment.
 - Monthly: provides premium payments to survivor, disability insurers.
 - Other services soon to become important: participants may request: a 1-time payout for marriage (equal to 1 month minimum wage); an unemployment payout every 5 years equal to the lesser of 10% of one’s old-age account balance, or 75 days of one’s 5-year average pay; CONSAR 1997a); an old-age

benefit available at age 65; or a severance benefit payable at age 60 (these last 2 require contributions of about 25 years).

- For survivors and disabled, determine value of AFORES sum to be turned over to disability and survivor insurer.
- At retirement the retiree may get a lump sum if the remaining amount will pay a pension at least 30% greater than the guarantee. Voluntarily paid-in funds can be taken as lump sum each 6 months. Pension payments may be programmed withdrawal.
- Reserves must be maintained as per the law.
- Commissions:
 - Vary by AFORE; 7 of 17 have a one-time front load on contributions, but others use combinations of front load, annual fraction of assets, and annual percent of real return.
 - Commissions may decline with time in the fund, but by law the same commission must apply to all new contributions. At present, exit fees disallowed. Estimated front-load commission across all AFORES about 2% of pay (Mitchell 1998a); figure includes money management and record-keeping, but thus far excludes insurance load for annuity at retirement (as well as disability and survivor insurance).

H. INFONAVIT

- Bi-monthly: receives funds worth 5% of pay from Central Bank
- Invests these funds in housing/real estate.
- Provides loans to low-income workers for housing purchase; if not used at retirement, workers' funds may be used to buy a bigger retirement annuity.
- Charges: Not clear.

I. CONSAR

- Oversees flow of funds, costs, investments, etc. for entire pension system. Daily investigation of irregularities using automated system of "200 alarms" permitting identification of problems immediately (CONSAR 1997b)
- As Supervisory agency, required to implement and monitor regulations & the law (including portfolio limits, maximum size caps on AFORES share of market, training & testing of agents, etc).
- Currently operating as grievance and conciliation branch in case of complaints; access free and costs not reported.
- CONSAR supervises AFORES advertisements and claims for veracity.
- Currently budget of ~US\$22M not charged to pension system (subsidized by central govt). but will be charged in future (P\$179M; CONSAR 1997b). If current levels continue, would be ~US\$2.2 per affiliate per year.

J. PROCESAR

- Information-gathering objective:
 - Collects data on individual worker contributions, years of service, financial flows to and from employers, banks, AFORES, and insurers.
 - Corrects errors with employers; reconciles employer and employee records.

- Computes IMSS obligation for “cuota social” and computes government amount for minimum pension.

■ Requests fund transfers to AFORES from Central Bank to Liquidator Bank.

■ Charges to AFORES (PROCESAR 1997):

<i>Account management</i>	<i>P\$10.8/account/year</i>
Receipt, reconciliation	P\$1.89/account/event
Certification of employee	P\$0.72/event if accepted, 0.09 if declined
Transfer between AFORES	P\$0.99/transfer
Transfer Bank/AFORE	P\$0.54/transfer
Retirement	P\$0.26/account
Change of information	P\$0.26/event
Administration of Banks	0.3% on assets

K. Insurance Companies:

■ Must price life annuities for survivors and disabled on demand.

■ If selected by insured, provide life annuity to survivor/disability based on requisite formula, in exchange for worker’s AFORES accumulation and a “top-up” by IMSS.

■ Invest funds to generate life annuity.

■ Charges: Not yet available. Should be comparable initially to private sector plans

L. Other supervisory agencies:

- Comision Nacional Bancaria y Valores: oversees investment side

- Comision Nacional de Seguros ys Finanzas: in charge of insurance investment

Neither levy costs on AFORES at present.

M. Other Stakeholders:

SAR: Funds accumulated in individual accounts under old SAR system

- Charges now set at 0.8% of assets (CONSAR 1997b)

- Over next 4 years, SAR funds must be transferred to AFORES accounts (no commission to be charged by agents for this transfer); cross-subsidy from those without to those with SAR accounts.

Terminology/Glossary:

AFORES: Administradoras de Fondos Para el Retiro

CONSAR: Comision Nacional del Sistema de Ahorro para el Retiro.

IMSS: Instituto Mexicano del Seguro Social

INFONAVIT: Instituto Nacional de Fomento y Asistencia para la Vivienda

PROCESAR: Proceso de Recaudacion, Individualizacion, y Dispersion

SIEFORES: Sociedades de Inversion Especializadas de Fondos para el Retiro

SUA: Sistema Unico de Autodeterminacion

Notes: The structure described here applies only to “formal sector” wage and salary employers and employees in Mexico, inasmuch as informal sector and self-employed workers are not required to participate in the new system. Exchange rate P\$8=US\$1.