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May 10, 2007

To: Members of the Executive Board

From: The Secretary

Subject: **Mexico—Publication of Financial Sector Assessment Program—
Update—Technical Note on Industrial Organization and Competition—
Pension System in Mexico**

Attached for the **information** of Executive Directors is a technical note for Mexico, on industrial organization and competition—pension system, in connection with the Financial Sector Assessment Program (FSAP). The FSAP technical note supplements the Financial System Stability Assessment Update for Mexico, which was circulated as SM/06/278 (8/7/06).

It is intended that this technical note be published on the Fund's external website as requested by the authorities of Mexico and approved by management.

Questions may be referred to Mr. Leone, STA (ext. 38628).

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

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FINANCIAL SECTOR ASSESSMENT PROGRAM UPDATE
MEXICO

**TECHNICAL NOTE ON INDUSTRIAL
ORGANIZATION AND COMPETITION:
PENSION SYSTEM IN MEXICO**

NOVEMBER 2006

THE WORLD BANK
FINANCIAL AND PRIVATE SECTOR DEVELOPMENT
VICE PRESIDENCY
LATIN AMERICA & CARIBBEAN VICE PRESIDENCY

INTERNATIONAL MONETARY
FUND
MONETARY AND CAPITAL MARKETS
DEPARTMENT

Contents

I. Introduction	3
A. Pension Reform in Mexico	3
B. The Role of the Government	4
C. The Afore Industry	5
D. Commission Structure	9
E. Potential Barriers to Entry	11
F. Changes in Regulation that Promote Price Competition.....	12
G. Comments on Policy Implications and Prospects	14
H. Conclusions and Policy Recommendations	17
Tables	
1. Contributions as Percentage of the Salary.....	4
2. Average Price and Costs Per Affiliate (Monthly).....	7
Figures	
1. Market Size.....	6
2. Number of Sales-agents	7
3. Contributions Market Share/Affiliates Market Share	8
4. Marketing Cost Share/Commissions Income Share.....	8
5. Equivalent Fees Over Assets	11
6. Transfer of Affiliates Between Afores.....	13
7. Annual Equivalent Fee Over Fund Manager	14
References	21

I. INTRODUCTION

1. Mexico, as many other countries in Latin America, has adopted an individual capitalization pension system. The design of these pension reforms confers the administration of pension funds to private companies. Under these schemes competition plays a key role, keeping prices low, a good quality of service and an efficient investment allocation.
2. However, the extent of competition in the reformed systems has been a common concern for most of the countries where it has been implemented. Moreover, when competition has been intense, like in Chile between 1994 and 1997, marketing expenses were extremely high. This outcome might not be desirable if it does not benefit future pensioners and is an unnecessary increase in costs of providing the service. The performance of competition in this industry is largely related to the demand characteristics, which is by design highly insensitive to prices, rates of return or quality of service, given that this is a compulsory product with government guarantees. Regulations in this market also significantly affect the way in which competition operates.
3. Aiming to a better degree of competition, the private pension system's regulator in Mexico has introduced innovative rules. These regulations have focus in inducing higher demand elasticity to prices and lowering barriers to entry. This has entailed lower prices, lower profits and the entrance of new firms. Nevertheless, since the industry is "young" and the policy has been recently implemented the long run effects are still unknown.

A. Pension Reform in Mexico

4. In 1997 the Mexican pension system for private sector employees was reformed, the PAYG system was replaced by an individual capitalization system. The Afores (Pension Fund Managers—*Administradoras de Fondos para el Retiro*) were established as the companies in charge of managing the individual accounts and invest pension funds in Siefores (Pension Fund—*Sociedades de Inversión Especializadas de Fondos para el Retiro*), on behalf of the account holders. Workers can choose between the different Afores and switch from one to another. Additionally, each Afore has two Siefores from which workers can choose where to invest their compulsory retirement savings.
5. The assets of the Siefores and Afores are segregated to reduce potential conflicts of interest, to assure the security of the operation of the system and to have a better control over the investment of pension funds.
6. Contributions are collected bimonthly; therefore, every two months employers have to deposit contributions on the workers' individual accounts. This is done through a collection agency, Procesar. After that the contributions are transferred to each Afore. Each worker has the following different sub-accounts of his/her property in the Afore: The Unemployment at Advanced Age and Old Age Retirement Sub-account (RCV, the Housing Sub-account, and the Voluntary Contribution Sub-account. An important feature of this

last account is that it could be short-term, medium-term or long-term saving and the tax treatment differ in each case. Affiliates are also covered by a disability and survival. Even if they stop contributing, workers who have contributed for four or more years are covered by this insurance for one fourth of the time they have contributed, starting from the moment they stopped contributing. Contributions to these accounts are made by the employee, the employer and the government as shown on Table 1.

Table 1. Mexico: Contributions as Percentage of the Salary

Account	Employer	Employee	Government	Total
RCV				
Retirement	2 percent			2 percent
Advanced age unemployment and Old Age	3 percent	1.125 percent	0.225 percent	4.5 percent
Social Contribution ¹			US\$0.28	US\$0.28
Disability and Survivor Insurance	1.750 percent	0.625 percent	0.125 percent	2.5 percent
Work risks	0.25 percent to 1.5 percent			0.25 percent to 1.5 percent

¹ This amount is paid by the government for each day contributed.
Source: IMSS

7. The RCV sub-account is used for retirement and invested in the Siefore for this purpose. The investment of these funds has to comply with the regulation set in the Law approved on April 26th, 1996 (*Ley de los Sistemas de Ahorro para el Retiro*) and the secondary regulation issued by Consar. The retirement benefits from this account can be claimed at age 65 or above. In case of unemployment benefits can be demanded after age 60. However, account holders can also claim unemployment benefits from this account before age 60, subject to certain restrictions. Additionally, withdrawals are allowed in case of marriage for a limited amount.

8. The voluntary contributions sub-account provides an additional retirement savings vehicle that benefits from tax exemptions, depending on the horizon of the investment, which could increase retirement benefits for workers affiliated to the IMSS and since recently also for not affiliated workers. This is the case of self-employed workers for whom recent modifications to the regulation allow them to participate in this type of savings. Moreover, there has been an important effort from Consar to incorporate them in the system, by providing information and facilitating the administrative procedures as much as possible.

B. The Role of the Government

9. The design of the pension system confers the government an important role in this system. The first role that can be mentioned is the regulation and supervision of the system, which is done by the Consar. Given the compulsory nature of the contributions and the presence of information asymmetries, this is a crucial role in this type of system. The

principal-agent problem in this industry is strong, given that Afores manage funds of workers that are not financially knowledgeable. Therefore regulation and supervision has been one of the important pieces in the design of the reformed systems.

10. Additionally, in the case of Mexico the government has kept an active role by contributing to the workers' accounts with a contribution that depends on the workers' salary and also with a fixed amount (*Cuota Social*), which makes these contributions progressive. The amount contributed by the Government is 5.5 percent of the minimum wage (close to 0.28 dollars per day), which for a minimum wage earner corresponds to an additional 90 percent of the total contribution to his/her individual account (employee, employer and government).

11. Finally, as mentioned before, the government provides certain guarantees. These guarantees are mainly the minimum pension guarantee and the possibility of retirees that were affiliated to the IMSS before 1997 to get the pension that they were entitled to according to the rules of the previous system. The minimum pension guarantee is given to those that have worked for at least 1,250 weeks, do not have accumulated enough funds in their accounts to finance a pension equivalent to the minimum wage for the remainder of their lives and retire at age 60 or above.¹ In this case the government complements with enough resources such that these retirees get the minimum pension, which corresponds to the July 1997 minimum salary adjusted by inflation.

C. The Afore Industry

12. In Mexico there is a collection agency called Procesar (*Empresa Operadora de la Base de Datos Nacional SAR*) which carries out the collection process together with IMSS and gives the support for the transfer of affiliates between Afores. Then, as mentioned before, the Afore is in charge of managing the funds on behalf of affiliates by investing them in a Siefore. There is only one collection agency but many Afores compete in the market and each Afore has more than one Siefore.

13. Procesar is owned by the Afores and the banks that on behalf of the IMSS collect contributions to social security. Each of the Afores owns one share of Procesar independent of its size. Whenever there is an entrance of a new Afore it should buy one share of Procesar. Fees charged by Procesar are regulated to be cost based and the amount charged per transaction to each Afore cannot differ. The company is a non profit institution and therefore it does not give out dividends.

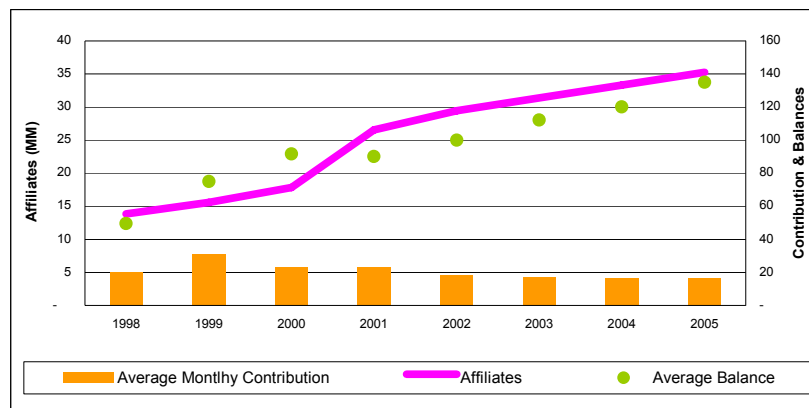
14. To carry out the collection process Procesar keeps and manages a data base with the name, social security number and the Afore in which the person is. This data base does not have the whole contributory history of the account holder neither the balance of the account.

¹ Articles 170, 171 and 172 of the Social Security Law.

The IMSS register and keep records of contributions history and since recently Consar has also a data base with this information.

15. In the case of the Afores, there is competition between them; however, it is important to have in mind that concentration is limited by law, given that there is a 20 percent limit to the market share of any Afore, in terms of the number of accounts. Therefore, if all Afores get close to this maximum level, competition would turn less aggressive. Given that until June 2005 there were 15 Afores and the larger had 16.8 percent of the potential market, there is still plenty of space for competition between them. Moreover, new Afores have entered the market totaling 16 Afores as of December 2005 and two more about to enter the market during 2006.

Figure 1. Market Size
(US\$ December 2005)



Source: Consar

16. Figure 1 shows that the average balance on affiliate's accounts has been growing sharply during the last five years; this is not the case of the average contribution which after an increase during the first years decreased severely and has remained almost constant since 2002. This is a signal that even if the number of people registered has increased there is a significant number of people that enters the system and contributes only for a few periods.

17. About firm's prices and costs, Table 2 shows a growing number of Afores since 2001, and average commissions charged decreasing since 1999. This is in spite of the fact that operational cost have been growing, especially because of the sales effort (which are part of the operational costs). Indeed, the number of sales agents in the market is growing since 2002, as shown in Figure 2. This has implied that average monthly profits have been reduced since 2003.

Table 2. Mexico: Average Price and Costs Per Affiliate (Monthly)
(US\$ December 2005)

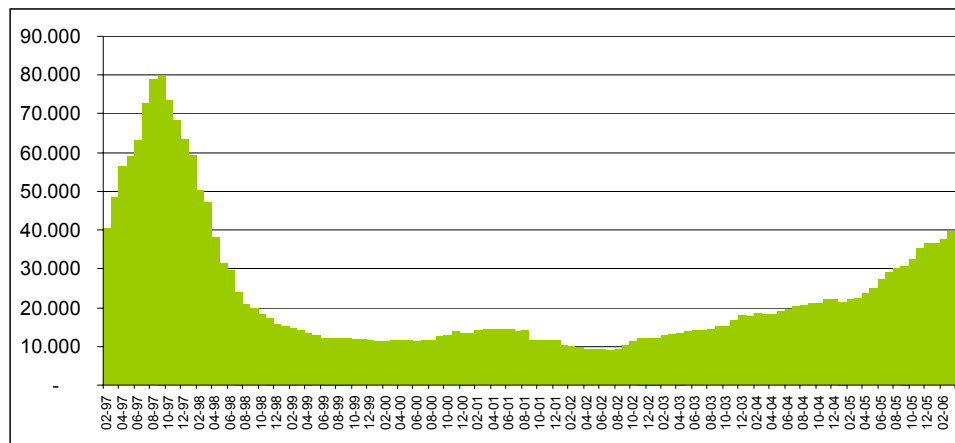
<i>Year</i>	<i>N° Afores</i>	<i>Commissio ns</i>	<i>Operacional cost</i>	<i>Net Profit¹</i>	<i>IHH²</i>
1998	14	4.4	4.3	0.3	132
1999	13	5.1	3.8	1.3	126
2000	13	5.1	3.7	1.4	123
2001	13	3.9	2.5	1.2	117
2002	11	3.5	1.9	1.2	142
2003	12	3.5	1.8	1.3	141
2004	13	3.4	2.1	1.0	134
2005	16	3.2	2.2	1.0	121

¹Includes non-operation items.

²IHH: Herfindahl Index calculated on fund's size

Source: Autor's calculations on CONSAR data.

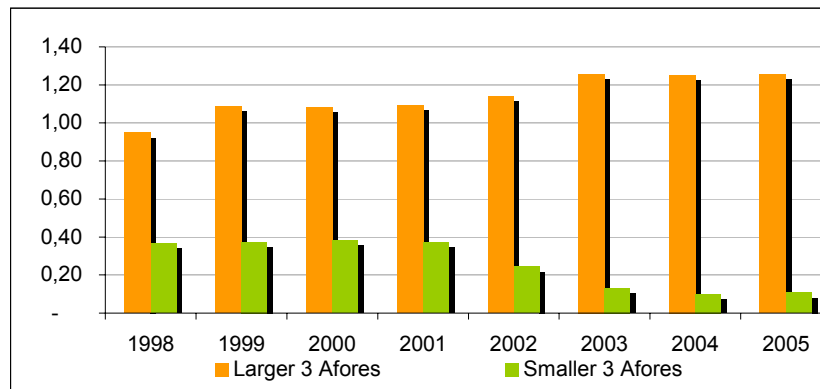
Figure 2. Number of Sales-agents



Source : CONSAR

18. With the respect to market shares, the larger three Afores have reduced their participation measured as the share on affiliates, which has fallen from 44 percent to 38 percent between 1998 and 2005. Nevertheless, the ratio between the share of contributions and the share of affiliates has increased for these same companies, with respect to 1998, from less than one to more than one. This means that larger Afores have improved the average “quality” of their clients, meaning that on average the affiliates of larger Afores contribute more often or for larger amounts than smaller companies’ affiliates.

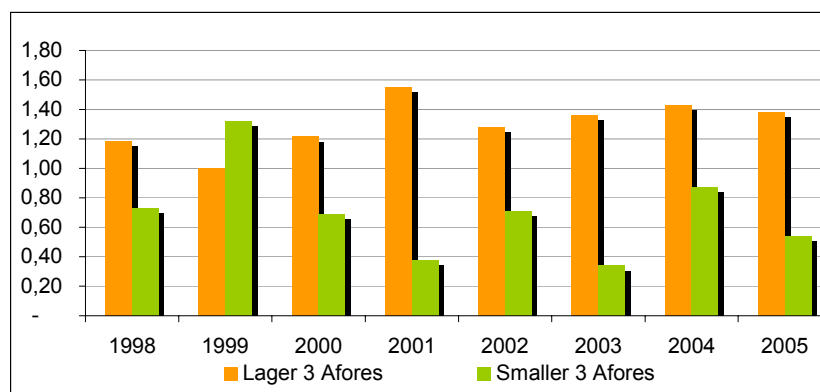
Figure 3. Contributions Market Share/Affiliates Market Share



Source: Author's calculations on CONSAR data.

19. It is difficult to quantify whether larger companies are more aggressive in marketing efforts. On the one hand, the share of marketing costs of the larger three Afores has been systematically larger than the share of commissions in total income, with exactly the opposite situation in the case of the smaller Afores, at least for the last six years (Figure 4). This might be related to the “*asignados*” rule—it can produce market segmentation, with smaller firms that capture the assigned affiliates and do not necessarily raise commercial expenses.² On the other hand, if one analyses the company marketing costs as a share of total costs it is evident that the proportion of marketing costs of larger companies is lower than for smaller companies. These two seemingly contrasting results might be reconciled by observing that larger companies have on average lost market share, that income and profit margins have decreased, and that costs adapt with a certain lag to pressures from reduced income.

Figure 4. Marketing Cost Share/Commissions Income Share



Source: Author's calculations on CONSAR data.

² These firms do not need to compete with the large ones, but have to keep the prices low in order to capture the assigned affiliates. On the other hand, large firms with high prices might get involved in a marketing war.

20. Competition between Afores has been increasing during the last years; evidence of this is the entrance of new companies and also the lower commissions that are being charged to affiliates. Besides, the entrance of these small Afores with low fees supports the result in Aguilera and Velazquez (2005), who show no significant economies of scale with respect to the size of the economy in the Mexican Afore industry (minimum efficient scale is reached with 800,000 affiliates, which is less than 2 percent of the total) and, therefore, no shrinking of participants should be expected in the short run.³

21. Other feature of the Mexican private pension system is that there is direct participation of banks, insurance companies, financial conglomerates and even the retail industry in the property of pension fund managers. This allows entrants that are related to other industries to take advantage of potential economies of scope.

D. Commission Structure

22. According to what is established in the Law (Art. 37), Afores can charge two types of fees for the services provided, one as a percentage of the salary (commission based on the flow) and the other as a percentage of the account balance (commission based on the stock). The first is computed as a percentage of the base salary and does not consider voluntary contributions or the *Cuota Social*. The fee over the balance is charged as a fixed annual percentage of the account balance invested in the Siefores. If there are no contributions to an account, only this last fee can be charged. However, it is worth noting that both commissions are discounted from the total amount that would finally finance the pension; therefore, higher charges imply lower pensions. This is different from the case of countries like Chile, Peru and Argentina where the fees are mainly paid on top of what is contributed for retirement. In the case of these other countries, commissions imply in general lower net salaries and not lower pensions. Afores in Mexico can also charge for specific services, which is also different from the case of Chile. For example, additional statements or other types of documents issued by the Afore can be charged to affiliates.

23. In Mexico, the fee structure has to be approved by the Consar Board and can start being applied 60 days after being approved and published if fees are increased, or immediately in case of a decrease. Afores can offer discounts to their affiliates in any of the fees if they have been in the system for a certain number of years.⁴

³ The optimal scale of AFOREs is difficult to calculate and critically depends on the techniques used. Parametric studies based on translog functions tend to exhibit larger scale than non parametric studies (see Melendez, J. (2004), Garcia, M., and T. Rodriguez (2003), Molina, J.C.Z., and O.J.R. Flores (2005) and Aguilera and Velazquez (2005)).

⁴ These discounts were set before January 2005 according to the permanence on the specific Afore, but a recent amendment to the Law changed the way in which these discounts can be set.

24. A special feature of the Mexican regulation is that since the implementation of the system affiliates are not able to switch between Afores before one year. This policy was changed in 2005 by making it interact with commissions level, now it establishes the possibility of more than one transfer within a year, only if the addressed Afore is cheaper than the former.

25. Yet another policy interacting with the commission levels is the *asignados* rule. Since the beginning of the new system, the Law determined the default Afore for new workers who don't choose by their own, at first affiliation time. The first assignation rule used combinations of conditions as determinants for eligibility, so ranking position determines who gets the *asignados*. The conditions were:

- Equivalent commission in a 25 years projection basis;
- Historical yields on funds;
- CURPs generating process for affiliates;⁵
- Afore financial sustainability.

26. In 2001, the automatic assignation 2002 was based on equivalent commissions at 25 years and other indicators such as ratability and capitalization levels. In 2002, the formula was modified to give more weight to the equivalent commission's structure (90 percent), then calculated at 5 years with additional elements such as the geographic location and coverage. In December 2002, the system went back to using the equivalent commission fee at 25 year as unique criterion to determine the automatic assignation. In April 2005, the equivalent commission started to be calculated on a one year projection.

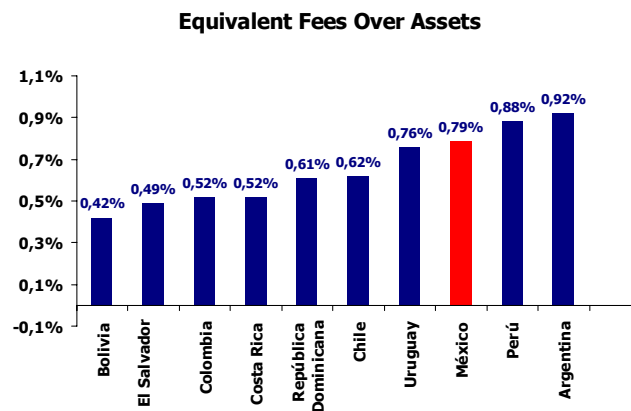
27. There is a vast literature that attempts to compare costs of private pension systems or even compare them with public system; however, most of these studies recognize their limitations. This is basically because there are important differences in commission structures, industry structure, regulation, immaturity of the systems, overall prices in the economies and services provided. Therefore, in many cases these comparisons might be misleading. However, there are two results that are worth noting from these studies, one is that the Mexican pension system is in general one of the most expensive systems and that price dispersion within the system is especially large. There are many caveats for any comparison, but this is a signal that there might be some specific features of the Mexican system that make it more expensive than others.

28. James, Smalhout and Vittas (2001) and Whitehouse (2000 and 2001), show that the Mexican system has been between the most expensive private pension systems. However, the

⁵ CURP is the personal number which Mexican people use as their official ID.

costs have decreased significantly as predicted by Mitchell (1999). This is shown by a recent study done by Consar that compares equivalent fees over assets for different Latin American pension systems and uses the same methodology to compare the Mexican system in 2005 and 1998, finding that prices have decreased from more than 1 percent over assets to less than 0.8 percent, but Mexico is still between the high cost systems. The methodology used in this study assumes an individual that contributes for 40 years, with a 5 percent rate of return and for the average wage in the country. Under these assumptions Mexico appears to be more expensive than countries like Colombia, Bolivia and Chile, but cheaper than Peru and Argentina. The same study computes dispersion of fees within each system and finds that Mexico had the highest dispersion in 1998 and that now it is just behind Argentina.

Figure 5. Equivalent Fees Over Assets



Source: Consar (2006)

E. Potential Barriers to Entry

29. For a new Afore to enter this market, it has to be approved by the Consar Board. There are limitations with respect to foreign property of an Afore. The Law established that 51 percent of the capital of an Afore has to be Mexican; however, in the case of foreign financial institutions from countries with which Mexico has international agreements this limitation does not apply and they can have an Afore as a subsidiary.

30. In any case there is a minimum capital requirement of around US\$2,500,000. Additionally, the Afore must have a reserve invested in each Siefore, which amounts to the equivalent of 1 percent (1.65*0.6 percent the VaR limit) of the fund under management. Moreover, there is a fixed minimum capital of around US\$400,000 for Basic Siefore 1 and additional US\$10,000 for Basic Siefore 2 and each additional Siefore. This reserve would be used to compensate the fund in case there is a loss of value which can be related to a violation of the regulation.

31. In any case, an Afore can be wind up by the regulator if there are persistent violations of the regulation or if it does not release the necessary information to the supervisor. This

would also be the case if the Afore does not recognize the authority of the supervisor or if it enters in bankruptcy. Before the process of liquidation starts, the accounts of affiliates are transferred to the central account and then they are distributed to other Afores if the affiliate does not choose a specific Afore. Mergers are allowed in this industry; however, whenever there is a merge the new company has to charge the lowest of the fees charged by the Afores that merge.

32. Barriers to entry have continuously been decreased by the authority. As analyzed in Section 5, regulatory changes have facilitated switching from one Afore to another and therefore promote competition. Moreover, the field has been leveled in favor of entrants with lower fees. However, entrants get assigned clients who are generally people that have low income and contribute sporadically. Therefore, the new companies tend to be low cost firms that serve a part of the market that implies low revenues and also low costs. Most of the clients of these companies have not signed a contract with the Afore and there is no address information to send them a statement or provide any kind of service to them. In many cases these people don't know in which Afore they are or even that they are registered in the system.

33. Two additional changes in regulation that have decreased the cost of entry to this market were introduced in December 2004. The first relates to the supervision tariff that has to be paid by each Afore in order to provide financing for the regulator, the structure of this tariff was changed increasing the variable component and decreasing the fixed component significantly, and therefore reducing the burden on small companies. Second, Procesar charges to Afores started to be on a proportional basis, which also help smaller Afores, thus reducing entry barriers.

34. Contrary to all of the previous measures, in February 2006 a Risk Based Supervision approach was introduced which could be seen as an increase in barriers to entry, at least in the short run. The potential entrant would have to implement the capacity of risk management required by the regulation on top of the previous compliance regulation. However, the authority considers that these are minimum standards that should be followed by potential participants. In any case, it is expected that the compliance regulation would be relaxed gradually in the near future, reducing regulatory burden for the industry.

F. Changes in Regulation that Promote Price Competition

35. Since 2002 Consar has adopted a regulation strategy to induce price competition. The actions taken started in 2002 when the transfer process started in the addressee Afore instead of the former one. This had a significant impact on the number of transfer pressing on competition between Afores. During the same year the transfer process was shorten from three months to 13 days, which also facilitate switching. Additionally, requirement of documentation for transfers simplified during 2002-2003.

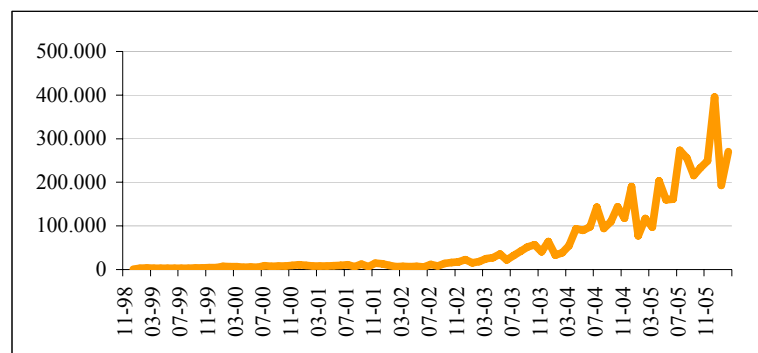
36. In 2004 complementing the regulation changed in 2002 with respect to where the transfer process starts, the transfer validations started to be done by Procesar instead of the former Afore, and in 2005 internet transfers were allowed. All of these implied that the opportunities for the former Afore to block a switching have been reduced.

37. During these years there has also been a significant improvement in terms of information disclosure. For example, when a person wants to transfer from one Afore to another it has to sing a form that includes a comparison of commissions between Afores. However, this comparison is done for a representative individual and therefore it is not necessarily the relevant comparison for the worker that is switching. There has also been a significant improvement of information available on the Consar webpage, not only on prices but also on rates of return, pension projection and services provided by the different Afores. Information sent by Afores, together with the statements, to workers has also been improved by including costs and rates of return comparisons between Afores.

38. Along with these lines, there was an important Law amendment in January 2005 which included a package of measures that intend to promote competition in the Afore industry. One of the main changes was that affiliates that switch from one Afore to another or the ones that were assigned to an Afore because they did not choose any, can switch before one year only if they are transferring to a cheaper Afore, otherwise they have to wait until they have been at least one year in the Afore.

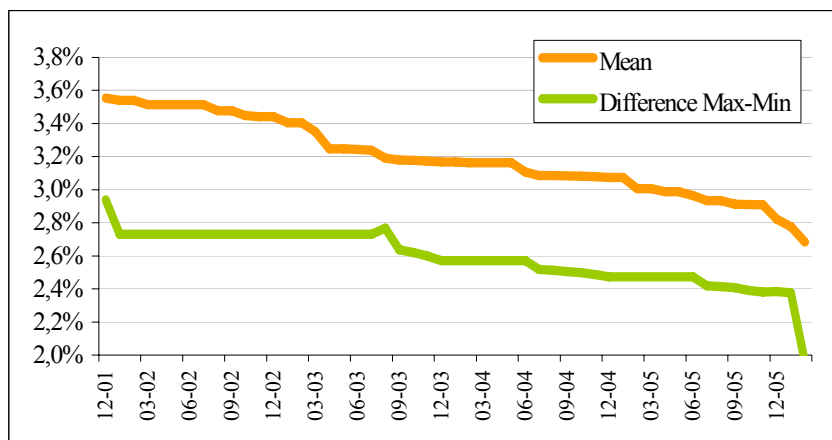
39. These changes in regulation had a significant impact on transfers, and price dispersion has fallen notably. Transfers between Afores have increased considerably during the last period, and fees have decreased. However, it should be noted that transfers started to kick up before these last reforms because of changes on secondary regulation. In fact, this trend started in 2002, when the transfer process was changed by a modification of a Circular of Consar, which implied that instead of going to the former Afore to being able to switch, the affiliate had to go to the Afore he was willing to switch to in order to do so.

Figure 6. Transfer of Affiliates Between Afores



Source: Consar, March 2006

Figure 7. Annual Equivalent Fee Over Fund Manager



Note: The annual equivalent fee considers the commission for an affiliate that has been five years in the system, has a balance of 22,000 pesos at the beginning of the year, the real rate of return on the fund is 5 percent and contributes 721 pesos bimonthly.

Source: Consar, March 2006

40. It is worth noting that, in the case of Mexico, the lower cost has a significant impact not only on pensions but also in fiscal terms, because of the option given to contributors to go back to the old system once they retire and the Minimum Pension Guarantee given to participants.

G. Comments on Policy Implications and Prospects

41. As mentioned in Section 7, the regulator in Mexico has promoted policies that enhance competition in the Afores' market. It is too early to assess the long run effect of these policies, but the following comments give some insights about what can be expected.

Information disclosure

42. Every policy aiming to help people, in terms of information, education and assistance, generate higher demand elasticity, which is one of the central weaknesses of the industrial organization in this type of systems. In this sense, Consar has done significant efforts to improve information available for participants; however, as mentioned before, the complexity of the commission structure makes it especially difficult. It might be useful to attempt to provide more personalized information when possible. This may increase costs, but at the same time give the correct information for affiliates to decide. One possibility would be to provide personalized information comparing costs of the different Afores together with the statement sent to affiliates instead of information for a representative individual. This is done in Chile where calculations are simpler, which mean that the cost might be higher for the case of Mexico, but also the benefits of providing better information

would superior. However, the horizon the worker would stay in an Afore would still be a relevant assumption to make in this comparisons, unless the fee structure is simplified.

Restriction to switching before one year

43. With the aim of focusing competition on low prices, the regulator allowed more than one transfer a year, but to a cheaper Afore. Sales men could break this rule by coordination: once a year the affiliate is transferred to the high commissions Afore and then, sequentially the transfers are done to a cheaper one. There is some informal evidence that this is already happening.

44. Even if at this time prices have come down it seems that this has not prevent sales agents from offering gifts to potential switchers in order to induce them to transfer from one Afore to another. If this is the case it might be that there would be some companies that subsist with low prices, especially the *asignado* Afores and that there would be a “marketing war” between the other segments of Afores that would be struggling to attract the high income, high fund and high contribution density affiliates. The effect of eliminating all restrictions to switching might be worth to explore, such that the economic value of a transfer is reduced and the incentives to bribe customers to switch would be smaller.

Assignment of affiliates

45. The *Asignados* policy has succeed in the sense that actual entrant firms use it, charging the lower prices. Maybe, these firms wouldn’t even have entered the market in the absence of the *asignados* rule. These Afores have pressure the market price downwards. This policy, as the switching restriction, has artificially increased demand elasticity, since regulator imposes a larger response to low prices. In addition, the automatic assignment methodology was modified in June 2006 to encourage low cost AFOREs to register *asignados*. The specific modification entails a 50 percent weight on the two-year average share of the registered members in the total of *asignados* received by any given AFORE.

46. Nevertheless, more firms in a market do not, by itself, assure a more competitive and efficient market. A policy that artificially lowers barriers to entry might end with more firms than what is efficient, and/or product characteristic that are not in line with what could be considered as the social optimum. Therefore, the long run equilibrium of this policy, once the industry reaches his mature state, would have to be addressed in a more in depth study.⁶

47. In fact, there is evidence that *asignados* are in general worst conditions workers (low earning, low funds and low density of contributions). Under this scenario it is likely that the market would be segregated between firms that would be constantly aiming to the *asignados* and the rest of the firms would concentrated on the other affiliates. Since the *asignados* firms

⁶ Development stage of industries is characterized by new entrance, mergers and high interaction.

have to be the cheaper ones and at the same time their affiliates presumably have the lowest conditions of salary, funds and density of contributions, it can be expected that the quality of service would be as poor as possible. This long run equilibrium is a possible outcome and the convenience of it would have to be analyzed. There is some evidence that this is the way in which the industry is evolving. In fact, given that the *asignados* are not registered, there is no information about them in the Afores where they are assigned and the companies do not have the incentives to do the efforts of seeking that information. If some of the *asignados* Afores try to extend their market to other affiliates, they will face a more inelastic demand to prices and might not be able to sustain a commercial war with low prices. At the same time, some Afores that have benefited from the process of automatic assignation such as Bancomer, Banamex, IXE, Principal and Azteca have lost this benefit due to the entry of new competitors in the market.

Price controls

48. The fact that any change in the price structure has to be approved by regulator can be seen as a price control. This prevents further increases in prices and therefore it sets a limit to the potential commercial war. However, the experience in this systems show that prices naturally decrease as the system matures, especially when there are fees as a percentage of the fund because the fund increases in size and then the amount collected increases without a significant increase in costs. Therefore, in a context where a commercial war starts and if it is expected that if prices are reduced it would be impossible to increase them afterwards, potentially Afores would be reluctant to decrease prices.

49. Other price control in this industry relates to mergers, in this case the final price has to be the lowest one between the companies that merge. If the Afore for sale has a lower price but an attractive group of affiliates, this policy does not prevent merges. But, it might be expected that, for example, an *asignados* Afore would not easily find another Afore willing to merge with it. This has an impact on the market value of these Afores and it restricts the possibilities of exiting the market for an Afore that has entered taking advantage of this rule.

Afores and Procesar operation

50. The existence of Procesar and given that the IMSS also concentrates many of the activities that might imply economies of scale, the entrance to the pension industry in Mexico is easier than in other countries. However, given that the ownership of Procesar is in the same industry the corporate governance of it is especially important to assure that the conditions are favorable for new entrants and smaller companies. The recent changes that give more independence to the board of Procesar have been a significant progress in this direction. Nevertheless, a follow-up of the effects of these changes would be necessary to realize if it is sufficient or more drastic measures, as a change of property, are necessary.

51. If there is confidence with respect to the operation of Procesar, in terms of the conditions for competition within the industry, it might worth to explore the possibility of concentrating more activities in this institution. This is for example the record keeping of balances or others that imply economies of scale and facilitate the operation of the companies.

Integration with other industries

52. Given that there is direct participation of banks, insurance companies, financial conglomerates and even the retail industry in the property of Afores, the regulation of conflicts of interest is especially relevant in this industry. Additionally, it exacerbates the possibility of tying the transfer to an Afore to other products that are more attractive for the affiliate, like a loan at a low interest rate, a discount in the price of a refrigerator, or others. Even if there are restrictions for the commercialization of the pension product, such that it cannot be tied to other services or products, in this environment the fiscalization might be especially difficult. This combined with the fact that commissions are paid out from the fund could imply that high prices can be charged and other benefits, more valued by the worker, can be provided to induce affiliates to switch. Nevertheless, the norm that does not allow switching before one year, and the difficulty to increase prices because it has to be approved by Consar prevents a price escalation and funds liquation by this canal. In any case, this issue deserves especial attention from the regulator given that the commercial war is getting stronger in this industry.

H. Conclusions and Policy Recommendations

53. Competition has been an issue of concern not only in Mexico but in almost all the countries where a pension reform has taken place. In a private pension system where companies compete for clients, this competition has an important role in terms of low prices, adequate rates of returns and services for affiliates. One of the main sources of insufficient competition in these systems has been the low demand elasticity.⁷ This is mainly because there is a lack of interest in general on pension matters, benefits are on the long run and therefore not valued. Moreover, this is a complex decision and it is costly to be informed.

54. There are certain features of the Mexican system that imply even lower demand elasticity than in other countries. For instance, the fee structure considers different possible charges, and therefore makes it even more difficult to compare costs that in other countries. In fact price comparisons for information disclosure, advertisement and affiliates assignments have to be done with fictitious personalized data, using standard assumptions on expected return and contribution's density, which does not necessarily coincide with the

⁷ See Bernstein and Ruiz (2005) and Marinovic and Valdes (2005) for the case of Chile.

relevant information for the particular affiliate that reads it.⁸ Besides complexity, commissions are paid out from the funds. If it were paid on top of contribution rate, people could “see it” easier, so price-concerning would help elasticity objectives of the regulator.

55. Additionally, for a large generation, even if they are interested and informed, rationally it does not matter the performance of the pension fund because they can opt out and retire under the old scheme. Some people that are in this transition generation would not achieve the vesting period to retire under the old scheme and therefore the amount accumulated in their accounts would still be important, but it might be expected that the more knowledgeable would be in the group of people that will retire under the old scheme. Moreover, as there is a minimum pension guarantee even some people that are not in the previous situation might not care about the performance of the pension fund because they are likely to get the minimum pension guarantee. It is likely that a significant number of people might not have the 25 years that are required for the minimum pension guarantee, and therefore, if the accumulated amount is not enough to self finance a pension of that amount, they would be able to withdraw the whole accumulated fund. In this case the performance of the pension fund in terms of returns and costs does matter; however, probably these people might not be well informed about these variables.

56. In this context, the regulator in Mexico has promoted policies that enhance competition in this market. The previous section discusses the potential effects of these measures giving emphasis to their possible adverse effects. Even if there are some risks and it is too early to know which would be the long run effects of these policies, competition has increased in this industry and the Mexican experience is being observed by many other countries that have not found a way to encourage competition in this market.

57. It might be worth to explore mechanisms that mitigate the previous mentioned risks and allow to promote competition further in the same direction that the regulations already in place. This could convey, for example, the simplification of the fee structure. A simpler commissions’ structure makes easier for affiliates to be involved in the system, and make informed decisions. Additionally, even if countries where the fees are on top of the contribution demand elasticity is not high, it might still be worth to evaluate this possibility which allows isolating pensions saving and gives affiliates another reason for concern about prices.

58. In fact these two policy alternatives interact in a certain sense, this is because to simplify the fee structure it would be necessary to opt between a fee on flow, percentage of wages, or a fee on stock, a percentage of the balance. To use just a variable commission on

⁸ The difference between the equivalent commission and what individuals actually pay in fees has been reducing over time. This is due to the slow convergence in the fee structure across Afores. CONSAR estimates that the share of individuals that moved to higher fee AFORE has reduced from 37 percent in 2002 to 17 percent.

fund, will allow a very easy way for comparing Afores, but can not be paid on top of the contribution, this makes it more invisible and has a direct impact on pensions. The use of a variable commission on contribution allows an on top payment, but makes harder the comparison of net of cost rates of return between Afores.⁹ Other drawback of fees on assets under the current regulation in Mexico is its compatibility with the *asignados* rule, given that these affiliates have by definition low balances probably these Afores would not be financially sustainable by charging low fees as percentage of assets.

59. Other alternative policy that has been used in other markets to control costs is to directly set price ceilings. This is used when dealing with natural monopolies and it has also been used for the pension industry in countries like Poland, Sweden and the United Kingdom. However, since prices in these industries are high during the first years of operation, price control could discourage Afores to move down commission, and the price ceiling might turn into the a floor at the same time. In general, the main problem of price controls is the difficulty of setting the price correctly, if set too high there would be no incentive to reveal the real lower equilibrium price and if set too low this could damage the quality of the product and discourage entrance. In any case, in the particular case of Mexico there is certain price control of the authority, since changes have to be approved by Consar.

60. In terms of barriers to entry they have been in general lowered by the regulation, except for the costs of implementing a RBS framework, which in the case of most of the incumbent Afores does not seem to be significant because they already have internal controls. Nevertheless, barriers to entry might have increased, at least during the transition period where the RBS is on top of the compliance regulation. It is worth noting that Consar has been especially cautious in relaxing regulations and in the design of the RBS. This is because operational risks in this industry are particularly high. The main reason for this high risk is that people are not interested in the product and therefore do not exercise a diligent control over the providers. At this point, the RBS methodology that has been designed is not associated to any capital requirement. The way in which this can be done is currently under study by Consar. In order to better align incentives it is in general considered convenient to have capital requirement that depends on the risks. If this implies that low risk Afore are required to have less than a 1 percent reserve, this might imply lower barriers to entry.

61. Given the significant increase in transfers between Afores and that there are incentives for fraud it might be convenient to design a more secure procedure for Procesar. Currently, the affiliate that wants to switch has to sign a form and the signature is validated by comparing it with a copy of the identity card. However, this can be easily adulterated. Additionally, balance record keeping by Procesar could also be something worth to explore

⁹ In terms of long run profitability, there exist a pre-payment and a auto-subsidy effect, as shown in Berstein and Castro (2005).

in order to increase efficiency of the system and facilitate the transfer process between Afores.¹⁰

62. Another line of action that might be worth to explore is related to the role of Sales Agents. As the markets mature, sales men play an important role on information and could help high quality Afores to capture clients faster than their rivals. Bernstein and Micco (2002) provide some evidence on the informational role of sales men for the case of Chile. Therefore, policies aimed to transform sales agents in pension advisors might have a positive impact on competition. The fee structure paid to Sales Agents is gradually shifting from a transfer fee to a retention fee. It is possible that this alone will improve the quality of the advice that agents will provide to clients.

63. Finally, it could be thought about extending the *asignados* rule to all new workers. The current *asigandos* rule might end up into equilibrium with cheap and very low-quality Afores for poor workers and better Afores for the rest, in terms of rates of return and services. The likelihood of this outcome might be reduced if the *asignados* rule is extended for every new worker, not only for the ones that do not explicitly choose an Afore. In this way new firms could be more aggressive in prices and would have more incentives to provide a better service, since they could try to retain their clients. However, these companies might engage into a commercial war as the other Afores that are not in the *asignados* market, and therefore the market would not be segmented, but marketing expenses could be large.

64. In summary, enhancing competition in the pension industry is not an easy task. Mexico has done significant progress but the long run equilibrium that would come out from all these different micro regulations is still unknown. There are some policies that might reduce the potential adverse effects of the current regulation, between them the simplification of the fee structure, making the transfer process more secure and the extension of the assignation rule to all workers.

¹⁰ The security of the transfers is being increased by CONSAR through the promotion of the use of internet and relative PIN number as well as through the implementation of a risk based supervision model that subjects Afores with higher operative risk in the area of transfers to more intense supervision.

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