Latin America – privatized pension funds in Mexico compared with elsewhere

Tapen Sinha

Tapen Sinha is the ING Chair Professor at the *Instituto Tecnológico Autónomo de México* (*ITAM*) in Mexico City. He is also a Special Professor at the School of Business, University of Nottingham, in the UK. Dr Sinha is the founder-director of the International Center for Pension Research at *ITAM* and is an Associate of the Centre for Risk and Insurance Studies at the University of Nottingham. He has Bachelor's and Master's degrees from the Indian Statistical Institute and a doctorate in Economics from the University of Minnesota; he is also a member of the Mexican Academy of Sciences. Dr Sinha is the author of over 130 research papers published in journals and edited volumes. He is the author/editor of nine books, his latest co-edited book (with Stephen J Kay) being *Pension Reform in the Americas*.

"The triple pillar of the world transform'd
Into a strumpet's fool."

Antony and Cleopatra
William Shakespeare

In 1980, Chile took the unprecedented step of switching from a pay-as-you-go pension system to a substitutive pre-funded pension system. It continued to pay benefits promised under the old system by issuing recognition bonds and running budget surpluses during the initial years to finance these bonds. Chile was followed by Argentina and Colombia in 1994. With the publication of the landmark study *Averting the Old-Age Crisis* that same year, the World Bank and other leading international organizations were now officially encouraging individual pre-funded accounts. It set out the so-called three-pillar model:

Pillar 1. This was envisioned to be a small pay-as-you-go system that would act as a safety net.

Pillar 2. This was the main government mandated but privately run pre-funded system.

Pillar 3. This was the voluntary saving scheme.

Since then, the World Bank has helped more than 80 countries make changes in their pension systems. Of these, about a dozen countries in Latin America have passed laws introducing mandatory saving, while a similar number in Eastern Europe and central Asia – mainly in the post-Soviet "transition economies" – have also made legal provisions for individual accounts. A recent book by Mitchell Orenstein gives a good account of the politics behind such privatization[1].

Individual accounts represent the so-called second pillar of the three-pillar system first proposed by the World Bank. Nowhere in the world have such changes been more dramatic than in the countries of Latin America. In this article, I set out to compare nine of those countries: Argentina, Bolivia, Chile, Colombia, Costa Rica, El Salvador, Mexico, Peru and Uruguay.

Comparative studies are useful for various reasons. First, a comparison shows us what it is possible to change and in what context. The situation in each country (or region or state) is unique. What may be possible in one place might not be possible to achieve in another. Thus, a comparative study gives us a whole range of possibilities. Second, it shows us the weak and the strong points of each reform.

An early attempt on detailed comparison was made in my book on this subject written 10 years ago[2]. A recent comparison was made by *AIOS**[3]. However, the tenor of that article is different from this one. *AIOS* goes into the details of laws and regulations in each country but provides precious little comparison proper. It does not explain why the countries differ in different dimensions.

GROWTH OF AFFILIATES

TABLE 1 overleaf provides information about affiliates – fund participants – by country over time during the period 2002-07. The total number for Mexico far exceeds any other country shown. This is not surprising given that the Mexican population is larger than that of any other country in the region with the exception of Brazil – and Brazil is conspicuously absent from the list of countries that have undergone reform. What is surprising is the growth in the number of affiliates in the systems. They have grown in the neighborhood of 20-30% in almost all countries. This is true even in Chile where the system was put in place almost three decades ago.

The number of affiliates by age is shown in TABLE 2 overleaf. An important feature of population aging in Latin America is that it is not uniform across different countries. Some countries such as Argentina, Chile and Uruguay have populations that are relatively old. By contrast, countries such as Bolivia, El Salvador and Mexico have relatively younger populations. Yet, the number of affiliates to the new system does not reflect the level of the aging of the population. With the exception of Costa Rica, most people in these individual systems are in the age range 30-44. More surprisingly, Bolivia, a very young country, shows the population in the individual system above age 60 is 8%. This reflects the fact that the affiliation of people in the system is not

* *Asociación Internacional de Organismos de Supervisión de Fondos de Pensiones*

TABLE 1	Number of Affiliates by Country (2002-07)					
Country	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
Argentina	9,106,349	9,462,997	10,008,255	10,621,413	11,307,715	10,816,790
Bolivia	760,959	846,358	878,343	934,304	988,967	1,077,814
Chile	6,708,491	6,979,351	7,080,646	7,394,506	7,683,451	8,043,808
Colombia	4,715,948	5,213,023	5,747,396	6,361,763	7,010,287	7,814,535
Costa Rica	1,069,194	1,140,021	1,273,943	1,430,609	1,542,151	1,646,405
El Salvador	992,824	1,074,493	1,166,602	1,279,714	1,437,474	1,579,410
Mexico	29,421,202	31,398,282	33,316,492	35,276,277	37,408,828	38,531,579
Peru	2,993,782	3,192,503	3,397,047	3,636,876	3,882,185	4,101,060
Uruguay	616,664	635,888	659,774	687,100	723,271	773,134

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

TABLE 2	Number of Affiliates at the end of 2007 (percentage distribution by age group)				
Country	*Age*				*Affiliates*
	<30	*30-44*	*45-59*	*>60*	
	%	%	%	%	
Argentina	29	45	21	5	10,816,790
Bolivia	23	45	25	8	1,077,814
Chile	29	43	25	3	8,043,808
Colombia	38	49	13	0	7,814,535
Costa Rica	40	36	20	4	1,646,405
El Salvador	42	43	14	1	1,579,410
Mexico	35	42	17	6	38,531,579
Peru	32	47	19	3	4,101,060
Uruguay	24	54	22	0	773,134

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

TABLE 3	Proportion of Women Affiliates					
Country	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
	%	%	%	%	%	%
Argentina	32	33	33	33	33	33
Bolivia	34	34	35	35	34	35
Chile	43	44	44	44	45	45
Colombia	41	41	41	41	41	42
Costa Rica	–	35	35	35	36	36
El Salvador	42	42	43	43	43	44
Mexico	37	37	37	37	38	38
Peru	35	35	35	35	35	35
Uruguay	42	42	42	42	41	41

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

properly representative of the general aging of the population.

In all the countries, the proportion of women in the work force is always below 50%. In the population, women represent over 50%, especially among people over 60 years of age. In half the countries listed (see TABLE 3), women represent no more than a third of the affiliated population. Moreover, these proportions are steady over time – they are not rising substantially. This will mean one thing: Women will be underrepresented in the retiring population who will benefit under the new system.

CONTRIBUTORS AND COVERAGE

Affiliate numbers were seen to be rising in TABLE 1. For any person, simple affiliation to a pension fund is not enough. Affiliates have to contribute. Unless they contribute regularly to the funds they belong to, they will not have enough accumulated funds for their retirement needs. In TABLE 4 opposite, I examine the growth of the contributors to the system. In some countries, such as Argentina, Bolivia, Peru and Uruguay, there has been a notable rise in the number of contributors to the system. In Mexico, by contrast, there has been no such rise.

A different way to view the system is to examine its coverage in relation to the economically active population – the labor force. Here, we see a very different picture of Mexico emerging. After Chile, it has the highest proportion of population actually signed up to the system (see TABLE 5 opposite).

Unfortunately, the optimistic picture that emerges for Mexico in TABLE 5 is a mirage. While most Mexicans are actually in the system, they are not contributing regularly. In fact, only 38% are currently doing so. Costa Rica has the highest contribution rate among affiliates at 68% – even though it has actually fallen over time.

We know from the experience of the pay-as-you-go systems in Latin America that the majority of the population was not covered. One implication is that under the individual account system, in all these countries, the majority of the working population will still not be covered. The main problem in the lack of coverage of the pension systems in Latin America is not so much that they have pay-as-you-go or individual account systems as that a large informal sector still exists in these countries. Unless the problem of the informal sector can be solved, the coverage will be there only for a minority of the population. In addition, the informal sector is highly concentrated among the low income segment of the labor force. Thus, a pension system for the low income earners through the

TABLE 4 **Contributors to the System**

Country	2002	2003	2004	2005	2006	2007
Argentina	3,026,570	3,331,437	3,541,146	4,283,242	4,563,768	4,391,847
Bolivia	357,207	329,961	394,504	443,656	495,396	509,842
Chile	3,424,224	3,618,995	3,571,864	3,784,141	3,956,992	4,329,412
Colombia	2,243,604	2,538,688	2,240,698	2,458,094	2,943,940	3,522,056
Costa Rica	804,353	833,191	868,005	934,241	1,011,853	1,126,149
El Salvador	472,097	497,967	489,328	504,971	538,370	566,693
Mexico	12,283,127	12,352,300	12,920,808	13,254,438	13,764,094	14,710,107
Peru	1,181,014	1,336,383	1,356,775	1,318,435	1,350,775	1,698,782
Uruguay	278,163	335,316	346,240	382,410	415,783	453,272

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

individual accounts system will remain an unfulfilled promise.

SALARY OF CONTRIBUTING AFFILIATES

To receive higher benefits, a higher salary is required. A higher salary implies higher contributions, which, in turn, implies higher benefits when other factors are constant. To make countries comparable, salaries have been converted into US dollars. There is a drawback to this method. The exchange rate fluctuates substantially over time. For example, in the case of Argentina, the value of its currency fell dramatically after the crisis hit, meaning that the more than doubling of the average salary shown in TABLE 6 is somewhat misleading. It would have been better to have converted all the salaries taking into account the purchasing power of each currency.

Note that there are four critical elements for determining the retirement benefits. First, as noted above, the salary level matters. Low salary will eventually mean low benefits. Growth of the salaries is important. Second, the contribution rate is also important. If the required contribution rates are low, and if most people do not make additional voluntary contributions, their benefits will be low. In Mexico, the contribution rate is set at 6.5% of the basic wage, whereas in Chile it is set at 10%. Thus, the retirees in Chile will have higher retirement income, other things being equal. Third, the rates of return that affiliates receive will be important. High real rates would mean high benefits. Last, the cost of fund management can eat away the benefits. Similarly, the cost of buying an annuity at retirement can play a critical role.

TABLE 5 **Affiliates in the System (as a percentage of the working population)**

Country	2002	2003	2004	2005	2006	2007
	%	%	%	%	%	%
Argentina	55	56	58	61	64	60
Bolivia	23	25	25	26	27	28
Chile	112	114	111	117	113	114
Colombia	24	25	29	30	35	38
Costa Rica	63	65	72	75	79	82
El Salvador	37	39	41	44	49	53
Mexico	72	76	77	80	84	84
Peru	27	28	29	30	32	32
Uruguay	41	41	43	45	45	47

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

TABLE 6 **Average Salary of Contributors (in US dollars)**

Country	2002	2003	2004	2005	2006	2007
	US$	US$	US$	US$	US$	US$
Argentina	258	341	369	449	512	642
Bolivia	287	281	313	316	324	365
Chile	430	539	614	681	685	794
Colombia	229	245	300	334	364	458
Costa Rica	317	438	448	459	479	556
El Salvador	313	313	298	452	459	474
Mexico	476	451	483	545	543	578
Peru	556	561	615	593	655	742
Uruguay	345	348	379	471	511	634

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

COMPOSITION OF THE FUNDS

The evolution of the money accumulated in the pension funds of individual accounts is shown in TABLE 7 overleaf. The amounts are converted into US dollars. Thus, once again, the exchange rate movements are reflected in these figures. What is clear: These funds are growing substantially in each country. Not surprisingly, Chile is leading with over US$111 billion, with Mexico in second place at nearly US$76 billion at the end of 2007.

This situation is about to change. Chile's system has been in place for 27 years. Thus, we are beginning to see people retiring under the system. Within the next decade, the number of people retiring will catch up with the number of people entering the system. Thus, the growth of the funds in the system will slow down. By contrast, Mexico only has a decade of experience. It will have very little outflow from the funds over the next 15 years. As a result, during the next decade, Mexico will have more money under management than any other country in the region. These funds have become an important source of investment in Mexico. They have already contributed to the stabilization of important macroeconomic variables

TABLE 7 **Managed Funds in each Country**

Country	2002	2003	2004	2005	2006	2007
	US$ bn	US$ bn	US$ bn	US$ bn	US$ bn	US$ bn
Argentina	11.65	16.14	18.31	22.56	29.37	30.10
Bolivia	1.14	1.49	1.72	2.06	2.30	2.91
Chile	35.52	49.69	60.80	74.76	88.63	111.04
Colombia	5.47	7.32	11.07	16.02	19.28	24.64
Costa Rica	0.14	0.31	0.48	0.71	1.02	1.40
El Salvador	1.06	1.57	2.15	2.90	3.35	3.96
Mexico	31.46	35.74	42.52	55.20	66.61	75.99
Peru	4.48	6.31	7.82	9.40	14.26	20.16
Uruguay	0.89	1.23	1.68	2.15	2.59	3.39

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

such as the real interest rate. They have also sparked developments in the capital markets such as new secondary markets for financial products.

Instead of looking at the absolute amounts of money in the pension funds, we can examine the amounts of money in relation to GDP* (see TABLE 8 below). In comparison with Chile, where the accumulated funds amount to 65% of GDP, Mexico still has less than 9% of GDP. Argentina provides a sobering lesson: The funds as a percentage of GDP do not necessarily grow. The crisis in Argentina has led the funds to stagnate as a percentage of GDP (while the dollar value has grown almost threefold as TABLE 9 opposite shows). Will Mexican funds grow as large as the Chilean funds as a proportion of GDP? The answer is no, recalling that in Chile the contribution rate is 10% instead of Mexico's 6.5%. Thus, in the long run, Mexico will not achieve the same level of accumulation as Chile. In addition, a larger proportion of the Mexican market is informal. However, Mexico also has a separate housing account: *INFONAVIT*†. If the housing account eventually becomes part of the retirement account, the percentage of basic salary destined for pension funds will increase to 11.5%.

The composition of funds for each country at the end of 2007 is broken down in TABLE 9 opposite. The first striking feature is that the composition of investment portfolios varies enormously between countries. In Bolivia, Costa Rica, El Salvador and Mexico, the pension funds have invested very large proportions in government bonds. By contrast, in Chile, very little is invested in government bonds. The heavy investment in government bonds is not a result of pension funds voluntarily investing in them. It is mostly a result of restrictions placed by regulatory bodies on investing in various instruments. For example, in Mexico, a substantial fraction of the funds have to be invested in government bonds by law. The laws are similar (and even more stringent) in El Salvador. Most countries put severe restrictions on investment in common stocks of private companies. In contrast, in developed countries, where the so-called "prudent man rule" is in force, a large proportion of investment is made in the stock market – at least in designated indexed funds.

TABLE 8 **Managed Funds as a Percentage of GDP**

Country	2002	2003	2004	2005	2006	2007
	%	%	%	%	%	%
Argentina	11.33	12.39	11.95	12.32	13.71	11.48
Bolivia	15.53	20.88	20.50	21.58	21.63	22.02
Chile	55.77	64.48	59.08	59.35	61.01	64.42
Colombia	7.71	8.80	10.24	13.07	13.99	14.72
Costa Rica	0.86	1.83	2.70	3.72	4.65	5.10
El Salvador	7.43	11.00	13.69	18.30	18.07	21.22
Mexico	5.27	5.65	5.82	7.01	7.87	8.50
Peru	8.05	10.58	10.98	12.06	15.25	18.45
Uruguay	9.28	11.44	16.15	15.29	13.97	15.75

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

PENSION INDUSTRY ORGANIZATION

Now I will consider the organizational aspect of the pension industries in different countries in Latin America. In 2002-07 the industry was remarkably stable in all countries except one: Mexico. In all other countries, the number of companies operating in the industry was either steady or falling, whereas the number of companies operating in Mexico nearly doubled in that period. Before 2002, the number of companies in Mexico was falling due to mergers. In 2002 and in 2006 several new companies were given charters to operate as pension funds. Many of the new companies had not operated in the financial industry before.

TABLE 10 opposite provides a different way of examining commissions. In Column (a), the commission is expressed as the total commission on basic salary. Here, Mexico is clearly the highest. This is also reflected in Column (f) – although here Mexico appears as the second highest. One reason why Mexico appears so high in terms of commission is explained in Column (b). Mexico charges the highest amount of insurance premium for death and disability. Not coincidentally, this portion of insurance is still operated by *IMSS*‡ and has not been privatized. Given that there is a substantial difference between what companies in Mexico charge and what those in the other countries charge, there is reason to believe that premium for such insurance is higher than it should be. Once that segment of commission is taken out, *AFOREs*§ in Mexico appear to have relatively moderate commissions.

CONCLUSIONS

In this article I have examined the experience of nine countries in the region in a comparative setting. There are many similarities between the systems. This should not be surprising given that many countries in the region have adopted a version of the Chilean system. There is one clear exception: Bolivia. Thus, the Bolivian experience has been markedly different from the others.

* gross domestic product
† *Instituto del Fondo Nacional de la Vivienda para los Trabajadores*
‡ *Instituto Mexicano del Seguro Social*
§ *Administradores de Fondos para el Retiro*

TABLE 9 Fund Composition as of December 2007

Country	Government debt	Financial institutions	Non-financial institutions	Stocks	Mutual funds etc.	Foreign investment	Other
	%	%	%	%	%	%	%
Argentina	54.89	2.44	1.48	15.01	14.59	8.45	3.15
Bolivia	72.37	14.60	8.51	0.04	1.04	2.24	1.19
Chile	7.84	30.34	7.97	14.51	3.70	35.57	0.08
Colombia	44.12	7.71	10.10	22.31	0.40	11.96	3.41
Costa Rica	60.27	14.49	3.35	0.35	5.37	13.37	2.80
El Salvador	78.68	16.36	4.96	0.00	0.00	0.00	0.00
Mexico	69.32	6.19	10.90	3.84	0.00	9.75	0.00
Peru	20.64	7.96	10.27	41.21	1.30	13.19	5.43
Uruguay	57.82	38.64	1.57	0.12	0.00	0.00	1.85

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

TABLE 10 Different Ways of Viewing Commissions as of December 2007

Country	Total commission	Death and disability insurance	Net commission	Contribution	Net commission	Total commission
	as a percentage of salary					
	a	b	c = a–b	d	e = c/(d+c)	f = a/(d+a)
Argentina*	2.39	1.40	1.00	4.61	0.18	0.34
Bolivia†	2.21	1.71	0.50	10.00	0.05	0.18
Chile	2.44	0.73	1.71	10.00	0.15	0.20
Colombia‡	3.00	1.42	1.58	11.00	0.13	0.21
Costa Rica§	–	–	0.29	3.96	0.07	–
El Salvador	2.70	1.30	1.40	10.00	0.12	0.21
Mexico¶	3.52	2.50	1.02	7.48	0.12	0.32
Peru**	2.72	0.91	1.81	10.00	0.15	0.21
Uruguay	2.78	0.99	1.79	12.22	0.13	0.19

* If there is no contribution, death and disability insurance cost is deducted from the account balance.
† There is an additional charge for fund management, with a maximum limit of 0.02285% of the flow.
‡ There are additional charges for changing funds.
§ This represents equivalent commission by flow of deposits.
¶ This represents equivalent commission by flow of deposits. Additional insurance cost of 2.5% of salary is channeled through *IMSS*.
** The commission includes 0.1% in respect of the regulatory body.

Source: *Boletín Número 18*, December 2007, www.aiosfp.org

There are two important lessons we can learn. First, individual accounts are not in themselves enough to create other macroeconomic benefits. For example, individual accounts without a structural reform of the labor market do not guarantee any movement towards its formalization. Obviously the informal labor market is never a part of the social security network whether it is a pay-as-you-go or an individual account system. Second, individual accounts can bring floods of money into different segments of the capital market. In most countries, where funds are required by law to hold a large proportion of government bonds, this market flourishes. With additional market instruments, the cost of borrowing in other related markets, such as real estate or commercial loans, can be reduced. In developing countries, where capital markets are not well developed, it can also place a strain on the capital market. Ω

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