



## Social Protection Discussion Paper Series

### **Pension Reform in El Salvador**

**Rodrigo Acuña**

**April 2005**

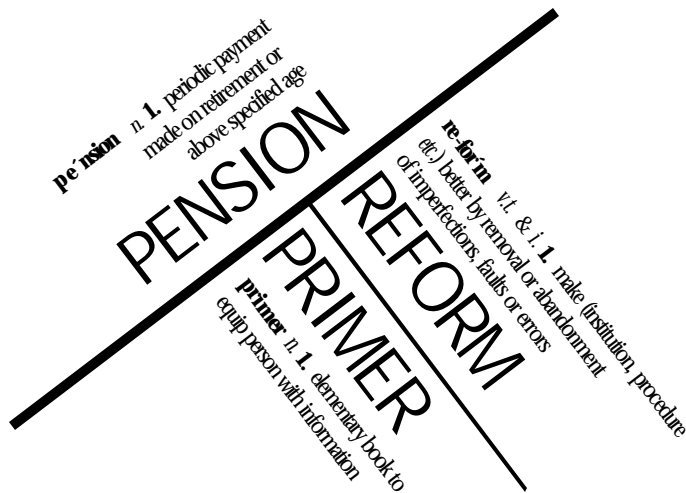
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## **Abstract**

El Salvador implemented a systemic pension reform in 1998. The publicly-managed, defined benefit and unfunded pension schemes for formal sector workers were replaced by a privately-managed scheme with individual accounts. The experience during the first five years of the reform has been marred by problems related to the valuation of accrued rights in the old scheme and government intervention. There are also growing concerns about market concentration in a country where only two pension fund managers compete in a system which is mandatory for all formal sector workers. The case of El Salvador raises the question as to whether a small country with limited governance capacity can succeed with this reform model.

\* Rodrigo Acuña is partner with PrimAmérica Consultores.

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## 1. Introduction

In 1998, a new pension scheme began operating in El Salvador. It is called the Pension Savings System (SAP) and will completely replace the old scheme (SPP) in the long term. The first pillar of the SAP consists of a minimum old-age pension guaranteed by the State for all workers who have paid contributions for at least 25 years and comply with the age requirement, which is 60 for men and 55 for women. In September 2003, the minimum old-age pension was US\$100 (Table 1) or 32 percent of the average earnings of contributing workers. This guarantee is triggered when the worker is not capable of financing the value of the minimum pension with the balance accumulated in his or her individual account. In other words, it is targeted on those workers with the least income. It is financed directly from the central budget.

There is a second pillar that is based on privately-managed, funded, individual accounts. The specialized pension fund managers also provide the mandated disability and survivorship pensions (defined as a proportion of earnings) through group insurance contracts. Contributions are paid by workers and employers while the Government supervises and finances the guarantee already mentioned. The SAP also allows workers to pay voluntary contributions, with tax benefits, into the individual capitalization accounts in the AFPs (this being the third pillar).

According to a paper published by Whitehouse<sup>1</sup>, under reasonable assumptions, the second pillar would likely provide more than 90 percent of the funding required to finance the system for workers with full contribution histories. For a worker contributing throughout his or her career, it is likely that the state guarantee would come into play for workers that had, on average, earned less than 80 percent of the average wage each year. The top up required from the Government would not be very large for these workers. On the other hand, many workers do not have full contribution densities and the minimum pension level may be increased by the Government. Furthermore, the outcome depends on future income distribution, growth of wages and rate of return on individual accounts. The topic merits a separate study to estimate the liability involved.<sup>2</sup>

Compared to other pension systems that have been reformed in Latin America<sup>3</sup>, Whitehouse (2003) finds the system in El Salvador to be among the smallest in terms of targeted replacement rate and pension wealth. This would be explained partly by the relatively low retirement age as well as the absence of any residual defined benefit scheme. Among the Latin American systems, El Salvador places in the middle range in terms of the amount of redistribution inherent in its parameters. This redistribution is generated by the minimum pension guarantee.

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<sup>1</sup> Whitehouse (2003).

<sup>2</sup> For an example of such an estimate, see Penacchi (1998).

<sup>3</sup> The comparison was made with Argentina, Colombia, Costa Rica, Chile, Mexico, Peru, the Dominican Republic and Uruguay.

The defined benefit scheme that the SAP replaces is characterized by the collective accumulation of reserves, which are practically exhausted<sup>4</sup> and are managed by a centralized, public entity. The SPP is partly financed by contributions, but also receives transfers from the public budget.

Although the SAP has been functioning for only five years, it has over 90 percent of the total number of members in the pension system. Given its short period of operation, it would be premature to make a full evaluation of the reform. Nevertheless, enough time has passed that it is possible to analyze the main characteristics of the new system, the results obtained and the main advances made so far. A number of problems can also be detected. One of the objectives of this paper is to learn from these flaws in order to improve the system and to avoid repeating these mistakes in other countries facing similar challenges.

The document begins with an analysis of the coverage achieved by the pension system, in both its public and private components. Section 3 presents a summary of the current and projected situation of the public system while Section 4 studies the new, private pension system and its implementation in detail. The following chapter analyses the relation between the reform of the pension system and the capital market. Finally, section 6 presents conclusions and recommendations.

## **2. Pension System Membership and Coverage**

### **2.1 Overview**

The pension system in El Salvador had 1,086,919 members in December 2002, of whom 91.3 percent (992,824) were in the Pension Savings System (SAP) and 8.7 percent (94,095) were in the Public Pension System (SPP) (Table 2). The new system of privately-managed, individual accounts rapidly achieved this dominance, due partly to the lack of credibility of the old public system<sup>5</sup>, partly to the commercial pressure imposed by the sales force of the AFPs, and partly because of the design of the reform itself. This last element affected the ultimate outcome by obliging a high percentage of workers to join the SAP, allowing a relatively short period of time for those who were entitled to choose between the public and private systems to make up their minds, and stipulating that anyone wishing to remain in the SPP must say so in writing. The differences in contribution rates were not a decisive factor in the transfer to the SAP<sup>6</sup> (Appendix N<sup>o</sup> 1).

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<sup>4</sup> As of 31<sup>st</sup> March 2003, the financial investments of the SPP amounted to only US\$54 million, corresponding basically to money collected to pay the benefits for the period.

<sup>5</sup> Among other reasons, the Instituto Salvadoreño del Seguro Social (ISSS) and the Instituto Nacional de Pensiones de los Empleados Públicos (INPEP) experienced long delays in granting benefits (between 2-3 years). Also, under the old system, post-retirement employment was prohibited.

<sup>6</sup> Employees in private and public sectors contributed 4.3% and 5.2% of their basic income to the AFPs in 1998 and 1999. If they had remained in the public scheme, private employees would have paid 4.5% and 5.5% to the ISSS and the workers in the public administrative sector would have contributed

Those under 36 years of age at the time of the reform were obliged to switch to the funded scheme. Men between 36 and 55 years of age, and women between 36 and 50 years of age could choose between the two systems, while older members had to remain in the old scheme. The period for exercising the choice to remain in the SPP ended in April 1999 after only 12 months<sup>7</sup>. The statistics in June of that same year show that of the total universe of workers belonging to the SAP, 78 percent were forced to join the system<sup>8</sup> while 22 percent chose to do so. Of the members who were able to choose between the systems, 80 percent chose the SAP and 20 percent preferred to remain in the SPP. One quarter of those belonging to the pension system at the time of the reform were given a choice (Table x).

It is important to point out that workers who chose the SAP and have retired or are close to doing so have been disappointed with regard to the level of benefits provided by the AFPs (see characteristics and pension estimates in the SPP and SAP in Appendices 2 and 3). This is due to the low value of the Transfer Certificates (CT) granted by the administrative institutions of the old scheme and guaranteed by the State (see the characteristics and calculation formula of the CT in Appendix 4) which were not sufficient to match the generous benefit levels of the old scheme. The CT constitutes the main source of funding for benefits granted by the AFPs since older workers have accumulated for only short periods in their individual accounts.

**Table 1 Members and Contributors to all pension schemes in El Salvador**

Category	Jun-99	Sep-99	Dec-99	Dec-02
<b>Total Pension System</b>	<b>744,338</b>	<b>783,019</b>	<b>815,216</b>	<b>1,086,919</b>
Public Pension System (SPP)	74,261	78,457	78,988	94,095
% of the total	10.0%	10.0%	9.7%	8.7%
Private Pension System	670,077	704,562	736,228	992,824
% of the total	90.0%	90.0%	90.3%	91.3%
<b>Members who made a personal choice</b>	<b>181,057</b>	<b>190,666</b>	<b>193,106</b>	<b>228,571</b>
Members who applied to remain in the SPP	36,897	38,882	39,335	41,389
Members who opted for the SAP	144,160	151,784	153,771	187,182
<b>Members not entitled to personal choice</b>	<b>547,110</b>	<b>589,343</b>	<b>604,349</b>	<b>829,163</b>
Members obliged to remain in the SPP	37,364	39,575	39,653	52,706
Members obliged to transfer to the SAP	509,746	549,768	564,696	776,457
<b>Flow of transfers to the SAP</b>	<b>670,077</b>	<b>718,720</b>	<b>736,228</b>	<b>992,824</b>
Opted for the SAP	144,160	151,784	153,771	187,182
Obliged to join the SAP	509,746	549,768	564,696	776,457
The Self-Employed	16,171	17,168	17,761	29,185

Source: Superintendency of Pensions.

5.0% and 5.5% in the INPEP, respectively. The contribution rates for employers were also similar in both systems. In the case of employees in the education sector, contribution rates for workers and employers were lower in the SPP, but were subsequently increased so as to exceed those of the SAP.

<sup>7</sup> The original period was 6 months, but this was extended.

<sup>8</sup> People who were under 36 years of age when the SAP came into operation and new workers entering the labour market after that date.

The differences between the pensions granted by the AFPs and those of the SPP, together with the high percentage of members who decided to transfer to the SAP, led the government to provide them with a supplementary CT<sup>9</sup>. The intention was to align the pensions received from the AFPs with those that the pensioners concerned would have received under the public system. However, the supplement is not applicable to members who retire before the age of 60 (for men) and 55 (for women) or before accumulating 30 years' service, so that in these cases, the SPP pensions will continue to be significantly higher than those that can be funded in the SAP. The situation is different for disability pensions, where benefits are generally higher in the SAP than in the SPP.

Although membership of the SAP is irrevocable, there was a period of time, which ended in October 1999, when workers who had transferred voluntarily to the SAP were allowed to return to the public system if they could prove that the transfer resulted in lower benefits. In addition, in November 2000, a decree was passed, (with effect from February 2001) allowing former contributors to the special scheme for the armed forces, the Instituto de Previsión Social de la Fuerza Armada, to rejoin that system for a period of one year. This led to 25,575 people withdrawing from the new pension system or approximately 2.5 percent of the total number of affiliates.

## **2.2 Extent of coverage**

There are various definitions for coverage. In this document, the focus is on two concepts, the ratio of contributors to affiliates and the proportion of the economically active population or labor force.

*Ratio of contributors to affiliates.* It is reasonable to expect that there will be a decreasing trend in the ratio of contributors to affiliates over time, since the membership continues for the complete life-time, while contributor status is accorded only while contributions are being paid into the system. Moreover, the natural turnover of the work force gradually produces an increase in the number of people who become members but then do not pay into their individual accounts because they withdraw from the work force.

In El Salvador, the ratio of contributors to members as reported by the Superintendency of Pensions shows this typical trend, starting from levels considerably below 100 percent since the beginning of the new pension system. In fact, at the end of 1998, only nine months after the SAP began operations, 32.8 percent of the affiliates were not contributing (see Table x). This situation was due to various factors, including the following:

- (i) Multiple affiliation, facilitated by the lack of a single identity document<sup>10</sup>;
- (ii) Affiliation of workers who never paid contribution or did so infrequently<sup>11</sup>. Many of these are actually informal sector workers who were enrolled in the system under intense pressure from the AFP's sales force<sup>12</sup>;

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<sup>9</sup> Special Decree 1,217: Equalization of Pensions for Members with Free Choice.

<sup>10</sup> This document was created in the year 2001. The percentage of people who have obtained it is not known, but the process is known to have been slow.

- (iii) lack of control in the affiliation process (related to (i) and (ii), of course);
- (iv) definition of contributors, which includes only workers whose contributions are paid by the employer in the month following that in which the earnings accrue. The difference between definitions may be significant. For example, according to the figures of one AFP, its ratio of contributors to affiliates was 76.5 percent in December 1998 using the Superintendency's definition, and 87.4 percent when workers whose contributions were paid late by employers were included.

Between 1998 and 2002 the ratio of contributors to members showed a marked downward trend, falling from 67.2 percent in December of the first year to 47.6 percent in the same month of 2002. This trend may be a consequence of the factors mentioned in the previous paragraph, the high mobility to be found in the labour market in El Salvador and an apparent recent increase in the size of the informal sector.

**Table 2 Members and Contributors to the Pension Savings System**

Category	1998	1999	2000	2001	2002
Members	569,972	736,228	847,805	919,805	992,824
Contributors	383,020	424,679	468,237	492,221	472,097
Contributors / Members	67.2%	57.7%	55.2%	53.5%	47.6%

Source: Superintendency of Pensions.

*Contributors to both schemes as share of economically active population (EAP) or labor force*<sup>13</sup>. This measure provides a clear picture as to the percentage of workers that are accruing retirement wealth in the system at any given time. We begin by reviewing historical coverage rates according to this definition. Table x below shows the evolution of the coverage of the pension system, defined as the ratio of actual contributors to the EAP, for the past twenty-one years.

During the 1980s, the indicator fluctuated around 20 percent, without any clear trend. Between 1991 and 1998, the situation changed radically, with coverage rising from 18.8 percent to 24.5 percent of the EAP. It is likely that the main cause for the increase in coverage in this period was the signing of Peace Agreements between the government and rebel groups in January 1992 and the consequent impact on economic reform, growth and positive effects on the labor market. Between 1992 and 1995, GDP grew at an average rate of 6.8%, while pension coverage rose by 5.3 percentage points of the EAP. Between 1996 and 1998, GDP grew at a considerably lower rate (3.2%) while coverage fell in 1996 and rose again between 1997 and 1998, reaching the highest level ever in that year, at 24.5% of the EAP.

<sup>11</sup> The AFPs cannot remove these members from their databases and this means accepting costs that might be avoidable.

<sup>12</sup> As will be seen below, the informal sector in El Salvador represents a high percentage of the work force actually in work, reaching almost 50% in the urban area.

<sup>13</sup> In El Salvador the PEA (EAP) is equivalent to the definition of work force in other countries.

**Table 3 Coverage in the Pension System of El Salvador**

Year	EAP	Contributors			Contributors/ EAP
		SAP	SPP	Total	
1982	1,549,346	-	295,380	295,380	19.1%
1983	1,562,034	-	306,174	306,174	19.6%
1984	1,576,785	-	307,537	307,537	19.5%
1985	1,597,136	-	307,688	307,688	19.3%
1986	1,623,271	-	317,310	317,310	19.5%
1987	1,661,734	-	323,219	323,219	19.5%
1988	1,697,655	-	339,755	339,755	20.0%
1989	1,736,594	-	338,996	338,996	19.5%
1990	1,778,288	-	348,471	348,471	19.6%
1991	1,951,900	-	366,567	366,567	18.8%
1992	1,936,400	-	398,364	398,364	20.6%
1993	2,002,000	-	438,806	438,806	21.9%
1994	2,113,300	-	481,855	481,855	22.8%
1995	2,136,500	-	515,827	515,827	24.1%
1996	2,227,400	-	519,381	519,381	23.3%
1997	2,245,400	-	535,485	535,485	23.8%
1998	2,403,200	383,020	205,479	588,499	24.5%
1999	2,444,900	424,679	82,216	506,895	20.7%
2000	2,496,400	468,237	54,530	522,767	20.9%
2001	2,634,800	492,221	50,498	542,719	20.6%
2002	2,573,000	472,097	38,273	510,370	19.8%

Source: Superintendency of Pensions.

Note that the pension system began operating in 1998. Between 1999 and 2000, coverage fell to 19.8% at the end of 2002, a level similar to that recorded in the 1980s. An analysis of this period makes it possible to suggest four hypotheses to account for the fall in coverage. First, that it was related to the reduction in the growth rate of GDP (2.3 percent average) which was stagnant in per capita terms. This would tend to increase informal sector activity and reduce employment in the formal sector. Second, between 1998 and 2002 the rate of contribution to the pension system increased<sup>14</sup> in both schemes, possibly leading to higher rates of evasion. Third, a considerable percentage of the members of the SPP retired in the last few years. This was due in part to a decree which obliged public employees to retire, with indemnity payments, but also to the fact that many members had fulfilled the requisite number of contribution years. The fact that the fall in coverage is concentrated largely in the SPP where the older workers were obliged to remain, suggests that this has been a significant factor.

The growth of the informal part of the labor market together with the reluctance of the self-employed workers to join the system, would also seem to be the main reasons explaining historically low coverage rates in El Salvador. According to a report from the Ministry of

<sup>14</sup> Between 2 and 8.5 percentage points, depending on the type of member concerned.

Work and Social Security<sup>15</sup>, in 1998 46.6 percent of urban workers could be found in the informal sector with 30.4 percent falling in the self-employed category. The latter percentage contrasts with the less than 3 percent participation of self-employed workers in the system.

The incorporation of new groups of workers in the SAP, the presence of incentives to join the system and the reinforcement of the AFPs' procedures for membership and collection<sup>16</sup>, may improve coverage in the future. For example, the legislation contemplates the issuing of a special regulation to incorporate agricultural and domestic workers, who have not so far been included in the system. At time of writing, the Superintendency was preparing a paper on the entry of workers in the domestic sector (maids, servants) into the SAP that would serve as a basis for preparing the relevant regulation. The Superintendency has also stated that one of its objectives is to incorporate workers in the agricultural sector and non-resident Salvadorians. This latter group is important since it is estimated that between one and one and a half million Salvadorians live in the United States alone. The Superintendency has met with representatives of these workers to seek formulas to facilitate their inclusion in the SAP. At present, they can join as self-employed workers. As a matter of fact, the system has 4,293 foreign affiliates, coming mainly from Central America, North America and Europe.

The greatest optimism for increasing coverage centers on non-residents living in the United States, because the vast majority of them have no coverage under US Social Security. It is estimated that there might be interest in depositing a part of the remittances that they send to El Salvador in social security savings plans. Some of them would have an additional incentive because they could recover the Transfer Certificate if they join the SAP. It should be noted however, that disability coverage falls outside the scope of benefits provided for these workers due to the impracticality of certifying disabled status for non-residents. This obviously introduces an administrative complexity for the AFPs handling these foreign affiliate accounts.

The potential for affiliating domestic and agricultural workers is viewed with more scepticism, due to the low level of income, the high turnover and temporary nature of their jobs. The characteristics of the new system should provide an incentive for more people to join and contribute, due to the individual ownership of the funds, the direct relation between benefits and contributions and the possibility for self-employed workers to join the SAP without the obligation to contribute health program. In addition, although contribution rates rose with the reform, their levels are low compared with those in other countries of the region.

However, the country must continue to develop and the SAP itself must consolidate if any sustained increase in coverage is to be achieved. It is here that clouds can be seen on the horizon, because of the use that has been made of the system for purposes other than its original objective (see Section 4), i.e., to obtain the highest pensions possible for a given level of risk. Moreover, the relatively low level of old-age pensions received by the first pensioners compared with those granted by the SPP, as a result of the low value of the Transfer Certificates, had a negative effect on the image of the AFPs<sup>17</sup>.

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<sup>15</sup> Labour Statistics 1999.

<sup>16</sup> See Section 4.2

<sup>17</sup> This was corrected by giving a Supplementary Transfer Certificate.

### **3. The Public Pension System (SPP)**

The Public Pension System is managed by two institutions<sup>18</sup>, the Instituto Salvadoreño del Seguro Social (ISSS) which was set up in 1969; and the Instituto Nacional de Pensiones de los Empleados Públicos (INPEP), created in 1975. Both institutions were therefore relatively young when the reform was introduced. Despite this fact, rapid deterioration of the system's finances was forecast, due to the anticipated decline in the ratio of active to passive members and the increase in benefit levels as the scheme matured. A study carried out in 1994 estimated that without reforms, the public system would run deficits as early as 1997 and that its reserves would be totally depleted by 2009<sup>19</sup>.

The deterioration in the financial situation was aggravated in the short term by the reform which diverted contributions from the ISSS and INPEP to the AFPs. Clearly, in the long run, this is offset by a reduction in future benefits paid out. In 1997, before the creation of the AFPs, the number of people contributing in the SPP was 535,485, while by July 2003 the number of contributors amounted to 38,076, only 7.6 percent of the total registered for the system. On the other hand, the retired population added up to 102,385 people on the same date.

According to information from the Superintendency of Pensions, the SPP will register a shortfall between contributions and benefits of US\$251.1 million during the year 2003, equivalent to 1.7 percent of GDP. The benefits include SPP pensions, minimum pension supplements from both the SPP and the SAP, and the redemptions of original and supplementary Transfer Certificates. The deficit will increase throughout the forecast period, until it reaches US\$702.5 million in the year 2017, or 2.7 percent of GDP<sup>20</sup> (see Table x). The Superintendency estimates that the present value of the actuarial deficit of the SPP, discounted at a rate of 4 percent, is equal to US\$ 5,427 million, or 38 percent of GDP for 2002.

Reserves are minimal and assets are held in short-term investments for liquidity purposes as well as some property. The INPEP also has a portfolio of housing and personal loans granted to its members, which are difficult to recover. The SPP does receive support from the central budget in addition to its own revenues. During 2003, the SPP received US\$158 million in current transfers from the public budget in order to cover its outlays.

As pointed out earlier, the SPP will be completely replaced by the new, funded scheme in the long term, as all new labor market entrants must join an AFP. The attention of the authorities is on harmonizing processes related to awarding benefits, improving services to affiliates and reconciling unassigned contributions. This last category involves contributions received by the SPP that have not been assigned to a specific affiliate's account because they presumably correspond to members of the AFPs. In the meantime, proposals to merge the institutes are not considered to be politically viable.

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<sup>18</sup> There is also the Instituto de Previsión Social de la Fuerza Armada (IPSFA), but its contributors and pensioners are excluded from the Pension Saving System.

<sup>19</sup> Ciedess (1994).

<sup>20</sup> This assumes an average GDP growth rate of 4%.

**Table 4 Income and Expenditure Projection for the Public Pension System  
(Millions of US \$)**

Year	Contributions	Benefits SPP	Minimum Pension SPP	C.T. SAP	Supplementary C.T. SAP	Minimum Pension SAP	Admin. Expenses	Deficit	
								MM US \$	% GDP
2003	25.2	265.0	0.8	3.2	0.0	0.0	7.4	251.1	1.69%
2004	23.0	274.2	0.8	27.0	4.6	0.0	7.4	290.9	1.88%
2005	21.0	281.7	0.8	52.7	9.9	0.0	7.4	331.6	2.06%
2006	18.3	292.0	1.0	72.4	20.1	0.0	7.4	374.6	2.24%
2007	15.1	304.2	1.1	84.7	27.2	0.0	7.4	409.5	2.36%
2008	12.2	314.3	1.2	99.2	36.2	0.0	7.4	446.2	2.47%
2009	9.6	321.9	1.3	125.0	52.1	0.0	7.4	498.0	2.65%
2010	6.7	330.1	1.3	139.2	61.5	0.0	7.4	532.9	2.73%
2011	4.3	334.9	1.3	155.0	72.6	0.0	7.4	566.9	2.79%
2012	3.0	334.6	1.3	159.9	76.0	0.0	7.4	576.2	2.73%
2013	1.0	337.1	1.4	176.1	87.2	0.0	7.4	608.2	2.77%
2014	0.4	332.4	1.4	194.0	100.2	0.0	7.4	635.1	2.78%
2015	0.0	326.3	1.4	202.1	105.7	0.1	7.4	643.1	2.70%
2016	0.0	318.1	1.4	217.8	118.1	0.9	7.4	663.6	2.68%
2017	0.0	309.7	1.4	246.8	134.4	2.8	7.4	702.5	2.73%

C.T. = Transfer Certificates. Source: Superintendency of Pensions.

## **4. The Private Pension System**

### **4.1 Market Structure**

The total market in terms of affiliates in the SAP was slightly less than one million by December 2002. Contributors represented 48 percent of affiliates and had average earnings subject to contribution of US\$313.

The SAP is managed by single-purpose firms called Pension Fund Managers (AFPs). They manage only one fund each and arrange for and award old-age, disability and survivorship pensions. The AFPs make their income exclusively from the commissions that they charge from members and the investment of the Special Guarantee Payment. The latter is an asset

belonging to the shareholders of the AFPs and its purpose is to provide capital to back up the minimum yield guarantee specified in the Law<sup>21</sup>.

The supervision of the SAP and the SPP is the responsibility of a specialized institution, the Superintendency of Pensions. The regulation allows flexibility for the AFPs to contract services such as contribution collection, information processing and other services related with their operations from third-party companies with the exception of the actual management of the investment portfolio. AFPs have to take out an insurance policy by public bidding to guarantee the financing of the disability and survivorship benefits. The insurance contract must be signed with an insurance company that operates in the personal area (life insurance). The premiums represented 51.9 percent of the operating costs of the AFPs during 2002. The remaining percentage was distributed between commissions and the wages of sales agents (7.7 percent), personnel and administrative expenses (32.6 percent) and other operating costs (7.8 percent). The same year, the AFP system earned pre-tax profits of US\$12.0 million and post-tax profits of US\$9.3 million. These figures implied yield on net worth<sup>22</sup> of 36.2 percent and 27.8 percent, respectively.

#### **4.1.1 Market concentration**

In the spring of 1998, five pension fund managers were set up to compete in the new private system. In June 2000, three of these merged and the Superintendency of Pensions withdrew the license of another for operating without sufficient capital. Indicators of concentration of affiliates and assets are shown in Tables x –y below.

It is striking fact that three years after this measure was taken, the manager concerned (Profuturo) was still operating with 16,637 registered affiliates in March 2003 (as opposed to the 28,731 the month prior to the revocation of the license). The cause of the delay is a lawsuit brought by Profuturo's shareholders against the measure which eventually reached the Supreme Court.

There is evidence that the continued operation of Profuturo has caused problems for its affiliates. The Superintendency pointed out its poor return performance in July 2002<sup>23</sup> saying that, "the marked difference shown by the latter (AFP Profuturo Pension Fund) has to do with the quantity of resources that it holds in short-term securities in order to meet the liquidity needs that it faces as a result of the transfer of former members to other AFPs". In May 2003,

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<sup>21</sup> The AFPs are responsible for ensuring each month that the book yield for the Fund over the last twelve months is no less than the lower of the following two percentages: (a) the average book yield of the last twelve months for all the Pension Funds, less three points; and, (b) eighty percent of the average book yield of the last twelve months for all the Funds.

<sup>22</sup> Profits of the financial year/ (Net worth at close of financial year – 50% profits of financial year). These are book yields and do not necessarily reflect the yield for current shareholders of the AFPs.

<sup>23</sup> Investment Bulletin.

the manager obtained a yield below that demanded by the Law<sup>24</sup>, which placed the shareholders under the obligation to use the Special Guarantee Payment owned by them to make the yield up to the required minimum. So far this has not happened. The problem of Profuturo is a delicate one because the Superintendency has taken control of the company, assuming direct operating duties including investment. For this reason, shareholders could argue that the transfer of administrative responsibilities frees them from the responsibility of paying the amount required by the Law to complement the yield. The best solution is a swift liquidation of its activities.

**Table 5 Affiliates in the privately-managed scheme by AFP, 2001-03**

AFP	Mar-03	Market Share	Dec-02	Market Share	Dec-01	Market Share
CONFIA	441,332	43.5%	429,849	43.3%	392,032	42.6%
PROFUTURO	16,637	1.6%	16,778	1.7%	20,173	2.2%
CRECER	557,591	54.9%	546,197	55.0%	507,600	55.2%
<b>SYSTEM</b>	<b>1,015,560</b>	<b>100.0%</b>	<b>992,824</b>	<b>100.0%</b>	<b>919,805</b>	<b>100.0%</b>

Source: Statistical Bulletins of the Superintendency of Pensions.

**Table 6 Contributors to the privately-managed scheme by AFP, 2001-03 (1)**

AFP	Mar-03	Market Share	Dec-02	Market Share	Dec-01	Market Share
CONFIA	206,946	44.4%	204,876	43.4%	233,615	47.5%
PROFUTURO	1,058	0.2%	1,302	0.3%	1,812	0.4%
CRECER	257,691	55.3%	265,919	56.3%	256,794	52.2%
<b>SYSTEM</b>	<b>465,695</b>	<b>100.0%</b>	<b>472,097</b>	<b>100.0%</b>	<b>492,221</b>	<b>100.0%</b>

(1) Month of contribution

Source: Statistical Bulletins of the Superintendency of Pensions.

**Table 7 Assets in the privately-managed scheme by AFP, 2001-03**

MUS\$	Mar-03	Market Share	Dec-02	Market Share	Dec-01	Market Share
CONFIA	598	50.8%	542	51.1%	387	50.6%
PROFUTURO	4	0.3%	4	0.3%	5	0.7%
CRECER	575	48.9%	515	48.6%	372	48.7%
<b>SYSTEM</b>	<b>1,176</b>	<b>100.0%</b>	<b>1,061</b>	<b>100.0%</b>	<b>764</b>	<b>100.0%</b>

Source: Statistical Bulletins of the Superintendency of Pensions.

<sup>24</sup> According to information issued by the Superintendency of Pensions, the annual book yield obtained by Profuturo was 4.05%, while the minimum yield required was 4.75%.

Once Profuturo is totally liquidated, there would be only two AFPs left in the market, Confía and Crecer. Both managers have quite similar market shares (see Tables 6 to 8). AFP Crecer resulted from the merger of Porvenir, Previsión and Máxima. The three managers remained with common shareholders as a consequence of the merger of the financial groups Argentaria and BBV in Spain, which were shareholders of Máxima and Previsión, respectively, and the purchase of the Chilean AFP Provida, with shares in Provenir, by BBV. This precipitated the merger of the three managers, with the BBVA group remaining as the main shareholder of the new AFP, one of the most important investors in this sector in Latin America. The operation was approved by the Superintendency of Pensions, a decision which was criticized by some specialists because of the resulting high market concentration.

Confía was formed from a joint venture between two of the main financial groups in El Salvador and Citigroup. It was the most successful manager in terms of registering affiliates when the system began, and this is reflected in the market share of 38 percent which it had in December 1998. The local financial groups sold their shares to Citigroup in 2000.

#### **4.1.2 Barriers to entering the market**

Despite the high yields on net worth achieved by the AFPs, other investors have not entered the market since the merger and liquidation process of 2000. This is probably due primarily to the barriers to entry that exist and that can be classified into two types – legal and market.

Among the most important legal barriers are the prohibitions preventing certain types of institutions from participating directly in the ownership of the AFPs including banks and insurance companies; the establishment of a minimum net equity<sup>25</sup> and the Special Guarantee Payment (AEG)<sup>26</sup>, equivalent to 3 percent of the Pension Fund; and the difficulty of differentiating the products and services offered by the AFPs due to regulatory restrictions.

The prohibition on banks from ownership of AFPs leaves potential challengers outside the industry. In many countries, including El Salvador, banks usually have a well established public image, regular business relations with their clients, a database and a branch infrastructure available with country-wide distribution. This would allow for economies of scale and scope in an industry that complements their activities. It could, in theory at least, reduce the commercial and operational investment required and therefore, the cost per affiliate of running the system. Moreover, in many countries the banks have the most experience in managing funds, a function which is vital for the success of the pension system.

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<sup>25</sup> Net equity is understood to mean the sum of paid-up capital, the legal reserve and other capital reserves, plus the retained surplus and profits accounts, fifty per cent of the profits net of provision for income tax for the current financial year, fifty percent of the revaluations authorized by the Superintendency of Pensions, less the capital shares in other companies and the value of any losses.

<sup>26</sup> As mentioned previously, the AEG is an asset belonging to the shareholders of the AFPs which must be constituted in order to back up the minimum return on the Pension Fund which is required by the legislation.

There are, however, several arguments against allowing banks to participate. There are potential conflicts of interest in the investment of pension funds and in the marketing of other services (for example, tied selling of banking products with AFP services). In El Salvador and other reform countries, these risks, along with the fear of excessive concentration of financial investments in few institutions, was the rationale for new individual account schemes to exclude banks from direct ownership of AFPs.

The minimum net equity and AEG requirement was modified in December 2001 along with other regulatory changes. As of end 2003, the minimum net capital requirement is 3 percent of total pension fund assets, not to exceed US\$10 million. At the same time, the percentage for the AEG is stipulated by the Superintendency of Pensions in regulations but should not exceed 3 percent of assets. During 2002, the Superintendency set it at 1.5 percent of the Fund. These changes substantially reduced the investment requirements for shareholders of the AFPs and reduced the legal barriers for entering the industry. However, a new risk was introduced since the Superintendency may raise the AEG at any moment to the upper limit stipulated by law<sup>27</sup>. Most observers also recognize significant market entry barriers. The first involves the up front marketing expenses that would be required for any new player to capture a reasonable market share that will allow a new AFP to compete. There is also a strong impression in the industry that there are economies of scale with regard to operating costs, although this is impossible to show given the highly concentrated market.

In terms of marketing, it is important to note that when the system began in 1998 the AFPs recruited their affiliates from those transferring out of the old public scheme. Regulations obliged a high proportion of workers to transfer to the SAP and granted those entitled to make a choice a relatively short period of time in which to decide whether to transfer to the SAP or remain in the SPP. In this way, entry into membership of the AFPs took place rapidly and on a large scale, which implied relatively low initial investments were required for marketing, at least compared with other countries.

By contrast, the current situation is radically different. There is no longer any possibility of attracting workers from the public system. Also, it is difficult to capturing new affiliates from the informal sector given the myriad determinants of avoiding formal sector activity. Small employers and the self-employed would incur many other costs in terms of regulations and various forms of taxation were they to join the formal sector. The result is a zero sum game in which new AFPs would have to poach affiliates from the AFPs already in the market. This in turn, requires significant spending on publicity and advertising as well as selecting, training and hiring sales agents. Such an effort would undoubtedly trigger a strong bid by the existing firms to retain their market share. Finally, there is little room for a new AFP to differentiate itself given the strict regulations that lead to a largely homogenous product.

The risk that a minimum size in terms of affiliates would not be quickly reached is great enough to deter many potential entrants. If they were never to achieve the scale economies seen in the other AFPs, they would be at a permanent competitive disadvantage and may never be in a position to make up for early losses. According to the information corresponding to

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<sup>27</sup> Strangely, this change would require the signature of the President.

the first semester of 1999, when there were five managers operating in the market, the average operating costs per contributor in the largest AFP, excluding the commissions of the sales agents and the premium of the disability and survivorship insurance, were a quarter of the costs of the smallest AFP and half those of the second smallest.

### 4.1.3 Transfers

In some countries, the evidence suggests that most of the members of the mandatory pension system adopt a passive attitude towards the services offered by the AFPs, due to the mandatory, intangible and long term nature of the product. The main impetus for transfers is usually the efforts of sales agents, who make affiliates aware of the advantages of transferring between AFPs in order to increase their own market share. In the pension system in El Salvador, this phenomenon of passive consumers is likely to be attenuated by the fact that there are only two AFPs that each offers essentially the same financial product.

Transfers amounted to 88,306 in 2001, equivalent to about 17.7 percent of contributors. Of this total, 3,824 corresponded to transfers out of AFP Profuturo, which cannot enroll new workers because its license has been revoked. The following year the number of transfers fell to 47,058 or 9.8 percent of contributors (Table 9). However, the number of transfers would be higher, but for the existence of a rejection rate of around 30 percent.<sup>28</sup> In El Salvador, the Superintendency intervenes directly in the process, approving the applications presented by the AFPs, whereas in other countries, the responsibility for notifying and accepting the transfer lies with the AFPs themselves. According to industry sources, the high level of rejection is partly the result of the Superintendency's zeal in checking even the smallest details of the applications.

**Table 8 Transfers by AFP, 2001-02**

CATEGORY	2001				2002			
	CONFIA	CRECER	PROFUTURO	TOTAL	CONFIA	CRECER	PROFUTURO	TOTAL
MEMBERSHIP AT BEGINNING OF THE YEAR (a)	357,586	466,216	24,003	847,805	392,032	507,600	20,173	919,805
NEW MEMBERS (b)	28,654	43,352	-6	72,000	35,178	37,841	0	73,019
TRANSFERS ENTERING THE AFP (c)	45,894	42,412	0	88,306	24,075	22,983	0	47,058
TRANSFERS LEAVING THE AFP (d)	40,102	44,380	3,824	88,306	21,436	22,227	3,395	47,058
NET TRANSFERS {e = (c-d)}	5,792	-1,968	-3,824	0	2,639	756	-3,395	0
MEMBERSHIP AT END OF YEAR (f = a+b+c-d)	392,032	507,600	20,173	919,805	429,849	546,197	16,778	992,824

Source: Superintendency of Pensions.

In theory, the number of transfers could continue to fall, because of the lack of competition in this kind of duopolistic industry. Also, regulations restricting transfers are imposed including the requirement that an affiliate have at least six monthly contributions and a signed transfer booklet at the AFP to which he or she plans to transfer. The degree of competition in the

<sup>28</sup> In addition, many transfers are approved after several actions are taken by the AFP to address the objections from the Superintendency.

industry or lack thereof and its effects on the AFPs' commissions and services should be one of the highest priorities for policymakers as the reform is further refined in coming years.

## **4.2 Level and Structure of Commissions**

The pension fund managers may charge commissions for the following items:

- a) Administration of the individual accounts, including the disability and survivorship insurance contract. This commission may only be charged as a percentage of the base contribution income and has been subject to a 3 percent maximum since 2001. The Law defined transitory maxima of 3.5 percent in 1997-98 and 3.25 percent for 1999 and 2000.
- b) Administration of the programmed withdrawals which can only be set on the basis of a percentage of the monthly pension and may not exceed 1.5 percent of that pension.
- c) Administration of individual accounts that have been inactive for more than one year, with balances of over 100 minimum wages. This commission does not include the disability and survivorship insurance and its maximum permitted value is equal to 5 percent of the annual yield on the individual account, provided that the respective deduction is no more than 1.5 percent of the base income for the last twelve months for which contributions were paid.
- d) Administration of the individual accounts of pensioners or members who do not exercise their right to a pension, even though they meet the age requirements, and continue to contribute.

Until 2001, the AFPs charged commissions only under category (a) the administration of the individual accounts of active affiliates entitled to the disability and survivorship insurance. However, as from 2002 they began to charge for all four items allowed in the Law (Table x), even though almost all their income still comes from the commission for administering the accounts of active workers. The other commissions have not reached significant levels due to the small number of pensioners and the low accumulated balances registered in the individual accounts of workers who are not currently active.

*Commission for Administration of Active Individual Accounts and other charges.* In the early days of the system, some AFPs fixed commissions which were significantly lower than the maximum allowed by the Law (e.g., Porvenir: 2.7 percent versus 3.5 percent). The average level of the percentage commission charged by the AFPs decreased from 3.3 percent of the base income in December 1998 to 2.98 percent in July 2003. As was mentioned earlier, the maximum permitted commission fell in that same period from 3.5 percent to 3.0 percent. However, in recent years the AFPs have charged at the ceiling allowed by regulation. In 2003, Confia charged 3.0 percent of the base income, the maximum allowed, while Crecer charges 2.95 percent.

The net commission charged by the AFPs, after subtracting the disability and survivorship insurance premium, decreased to a greater extent in the period under analysis, falling from 2.1

percent of the base income in 1998 to 1.6 percent in the year 2003. The greater reduction reflects the increase in the percentage of the average premium paid by the AFPs to the life insurance companies, which rose from 1.2 percent to 1.4 percent of the base income. Meanwhile, the charges for programmed withdrawals and for administering inactive accounts and pensioner accounts are at the maximum level allowed by the Law, namely 1.5 percent of the programmed withdrawal or base income, as applicable.

**Table 9 Commissions Structure of the AFP System  
July 2003**

Type of Commission	Confía	Crecer	System (3)
Administration of individual accounts (% of Base Income)	1.556%	1.600%	1.578%
Administration of inactive individual accounts (% of Base Income) (1)	1.500%	1.500%	1.500%
Administration of individual accounts belonging to pensioners who continue to pay contributions (2) (% of Base Income)	1.500%	1.500%	1.500%
Disability and survivorship insurance	1.444%	1.350%	1.397%
Administration of programmed withdrawal (% of the income)	1.500%	1.500%	1.500%

(1) Inactive continuously for more than one year, with balances of over 100 minimum wages.

(2) Or members who do not exercise their right to receive a pension and continue to pay contributions even though they fulfil the age requirements.

(3) System corresponds to the simple average of the AFPs.

Source: Superintendency of Pensions.

*Disability and Survivorship Insurance*<sup>29</sup>. According to sources in the Salvadorian insurance industry, the increase in the insurance premium is a consequence of the increase in the costs of reinsurance, which is costly because the retention rate of the companies covering the insurance is relatively low. One of the companies that currently have the coverage of an AFP has a retention rate of less than 50 percent. The reinsurance conditions have apparently become worse due to the bad experiences of claims in other countries, such as Argentina.

Certain factors specific to El Salvador that influence the cost of insurance include the levels of violence, which translate into higher claims compared with other countries, especially among

<sup>29</sup> See relevant aspects of the disability and survivorship insurance in Appendix N° 5.

young workers with low incomes, and the lack of clarity in the rules for deciding whether the parents of the originator are entitled to benefits.

On the other hand, a small number of insurance companies (five at present) are involved in the disability and survivorship insurance business. One of them is related to the group that owns one of the pension fund managers. There is also the practice of co-insurance, which consists of two or more companies sharing the coverage offered to the AFP, which limits even further the number of participants and the competition in the bids for insurance. For example, at present Confia's policy is shared between SISA and AIG.

It is worth noting that in El Salvador, the insurance companies and the respective re-insurers apparently<sup>30</sup> assume the entire risk involved in events covered by the contract, unlike other countries, such as Chile, where the risk is shared between the AFPs and insurers, within certain ranges of claims at least. In any case, since the period of the contracts is one year, the companies can quickly readjust their premiums on the basis of the real claim rate of the policy. It is also important to point out that the AFPs are responsible in the final analysis for the payment of disability and survivorship pensions, which means therefore that they assume the risk of the bankruptcy of the insurance companies. Since the insurance coverage is limited to the payment of complementary capital and temporary disability pensions, the bankruptcy risk assumed by the AFPs is a short-term one. This contrasts with other countries, where the companies have to pay life annuities to the affected members, in which case the AFPs assume the bankruptcy risk of the companies in the long term.

*Impact of the changes implemented in the past few years.* In December 2001, the government made changes to the system which will affect the levels of income and costs of the pension fund managers. These changes are likely to reduce income, because the base upon which commissions are charged has been reduced. In fact, a maximum limit for base income was set equivalent to the highest earnings received in the public sector (in July 2003 this was about US\$4,500). However, it is estimated that, because of the high level of this limit, its effect on AFP income will be slight<sup>31</sup>. In addition, certain items which form part of earnings are excluded from the base income. It was also established that the AFPs will not be allowed to charge commissions until contributions have been credited to individual accounts.

The only change that might increase the income of the AFPs is the reinforcement of collection procedures. The new regulations explicitly stipulate that the employer will be fined for failure to pay contributions. They also define more clearly the judicial collection procedures to be followed by the AFPs<sup>32</sup> and provide them with better legal recourse to force contribution payments. These changes should expedite the collection process, though according to the AFPs, the judicial structure in El Salvador is very bureaucratic, mitigating the impact of the measures. The AFPs also criticise as impractical the short time allowed for collection, which was reduced from 90 to 30 days. A more effective measure affecting collections is the recent

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<sup>30</sup> There is some evidence that insurance companies would return some percentage of the premiums paid by the AFPs if claims were lower than expected.

<sup>31</sup> The ceiling was more than 13 times the average covered wage as of December 2002.

<sup>32</sup> The jurisdiction of the Commercial Tribunal was made clear.

enactment by the Legislative Assembly<sup>33</sup> of a decision obliging the companies involved in Government purchases and contracts to present certificates proving that they are up-to-date with their payments to the ISSS and the AFPs.

In the sphere of costs, there are contrasting effects. On the one hand, the reforms reduced the requirements for Net Minimum Equity and Special Guarantee Payment and set a limit on the total amount of reference pensions for survivors, equivalent to 100 percent of the reference pension of the originator. This latter measure, plus the concession of Supplementary Transfer Certificates, should reduce the cost of the disability and survivorship insurance. On the other hand, an additional disability benefit (an additional 20 percent of pension) was granted to people who require assistance to carry out the ordinary activities of daily life, and the requirements for obtaining survivorship pensions were made more flexible.

The net effect of these changes on AFP costs and the resulting impact on commissions is not known. A reduction in costs could lead to an increase in profits or might be passed onto the members in the form of lower charges. However, given the low level of competition and international evidence of low price elasticity of demand for AFP services, the risk that savings will not be passed onto consumers is considerable.

### **4.3 Investment regulations and structure**

The level of pensions provided by the funded scheme depends to a very large extent on the yield obtained on the investments. Each percentage point of greater real yield achieved over the active life of a worker translates into a 25 percent to 30 percent increase in the pension. For this reason it is very important to create investment conditions for the Pension Funds which allow the AFPs to achieve the highest possible yields within the range of risk considered tolerable. This objective requires suitable regulation of investments, which guarantee the existence of sufficient investment alternatives for the Pension Funds while limiting the maximum level of risk to which the funds are to be exposed. The rapid growth of the funds makes constant revision of the regulations an essential requirement, in order to broaden the frontier of investment possibilities as the managers and supervisory institutions gain experience and the regulations and institutional structure of the capital market improve.

During the past few years, El Salvador has made important progress towards improving its financial markets including the introduction of independent risk rating agencies, the dematerialization of securities and electronic trading, all of which have improved the environment facing the AFPs when they invest. However, the rapid growth of the AFPs has not been accompanied by an equivalent increase in the supply of instruments available, both for reasons that may be attributed to the capital market itself and to the AFPs investment regulations. Moreover, the existing trading regulations introduce a lack of flexibility which forces the AFPs to pay excessive intermediation costs.

An especially troubling phenomenon is the use of pension funds for purposes other than that of obtaining the best risk-adjusted returns for members. Since the beginning of the system, the

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<sup>33</sup> Dated 10<sup>th</sup> July 2003.

AFPs have been forced to invest a minimum share of the funds in programs designed to fund housing for low-income workers. In addition, the Pension Funds have recently been forced to accept Transfer Certificates, which are financial instruments issued by the institutions in the public system to recognize the contributions paid by the workers who transferred to the SAP. According to the industry, these instruments are issued with below market rates of interest.

The combination of these factors has produced an excessive concentration of pension fund investments in government securities or instruments from certain issuers in the private sector with the result of exposing members to high levels of risk. Also, the steep increase in the funds and lack of investment opportunities has produced an excessive demand for financial securities in the local market. This has helped reduce interest rates over the past four years by distorting asset prices and eventually reducing the returns to the funds themselves.

### **4.3.1. Investment limits**

The investment of pension funds in El Salvador are subject to maximum investment limits by instruments, groups of instruments and issuers. The SAP Law defines the ranges of limits for instruments and sets certain upper limits for groups of instruments, while investment regulations set the ranges for maximum limits in the case of issuers. The responsibility for determining the actual limits within the ranges set in the law and regulations belongs to the Risk Commission, a special institution that also sets the minimum risk-rating categories for instruments in which the AFPs may invest. They also set the range of average weighted term for investments in fixed income instruments. This Commission is made up of the Superintendents of Securities, Pensions, and the Financial System and the President of the Central Reserve Bank.

Maximum limits for issuers are defined on the basis of assets of the pension funds, assets of the issuers and assets of the business groups to which these issuers belong (Table 11). Risk ratings are not considered when fixing these maximum limits, but as mentioned in the previous paragraph, minimum rating levels are required for instruments to be eligible. Although an analysis of the investment limits is not one of the objectives of this paper, it is clear that certain restrictions clearly limit the frontier of investment possibilities, prevent adequate diversification of risk for the pension funds and reduce the risk-adjusted rate of return.

*Foreign Investment.* To date, AFPs have not been authorized to invest in financial instruments traded outside of El Salvador. This restriction has persisted despite studies that have shown the advantages of international diversification. For example, Tarziján<sup>34</sup> underlines the fact the foreign investment would mean important diversification of risk for workers belonging to the pension system emphasizing that this was, “especially important in El Salvador, given that the funds have no chance of significant diversification within the country, due to the lack of financial assets with returns dependent on the behaviour of different types of instruments”.

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<sup>34</sup> Tarziján (2002).

The AFPs can only acquire securities from foreign issuers which have been listed in the local stock exchange and which have two risk ratings issued by rating institutions authorized by the Superintendency of Pensions. This is because these securities fall within the category of “other publicly offered instruments” which are authorized by the law, but with investments limited to between 0 percent and 10 percent of assets. At time of writing the limit was fixed at 7 percent. This alternative of investment in foreign securities is useful, but it is still insufficient to allow adequate portfolio diversification. In fact, the latest portfolio information available shows only one foreign issuer in the Funds’ portfolio, the Banco Centroamericano de Integración Económica, which is a supra-national bank of which El Salvador is a shareholder. It is known that the AFPs have also invested more recently in two Panamanian issuers.<sup>35</sup>

The obligation to invest through the local stock exchange instead of doing so directly in the international markets imposes higher costs on the AFPs, which have to pay commissions to the stock exchange and to the local intermediaries, in addition to custodial services in Cedeval (see custody in 4.3.2). The liquidity of the instruments is also affected, because in order to sell, the AFPs have to negotiate with international agents and then with local brokers, who act as passive intermediaries, closing the operations that have already been negotiated by buying from the AFPs and selling to those agents.

*Public sector instruments.* The structure of limits allows for the possibility of investing 100 percent of the fund in securities issued by public sector institutions (the Treasury Department, Central Reserve Bank, state-owned companies and autonomous official institutions). This is inappropriate because it does not guarantee even minimal diversification of the investments. The reform of the SAP carried out in 2001 broadened the range of the maximum investment limit in Treasury securities from 20%-30% to 20%-50%, and also raised the maximum authorized limits for securities issued or guaranteed by state companies and autonomous institutions.

*Social Housing Fund (FSV).* The FSV is an autonomous credit institution, a public corporation, whose purpose is to contribute towards providing housing for lower-income workers. It is managed jointly by the State, the workers and the employers. The FSV issues and places financial instruments with the AFPs to capture funds to finance housing for low-income workers. The Law obliges the AFPs to invest a minimum percentage of the funds administered in securities with a mortgage or pledge guarantee issued by the Social Housing Fund (FSV). The minimum was 30 percent of assets during the first year of the system (April 1998-March 1999), to be reduced over a period of fifteen years to 10 percent of assets. At the end of 2003, the minimum was 25 percent.

The instruments of the FSV accrue a return equal to the average interest rate of 180-day time deposits published by the Central Reserve Bank, plus one point, or an annual interest rate of at least 4 percent above the change in the Consumer Price Index, to be adjusted at least once per quarter. The evidence indicates that the interest rate paid by the FSV instruments is below the market rate, and this clearly reduces the rate of return for the pension funds and ultimately, the pensions. This loss is not immediately recognized because, since FSV instruments are not

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<sup>35</sup> Information provided by AFP Confia.

traded in the market, the valuation in the Pension Fund portfolio is carried out on the basis of their value at issue, in other words, 100 percent of the par value. The loss thus emerges gradually, over time, through a lower-than-market yield.

According to information from local investors, there are bonds issued by private companies for terms between 3 and 5 years offering returns that are higher than the rates for 180-day time deposits by 2 to 2.5 percentage points, while the FSV securities, which have a life of 25 years and, in the opinion of some investors, are riskier, pay only one percentage point over that rate. On the other hand, the Eurobonds issued by the Government of El Salvador with a duration similar to those of the FSV securities and bought indirectly by the Pension Funds, are traded at rates between 4 and 5 percentage points higher than what those securities earn, even though the latter do not have an explicit state guarantee like the Eurobonds.

The risk ratings generated by specialised private entities show deterioration in the creditworthiness of the instruments issued by the FSV, which are currently in Category A. If this deterioration continues, its securities could fall to category BBB, which would mean that they ceased to fulfil the minimum risk requirement demanded by the Risk Commission. According to the Law, this would lead to an excess of investment which would not allow the AFPs to continue investing in the institution's securities. Moreover, in this case the managers would have to liquidate the excess within the period of 90 days, unless the Superintendency postponed the deadline. However, under the circumstances mentioned, the regulations governing risk-rating and excess investment would be at variance with article 223 of the Law, which obliges the AFPs to invest minimum percentages in the FSV instruments. If the fall in the risk rating occurs, a legal ruling will be necessary to decide which of the legal provisions takes precedence.

*Transfer Certificates.* The Pension Funds are obliged to accept Transfer Certificates (CT) issued by the ISSS and INPEP. The instruments are issued by these institutions in recognition of accrued rights of workers under the old scheme. The face value of the CT is adjusted according to changes in the Consumer Price Index between the date that the member transferred to the new scheme and the date upon which he/she fulfil the requirements to retire. Until 2001, the capital and readjustments of the certificates were paid on this latter date and included in cash in the individual accounts of the members concerned.

Starting in 2002, the certificates were converted into amortized financial instruments in fifteen annual instalments as from the date when the member fulfils the requirements for receiving a pension. The interest rate that accrues from that moment is equal to the Basic Passive Interest Rate published by the Central Reserve Bank which was valid at the date of issue, and remains stable throughout the life of the instrument. The new CTs are included at 100 percent of their value into the assets of the Pension Funds and that value is credited to the corresponding individual accounts. According to the Law, CTs are transferable by endorsement only to the Pension Fund, the administering institution providing the programmed withdrawal or the insurance company with whom the life annuity contract has been signed.

Like the FSV instruments, the CTs accrue an interest rate which is estimated to be below the market rate. At the end of September 2003, that rate was fluctuating between 3.0 percent and

3.5 percent per year, compared with returns between 7.5 percent and 8.0 percent for 2011 Eurobonds issued by the Government of El Salvador, which have a duration of 8 years. Since the CTs are transferred at par value to the Pension Funds, a loss occurs which is not immediately apparent since, because there are no market transactions, the periodic valuation of the CTs is made at 100 percent of the value at which they were transferred by the ISSS and INPEP, plus the accrued interest. Again, the loss becomes evident over time, in the form of a lower rate of return.

On the other hand, because the loss is not recognised immediately, a redistribution of income occurs from younger workers who are not entitled to a CT, or have one for a lower amount, to older workers who are retiring. In fact, since the CTs of the older workers were valued at 100 percent, their pensions become overvalued in comparison with what they could have financed if the true market value of the CTs had been recognised. According to Superintendency projections, the Transfer Certificates will represent 30.2 percent of the Pension Funds by 2005.

*Private Sector.* The maximum investment limits in instruments of the local private sector are ample. Here the problem is that there is a scarcity of instruments issued relative to the accumulated assets managed by the AFPs. As will be seen later, this has reinforced some of the restrictions above and reinforced the excessive concentration government or government backed instruments.

#### **4.3.2 Pension Funds and the Financial Market**

Even though the SAP has been in existence for only five years, it is already a significant player in the financial markets. In December 2002, the banks and Pension Funds were the main institutional investors in the Salvadorian financial market. By end 2002, banks managed US\$ 1,802 million in financial investments, while AFPs had accumulated assets equivalent to US\$ 1,061 million. These two figures represented 54 percent and 32 percent of all financial investments.<sup>36</sup>

During the year 2002 the AFPs had net collections of approximately US\$ 266 million net.<sup>37</sup> This figure together with papers reaching maturity had to be invested in a financial market which registered annual transactions of US\$ 2,319 million.<sup>38</sup> Note that not all these traded instruments can be purchased by the AFPs. The AFPs represented 13 percent of the demand of the primary market and 16 percent of the sales and 25 percent of the purchases registered in the secondary market.<sup>39</sup> There is no information available regarding the share in transactions

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<sup>36</sup> Considering banks, pension funds, stock broking firms and insurance companies. It does not include other agents such as public institutions, service companies and industry.

<sup>37</sup> The sum of collections, cashed transfer certificates, complementary capital payments made by the insurance companies and other sources of increase for the funds, minus AFP commissions, benefits and other reductions.

<sup>38</sup> This does not include the REPO market which presents the highest volume of transactions (US\$ 5,958 million) but where the AFPs are not allowed to operate.

<sup>39</sup> Superintendency of Securities of El Salvador (2002).

involving instruments that can be acquired by the AFPs, but it is undoubtedly higher than these percentages.

*Limitations to Pension Fund trading* Certain trading rules that have to be observed by the AFPs impose intermediation costs that could be avoided without any increase in the risk to pension funds. For example, in order to purchase Eurobonds from the government of El Salvador, the AFPs negotiate the transactions with international brokers, but since the rules oblige them to trade only on the local stock exchange, the operations require the intervention of a local broker, who buys securities from the international broker and then sells them on the local market to the Pension Funds, charging for the intermediation.

A similar situation arises in acquiring investment certificates and instruments of the Social Housing Fund, since the AFPs can only buy in the primary market of the Stock Exchange. They are prevented from buying directly from the issuer, though that is what happens with the securities issued by the Central Reserve Bank and the Government, which may be acquired directly from these institutions.

There are also conditions prevailing in the stock market which make transactions more expensive and less transparent. According to the AFPs and other operators in the market, the commissions charged by the El Salvador Stock Exchange are high<sup>40</sup>, which makes the implementation of portfolio adjustments very expensive. On the other hand, it is normal practice to negotiate the conditions of the transactions outside and then register them and pass them through the formal market, but with practically no possibility of any other buyer or seller offering better conditions. In this way, the brokerage firms in practice do little apart from “formalizing” the operations, with the result that the main criterion used by the AFPs when choosing such firms is the cost of intermediation.

*Custody.* As regards custody, the rules could also be improved towards reducing the costs of managing the investments without compromising the security of the funds. For example, the AFPs are obliged to hire the services of Cedeval, which a local institution is belonging to the stock exchange for the custody of Eurobonds. This institution does not really hold the securities in safe-keeping, but rather it sub-contracts with international custodial institutions. The AFPs should be able to enter into direct contracts for custodial services with the international specialist institutions (e.g. Clearstream and/or Euroclear) or with other institutions belonging to them, since this would create healthy competition with the services provided by Cedeval.

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<sup>40</sup> Stock Exchange Commission: 0.070625% regardless of the amount involved. Stock Broking Firm Commission: between 0,05% and 0.15% of the amount traded.

**Table 10 Commission Structures allowed as of 2003**

ISSUER TYPE OF INSTRUMENT	RANGE ESTABLISHED		PREVIOUS MAXIMUM LIMIT % FUND ASSETS	AUTHORIZED MAXIMUM LIMIT % FUND ASSETS	TYPE OF INSTRUMENT	CONDITION
	LOWEST PERCENTAGE	HIGHEST PERCENTAGE				
Art. 18, letter a).	0.00%	10.00%	5.00%	5.00%	SHARES	COMPANIES WITH A DEBT LEVEL MORE THAN FIVE TIMES THEIR NET WORTH
Art. 18; letter b).	0.00%	5.00%	0.00%	0.00%	CERTIFICATES OF PARTICIPATION	INVESTMENT FUNDS WITH OVER 50% OF THEIR PORTFOLIO CONCENTRATED IN THE DEVELOPMENT OF NEW COMPANIES.
Art. 18, letter c).	0.00%	10.00%	5.00%	5.00%	SECURITIES	ISSUERS WITH LESS THAN THREE YEARS OPERATION.
Art. 18; letter d).	0.00%	10.00%	-.	0.00%	SECURITIES	OTHERS DECIDED UPON BY THE RISK COMMISSION
Art. 18, final sub-secti	5.00%	15.00%	5.00%	5.00%	SECURITIES	SUM of a), b) c) and d).
Art. 19, letter a). *	5.00%	10.00%	5.0% 1/	6.00%	CERTIFICATES OF DEPOSIT AND SECURITIES	ISSUED OR GUARANTEED BY A SINGLE INSTITUTION OR BUSINESS GROUP.
Art. 19, letter b).	5.00%	10.00%	10.0% 1/	10.00% ISSUER'S ASSETS	CERTIFICATES OF DEPOSIT AND SECURITIES	ISSUER'S ASSETS.
Art. 19, letter c).	5.00%	10.00%	10.0% 1/	10.00% GROUP ASSETS	CERTIFICATES OF DEPOSIT AND SECURITIES	ASSETS OF ISSUING BUSINESS GROUP.
Art. 19, Number 1. *	20.00%	50.00%	20.0% 1/	30.00% ISSUE	SECURITIES	A SINGLE ISSUE.
Art. 19, Number 2.	5.00%	10.00%	5.0% 1/	5.00%	CERTIFICATES OF PARTICIPATION	A SINGLE INVESTMENT FUND
Art. 19, Number 3.	5.00%	15.00%	5.0% 1/	5.00% CAPITAL ISSUING COMPANY	SHARES	A SINGLE COMPANY.

1/ Originally laid down in Art. 93 of the SAP Law, which was reformed.

\* Modified.

Source: Department of Investment Supervision and Control, SAP Division, Superintendency of Pensions.

### 4.3.3 Investment Structure for pension funds

The impossibility of investing in international markets and the limited issuing and trading of financial securities from the Salvadorian private sector severely restricts the investment possibilities of the Pension Funds. As a result, there is a high concentration of investments in public sector instruments (see Table x and y below). In May 2003, 83.6 percent of the funds were invested in this type of instrument. This percentage can be disaggregated as follows:

- Treasury Department<sup>41</sup>, 51.4 percent;
- Social Housing Fund, 21.7 percent;
- Transfer Certificates issued by the ISSS and INPEP, 5.9 percent;
- and the Coffee Emergency Fund<sup>42</sup>, 4.7 percent.
- The remaining 16.3 percent is invested in six local banks (12.2 percent), four companies in the private sector (0.8 percent) and in the Banco Centroamericano de Integración Económica (BCIE) (3.4 percent).

As of the same date, investment in fixed income securities and equities was 99.6 percent and 0.4 percent of the Pension Funds, respectively. On analysing the evolution of the portfolio structure between the years 1998 and 2003, it may be observed that the Treasury Department increased its share of the pension assets continuously and substantially (from 1.3 percent to 51.4 percent), which reflects the Treasury's growing dependency on financing from the AFPs. By contrast, the percentage of the funds invested in Central Reserve Bank securities fell (from 38.9 percent to zero).

From 2000 and 2001, the AFPs began to invest in new instruments guaranteed by the State, issued by the Coffee Emergency Fund and the Public Pension System, respectively. The total percentage of the Pension Funds invested in state securities rose from 73.7 percent in 1998 to 83.6 percent in May 2003, while the investment in private sector instruments fell from 26.3 percent to 13.0 percent. In 2003, the AFPs invested for the first time in an international issuer, the Banco Centroamericano de Inversiones. As was mentioned above, this was possible because its instruments were registered for trading on the local stock exchange and classified by specialized institutions.

This concentration has negative effects. In the first place, there is an increase in both the diversifiable or non-systemic and the market or systemic risk levels. The capacity for reducing diversifiable risks is limited by the percentage of minimum investment in the FSV and the small size and low development to be found in the financial market in El Salvador. This means that there is an urgent need for the authorities to check the rules and institutions of the market, in order to encourage a greater supply of financial instruments from the private sector.

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<sup>41</sup> Eurobonds 2006, 2011, 2023 and 2032.

<sup>42</sup> The Coffee Emergency Fund is designed to help coffee producers and is managed by the National Coffee Council. These securities have a state guarantee and are excluded from the risk-rating process.

**Table 11 Composition of the Valued Portfolio of the Pension Funds  
By AFP, according to type of fixed income and variable rate instruments  
(As of 31<sup>st</sup>. December 2002)**

INSTRUMENT	CONFIA	CRECER	PROFUTURO	TOTAL	
				MU\$	%
<b>GENERAL TOTAL</b>	<b>542,114</b>	<b>515,454</b>	<b>3,714</b>	<b>1,061,282</b>	<b>100.0%</b>
<b>FIXED INCOME INSTRUMENTS</b>	<b>539,562</b>	<b>513,032</b>	<b>3,706</b>	<b>1,056,300</b>	<b>99.5%</b>
<b>Public Instruments</b>	<b>472,799</b>	<b>422,588</b>	<b>3,030</b>	<b>898,417</b>	<b>84.7%</b>
Central Reserve Bank of El Salvador	0	0	633	633	0.1%
General Treasury Department	280,581	254,851	468	535,900	50.5%
Coffee Emergency Fund	36,309	16,575	0	52,885	5.0%
Social Housing Fund	136,007	134,934	1,768	272,709	25.7%
Instituto Nacional de Pensiones de los Empleados Públicos	4,733	5,484	18	10,235	1.0%
Instituto Salvadoreño del Seguro Social	15,169	10,743	143	26,056	2.5%
<b>Bank Instruments</b>	<b>62,985</b>	<b>89,047</b>	<b>676</b>	<b>152,708</b>	<b>14.4%</b>
Banco Agrícola, S.A.	29,943	37,619	217	67,779	6.4%
Banco Ahorromet Scotiabank, S.A.	4,577	4,585	0	9,162	0.9%
Banco Credomatic, S.A.	6,791	14,260	81	21,131	2.0%
Banco Cuscatlán, S.A.	11,394	11,991	34	23,419	2.2%
Banco de Comercio de El Salvador, S.A.	7,682	12,660	150	20,492	1.9%
Banco Salvadoreño, S.A.	2,599	7,932	194	10,725	1.0%
<b>Instruments of local (national) companies</b>	<b>3,778</b>	<b>1,397</b>	<b>0</b>	<b>5,175</b>	<b>0.5%</b>
Metrocentro S.A. DE C.V.	3,778	1,397	0	5,175	0.5%
<b>VARIABLE RATE INSTRUMENTS</b>	<b>2,553</b>	<b>2,422</b>	<b>7</b>	<b>4,982</b>	<b>0.5%</b>
Instruments of local companies	2,553	2,422	7	4,982	0.5%
Compañía de Luz Eléctrica de Santa Ana, S.A. de C.V.	0	0	1	1	0.0%
Empresa Eléctrica de Oriente, S.A. de C.V.	0	4	0	4	0.0%
Telefónica de El Salvador, S.A. de C.V.	2,553	2,418	7	4,977	0.5%

Note: As from 1st January 2001, according to article 1 of the Law of Monetary Integration, a fixed, unalterable exchange rate was established between the Colón and the United States Dollar, at ¢8.75 per US\$ 1.

Source: Department of Investment Supervision and Control, SAP Division, Superintendency of Pensions.

**Table 12 Evolution of the Pension Funds' Investment Portfolio**

<b>Instrument</b>	<b>Dec. 98</b>	<b>Dec. 99</b>	<b>Dec. 00</b>	<b>Dec. 01</b>	<b>Dec. 02</b>	<b>May.03</b>
Treasury	1.3%	7.1%	24.4%	33.9%	50.5%	51.4%
Central Reserve Bank	38.9%	28.1%	15.6%	14.8%	0.1%	0.0%
Transfer Certificates (CT)	0.0%	0.0%	0.0%	0.0%	3.4%	5.9%
Coffee Emergency Fund	0.0%	0.0%	7.3%	7.6%	5.0%	4.7%
Social Housing Fund	33.5%	29.4%	24.1%	24.3%	25.7%	21.7%
<b>State Securities</b>	<b>73.7%</b>	<b>64.6%</b>	<b>71.3%</b>	<b>80.7%</b>	<b>84.7%</b>	<b>83.6%</b>
<b>Bco. Centro Americano de Integración Económica</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>3.4%</b>
Local Banks	24.8%	31.7%	25.3%	17.7%	14.4%	12.2%
Local Companies	1.5%	3.7%	3.4%	1.6%	1.0%	0.8%
<b>Private Sector Securities</b>	<b>26.3%</b>	<b>35.4%</b>	<b>28.7%</b>	<b>19.3%</b>	<b>15.3%</b>	<b>13.0%</b>
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Superintendency of Pensions.

They should also remove the obligation to invest in the FSV and to receive the CTs, allowing the AFPs to decide their own portfolio structure on the basis of the conditions of the various financial securities offered on the market and the maximum investment levels.

It is obvious that the main risk currently facing the Salvadorian Pension Funds is related to public sector securities. This risk may be illustrated by commenting on the experience of other countries such as Argentina and Bolivia. The pension systems of these two countries have faced serious problems caused by the influence of the government on the investment decisions of the Pension Funds.

The President of the International Federation of Pension Fund Managers (FIAP) stated recently that in Argentina “the AFJPs were made to bring foreign deposits and investments back to the country, which was then exchanged for state instruments expressed in dollars, called guaranteed loans.” Later they were “pesified” at an exchange rate that was completely different from the original one. In other words “there was a clear lack of recognition on the part of the Argentine authorities of the workers’ ownership rights over their funds”.<sup>43</sup> At time of writing a process of debt restructuring was under way. It may well imply a substantial loss in value for the investors (as much as 75 percent) including the pension funds.

In Bolivia, the pension funds were obliged to buy the assets of a collective fund which exists in the country. Its purpose is to finance the so-called Bonosol, a pension paid to all Bolivians who were 21 years old or more on the date of the reform of the pension system. The potential impact of this mandate on the ultimate rate of return of the system is difficult to predict (because there is no clear valuation of these assets), but could potentially be negative.

As discussed above, the Salvadoran pension system has not been spared this kind of state intervention in its investment decisions. As was analysed earlier, a negative precedent was set for the system from the outset of the reform, when the minimum investment in the FSV was stipulated. At present the AFPs are obliged to receive the securities representing the Transfer Certificates at 100 percent of their face value. The introduction of other measures of this type cannot be ruled out in the future.

One factor which contributes to increasing the risk is the fact that the public sector in El Salvador has obtained a considerable proportion of its internal funding by forcing government paper on the AFPs. According to statistics from the Central Reserve Bank<sup>44</sup>, the total internal debt of the central government was US\$ 1,874 million in March 2003, while the debt in securities was US\$ 1,726 million. Meanwhile, the AFPs had investments in Treasury bonds for a total of US\$ 634 million or 35 and 37 percent of the debt figures given above, respectively. A further US\$ 272 million were invested in securities issued by the FSV, whose total debt was US\$ 689 million in April 2003. The AFPs were therefore funding approximately 40 percent of the operations of that institution.

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<sup>43</sup> Arthur, May 2003.

<sup>44</sup> Monthly Statistical Bulletin, March 2003.

As long as there is no stimulus to develop the internal financial market and the supply and trading of financial instruments, the only opportunity to substantially improve the diversification of the Pension Funds lies in authorizing investment abroad. With this measure, there would be a significant broadening of the range of instruments available to be purchased by the funds, allowing the AFPs to gain efficiency in investment, and this would result in higher risk adjusted returns. The pension funds could be invested in a greater number of issuers, economic sectors and countries, thereby reducing all types of risk.

On the other hand, if more investment alternatives do not become available, the expected growth of the pension funds will continue to exert pressure on the limited supply of local financial instruments and on interest rates. Moreover, the structure of the funds will continue to be heavily concentrated in public sector securities and fixed income instruments, which are far from the most appropriate portfolios for the pension fund investment horizon.<sup>45</sup>

If changes are not introduced in the regulation of investments and in the development of the Salvadorian financial market, the Pension Funds will not only be exposed to higher levels of risk but will obtain lower yields, with the result the members will receive lower pensions. In this respect it is interesting to quote a Citigroup presentation<sup>46</sup>, which concludes that it is possible to achieve an improvement of 1 percent in return per year by modifying the structure of their investment portfolio. This, in turn, would lead to an increase in the pension of 25 percent.

The authorities are evaluating the matter. Studies have been carried out to analyse the advantages of investing in international markets and local officials have travelled to other countries to find out about international experience. At the same time, the Superintendency of Pensions has pointed out on many occasions<sup>47</sup> that pension fund assets exceed the local supply of financial instruments. There is also an awareness of the fact that if no steps are taken to tackle this situation, the relative scarcity of instruments will become more acute, due to the anticipated rapid growth of pension fund assets. According to estimates made by the Superintendency itself, they will have quintupled by the year 2010.

In fact, at the end of 2001, certain measures were adopted to broaden the range of investment alternatives. Investment in insured mortgage certificates was authorized, in initial public offerings issued by securities firms and in fiduciary participation certificates. The Funds have also begun to invest in securities from foreign issuers through the local stock exchange. However, these measures are clearly insufficient to achieve adequate diversification of the social security resources.

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<sup>45</sup> Ibbotson (2000) shows that asset allocation explains 90% of portfolio returns, the remaining percentage corresponding to the choice of specific instruments, the “timing” used when investing and other factors.

<sup>46</sup> Echegorri, 2002.

<sup>47</sup> See yield Bulletins for the years 2002 and 2003.

The dearth of investment alternatives has been so acute that AFPs have had to deposit part of their portfolio in current accounts which pay low interest rates.<sup>48</sup> In March 2002, the proportion of the assets in these deposits peaked at 16 percent.

#### 4.3.4 Portfolio choice opportunities for members

Under present conditions, characterized by the existence of two AFPs in the market which are allowed to manage only one pension fund each, and a capital market that offers few investment alternatives, members cannot choose different investment portfolios.

#### 4.3.5 Evolution of yield

The real rate of return of the pension funds showed a strong, steady decline between June 1999<sup>49</sup>, when the real yield was 14.4 percent for the previous 12 months and the year 2002, when the real annual yield fell to 2.4 percent. So far, in the course of 2003, the yield has recovered, with the percentage accumulated for the previous twelve months having risen to 5.8 percent by May. This may be explained by the decline in Eurobond interest rates. The accumulated yield since the beginning of the system is, on average, 11.2 percent per annum in real terms.

Analysing other indicators of rates of return in the Salvadorian financial market, the conclusion is that the downward trend in yield registered until December 2002 was the result of a general situation existing in the market. For example, the nominal rates of return in dollars for the securities of the Central Reserve Bank at 364 days decreased from 10.1 percent in December 1999 to 3.3 percent in the same month in 2002 (the variation in the Consumer Price Index moved from -1.0 percent in 1999 to 2.8 percent in 2002), while the average passive interest rates of the banks in dollars at 360 days fell from 6.3 percent in 1999 to 3.6 percent in 2002

**Table 13 Real Yield of the Pension Funds**  
(Last 12 Months, ended with the month given)

Period	Crecer	Porvenir	Previsión	Profuturo	Confía	Average
Dec. 99	14.26%	14.33%	14.30%	13.45%	13.81%	14.09%
Dec. 00	8.07%	n.c.	n.c.	7.46%	7.79%	7.92%
Dec. 01	7.71%	n.c.	n.c.	5.48%	7.63%	7.65%
Dec. 02	2.10%	n.c.	n.c.	1.68%	2.71%	2.41%
May. 03	5.68%	n.c.	n.c.	2.15%	5.91%	5.79%

Source: Superintendency of Pensions.

<sup>48</sup> In July 2003 they were paying nominal annual interest rates of between 2% and 3%.

<sup>49</sup> The first month in which the Superintendency began to publish statistics.

**Table 14 Real annual, cumulative rate of return for AFPs and system,  
December 1999-May 2003**

<b>Period</b>	<b>Crecer</b>	<b>Porvenir</b>	<b>Previsión</b>	<b>Profuturo</b>	<b>Confía</b>	<b>Average</b>
Dec. 99	16.44%	13.04%	13.73%	11.98%	13.93%	14.06%
Dec. 00	14.21%	n.c.	n.c.	10.96%	12.41%	13.30%
Dec. 01	13.37%	n.c.	n.c.	9.99%	11.93%	12.61%
Dec. 02	11.37%	n.c.	n.c.	8.49%	10.41%	10.86%
May. 03	11.77%	n.c.	n.c.	7.98%	10.78%	11.25%

Source: Superintendency of Pensions. Note: Return as of month and year reported.

The decline in rates implied reductions in the returns on the securities in the pension fund portfolio, without producing a significant valuation<sup>50</sup> of the stock of instruments, since the majority of these were variable rate instruments. With the portfolio restructuring carried out by the AFPs, most of the securities at present are now fixed rate instruments. This is the case of Eurobonds and Transfer Certificates. For this reason, the reduction in Eurobond rates which occurred in the year 2003 led to the improvement in the return mentioned above.

The doubt which remains is how much of the reduction registered by the interest rates in the market can be attributed to the pressure of the demand for financial instruments exerted by the pension funds. The author's hypothesis is that their influence has evidently been decisive in the fall in rates, even though at local level it is argued that the Law of Monetary Integration which came into force in the year 2002<sup>51</sup> would go a long way towards explaining the trends.

On the other hand, though the accumulated results are good, there is a lower value of the Pension Funds which is not recognized in the current valuation of the investments. This has to do with the securities of the Social Housing Fund and the Transfer Certificates which represented 28 percent of the portfolio in May 2003. These securities, which are not currently traded in the market, are valued at par. However, if their interest rate is compared with the yield of other instruments with similar duration and risk which are traded on the market, one would conclude that they should be valued considerably below par. The loss will appear gradually over time, through lower accrual of interest.

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<sup>50</sup> It is important to mention that the valuation of the instruments belonging to the Pension Funds is carried out at market prices, using price vectors provided by the Superintendency of Pensions.

<sup>51</sup> This Law fixed parity between the Colón and the United States Dollar at 8.75 Colones per Dollar. It also established the free circulation of both currencies throughout the country. However, events show that in practice the Colón is no longer traded.

## **4.4 Supervision and Guarantees**

### **4.4.1 Supervision**

The oversight of the SAP and SPP is the responsibility of a specialized body, the Superintendency of Pensions, which has administrative and budgetary autonomy and is financed with resources from the supervised institutions and transfers from the public sector. The AFPs pay supervision fees up to a maximum amount equivalent to 4 percent of the income that they receive in commissions. The actual percentage is fixed annually by the Superintendency.

During the year 2002, the costs of the Superintendency amounted to US\$ 3.1 million, while income totalled US\$ 2.6 million. Forty-one percent of this corresponded to resources from the public budget and the rest to income from supervision services charged to the AFPs. It is hoped that this latter source of income will increase with time, so that the Superintendency may achieve full financial autonomy. In 2002, the income under the heading of supervisory services represented 4 percent of the commission's income charged by the AFPs<sup>52</sup>. The difference between income and outgo was covered by using initial disposable assets.

The maximum authority at the Superintendency is the Superintendent, who is appointed by the Council of Ministers at the suggestion of the President of the Republic for a period of five years with the possibility of reappointment. The Superintendency is divided into a department in charge of supervising the SPP and another with responsibility for controlling the SAP. There are also managers and support units. In addition there is a Disability Assessment Commission, answerable directly to the Superintendent, whose main functions are to determine the origin of the common or work-related illness or accident and to assess the degree of disability of the workers belonging to the SAP and SPP, and their beneficiaries.

*Activities carried out by the Superintendency.* The supervisory function is vital for the successful development of a pension system. El Salvador is not exception, because the work of the Superintendency has been a decisive factor in the creation and development of the SAP, despite facing difficulties and challenges resulting from a series of factors discussed below.

The responsibility for safeguarding the proper functioning of the SAP has led the Superintendency to take on direct operational roles, a situation which has also occurred in the SPP. This could prove very costly if the situation continues over time. In the first place, there is confusion as to the role of institutions that weakens the Superintendency's capacity to fulfil its core functions of regulation and supervision. It is difficult for the institution to be effective in supervision if it is taking part at the same time in the activities that are being supervised. Moreover, the mixture of roles lends itself to the AFPs' attempting to pass the responsibility to the Superintendency in case of problems. Second, the Superintendency diverts resources

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<sup>52</sup> Net of the value of the disability and survivorship insurance premiums.

which should be used for the functions of regulation and supervision in order to perform these operational tasks. Finally, the institutions under supervision may become accustomed to having the Superintendency solve their problems and therefore have recourse to it frequently, which has happened in the past. In addition to overburdening the Superintendency, this arrangement delays resolution of problems which could probably be dealt with by the AFPs.

At the beginning, when the system was starting off and the AFPs had no experience, it may have been justifiable for the Superintendency to intervene in operations to ensure that the functions were carried out correctly. However, it would be advisable for the Superintendency to gradually withdraw from most of the operational activities in which it is currently engaged, passing them to the AFPs or to other contracted bodies, and to concentrate its human and technological resources on its own functions of regulation and supervision.

One of the most important operational activities currently being carried out by the Superintendency is the management of AFP Profuturo. This AFP had its license withdrawn in June 2000, but is still operating, even though it is not allowed to recruit new workers. The long period of delay in the liquidation process is striking, in circumstances where article N° 75 of the Law states that “once the dissolution of an Manager Institution has taken place and its liquidation has begun, depending on the case, the members shall be entitled to transfer to the manager of their choice during a period of ninety calendar days, after which the liquidator shall cede the management of the remaining individual pension savings accounts, proportionally, to those Manager Institutions which, in accordance with the respective regulations, have the financial capacity to receive them”. As explained in 4.1.1., the cause of the delay is a lawsuit levelled by the owners of the AFP against the Superintendency’s decision, which has made it impossible to start the legal liquidation process.

According to details given by the Superintendency itself in its regular reports, various units of the institution have worked in critical areas of the manager, updating many functions which those areas should have been carrying out, particularly the screening of information regarding unplaced contributions<sup>53</sup> and contributions pending deposit. The Superintendency is also taking part in investment management, in checking the payment of benefits and in compensation for transfers. This process has definitely meant that most of the operations of the Profuturo Pension Fund have been transferred to the offices of the Superintendency.

Other operational functions carried out by the institution are:

- a) Assigning the single social security number (NUP);
- b) Approving transfers and checking the requirements demanded by the regulations;
- c) Taking part in solving unplaced contributions and multiple membership situations;
- d) Collecting social security contributions. In coordination with other public institutions, the Superintendency carries out some inspection activities, visiting work places to check that employers are complying with their labour obligations, including those related with their workers’ social security contributions;

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<sup>53</sup> Contributions that have not been credited to the individual capitalization accounts because of information problems or because they belong to workers who are members of other institutions.

- e) Checking the requirements for cashing the Transfer Certificate (CT) and issuing the certification letters;
- f) Assessing the disability of members belonging to the SAP and SPP;
- g) Solving complaints presented by members and employers. During the year 2000, the Superintendency dealt with and solved 200 complaints registered by members who, among other things, requested investigations into delays in pension procedures and dissatisfaction with the benefit calculations made by the pension fund managers;
- h) Accrediting and setting examinations for sales agents. In 2002, 400 social security services agents were obliged to update examinations.

With regard to their regulation and supervision functions, one of the most complex subjects facing the Superintendency in the early days was that of “governance”. For various reasons, the Superintendency found it difficult to impose its powers on the institutions under supervision, and to insist on compliance with regulations and impose fines where these were justified. It also received many criticisms of its actions; fines were often not imposed and there was judicial opposition to some that were imposed.

This situation is rooted in several causes, but the evidence suggests that the following were the most important:

- a) arbitrary actions on the part of certain employees of the Superintendency;
- b) a lack of clear definition of responsibilities (the mix of operational and supervisory roles);
- c) turnover of personnel;
- d) And, too much attention given to formalities and details and not to the real, substantive problems.

The Superintendency itself recognizes that some of these problems have continued, but also stresses that the institution is taking steps to solve them. In its Annual Report for 2002, it points out that the formalistic approach is changing and that the activities of the institution are being directed towards underlying causes of the problems rather than their manifestations. It also underlines the change in the method of working with the supervised bodies, transferring more responsibility to them in the area of self-regulation and fulfilment of operational functions, while the Superintendency concentrates on supervisory activities.

In the future, the Superintendency will have the challenge of reinforcing its “governance” over the system, because this could suffer with the reduction in the number of AFPs. With just a few large institutions being supervised (four in all, including the ISSS and the INPEP which administer the SPP), it may be more difficult to take extreme measures, such as the liquidation of the manager, if an AFP is engaged in irregular activities.

Another matter which has weakened the Superintendency is the lack of computerization in some control functions. The available information indicates that the institution has gradually been increasing the automation of its functions. Recent examples are the automatic reconciliation of daily reports and the calculation of the value of the pension fund. With these improvements, the Superintendency has achieved automatic processing of all its daily reports,

thus freeing up resources that can be used for other supervisory tasks which cannot be automated and for analysis functions. Despite the progress, there are still tasks pending, as the Superintendency itself recognizes. For example, the benefit control modules have not yet been integrated into the information systems.

#### **4.4.2 Guarantees**

Mandatory pension systems may have implicit state guarantees arising from the fact that the State obliges the workers to contribute within the system. In the case of El Salvador, these guarantees are magnified because the Superintendency of Pensions, in addition to regulating and supervising the system, participates directly in certain operational tasks. It is also a member of the Risk Commission, together with the Superintendencies of Securities and the Financial System, and the President of the Central Reserve Bank. This is the body which defines the maximum investment limits, the average weighted term of the fixed income portfolio and the minimum risk-rating limits for instruments that can be purchased by AFPs.

In addition to the implicit guarantees, the Law states that the State guarantees the payment of minimum old-age, disability and survivorship pensions, for which compliance with certain requirements is demanded, as defined in the same Law (see Table x). There are no other state guarantees in the system.

The minimum old-age and disability pensions are fixed annually by the Treasury in the General State Budget Law, taking into account the relative variation in the average contribution wage in the pension system and the Central Government resources available. The minimum survivorship pension is determined as a percentage of the minimum old-age pension. The minimum disability pensions are converted into minimum old-age pensions when the disabled pensioner reaches the legal age for an old-age pension. In the case of the programmed withdrawal and temporary income options, the minimum pensions begin to operate when the funds accumulated in the individual capitalization accounts are exhausted.

**Table 15 Amount and Requirements of the Minimum Pensions guaranteed by the State in El Salvador**

Type of Pension	Amount		Requirements
	Level	Readjustment	
<b>Old-Age</b>	According to budget and relative variation in the average contribution wage	Annual	Income, including pension, lower than the minimum wage  60 years of age or more in the case of men and 55 or more in that of women, without having retired before having reached those ages  At least 25 years of contributions (1)
<b>Total and Partial Disability</b>	According to budget and relative variation in the average contribution wage	Annual	3 years of contributions during the 5 years immediately preceding the first disability decision; or  Currently contributing on the date of the disability decision in the case of a common accident, provided that contributions have been paid for at least 6 months of the last 12 and that the accident occurs after joining the system; or  At least 10 years of contributions on the date of the disability, or later in the case of a pensioner who is still contributing (1)
<b>Survivorship</b>	% Minimum Old-Age Pension according to reference pensions defined in the Law	Annual	Originator with 3 years of contributions during the 5 years prior to the date of death; or  Originator contributing on the date of death in the case of a common accident, provided that contributions were paid for at least 6 months of the last 12 and that the accident occurred after joining the system; or  At least 10 years of contributions by date of death (1)

**(1) The period paid in the Public Pension system is taken into account; plus the periods in which the worker was incapacitated and received the corresponding subsidy (maximum 3 years); the time in which the member received disability pensions on the basis of a first decision, when this ceased with the second decision, and in the case of a pensioner who continues to contribute, for each 24 months of contributions after reaching the required age for retirement, one year is calculated for purposes of the time requirement for the minimum pension. Source: Decree N° 927 (1996).**

The value of the minimum old-age pensions paid by the State between 1991 and 2002 oscillated between 14 percent and 28 percent of the average contribution wage of the workers enrolled in the Instituto Salvadoreño del Seguro Social. Table x below shows the changes to the minimum pension over time.

**Table 16 Amount of the Minimum Old-Age Pension guaranteed by the State in the Pension System of El Salvador**

Period		US \$
From	To	
September 1980	February 1988	17.1
March 1989	December 1995	34.3
January 1996	December 1996	62.9
January 1997	December 2001	80.0
January 2002	December 2002	92.0
January 2003	2003	100.0

Source: Superintendency of Pensions - El Salvador.

According to figures from the Superintendency of Pensions, the state expenditure on minimum pensions will rise from 0.01 percent of GDP in the year 2003 to a maximum of 0.28 percent of GDP in the year 2045, and then fall until it reaches 0 percent in the year 2071 (see Table x). This projection assumes that the generations of pensioners who receive benefits financed entirely with the balances accumulated in the capitalization system will not need state support in the long term in order to reach the level of the minimum pension.

**Table 17 Actuarial Projection of Minimum Pension costs in SPP and SAP**  
Millions of US \$

Year	Minimum Pension SPP	Supplements to Minimum Pension in SAP	Total	
			Mill. US \$	% GDP (1)
2003	0.75	-	0.75	0.01%
2004	0.80	-	0.80	0.01%
2005	0.85	-	0.85	0.01%
2006	0.96	-	0.96	0.01%
2007	1.07	-	1.07	0.01%
2008	1.18	-	1.18	0.01%
2009	1.26	-	1.26	0.01%
2010	1.28	-	1.28	0.01%
2015	1.38	0.11	1.50	0.02%
2020	1.29	5.08	6.37	0.02%
2025	1.08	22.57	23.64	0.07%
2030	0.83	69.12	69.95	0.16%
2035	0.59	87.94	88.53	0.17%
2040	0.37	138.59	138.96	0.22%
2045	0.20	214.43	214.64	0.28%
2050	0.10	208.59	208.68	0.22%
2055	0.04	178.43	178.46	0.16%
2060	0.01	128.46	128.47	0.09%
2065	0.00	80.41	80.41	0.05%
2070	0.00	41.11	41.11	0.02%

(1) Projection GDP with a growth rate of 4% per year. Base GDP 2002 equals US \$ 14,283.9 million.

Source: Superintendency of Pensions.

## **4.5 Pension payout options**

### **4.5.1 Characteristics**

At retirement, affiliates in the new individual accounts scheme may choose between three pension options: programmed withdrawal, life annuity and programmed withdrawal with deferred life annuity. According to the law, members who are about to retire, or their survivors, who wish to receive pension bids, must advise the respective AFP, which has to send the information about these members anonymously to the life insurance companies interested in offering life annuities and to the AFPs interested in offering the service of programmed withdrawal, so that they may send their bids. This process of personal pension bidding is regulated and supervised by the Superintendency of Pensions.

In the programmed withdrawal option, the member keeps the balance of her individual account in an AFP when she fulfils the conditions for receiving a pension. The AFP then pays a monthly pension out of that balance. The monthly pension is calculated by dividing the balance in the individual account each year by the technical capital needed to pay one pension unit to the member and, when she dies, to his/her beneficiaries, according to the reference pensions laid down in the Law (see Appendix N° 6). The decision to opt for a programmed withdrawal can be revoked, because the pensioner may transfer her balance to another AFP or change to either of the other two existing options. The programmed withdrawal is obligatory for members whose benefits would be lower than the minimum pension guarantee.

The life annuity pension option is an insurance contract signed with a life insurance company, in which the company is bound to pay the member a monthly income as long as he lives, and once he dies, to pay survivorship pensions to those beneficiaries who are entitled to them under the Law. The contract is irrevocable. The life annuity contract may be expressed in colones or dollars.

The programmed withdrawal with deferred life annuity is a combination of a temporary programmed income and a life annuity. With one part of the balance in the individual account, the member buys a life annuity as from a future date agreed with the insurance company. The other part of the balance in the account funds a programmed income which the AFP pays to the pensioner monthly, from the time when he/she fulfils the pension requirements until the payment of the life annuity begins. The life annuity cannot be less than fifty percent of the first monthly payment of the temporary income nor more than one hundred percent of that payment.

The temporary programmed income is calculated by matching the part of the balance in the account set apart to cover it with the current value of equal annual advance payments received during the period that the temporary income lasts, updated according to the technical bases set out in regulation. This calculation is readjusted annually. If the member has a balance in the individual account that exceeds the capital needed to finance, on the one hand, a pension equal to 70 percent of the average of the base contribution income of the last 120 months during

which contributions were paid, and on the other, a pension equivalent to 160 percent of the minimum pension guaranteed by the State, he may withdraw the excess totally or partially on retirement ('free disposable surplus'). On the other hand, if a non-pensioner fails to fulfil certain requirements laid down in the Law when he becomes disabled or dies, the accumulated balance, including the Transfer Certificate, is returned to him or to his beneficiaries in a lump sum ('refund of balance').

#### 4.5.2 Pensions paid

As might be expected from an immature pension system, the SAP still has a small number of pensioners in relation to the number of members. In December 2002, there were 8,489 pensioners, distributed as follows: 862 old-age pensions, 571 disability pensions and 7,056 survivorship pensions generated by 2,623 originators. All the pensions paid correspond to the programmed withdrawal option, since the life annuity alternative is not currently available. It is known that the government is working towards making this option available and is at the stage of preparing the regulations needed for operating the insurance companies, particularly with regard to the rules for constituting reserves.

#### 4.6 Tax treatment of contributions and benefits

Contributions to pension schemes are deducted from taxable earnings, with the result that they are tax-exempt. The contribution rates that have to be paid by workers and employers in the various programs are as follows:

**Table 18 Contribution rates for pensions and other social programs**

Item	Worker	Employer	Total	Taxable Maximum
Indiv. Pension Account	3,250 %	6,750%	10,000%	4.501,95
AFP Comisión (1)	2,975%	0,000%	2,975%	4.501,95
- Adm. Indiv. Account	1,578%	0,000%	1,578%	4.501,95
- Disab. + Surv. Insurance	1,397%	0,000%	1,397%	4.501,95
Health	3,000%	7,500%	10,500%	685,71
INSAFORP (2)	0,000%	1,500%	1,500%	No limit
Total (3)	9,225%	15,750%	24,975%	

(1) Simple average of AFP Confía and Crecer.

(2) Professional Training Institute.

(3) The effective contribution rates are lower, because there are limits to the taxable earnings (fifth column in the table) which are different in each social security program.

Source: AFP Confía.

Workers can contribute as much as 10% of their gross earnings voluntarily to their individual accounts managed by the AFPs, with the tax limits indicated in the table above. These contributions have tax benefits, because they can be deducted from taxable earnings. Workers are also allowed to make an annual deduction for health and education expenses from their taxable income, with a limit in each case of approximately US\$571. The old-age, disability and survivorship pensions, free disposable surplus, refund of balance and inheritance are not taxable.

Table x gives the income tax rates applied to natural persons in El Salvador. These represent the tax benefit obtained by members of the SAP, due to the fact that their contributions and benefits are tax-free. The benefit can be as high as 30 percent for high income workers. No estimates of tax expenditures resulting from this policy are available.

**Table 19 Personal Income Tax schedule in El Salvador, 2003**

Income Band	Tax
Up to ¢22,000 (US\$ 2,514.3)	Exempt
From ¢22,000.01 to ¢80,000 (US\$ 9,142.9)	10% on the amount in excess of ¢22,000 plus ¢500 (US\$ 57.1)
From ¢80,000.01 to ¢200,000.00 (US\$ 22,857,1)	20% on the amount in excess of ¢80,000 plus ¢6,300 (US\$ 720.0)
Over ¢200,000 (US\$ 22,857,1)	30% on the amount in excess of ¢200,000 plus ¢30,300 (US\$ 3,462.9)

Source: AFP Confía.

## 5. Impact of the Reform on the Capital Market

Since the pension funds managed by the AFPs in El Salvador have been in existence for no more than five years, it is obviously only possible to make a preliminary analysis of the impact that the reform of the pension system has made on the capital market. This analysis will concentrate on comparing the effects that should be expected from the reform in the light of experience in other countries, especially Chile, along with the qualitative evidence available so far in El Salvador.

The effects that the creation of pension funds can have on the capital market depend critically on factors that are specific to the pension industry and on the general conditions of the stock market and the economy. The impact of the reform will be greater if investment regulations do not limit diversification too much and if these are made more flexible as the volume of these funds grow and the experience of AFPs and supervisory institutions increases. It is also

important that the authorities understand the close relationship that exists between the accumulation of assets in the system and the development of the stock market and that they show conviction and willingness to carry forward the changes in regulation that are necessary and to encourage the private sector to modernize the institutional framework. In addition, a stable macroeconomic environment and the execution of other financial reforms and modernizations consistent with the change in the pension system may serve to reinforce the positive impact of pension assets on the development of the capital market.

Among the most important potential effects on the capital market that can be expected of the reform are the improvement in regulations and the institutional environment of the financial market, improvements in the characteristics of financial securities and the creation of new instruments, an increase in the size and depth of the stock market, a reduction in the volatility of transactions, a decrease in the costs of capital faced by companies, greater competition between the institutional investors involved in the market, and improvements in the allocation of financial resources, due to more professionalism in the market.

*Regulations and the institutional environment of the stock market.* Given that a high proportion of the balances accumulated by the workers in their individual accounts when they retire depend on the yield obtained on the investment of their pension contributions, it is vital that the growth of pension assets proceeds in conjunction with a systematic improvement in the regulation of the capital market. Experience in Chile shows that the creation of professional, specialized investors, such as the AFPs, contributes to that improvement since they are interested in providing their members with the best yield results, they propose improvements in the conditions of the capital market and press for these to be implemented.

In the case of El Salvador, at the time of the pension reform, the stock market was at a very early stage of development. In fact the first session of the Stock Exchange was recorded in 1992. A reform to the Stock Market Law was not enacted either before or at the time of the creation of the new pension system. The first important modifications were made in the year 2001 and came into force in January 2002. Among the main changes were the simplification of the process for listing foreign securities in the Stock Exchange, the improvement in REPO<sup>54</sup> operations, greater facilities for approving non-banking company issues, placing this responsibility in the hands of the Board of Directors and not the General Shareholders' Meeting, and improvement of the information provided for investors. According to the available data, this reform and the securities law currently in force in general have been promoted basically by the Stock Exchange of El Salvador.

At the time of writing, there was new draft legislation that would make substantial modifications to the stock market regulations in the following areas, among others: the protection of the interests of minority shareholders, the creation of alternative markets apart from the Stock Exchange, support of international standards, greater supervisory powers for

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<sup>54</sup> This is one of the most common deals on the Stock Exchange and consists in a sale with a repurchase agreement, with a life of between 2 and 45 days. The securities involved in the REPO are deposited in custody in the Central Securities Deposit (CEDEVAL).

the Superintendency of Securities, greater freedom for intermediaries and regulation of public offerings of shares.

In addition to the changes in regulations already mentioned, significant modifications were made in the institutional environment of the stock market, following the pension reform. The risk-rating system was created under the responsibility of private companies. In June 2002, an electronic trading system was also inaugurated, this being used in debt instrument operations in the primary and secondary markets and in shares. Physical transactions remain only for REPOs. Moreover, in September 2002, the Law of Securities De-materialization came into effect, by electronic annotations in the account. In this way, it is hoped to increase transparency, speed and security in the transfer of securities and reduce the risk of securities being stolen, forged or lost.

*The Size of the Market.* Transactions in the Salvadorian stock market are highly concentrated in public sector securities and repos, which are short-term instruments (Table 19). 90 percent of the securities traded in the primary market during 2002 were issued by public institutions, especially the Central Reserve Bank (81 percent) and the FSV (9 percent). In the secondary market, 93 percent of transactions corresponded to public sector securities. On the other hand, during 2002, repos represented 72.0 percent of the total transactions in the Stock Exchange, while in the primary and secondary fixed income market<sup>55</sup> and the share market they accounted for 12.8 percent, 15.0 percent and 0.3 percent of the total traded.

**Table 20 Amounts Traded in the Stock Exchange of El Salvador**  
*Millions of US \$*

Year	Primary	Secondary (1)	Shares	Repos.	Total	% GDP
1998	1,196	136	18	5,205	6,554	54.6%
1999	2,165	164	48	5,406	7,782	62.4%
2000	2,349	381	26	7,818	10,574	80.5%
2001	1,997	679	23	6,393	9,092	65.9%
2002	1,056	1,238	24	5,958	8,276	57.9%
Jan.-Jun. 2003	300	1,027	4	3,059	4,390	n.d.

(1) Includes international operations. Source: Stock Exchange of El Salvador.

<sup>55</sup> This market includes purchases and sales of international papers.

The demand for financial securities from pension fund managers has stimulated the growth of transactions in the secondary stock market. Between 1998 and 2003, operations in this market rose by more than 800 percent. By contrast, transactions in the primary market doubled between 1998 and 2000, but then fell to levels similar to those of 1998 as a result of the decrease in open market operations by the Central Bank. This explains why the share of the pension fund portfolio invested in securities of the Central Bank fell to zero. On the other hand, the share invested in Treasury bonds grew considerably. These are Eurobonds which have been invested internationally and bought by stock broking firms, which have then sold them to the AFPs through the local secondary market. These operations explain the steep rise in transactions in this latter market.

The AFPs are not allowed to take part in the REPO market. In the case of shares the market is practically non-existent, because the annual volumes have fluctuated between US\$ 18 million and US\$ 48 million in the last five years. In the future, the impact of the pension funds on stock market transactions will become weaker, because an increasing percentage of their portfolio will have to be invested in Transfer Certificates<sup>56</sup>, which must be accepted directly by the AFPs from the institutions managing the public system.

*Creation of financial instruments and the improvement of existing ones.* After five years of experience, AFPs are still investing the pension assets mainly in state and bank securities because no new investment possibilities have emerged. The main steps taken by the local authorities have translated into the opening up of investment alternatives for the Pension Funds in securities issued or guaranteed by the public sector, such as those of the Coffee Emergency Fund<sup>57</sup> and the Eurobonds. The funds were also obliged to receive the Transfer Certificates. Another new, though limited, alternative has been the possibility of investing in securities of foreign issuers listed on the local stock exchange.

Though the reform introduced at the end of 2001 authorized investment of Pension Funds in financial paper in the insured mortgage system, in IPOs issued by securities firms and in fiduciary certificates of participation, the regulations needed to implement these investments have not been issued.<sup>58</sup>

As was pointed out earlier, foreign investment must be permitted if any reasonable degree of portfolio diversification is to be attained. It is also essential to carry out reforms that give firm encouragement to private sector issuers to issue financial instruments. Not only will the pension system's performance suffer as long as the status quo remains, the secondary and potentially positive impact on economic development is unlikely to take place.

*Efficiency in allocation of resources.* One of the potential effects of the reform to the pension system is an improvement in the allocation of financial resources, due to the greater professionalism and specialization of the market produced by the entry of the Pension Funds. However, in the case of El Salvador the impact in terms of efficiency has been seriously

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<sup>56</sup> As seen in 4.3.1.

<sup>57</sup> These have a state guarantee.

<sup>58</sup> For example, the Law of Securitization is still pending.

handicapped by the funds' obligation, whether direct (minimum limits) or indirect (lack of alternatives), to invest in state instruments or those of the banking sector. As has already been said, the AFPs have had limited possibilities of allocating their resources in new types of instruments in the national market or abroad. If new, important opportunities were to open up, this would justify a growing level of specialization and more professional management and would favour the transfer of technology from abroad with a significant impact on efficiency.

The slight investment in shares has not stimulated progress in corporate governance rules either, though this could occur as a result of the participation of pension funds as minority shareholders in company ownership. On the other hand, the imperfections in the trading rules that have to be kept by the AFPs when investing the Pension Funds<sup>59</sup>, and the existence of only one Stock Exchange<sup>60</sup> where all instruments have to be traded<sup>61</sup>, have been obstacles to a more significant reduction in trading costs.

*Effects on other industries.* There are two industries closely related with the pension system which have been stimulated in their development by the creation of the AFPs. On the one hand there is the banking industry which has received massive investments through investment certificates. Since a considerable percentage of these certificates is destined to finance mortgage loan operations, the construction sector has also benefited from the reform. The recent authorization of investment in the system of insured mortgages may provide an additional boost to this industry, once the regulatory conditions are in place to make these investments possible.

Another industry that has benefited from the creation of pension funds is the life insurance industry, which provides the AFPs with coverage for the disability and survivorship insurance. However, the most substantial impact on this industry is still to come and is related to the business of offering life annuities to pension system affiliates. As was seen in 4.5, the Salvadoran authorities are in the process of preparing the regulations required so that life insurance companies can offer this product.

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<sup>59</sup> See Section 4.3.2.

<sup>60</sup> Which is also the owner of the only centralized custodial institution.

<sup>61</sup> Except purchases of Treasury and Central Reserve Bank instruments in the primary market.

## 6. Conclusions

The results shown so far by the private pension system of El Salvador are positive insofar as a rapid consolidation of coverage and real rates of return of more than 10 percent per year, while the average commission levels charged by the managers, net of the cost of the disability and survivorship insurance, are among the lowest in the Latin American capitalization systems.<sup>62</sup>

However, there are various aspects that are essential for the success of the SAP in the medium and long term which must be faced and reformed. The most urgent refers to the Pension Fund investments. Due to the strong growth of the funds, the scarce supply of financial instruments in the market and the deficiencies in the investment regulations (the existence of minimum limits and the prohibition on acquiring securities of foreign issuers traded in the international markets), the pension resources of the workers are highly concentrated in state and bank instruments.

This situation exposes workers to high and unjustified levels of risk. The authorities should therefore modify the list of eligible instruments and maximum investment limits, authorizing investment in international markets. In addition, the authorities need to make investment regulations gradually more flexible over time, as the AFPs and supervisory bodies gain experience and the stock market develops. This last measure should be strongly and consistently encouraged the authorities by modernizing the regulations of the capital market. It is also important to ensure that trading regulations do not impose excessive transaction costs on the pension funds, as has occurred in El Salvador because of the obligation to concentrate a large proportion of the transactions in the local market, which has only one stock exchange.

Another subject of the utmost importance is the threat of market concentration. The reduction in the number of managers from five in the year 2000 to two in 2003 obviously restricts competition.<sup>63</sup> The problem facing the authorities is how to ensure that the AFPs have permanent incentives to reduce prices and improve the quality of their services, in a market where two institutions are competing, offering a mandatory, intangible product, to a group of clients who may have difficulty in taking adequate precautions regarding the quality of the pension administration because of the complexities inherent in the product and the costs of transaction.

The existence of only two AFPs, combined with the high yields being obtained on net worth<sup>64</sup>, have contributed to a situation in which certain political sectors are suggesting deep-seated reforms to the pension system, such as reviving the public scheme, the creation of a mixed system with multiple pillars or the creation of a state AFP. Given the tenor of the proposed suggestions, there is a risk that political debate may lead to modifications being made to the SAP which might constitute a step backwards in the modernization of the pension system.

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<sup>62</sup> See AIOS Statistical Bulletins, various.

<sup>63</sup> Although three are still operating, one has had its license withdrawn and it is assumed that it will soon start the liquidation process.

<sup>64</sup> These are not necessarily so high for the current shareholders or from an historic perspective (losses in earlier financial periods).

The Superintendency has been criticized for authorizing three managers to merge in 2000, at the same time as it withdrew the license of another, since this left the market with only two managers. It is true that the reduction in the number of AFPs threatens the competitiveness of the industry, but it is very likely that the same result would have occurred later as a consequence of merger processes motivated by the desire to reduce costs.<sup>65</sup> Moreover, what really matters is the degree of competitive threat facing the present AFPs, which is estimated as low in view of the existence of legal, commercial and political barriers to entry. The efforts of the authorities should therefore be directed towards adopting measures to increase that competitive threat.

One of the most important lessons to be learned from the Salvadoran case is precisely the vulnerability shown by the system when faced with political pressures to use the Pension Funds to fulfil objectives other than the maximization of old-age, disability and survivorship benefits. In the early days of the SAP, this vulnerability was evident in the obligation imposed on the AFPs to invest high percentages of the Pension Funds (30 percent) in instruments of the Social Housing Fund (FSV), which gave loans to low-income workers to enable them to purchase housing. It thus limited the flexibility of investment, generating costs in terms of risk-adjusted return for the affiliates of the funded scheme, in order to ensure the financing of housing for low-income groups, an objective that has nothing to do with the pension system.

More recently, the pension funds have been obliged to accept financial securities issued by the public pension system, the Transfer Certificates. Apparently, the aim was to ensure the financing of the deficit caused by the reform, which increased with the awarding of Supplementary Transfer Certificates.

Another lesson emerging from the way the SAP has functioned is the problem generated by the lower level of benefits paid by the AFPs compared with those provided by the SPP, as a consequence of the low value assigned to the Transfer Certificates. This situation, which had a cost in terms of the image of the AFP system, had to be corrected later by the authorities by assigning a supplementary CT. A similar problem occurred in the Chilean case. It is therefore important when designing the reform to avoid putting the workers who transfer to the new system at a disadvantage, by recognizing appropriately the contributions paid in the old scheme and seeking other alternative means of financing the fiscal deficit caused by the reform. The ideal objective would be to generate (ex ante) equality of conditions for those who stay in the old system and those who transfer to the new, in terms of recognizing the historic contributions paid.<sup>66</sup>

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<sup>65</sup> There is evidence of economies of scale. In various Latin American pension systems there has been a tendency to reduce the number of AFPs, as a consequence, to a large extent, of the economies of costs that can be achieved by merging managers.

<sup>66</sup> Note that there is a significant difference between ex-ante equivalence and ex-post equivalence. An ex-post guarantee of this outcome, as in the case of Mexico, can introduce a new and large contingent liability and distort incentives in the new system. Also, dissatisfaction with the outcome of a shift from a DB to a DC scheme of this type is also a function of the degree of choice and understanding of participants. In the case of El Salvador, both appear to have been low.

In the operational area, the experience of El Salvador underlines the need to grant the AFPs sufficient legal powers to detect and charge for contributions that have not been paid by employers, and to implement measures to encourage that payment and also contribution collection by the AFPs. A positive measure implemented in 2003 is the obligation imposed on companies to be up-to-date with their social security contributions in order to be able to take part in public sector bidding processes. It is also important to establish that the AFPs can only charge the commissions to which they are entitled once the contributions have been accredited in the individual accounts. This encourages the clarification of contributions with identification problems or those paid incorrectly by employers.

As regard the supervision of the AFPs, the work of the Superintendency has been crucial in the running of the system. However, its performance has not been without problems, due to the mix of regulatory and supervisory functions on the one hand, and operational functions on the other. The institution should concentrate on the former, which are its core purpose. Moreover, the Superintendency did not have automated systems of supervision available from the outset, and this obviously affected its productivity. There are improvements underway however, in this area.

An additional lesson to be learned from the case of El Salvador is the need to ensure that there is an expeditious process in place for liquidating AFPs which fail to comply with the requirements stipulated in the law. The Superintendency withdrew the license of one of the managers operating in the SAP in 2000, but it continues to operate, due to legal objections by the AFP owners. This has prevented liquidation proceedings from starting and been a major source of distraction for the supervision that has had to take over its operation. Most importantly, the situation harms affiliates who still remain in the AFP concerned.

# Appendices

## Appendix 1: Contribution Rates for SAP and SPP

As from the time when the SAP came into force, the contribution rates to be paid by people entering the labour market for the first time and those transferring to the SAP have been as follows:

Year	SAP							
	Private and Public Administrative Sector				Public Sector Scheme for the Education Area			
	Employer	Worker.	Comm.	Total	Employer	Worker	Comm.	Total
1998	5,00	1,00	3,31	9,31	6,75	3,25	3,31	13,31
1999	5,50	2,00	3,18	10,68	6,75	3,25	3,18	13,18
2000	6,00	2,50	2,97	11,47	6,75	3,25	2,97	12,97
2001	6,50	3,00	2,97	12,47	6,75	3,25	2,97	12,97
2002 a/	6,75	3,25	2,97	12,97	6,75	3,25	2,97	12,97

a/ From 2002 onwards. The commission charged by the AFPs (Comm.) may be modified at any time, but has a maximum limit of 3%.

Note: Comm. is equal to the percentage commission on the base contribution income charged on average by the AFPs; it includes the cost of the disability and survivorship insurance.

Source: Decree N° 927 (1996)

On the other hand, the contribution rates for those who remained as members of the Instituto Salvadoreño del Seguro Social or the Instituto Nacional de Pensiones de los Empleados Públicos are as follows:

Year	SPP								
	ISSS			INPEP					
				Administrative Scheme			Education Area Scheme		
	Emp.	Worker	Total	Emp.	Worker	Total	Emp.	Worker	Total
1998	5,00	4,50	9,50	5,00	5,00	10,0	6,50	6,50	13,0
1999	5,50	5,50	11,0	5,50	5,50	11,0	7,00	7,00	14,0
2000	6,00	6,00	12,0	6,00	6,00	12,0	7,00	7,00	14,0
2001	6,50	6,50	13,0	6,50	6,50	13,0	7,00	7,00	14,0
2002 a/	7,00	7,00	14,0	7,00	7,00	14,0	7,00	7,00	14,0

a/ From 2002 onwards.

Source: Decree N° 927 (1996)

Conclusion: from the point of view of contribution rates, there was a slight incentive to transfer from the SPP to the SAP.

## Appendix 2: Old-age Pensions in the Public Pension System

Those insured under the Public Pension System are entitled to an old-age pension when they fulfil any of the following requirements:

- a) To be 60 years old in the case of men and 55 in the case of women; and have a registered contribution time of twenty-five years or more;
- b) To have registered 30 years' contributions in the ISSS or in the INPEP, whether continuously or not, regardless of age.

However, people who had registered thirty-one years or more of contributions at the date when the SAP began operations are eligible for an old-age pension regardless of age.

On the other hand, a temporary scheme was applied to those insured members who stayed in the Public Pension System, in order to make up the minimum service time requirements for entitlement to an old-age pension, determined according to their age on the date when the SAP came into operation, as follows:

Age - Men	Years of Contribution	Age - Women	Years of Contribution
60 and over	15	55 and over	15
59	16	54	16
58	17	53	17
57	18	52	18
56	19	51	19
55	20	50	20
54	21	49	21
53	22	48	22
52	23	47	23
51	24	46	24
50 and under	25	45 and under	25

The amount of old-age pensions in the Public Pension System is determined as a percentage of the regulated base wage (SBR) on the basis of the time of service for which contributions have been paid, granting 30% of the SBR for the first

Three years of contributions, plus 1.5% for each additional year of contributions.<sup>73</sup>

The regulated base wage is the monthly average base wage for contributions for the last one hundred and twenty months contributed prior to the month in which the requirements for

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<sup>73</sup> However, in the case of members of the ISSS and INPEP who had to remain insured in these institutes because they were 55 years old or more (men) and 50 years old or more (women), and those who had registered 31 years of contributions or more on the date when the SAP came into force, regardless of age, the increase for each additional year of contributions over and above the first three is 1.75%.

entitlement to an old-age pension are met, or according to the calculations for regulated base wage and percentage pension scales in the laws of the ISSS or INPEP, as relevant, whichever is better for the insured.

Moreover, pensioners under the SPP have an additional annual benefit in the month of December each year, which is calculated according to the following table<sup>74</sup>:

- a) Pensioners with a minimum pension receive one hundred percent of their pension;
- b) Pensioners with pensions over the minimum, up to the equivalent of two minimum pensions, receive the equivalent of the minimum pension plus seventy-five percent of the difference between their pension and the minimum; and
- c) Pensioners with pensions higher than the equivalent of two minimum pensions receive the equivalent of one point seven five times the minimum pension, plus fifty percent of the difference between their pensions and one point seven five times the minimum pension.

Those people insured under the SPP who obtain their old-age pension as from the date on which the SAP came into operation may begin to work actively again without losing their pension benefit, but as from the time of their re-starting work, they will no longer be entitled to have that pension readjusted.

In that case, they may contribute to the SAP and may have access annually to the balance in their pension savings account. In the event of death, the balance will go to form part of their estate.

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<sup>74</sup> With a limit equal to that set by the Central Government as the Annual Complementary Wage, a bonus for employees in the public sector.

### **Appendix 3: Comparison of the Amount of Old-Age and Disability Pensions in the SPP and SAP**

According to information gathered in interviews held with various people related with the Pension Savings System (SAP), the AFPs have suffered a negative impact to their image as a result of the low levels of old-age pensions received by the first pensioners, compared with what they would have obtained in the SPP. This would be due to the low value of the Transfer Certificates.

In order to obtain figures that make it possible to appreciate the magnitude of these differences in benefits, estimates were made of the old-age pensions that different types of members would have received in the event of their remaining in the Public Pension System (SPP), comparing them with the pensions that such members would have achieved in the Pension Savings System (SAP). The results are presented in the table on the next page.

Male members between the ages of 40 and 54 at the date when the new system came into force were considered, because older members were obliged to remain in the SPP, whereas those under 36 years of age had to transfer to the SAP. The assumptions used to make the estimates are explained at the bottom of the table.

It is important to underline the fact that the estimated pensions are not representative of the benefits which members of the AFPs might obtain in the long term, because most of them are funded with the amount of the Transfer Certificate (without considering the Supplementary CT) which represents between 52% and 99% of the balance accumulated in the individual account in the examples analysed.

The old-age pensions calculated for the SPP are significantly higher than those of the SAP in all the cases analysed. This is a result of the low initial level of the Transfer Certificate, calculated on the date on which the worker transferred to the SAP, and the readjustment mechanism defined in the Law for this certificate, which considered only the variation in the Consumer Price Index, with no accumulation of real interest.

Estimate of the Amount of Old-Age Pensions for Members who remained in the SPP versus  
Members who transferred to the SAP

Age of Member when SAP came into force	Age on date of receiving Old-Age Pension	Years of Service on Retirement (1)	SPP Pension % SBR (2)	SAP Pension % SBR (2) (3)	SAP / SPP
54	55	33	75,0%	57,3%	-23,7%
	60	38	82,5%	65,8%	-20,3%
50	50	28	67,5%	45,5%*	-32,6%
	55	33	75,0%	51,7%	-31,0%
	60	38	82,5%	61,0%	-26,0%
45	50	28	67,5%	38,5%*	-43,0%
	55	33	75,0%	45,7%	-39,1%
	60	38	82,5%	56,5%	-31,6%
40	47	25	63,0%	31,0%*	-50,8%
	50	28	67,5%	34,9%*	-48,3%
	55	33	75,0%	43,7%	-41,8%
	60	38	82,5%	56,8%	-31,1%

(1) Assumes that the working life begins at 22 years of age.

(2) Regulated base wage.

(3) To calculate this pension, we considered: (i) a male member with a wife two years younger and two children; (ii) Salvadorian mortality tables (RVHES); (iii) yield on the individual capitalization accounts of 6% per year in real terms; (iv) constant real earnings during the period of contribution to the SAP and equal to the base used to calculate the CT and to the SBR used for determining the pension in the SPP; (v) 12.75 annual pensions were used to calculate the necessary unit capital in SAP.

(4) The figures marked with an "\*" correspond to members who would not have been able to retire in the SAP with the ages and years of service indicated, but could do so in the SPP.

Note: The figures in the table are only estimates, and do not represent the situation of any specific member.

Source: Author's own calculations.

Note that the lower the age at which the member retires and the fewer the years of contribution, the greater the differences in pension between the SPP and SAP. This is explained by the calculation formula of the pension in the SPP, which considers a base benefit equivalent to 30% of the average wage of all members who have at least three years contributions, to which 1.5% of that wage is added for each additional year of contributions. With this pension structure, the SPP favours members who retire early (the relation between benefits received and contributions paid is greater). By contrast, the amount of the CT is proportional to the number of years during which contributions have been paid.

Another outstanding point is that the differences between the SPP and the SAP are greater in the case of members who were younger at the date of the reform, considering the same pension age and years of service at the moment of retirement. This result is contrary to what might be expected a priori, because the members who were younger at the time of the reform make use of the advantages of the capitalization system for a longer time. The explanation is to be found in the readjustment formula used for the CT, as explained earlier. The fact that its

value is readjusted only for the variation in the Consumer Price Index, without considering real interest, considerably reduces the balance that members who transfer to the SAP accumulate when they retire.

In addition to the differences in pension, remaining in the SPP had the extra advantage for male and female members who were between 51 and 54 years of age and 46 and 49 years of age respectively at the date of the reform, which consisted in the possibility of retiring in the ISSS and INPEP with fewer years of service<sup>75</sup> (between 21 and 24 years as opposed to 25 years in the SAP).

Another alternative provided by the reform for those who remained in the SPP was the possibility of retiring in one of the institutes without needing to stop work. These people were allowed to continue working and to contribute in an AFP<sup>76</sup>, in order to complement the public system pension. However, the Law imposed a cost, because those who continue working lose the right to readjustment for the pension received from the SPP.

## **Disability Pensions**

Here the conclusions are directly opposite to those of old-age pensions. In fact, the disability coverage of the SPP is generally lower than that of the SAP, because it depends on years of service. Members of the public system are entitled to coverage of 30% of the SBR when they have accumulated three years of contributions, which increases at a ratio of 1.5% of the SBR for each additional year of contribution, reaching the equivalent of 70% at 30 years of contribution (total disability). By contrast, in the SAP the coverage is equal to 70% of the SBR as from when the worker has 6 months of contributions.

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<sup>75</sup> Insured members who remained in the SPP are being subjected to a transitory scheme in order to complete the service time requirement. For example, male members who were 50 years old or less when the SAP came into effect are required to have 25 years of service.

<sup>76</sup> Article 219.

#### **Appendix 4**

#### **Characteristics and Calculation Formula of Transfer Certificates**

The Transfer Certificates are issued with the following characteristics:

- a) Nominative;
- b) Expressed in local currency;
- c) Accruing a rate of interest as from the date on which the members transfers to the SAP equivalent to the variation in the Consumer Price Index;
- d) Guaranteed by the State;
- e) Payable, capital and interest, in 15 equal annual instalments in arrears, as from the date on which the members fulfil the requirements to accede to the benefits. The interest rate accrued as from that date is equivalent to the Basic Passive Interest Rate published by the Central Reserve Bank.
- f) Transferable by endorsement solely to the Pension Fund, to the Administering Institution handling the Programmed Withdrawal or to the Life Insurance Company providing the Life Annuity.

The face value of the CTs is calculated in the following way:

Man

$$VNCT = 0,75 \times PW12 \times \frac{N^{\circ} AC}{35} \times 12 \times 10,25 \times F$$

Woman

$$VNCT = 0,75 \times PW12 \times \frac{N^{\circ} AC}{35} \times 12 \times 10,77 \times F$$

Where:

- VNCT = Nominal value of the Transfer Certificate at the moment of issue.  
 PW12 = Average of the last 12 wages on which contributions were paid up to the 31st December 1996.  
 N° AC = Contribution period registered at the point when the member transferred to the SAP, expressed in years.  
 F = See attached table.

Contribution Period	Factor (F)
Up to 15 years	1,00
From 16 to 19 years	1,04
From 20 to 23 years	1,08
From 24 to 27 years	1,12
From 28 to 31 years	1,16
From 32 years onwards	1,20

## **Appendix 5: Important Aspects of the Disability and Survivorship Insurance**

Each AFP has to purchase an insurance policy to guarantee the funding of the disability and survivorship pensions. The insurance covers the supplementary capital required in case the balances accumulated in the individual accounts of those members who have suffered the accident and are covered by the insurance should prove insufficient to finance the reference pensions set out in the Law. The fact of taking out the insurance policy does not free the AFPs from the responsibilities and obligations assigned to them in the Law.

The contract must be signed with an insurance company that operates in the individual area (life insurance), by means of public bids supervised by a representative of the Superintendency of Pensions.

### **The Bidding Process**

Insurance companies, either local or foreign, may take part in the bidding processes, provided they are enrolled on the Public Register kept by the Superintendency and have been given a risk rating equal to or higher than the minimum that has been set (local A). At present there are five local companies that fulfil these requirements and participate in the market.

The AFPs have to prepare the bidding conditions, which must include the mortality tables authorized by the Superintendency for the calculation of the supplementary capital, and publish a call for bids notice. The bids from the insurance companies must fulfil certain minimum requirements, such as the presentation of legal documents, financial details, the investment portfolios being managed, investment policies, ownership and administrative structure, technical information and risk ratings carried out by local firms or the Risk Commission. In addition the companies must hand in a bid bond.

The rules issued by the Superintendency of Pensions define the aspects to which the AFPs must give preference when selecting the winning insurance company in the bidding process. Among these are the insurance rate or premium offered and the financial position of the company. These aspects must have specific weighting in the bidding conditions. In any case, the AFPs are entitled to award the contract to the insurance company whose offer best represents the interests of the AFP and its members, according to the selection criteria laid down in the conditions.

One insurance company which has currently been awarded the contract for disability and survivorship insurance is related to the ownership of one AFP.

## **Disability Assessment**

The decision regarding entitlement to a disability pension is the responsibility of an Assessment Commission, whose main functions are to define the origin of the disability (common or work-related) and to assess the degree, according to the General Disability Rules. The Commission is made up of three doctors, appointed by the Superintendent of Pensions. A doctor appointed by the insurance companies may attend the sessions of the Commission as an observer when the risk of the member being assessed is covered by them. The running costs of the Commission are funded by the Superintendency. The costs of tests, analyses, reports and transport that may be required in order to issue the decisions are funded by the AFPs.

The member, AFP or insurance company concerned may appeal against the decisions of the Assessment Commission to the Commission itself.

The General Disability Rules are prepared by the Superintendency of Pension and submitted for revision to a Technical Commission made up of the President of the Assessment Commission, one representative appointed by the AFPs, one by the life insurance companies, one by the ISSS and another by the INPEP, the Dean of the Faculty of Medicine of the Universidad de El Salvador and a Dean of a Medical Faculty appointed by the Private Universities.

## Appendix 6: Formula for Calculating the Programmed Withdrawal

The monthly pension by programmed withdrawal (programmed income) is equal to the result of dividing the balance in the individual account each year by the technical capital needed to pay one pension unit to the member, and when he/she dies, the percentages of a pension unit that correspond to his/her beneficiaries, according to the reference pensions defined in the Law. For purposes of the calculation, twelve and a half monthly payments are considered.

$$\text{Programmed Withdrawal} = \frac{\text{Balance in Individual Account}}{\text{cnu}}$$

At the same time, the necessary unit capital (cnu) is calculated as follows:

$$\text{cnu} = \sum_{i=1}^n \text{cnu}_i \times \text{Perc. Benef.}_i \times 12,5$$

Where:

$\text{cnu}_i$  = the capital needed to pay one annual pension unit to beneficiary  $i$ , including the member among them. In the formula it is multiplied by 12.5 to calculate the ncu required to pay one monthly pension unit (12) plus half of one pension unit for Christmas (0.5).

$\text{Perc. Benef.}_i$  = is the percentage of the member's reference pension that corresponds to each beneficiary.

Given below is the formula for calculating the member's necessary unit capital, taking the mortality tables and discount interest rate defined by the Superintendency. The mortality tables used are the RVHES and RVMES, which were apparently constructed with information from Mexico and El Salvador. However, the life expectancies emerging from these tables are significantly higher than those for Mexico and Chile (these last two being very similar). For example, the life expectancy of a male at age 65 is 18.4 years according to the El Salvador tables, and 16.5 and 16.7 according to the Mexican (EMSSA 97) and Chilean (RV85H) tables.

As may be seen, the formulae are based on actuarial functions and commutative values.

$$\text{cnu} = \frac{N_x - \frac{11}{24} D_x}{D_x}$$

On the other hand, the *cnu* of the spouse or partner, where there are no normal offspring with pension rights, or one or more disabled offspring, or father and mother of an old-age pensioner:

$$cnu = \frac{N_y - \frac{11}{24} D_y}{D_y} - \frac{N_{xy} - \frac{11}{24} D_{xy}}{D_{xy}}$$

where:

$$D_x = v^x \cdot l_x$$

$$N_x = \sum D_x$$

$$D_{xy} = v^x \cdot l_x \cdot l_y$$

$$N_{xy} = \sum D_{xy}$$

$$v = \frac{1}{(1 + i)^x}$$

*x* = Age of the pension originator.

*y* = Age of spouse (m or f), partner (m or f), father and mother of the originator.

*i* = Annual interest rate used to fix commutative values in tables.

*v* = Updating factor.

*l<sub>x</sub>*, *l<sub>y</sub>* = Number of people alive at a given age.

More details of the calculation of necessary capital may be found in Resolution N°. A-DO-AF-052/98 from the Superintendency of Pensions, available on its website at:

[www.spensiones.gob.sv](http://www.spensiones.gob.sv).

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