

## ONLINE APPENDIX

for

Sales Force and Competition in Financial Product Markets:

The Case of Mexico's Social Security Privatization\*

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## A.1 Additions to Main Figures and Tables

Appendix Table I shows R-squared from regressions of average cost for Afore  $j$  for individuals in cell  $c$ ,  $\bar{C}_{cj}$ , on average cost of individuals  $-c$  in the same municipio and for the same Afore,  $\bar{C}_{-cj}$ , from page 19 in the text. In regressions of  $\bar{C}_{cj}$  and  $\bar{C}_{-cj}$  run separately by Afore.

Appendix Table II presents regression results related to the instrumental variables regressions in Table III of the text. In Tables III and IV, instruments include both levels and full interactions with Afore dummies. To conserve space we report here pooled coefficients from regressions of endogenous sales force on our instruments but excluding interactions with Afore dummies. Standard tests for weak instruments were performed in each instrumental variable regression in the text and we reject the null of weak instruments in each specification at a significance level greater than 1%. The first three columns use the number of agentes as the dependent variable, corresponding to equation (2) in the text. It shows that Afores send more agentes to areas with higher expected revenues of other clients, areas where its competitors have more bank branches, areas where there is a higher fraction of formal, private sector workers and a lower fraction of government sector workers (who do not participate in the SAR). A positive impact of competitor bank branches implies Afores increase sales force in areas where their competitors have an advantage. The positive coefficient on formal private sector fraction and negative coefficient on formal public sector percentage supports our “needle in the haystack” cost of sales analogy (page 17 of text). Finally, as we add instruments from column 1 to 3, the coefficients are stable in magnitude, sign and significance, suggesting they vary independently from each other. Columns 4-6 use the concentration of sales force as the dependent variable, motivated by individual  $i$ 's probability of being approached by an agente from Afore  $j$ , given the number of agentes Afore  $j$  deployed to  $i$ 's municipality. Here the signs and significance of our advertising spillover's and competitor bank branch instruments remain constants. The signs of the labor sector participation measures change since the dependent variable is now measured per 1,000 SAR account holders.

Appendix Table III shows the simulated market shares and elasticities for each Afore in the Base Model and Neutral Agentes counterfactual in Figure IV and Table VI. Appendix Table IV shows the simulation results for each Afore for the simulations presented in Table VII. Appendix Table V shows the simulation results for each Afore for the simulations presented in Table VIII. Appendix Table VI shows the simulation results for each Afore for the simulations presented in Table IX.

APPENDIX TABLE I: REGRESSION CORRELATION OF COSTS

Afore	R-squared	Afore	R-squared
GenesisMetropolitan	0.002	Santander	0.006
Zurich	0.004	Previnter	0.004
Tepeyac	0.003	ING/Bital	0.001
XXI	0.003	Capitaliza	0.004
Banorte	0.006	Garante	0.005
Dresdner(AllianzHSBC)	0.003	Inbursa	0.003
Profuturo	0.003	Banamex	0.004
AtlanticoPromex	0.002	Bancomer	0.005
Principal	0.003		

Notes: R-squared reported for regressions of demographic cell costs on the costs of other demographic group's costs. Regressions are run separately for each Afore.

APPENDIX TABLE II: IMPACT OF INSTRUMENTS ON SALES FORCE

Dependent Variable	Agentes in Levels			Agente Concentration (per 1,000 SAR participants)		
	(1)	(2)	(3)	(4)	(5)	(6)
Afore <i>j</i> 's expected revenues from <i>c</i> 's neighbors	12.113*** (0.685)	10.602*** (0.661)	10.818*** (0.659)	0.056*** (0.004)	0.052*** (0.004)	0.049*** (0.004)
Average bank branches of <i>j</i> 's competitors		331.498*** (41.083)	368.378*** (48.588)		0.962*** (0.123)	0.525*** (0.124)
Fraction of workers in the formal private sector			15.620** (7.217)			-0.148*** (0.034)
Fraction of workers in the formal public sector			-85.833*** (33.156)			1.021*** (0.125)
Observations	62,883	62,883	62,883	62,883	62,883	62,883
R-squared	0.341	0.370	0.374	0.480	0.491	0.515

Notes: \*Robust standard errors in parentheses. \*\* p<0.01, \*\* p<0.05, \* p<0.10. All regressions control for Afore fixed effects and demographic group fixed effects. Standard errors are clustered at the Municipality and Afore level.

APPENDIX TABLE III: RESULTS FROM FIGURE IV AND TABLE VI BY AFORE

Afore	Market Share, Actual	Predicted Market Share, Base Model	Predicted Market Share, Neutral Agentes	Elasticity, Base Model	Elasticity, Neutral Agentes	Percentage Change in Revenues
GenesisMetropolitan	0.91%	0.93%	1.81%	-0.775	-1.948	51.6%
Zurich	0.20%	0.20%	0.74%	-0.747	-1.882	174.3%
Tepeyac	0.55%	0.56%	1.06%	-0.787	-1.984	50.3%
XXI	2.73%	2.74%	4.84%	-0.915	-2.273	14.4%
Banorte	7.70%	7.72%	4.32%	-0.767	-2.037	-57.8%
Dresdner(AllianzHSBC)	4.55%	4.54%	3.14%	-1.076	-2.767	-50.9%
Profuturo	11.31%	11.20%	9.38%	-0.825	-2.192	-35.4%
AtlanticoPromex	1.52%	1.51%	3.58%	-0.873	-2.181	67.6%
Principal	0.94%	0.94%	4.03%	-0.556	-1.366	313.1%
Santander	13.40%	13.42%	5.22%	-0.911	-2.530	-71.6%
Previnter	2.57%	2.57%	4.09%	-0.714	-1.790	17.2%
ING/Bital	9.19%	9.24%	9.62%	-0.708	-1.836	-18.3%
Capitaliza	0.22%	0.21%	0.85%	-0.756	-1.898	196.7%
Garante	10.82%	10.79%	5.13%	-0.711	-1.938	-64.4%
Inbursa	2.95%	2.94%	11.97%	-0.384	-0.708	362.2%
Banamex	13.10%	13.12%	16.15%	-0.682	-1.725	-6.3%
Bancomer	17.33%	17.36%	14.07%	-0.630	-1.728	-40.6%

Notes: Elasticities are calculated at the observed fee levels and individual characteristics. Elasticities in the Baseline Agentes model are calculated using estimates from equation 2 to generate the logit choice probability for each individual for each Afore. Elasticities for the Neutral Agentes model use estimates for demand parameters with Neutral Agentes from equations 2, 3, and 4 using the IV results from Table III column 4 and Table V column 1. Calculations are based on a 10% random sample of system affiliates.

APPENDIX TABLE IV: AFORE-LEVEL SIMULATION RESULTS FOR MAIN TABLE VII

	Simulated Outcomes from Neutral Agentes Preferences at New Equilibrium Fees						
	Base Model						
Afore	(1) Flow	(2) Balance	(3) Share	(4) $\Delta$ in Flow Fee	(5) $\Delta$ in Balance Fee	(6) % $\Delta$ Mkt. Share	(7) % $\Delta$ Cost
GenesisMetropolitan	2.00	0.00	0.91	-0.50	0.00	58.60	-28.28
Zurich	0.93	0.20	0.26	-0.52	-0.20	255.35	23.64
Tepeyac	0.60	1.05	0.69	-0.17	-1.05	95.93	-28.15
XXI	2.00	0.00	2.74	-1.40	0.00	186.86	-6.58
Banorte	2.00	0.00	7.58	-0.67	0.00	-46.38	-77.44
Dresdner(AllianzHSBC)	0.08	4.75	5.31	0.15	-3.27	-14.53	-67.27
Profuturo	2.00	0.00	11.87	-0.32	0.00	-23.76	-62.93
AtlanticoPromex	2.00	0.00	1.57	-1.55	0.00	236.68	3.50
Principal	2.00	0.00	0.78	-1.50	0.00	359.70	14.27
Santander	1.52	1.90	14.87	-0.35	-1.45	-56.94	-81.85
Previnter	1.52	0.00	2.62	-1.00	0.00	69.07	-46.41
ING/Bital	2.00	0.00	9.03	-0.67	0.00	-6.92	-60.72
Capitaliza	1.50	0.00	0.23	-1.20	0.00	427.94	70.88
Garante	1.95	0.00	10.59	-1.10	0.00	-46.87	-81.28
Inbursa	0.22	2.90	1.86	0.03	-2.52	102.26	-38.34
Banamex	2.00	0.00	12.54	-1.15	0.00	35.25	-52.19
Bancomer	2.00	0.00	16.55	-1.12	0.00	-8.81	-69.20
<b>Total</b>							<b>-61.65</b>

Notes: Equilibrium calculations are based on an 80,229 random sample plus a proportional random sample of new workers who entered the market over time, to capture growth forecasts in market size. Equilibrium fees are calculated from an iterated best response method using a 0.00025 grid for the base model while for the models with raised caps, equilibrium fees are calculated from an iterated best response method using a 0.0005 grid. Cost is calculated over the whole account horizon and discounted at a 5% rate.

APPENDIX TABLE VA: COUNTERFACTUAL SIMULATIONS WITH A GOVERNMENT COMPETITIVE FIRM AND BASELINE AGENTES

	Base Model			Government competitor, Base Model Preferences							
	(1)	(2)	(3)	(Fee cap at 3.20, 5.00)				(Fee cap at 3.20, 10.00)			
				(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Afore	Flow	Balance	Share	Flow	Balance	Share	% $\Delta$ Cost vs. Base Model	Flow	Balance	Share	% $\Delta$ Cost vs. Base Model
GenesisMetropolitan	2.00	0.00	0.91	2.20	0.00	0.96	18.08	2.15	0.00	1.01	23.28
Zurich	0.93	0.20	0.26	1.15	0.30	0.26	7.32	1.15	0.35	0.27	12.23
Tepeyac	0.60	1.05	0.69	3.20	5.00	0.39	10.38	1.05	1.35	0.66	16.30
XXI	2.00	0.00	2.74	0.00	0.10	6.40	-89.14	0.00	0.10	6.59	-88.82
Banorte	2.00	0.00	7.58	2.80	0.00	7.20	17.47	2.75	0.00	7.48	22.91
Dresdner(AllianzHSBC)	0.08	4.75	5.31	0.30	5.00	5.46	13.93	0.05	5.80	5.55	18.20
Profuturo	2.00	0.00	11.87	2.50	0.00	11.78	15.66	2.45	0.00	12.32	20.98
AtlanticoPromex	2.00	0.00	1.57	2.15	0.00	1.66	14.99	2.10	0.00	1.73	19.84
Principal	2.00	0.00	0.78	3.20	5.00	0.58	28.32	3.20	10.00	0.53	36.91
Santander	1.53	1.90	14.87	1.85	2.05	15.20	15.16	1.85	2.00	15.76	20.14
Previnter	1.53	0.00	2.62	2.10	0.00	2.52	12.82	2.05	0.00	2.64	17.66
ING/Bital	2.00	0.00	9.03	2.30	0.00	9.35	16.45	2.30	0.00	9.65	21.22
Capitaliza	1.50	0.00	0.23	1.85	0.00	0.24	17.66	1.85	0.00	0.25	22.73
Garante	1.95	0.00	10.59	2.40	0.00	10.60	15.08	3.20	10.00	6.97	23.47
Inbursa	0.23	2.90	1.86	0.35	4.00	1.75	8.06	0.40	3.80	1.81	11.93
Banamex	2.00	0.00	12.54	2.95	0.00	11.37	9.39	2.75	0.00	12.12	14.43
Bancomer	2.00	0.00	16.55	3.20	0.00	14.29	7.57	3.20	0.00	14.68	11.30
Total							7.83				12.65

Notes: Equilibrium calculations are based on an 80,229 random sample plus a proportional random sample of new workers who entered the market over time, to capture growth forecasts in market size. Equilibrium fees are calculated from an iterated best response method using a 0.00025 grid for the base model while for the models with raised caps, equilibrium fees are calculated from an iterated best response method using a 0.0005 grid. Cost is calculated over the whole account horizon and discounted at a 5% rate.

APPENDIX TABLE VB: COUNTERFACTUAL SIMULATIONS WITH A GOVERNMENT COMPETITIVE FIRM AND NEUTRAL AGENTES

Afore	Base Model			Government competitor, Neutral Agents Preferences							
	(1)	(2)	(3)	(Fee cap at 3.20, 5.00)				(Fee Cap at 3.20, 10.00)			
				(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Flow	Balance	Share	Flow	Balance	Share	% $\Delta$ Cost vs. Base Model	Flow	Balance	Share	% $\Delta$ Cost vs. Base Model	
GenesisMetropolitan	2.00	0.00	0.91	1.35	0.00	1.58	-21.28	1.35	0.00	1.58	-21.28
Zurich	0.93	0.20	0.26	0.60	0.10	0.79	18.33	0.60	0.10	0.79	18.33
Tepeyac	0.60	1.05	0.69	0.70	0.30	1.13	-26.24	0.70	0.30	1.13	-26.24
XXI	2.00	0.00	2.74	0.00	0.10	13.65	-78.44	0.00	0.10	13.65	-78.44
Banorte	2.00	0.00	7.58	1.30	0.00	4.29	-75.27	1.30	0.00	4.29	-75.27
Dresdner(AllianzHSBC)	0.08	4.75	5.31	0.30	1.75	4.43	-64.73	0.30	1.75	4.43	-64.73
Profuturo	2.00	0.00	11.87	1.50	0.00	9.90	-59.27	1.50	0.00	9.90	-59.27
AtlanticoPromex	2.00	0.00	1.57	0.90	0.00	4.27	-1.09	0.90	0.00	4.27	-1.09
Principal	2.00	0.00	0.78	1.10	0.00	2.59	26.69	1.10	0.00	2.59	26.69
Santander	1.53	1.90	14.87	1.20	0.60	6.52	-80.01	1.20	0.60	6.52	-80.01
Previnter	1.53	0.00	2.62	1.00	0.00	3.66	-46.20	1.00	0.00	3.66	-46.20
ING/Bital	2.00	0.00	9.03	1.30	0.00	8.89	-56.75	1.30	0.00	8.89	-56.75
Capitaliza	1.50	0.00	0.23	0.70	0.00	0.92	38.68	0.70	0.00	0.92	38.68
Garante	1.95	0.00	10.59	1.35	0.00	4.94	-79.65	1.35	0.00	4.94	-79.65
Inbursa	0.23	2.90	1.86	0.40	0.60	2.98	-51.09	0.40	0.60	2.98	-51.09
Banamex	2.00	0.00	12.54	1.15	0.00	15.52	-52.05	1.15	0.00	15.52	-52.05
Bancomer	2.00	0.00	16.55	1.15	0.00	13.95	-68.77	1.15	0.00	13.95	-68.77
Total							-64.02				-64.02

Notes: Equilibrium calculations are based on an 80,229 random sample plus a proportional random sample of new workers who entered the market over time, to capture growth forecasts in market size. Equilibrium fees are calculated from an iterated best response method using a 0.00025 grid for the base model while for the models with raised caps, equilibrium fees are calculated from an iterated best response method using a 0.0005 grid. Cost is calculated over the whole account horizon and discounted at a 5% rate.



APPENDIX TABLE VI: COUNTERFACTUAL SIMULATIONS FOR MAIN TABLE IX

	Increased Demand Elasticity for Most Inelastic				+ Government Competitor				+ Neutral Agentes			
	(1) Flow Fee	(2) Balance Fee	(3) Mkt. Share	(4) % $\Delta$ Cost	(5) Flow Fee	(6) Balance Fee	(7) Mkt. Share	(8) % $\Delta$ Cost	(9) Flow Fee	(10) Balance Fee	(11) Mkt. Share	(12) % $\Delta$ Cost
Afore												
GenesisMetropolitan	1.35	0.00	0.92	-35.36	1.53	0.00	0.90	-32.82	1.15	0.00	1.50	-41.24
Zurich	0.68	0.00	0.26	-31.41	0.90	0.00	0.23	-38.91	0.45	0.03	0.79	-12.31
Tepeyac	0.93	0.00	0.62	-37.49	1.13	0.30	0.56	-38.65	0.63	0.25	1.04	-44.90
XXI	0.85	0.00	3.66	-26.17	0.00	0.10	7.36	-86.36	0.00	0.10	12.92	-79.34
Banorte	1.90	0.00	6.73	-35.58	1.90	0.00	6.89	-32.15	1.00	0.00	4.23	-82.06
Dresdner(AllianzHSBC)	0.28	2.08	5.66	-36.59	0.40	2.40	5.30	-37.81	0.28	1.08	4.44	-75.12
Profuturo	1.98	0.00	10.28	-36.40	1.83	0.00	10.89	-32.68	1.28	0.00	9.46	-69.76
AtlanticoPromex	1.00	0.00	1.78	-33.23	1.35	0.00	1.61	-35.85	0.75	0.00	4.07	-25.96
Principal	0.78	0.00	1.10	-21.16	1.33	0.00	0.84	-32.56	0.93	0.00	2.51	-5.79
Santander	1.73	0.70	13.53	-38.28	1.55	0.73	14.39	-34.25	0.93	0.28	6.64	-85.60
Previnter	0.75	0.00	3.12	-26.18	1.23	0.00	2.51	-37.37	0.58	0.00	3.99	-60.53
ING/Bital	1.50	0.00	8.74	-36.39	1.58	0.00	8.78	-34.07	0.98	0.00	8.83	-69.17
Capitaliza	0.53	0.00	0.32	-15.28	1.08	0.00	0.24	-34.69	0.48	0.00	0.94	5.65
Garante	1.08	0.00	11.70	-32.58	1.45	0.00	10.53	-34.48	0.73	0.00	5.56	-85.40
Inbursa	0.48	0.50	2.49	-20.42	0.50	0.90	1.98	-42.34	0.25	0.38	3.19	-62.78
Banamex	1.25	0.00	13.09	-35.91	1.55	0.00	12.00	-38.71	0.83	0.00	15.74	-64.93
Bancomer	1.45	0.00	15.98	-38.93	1.70	0.00	15.00	-40.25	0.83	0.00	14.16	-77.23
Total				-35.26				-38.90				-73.50

Notes: Equilibrium calculations are based on an 80,229 random sample plus a proportional random sample of new workers who entered the market over time, to capture growth forecasts in market size. Equilibrium fees are calculated from an iterated best response method using a 0.00025 grid for the base model while for the models with raised caps, equilibrium fees are calculated from an iterated best response method using a 0.0005 grid. Cost is calculated over the whole account horizon and discounted at a 5% rate.

## A.2 Investment Regulations and Performance

We compile Siefore share prices from CONSAR website and calculate 30 day returns by Afore. We use the interest rate on a 28 day CETES federal treasury certificates as the short-term risk-free rate, the 30 day return on the Mexican stock exchange index (Mexbol), and the Mexico fixed bond auction rate for 10 year bonds, all available from Bloomberg. Mexbol and Mexican bond rate data series begin in 2000, so we restrict our analysis from 2000 through 2011. We regress monthly Siefore returns net the risk free returns on Mexican stock market and bond returns net the risk free rate by Afore for each Siefore. Tables A1.1 and A1.2 below show the coefficients of this regression for each of the Afores for Siefore Básica 1 and Siefore Básica 2. We try a handful of alternate specifications that allow the coefficients on bond and equity indices to vary with regulatory changes in caps on various investment vehicles. The estimates for Alpha are similar across the specification checks.

APPENDIX TABLE VII: PERFORMANCE OF MONTHLY RETURNS TO SIEFORE BÁSICA 1 BY AFORE

	Alpha		Beta Bonds		Beta Equity Index		N
Actinver	-0.0070	(0.004)	0.393	(0.052)**	0.544	(0.051)**	57
Azteca	-0.0030	(0.003)	0.358	(0.047)**	0.505	(0.042)**	98
Banamex	0.0000	(0.003)	0.362	(0.042)**	0.521	(0.036)**	118
Bancomer	0.0000	(0.003)	0.369	(0.042)**	0.514	(0.036)**	118
Banorte Generali	-0.0010	(0.003)	0.364	(0.041)**	0.520	(0.035)**	118
HSBC	-0.0010	(0.003)	0.379	(0.041)**	0.504	(0.036)**	118
Inbursa	0.0000	(0.003)	0.432	(0.038)**	0.447	(0.033)**	118
ING	0.0000	(0.003)	0.378	(0.042)**	0.509	(0.036)**	118
Invercap	0.0040	(0.004)	0.145	(0.066)*	0.467	(0.054)**	75
Ixe	0.0030	(0.005)	0.202	(0.073)**	0.365	(0.058)**	58
Metlife	0.0050	(0.004)	0.194	(0.062)**	0.408	(0.050)**	75
Principal	0.0000	(0.003)	0.378	(0.041)**	0.507	(0.036)**	118
Profuturo GNP	-0.0010	(0.003)	0.373	(0.042)**	0.513	(0.036)**	118
Santander	-0.0030	(0.003)	0.393	(0.045)**	0.528	(0.039)**	77
XXI	0.0000	(0.003)	0.375	(0.041)**	0.510	(0.036)**	118

Notes: Standard errors in parentheses. \* significant at 5%; \*\* significant at 1%

APPENDIX TABLE VIII: PERFORMANCE OF MONTHLY RETURNS  
TO SIEFORE BÁSICA 2 BY AFORE

	Alpha		Beta Bonds		Beta Equity Index		N
Actinver	-0.0010	(0.003)	0.210	(0.059)**	0.351	(0.054)**	44
Azteca	0.0010	(0.004)	0.213	(0.055)**	0.432	(0.047)**	84
Banamex	0.0010	(0.004)	0.173	(0.055)**	0.473	(0.048)**	84
Bancomer	0.0000	(0.004)	0.203	(0.056)**	0.459	(0.049)**	84
Banorte Generali	0.0000	(0.004)	0.208	(0.055)**	0.449	(0.048)**	84
HSBC	0.0010	(0.004)	0.216	(0.056)**	0.435	(0.049)**	84
Inbursa	0.0020	(0.003)	0.290	(0.049)**	0.355	(0.042)**	84
ING	0.0010	(0.004)	0.202	(0.056)**	0.464	(0.049)**	84
Invercap	0.0030	(0.004)	0.093	(0.066)	0.546	(0.054)**	75
Ixe	0.0010	(0.005)	0.164	(0.072)*	0.421	(0.057)**	58
Metlife	0.0040	(0.004)	0.156	(0.063)*	0.460	(0.051)**	75
Principal	0.0010	(0.004)	0.213	(0.054)**	0.449	(0.047)**	84
Profuturo GNP	0.0010	(0.004)	0.187	(0.057)**	0.485	(0.050)**	84
Santander	-0.0040	(0.003)	0.169	(0.061)**	0.413	(0.056)**	43
XXI	0.0010	(0.004)	0.215	(0.056)**	0.449	(0.048)**	84

Notes: Standard errors in parentheses. \* significant at 5%; \*\* significant at 1%

## A.3 Simulation of Counterfactual Equilibrium Fees

### A.3.1 Numerical Calculation of Nash-Bertrand Game in Balance and Flow Fees

This section details the computational techniques to solve for a Nash equilibrium in flow and balance fees. We begin by formalizing the Bertrand game on balance and flow fees. Afore  $j$ 's expected revenue as a function of flow fees, balance fees ( $f_j$  and  $b_j$ ), horizon expectations, and a vector of advertising levels

$(A_j)_{j \in J} \equiv (A_j^{(i)})_{i \in I, j \in J}$  is given by

$$\pi_j(f_j, b_j, A_j, f_{-j}, b_{-j}, A_{-j} | h_j) = \sum_{i \in I} \rho_{ij}(f_j, b_j, A_j, f_{-j}, b_{-j}, A_{-j}) p_i(f_j, b_j | h_j)$$

Where  $A_j^{(i)}$  is the agente concentration that individual  $i$  is exposed to,  $I$  denotes the set of individuals and  $J$  is the set of all seventeen afores.  $\rho_{ij}(f_j, b_j, A_j, f_{-j}, b_{-j}, A_{-j})$  is the logit demand estimate (i.e., the probability that the  $i$  chooses afore  $j$ ) and is given by

$$\rho_{ij}(f_j, b_j, A_j, f_{-j}, b_{-j}, A_{-j}) = \frac{\exp \left[ \lambda_{ij} \left( A_j^{(i)}, A_{-j}^{(i)} \right) c_i(f_j, b_j) + \delta_{ij} \left( A_j^{(i)}, A_{-j}^{(i)} \right) \right]}{\sum_{j \in J} \exp \left[ \lambda_{ij} \left( A_j^{(i)}, A_{-j}^{(i)} \right) c_i(f_j, b_j) + \delta_{ij} \left( A_j^{(i)}, A_{-j}^{(i)} \right) \right]}$$

Here  $p_i(f_j, b_j | h_j)$  is the present value of the revenue stream generated by the  $i$ th individual conditional this individual staying with the afore for at least  $h_j$  horizons, and  $c_i(f_j, b_j)$  is the present discounted total fees that  $i$  pays  $j$  for management services ( $c_i$  equals  $p_i$  if the account holder's and the afore's time horizons).<sup>1</sup>

Given a vector of advertising level  $A$  and a vector of expected account horizons  $(h_j)_{j \in J}$ , a Nash-Bertrand equilibrium in this game is a vector of fees such  $(f_j, b_j)_{j \in J}$  that

$$(f_j, b_j) \in \operatorname{argmax}_{(f_j, b_j) \in [0, \bar{f}] \times [0, \bar{b}]} \pi_j(f_j, b_j, A_j, f_{-j}, b_{-j}, A_{-j} | h_j)$$

for each afore  $j \in J$ . This Bertrand game differs from the standard logit-bertrand pricing game in a couple of nontrivial manner that complicates numerical calculation of an equilibrium. First, some firm's

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<sup>1</sup> $p_i(f_j, b_j | h_j) = \left( \frac{1}{1.05} \right)^{\min\{T_i, h_j\}} (F_{i, h_j} - R_{i, h_j})$ .  $R_{i, h_j}$  is the value of  $i$ 's account in  $h_j$  after deducting management fees and is given by  $R_{i, h_j} = \sum_{t=1}^{\min\{T_i, h_j\}} [(0.065 - f_j) s_{it} + c s_{it}] \left( 1 + \frac{.05 - b_j}{2} \right) (1.05 - b_j)^{\min\{T_i, h_j\} - t} + sar92_i (1.05 - b_j)^{\min\{T_i, h_j\}}$ , where  $T_i$  is the years to retirement for person  $i$ ,  $s_{it}$  is  $i$ 's salary in year  $t$ ,  $c s_{it}$  is the government contribution given to the individual in date  $t$ , and  $sar92_i$  is the individual's account balance at inception. Here  $F_{i, h_j}$  is the value of  $i$ 's account in  $h_j$  years if fees were set to zero.

maximization problems need not be convex. The lack of concavity in the profit function arises from the fact that afores compete over a substantial number of individuals who are price insensitive (those with low or positive price elasticities) causing some afores to best-respond by focusing their attention to these individuals and charging high fees.

Appendix Figure I.A illustrates this scenario for XXI, which shows regions of concavity (low fee levels) and convexity (high fee levels) for XXI's profit function, and Appendix Figure I.B graphs XXI's profit function when agents with positive price elasticity are eliminated from the sample.<sup>3</sup> These surface plots further suggest that afores possibly best-respond on the boundaries. In particular, firms that find it optimal to compete for the agents with inelastic demand charge the largest possible fees while other firms may choose to set only one type of fee (i.e., either balance fee or flow fee is set to zero).

Given that some afores best respond by charging fees on the boundary, solutions to the zeros of the gradient of the profit functions may not exist. Admittedly, one can include the appropriate equations that (necessarily) characterize the boundary solution (i.e., Karush-Kuhn-Tucker (KKT) complementary slackness conditions) in the system of gradient equations; however, solutions to these conditions need not be an equilibrium given the nonconvexity of the afores' profit functions. In other words, if one were to use variants of the Newton method to solve for zeros of the afores' KKT optimality conditions then the solver may converge to a solution that satisfies this condition, but the calculated fees for some afores need not be the best-response fees. For example, if there is a unique equilibrium solution in which  $k$  afores find it optimal to set fee equal to the high-fee boundary and exhibit profit functions similar to Appendix Figure I.A, then any Newton-like solver could potentially converge to  $\sum_{i=0}^k \binom{k}{i} 2^i$  and at least  $2^k$  points.

For the reasons outlined above, our numerical strategy disposes of the (necessary) gradient characterization of an equilibrium. We employ a best-response iteration algorithm (henceforth, BR iteration) to solve for the equilibrium fees, and we find an intuitively appealing solution that survives the iterative best-response test. To be exact, we use a Gauss-Seidel BR-iteration algorithm, in which afores simultaneously best respond at every iteration, and find no convergence issue in all of our numerical implementation.<sup>2</sup> We suspect that convergence of the algorithm is largely attributed to the fact that the

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<sup>2</sup> The simultaneous best-response iteration (Jacobi) method fails to converge and oscillates between high and low fee best responses in some of our computations. Given that afores could possibly compete for two different type of consumers such oscillating behavior is unsurprising. When firms best-respond simultaneously from a low-fee iteration, many firms find it optimal to charge high fees and focus on the price-inelastic consumers. Since competition for the price-intensive consumer is strong at this iteration, firms find it optimal to compete for majority of the accounts/agents and best respond by charging low fees in the next iteration.

game roughly exhibits Nash diagonal dominance.<sup>3</sup> Our calculations suggest that the solution found under this sequential best-response algorithm appears to be robust across changes in the order by which firms best respond and initial starting value, leading us to suspect that no other equilibria of this game exists where some firms best respond by setting fees equal to the upper boundary.

Our numerical solution does not preclude the existence of other equilibria that are not found under the sequential best-response algorithm. We argue, however, that the existence of an equilibrium where some afores choose to compete for the individuals with inelastic demand and charge the highest possible fees eliminates the possibility of an equilibrium where firms compete for the majority of the account (i.e., an equilibrium where no firms best respond on the upper boundaries). To see this, suppose on the contrary that there are two such equilibrium, say  $(f_j^*, b_j^*)_{j \in J^*}$ , where firms set  $J^*$  play on the upper boundary, and  $(f'_j, b'_j)$  where no firm plays on the boundary in this equilibrium (i.e,  $f_j < \bar{f}$  and  $b_j < \bar{b}$  for every afore  $j \in J$ ). In the equilibrium  $(f'_j, b'_j)_{j \in J}$ , firms compete for the majority of the account, say individuals with  $\lambda_i < 0$ , so that an afore's payoff exhibits strictly increasing differences in the other afores' fees (i.e., the game exhibits strategic complementarity). Hence, it must be the case that in such an equilibrium  $f'_j < f_j^*$  and  $b'_j < b_j^*$ , which imply stronger competition in the market for consumers with elastic demand. In this equilibrium, the incentive for firms in  $J^*$  to focus on the niche market (the  $\lambda_i \geq 0$  individuals) increases relative to its incentive in the equilibrium  $(f_j^*, b_j^*)_{j \in J^*}$ , which contradicts the statement that  $(f'_j, b'_j)_{j \in J}$  for afore  $j \in J^*$  are best-response fees against the fee levels  $(f'_j, b'_j)_{j \in J \setminus \{j\}}$ .

As an additional robustness check, we use the KKT conditions to numerically formulate the problem as a square complementary problem and employ the PATH algorithm (Ferris and Munson, 1998) through AMPL to solve for these conditions. As previously discussed, the solver may converge to flow fees that satisfy the KKT conditions but are not equilibrium fees. To aid the direction of the solver, we

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<sup>3</sup> We do not claim that the Hessian of the revenue functions satisfy diagonal dominance everywhere on the interior of the box  $[0, \bar{f}]^{17} \times [0, \bar{b}]^{17}$ . Though diagonal dominance is a sufficient condition for the BR-iteration algorithm to converge (the mutual best-response function form contraction under Nash diagonal dominance) it is by no means a necessary condition. We conjecture that there is enough diagonal dominance in the Hessian in some regions that increases the likelihood of the BR-iteration algorithm converges. For example, Table AIII.1 lists the absolute values of the flow-fee gradient of the first-order conditions with respect to flow fees evaluated at the observed fee levels. With the exception of three firms, the marginal effects on the Afores' first-order conditions in fees are dwarfed by the marginal effect to changes in its own flow fees. We calculated the Hessian in various points and surmise that this feature is not fee specific.

impose a higher lower bound on fees for firms that we find best responding on the upper boundaries in the equilibrium found under the sequential best-response algorithm.<sup>4</sup> Using this approach, we find that the solver converges to a solution that is approximately equal to the equilibrium fees calculated using the sequential best-response iteration.

To address the multiplicity of equilibria, we used random starting values to calculate the equilibrium fees and predicted market shares. As a first step, we used the baseline grid size and 100 random values. We found two possible solutions, close to each other and attributable to numerical error. As a second step, we increased the grid size and used 20 random values. Now, we found six possible solutions, even closer to each other. Therefore, we infer that numerical errors indeed cause the multiplicity of equilibria. Finally, predicted market shares further support our inference of a concave but flat objective function because the shares do not vary much between solutions—the worst case is an absolute difference of one percent, which represents the exception rather than the rule.

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<sup>4</sup> To be exact, the complementary condition for the firms that set the highest possible fees in equilibrium admit the following expression:

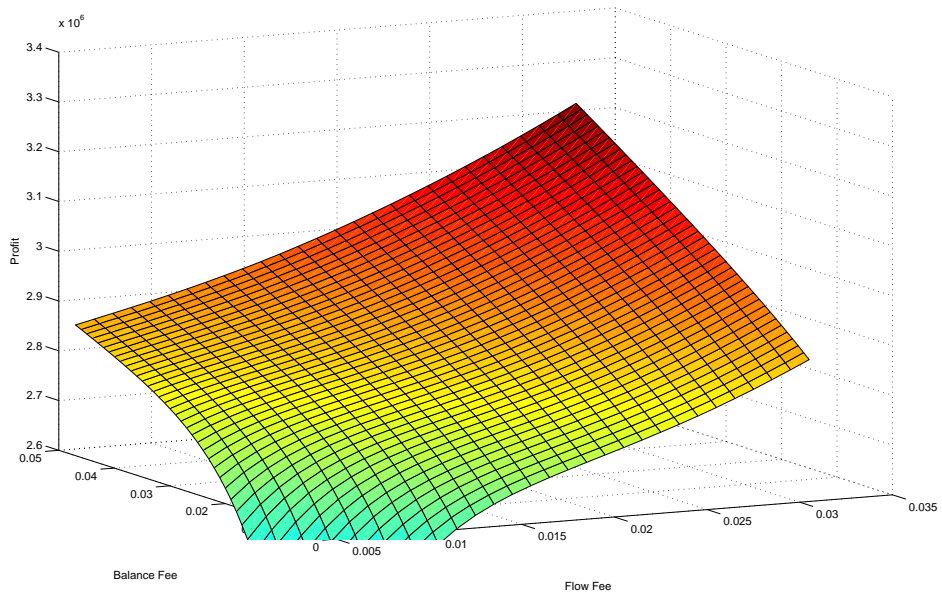
$$\nabla_{(f_j, b_j)} \pi_j(f_j, b_j) + \lambda_L - \lambda_H = 0$$

$$0 \leq \lambda_L \perp ((f_j, b_j) - (f_L, b_L)) = 0$$

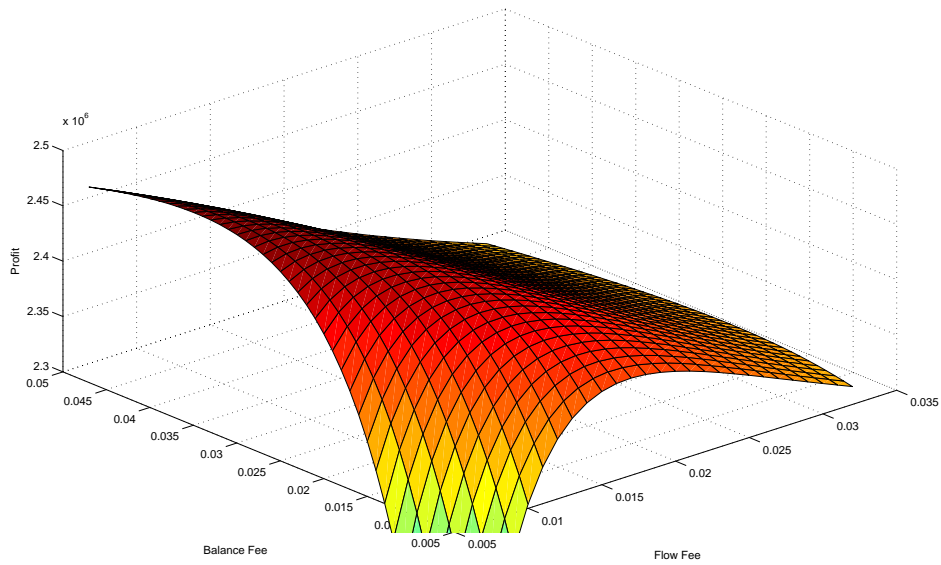
$$0 \leq \lambda_H \perp ((f_j, b_j) - (\bar{f}_j, \bar{b}_j)) = 0$$

for some  $(f_L, b_L) \gg 0$ . The lower bound of the fees is set to zero for the other firms.

APPENDIX FIGURE 1.A:  
ILLUSTRATION OF NON-CONVEXITIES  
IN AFORE PROFIT FUNCTION, BASELINE DEMAND MODEL



APPENDIX FIGURE 1.B:  
ILLUSTRATION OF CONVEX AFORE PROFIT FUNCTION,  
MODEL WITH NEUTRAL AGENTES AND DEMAND-SIDE POLICY





### A.3.2 Solving for Afore-specific time horizons

We first check how the observed balance and flow fees can be rationalized as the result of the above static equilibrium pricing game, taking our demand estimates and observed advertising levels as given. To do this, we calculate equilibrium balance and flow fees taking advertising levels as they are observed in our data.

We find that when applied to the demand estimates, the supply side model predicts a mix of flow and balance fees that are very different than those in the data. The model predicts that firms charge high balance and low flow fees in contrast to the high-flow, low-balance actual fee choices for the majority of cases. This suggests that firms have higher discount rates than the risk-free rate, potentially due to regulatory uncertainty.

Given demand and a model of competition, there is typically one unknown factor in the supply function that rationalizes observed prices and predicted prices. In a typical analysis of generic retail products, this factor is typically unmeasured components of marginal cost, which allows the model to fit the data. In this setting there are several reasons our predicted fees might not match actual fees even given unbiased estimates of demand. First, Afores made fee decisions under a regulatory approval process; they had to submit fees, forecasted demand and profitability to the regulator before being allowed to enter the market. They may have feared threat of regulation. This regulatory threat may have affected their fee strategy (e.g., Glazer and McMillan 1992, Stango 2003). They may also have been uncertain of the longevity of the system and thus favored flow fees because they yield revenues immediately, rather than high balance fees that could pay off more in future years. This longevity concern is plausible; new programs are started then quickly replaced under political pressure. Moreover, we have the benefits of the full data for the system and hindsight of 10 years of such data. Afores did not have and still do not have access to this data, and had to make projections and approximations about consumer characteristics and growth, many of which were rational *ex ante* but incorrect *ex post*.

Given the fee submission and approval process, we focus on the threat of regulation and introduce a parameter to capture this threat. We allow each Afore to have a different time horizon over which they calculate present discounted value of profits, assuming a terminal value of zero. We then modify the first best-response exercise by solving for the “rationalizing” time horizon for each firm: the time horizon, flow fee and balance fee set that best fits the observed data. Allowing the time horizon to vary across Afores brings calculated “equilibrium” balance and flow fees much closer to their observed values than when we impose that all time horizons are 10 years. Because we are using only one variable (time horizon) to fit variation in both balance and flow fees, the “fit” of this model is not guaranteed to be

perfect. Still, the correlation between observed and “equilibrium” flow and balance fees are 0.80 and 0.63 respectively, and the predicted market shares are correlated 0.99 with observe market shares.

Appendix Table IX compares the actual fees and market shares to the Nash equilibrium assuming all firms expect profits to continue over 10 years, and the outcomes generated by allowing a different fitted time horizon for each Afore. The table also shows the fitted time horizons and compares then to the *ex-post* longevity of the firm in the market. Overall, the fees and market shares fit very poorly under the uniform horizon assumption, but are highly correlated with actual under the fitted horizons.

APPENDIX TABLE IX: FITTED TIME HORIZONS

Afore	Horizon										
	Observed			Equilibrium Forcing Uniform 10 year Horizon			Equilibrium with Fitted Horizons			Fitted	Observed
	(1) Flow	(2) Balance	(3) Share	(4) Flow	(5) Balance	(6) Share	(7) Flow	(8) Balance	(9) Share	(10) Fitted Years	(11) Observed years
GenesisMetropolitan	1.65	0.00	0.93	2.00	4.75	0.73	2.00	0.00	0.91	7	2.17
Zurich	0.95	1.25	0.20	0.12	2.07	0.27	0.93	0.20	0.26	9	4.59
Tepeyac	1.17	1.00	0.55	0.03	2.55	0.70	0.60	1.05	0.69	9	5.67
XXI	1.50	0.99	2.75	0.00	3.75	3.15	2.00	0.00	2.74	7	10.00
Banorte	1.00	1.50	7.69	2.00	4.75	6.03	2.00	0.00	7.58	7	10.00
Dresdner(AllianzHSBC)	0.00	4.75	4.62	0.20	3.65	5.86	0.08	4.75	5.31	10	10.00
Profuturo	1.70	0.50	11.10	0.40	4.05	12.09	2.00	0.00	11.87	7	10.00
AtlanticoPromex	1.40	0.95	1.52	0.12	3.22	1.81	2.00	0.00	1.57	7	1.25
Principal	0.90	1.00	1.00	2.00	4.75	0.62	2.00	0.00	0.78	6	10.00
Santander	1.70	1.00	13.30	0.52	3.77	16.22	1.52	1.90	14.87	9	10.00
Previnter	1.55	0.00	2.52	0.20	2.67	2.90	1.52	0.00	2.62	4	1.25
ING/Bital	1.68	0.00	9.16	0.50	3.67	9.33	2.00	0.00	9.03	8	10.00
Capitaliza	1.60	0.00	0.22	0.25	2.50	0.25	1.50	0.00	0.23	4	1.42
Garante	1.68	0.00	10.68	0.50	3.40	11.08	1.95	0.00	10.59	8	4.59
Inbursa	0.00	1.57	3.52	0.25	2.60	2.04	0.22	2.90	1.86	10	10.00
Banamex	1.70	0.00	13.10	0.55	4.05	12.35	2.00	0.00	12.54	7	10.00
Bancomer	1.70	0.00	17.12	0.93	4.75	14.57	2.00	0.00	16.55	6	10.00
Correlation with observed:				0.05	-0.06	0.98	0.80	0.85	0.99	0.42	

Note: Equilibrium and market share calculation are based on a 80,229 random sample plus 41,294 new workers. Equilibrium fees are calculated from an iterated best-response method where best response functions are calculated over a .00025 grid-level increment. Market share calculations are based on the logit-share equation where cost is calculated over the whole account horizon and discounted at a 5% rate. Observed years in column (10) are truncated at 10 years.

## A.4 Construction of Expected Costs

To estimate demand as a function of management fees, when there are multiple fees charged to account holders, we calculated the cost over 10 years using each individual's contribution history from 1997 through 2007. However, if individuals do not perfectly forecast their labor force participation and earnings at the point of choosing a fund manager in 1997, using this measure of management cost may introduce measurement error that is correlated with the true underlying cost expectations individuals use to choose an Afore. This measurement error bias would lead us to understate the weight that individuals place on costs when choosing fund managers. Hyslop and Imbens (2000) show that measurement error generated by using a prediction of cost as the cost measure of interest (the Optimal Prediction Error) circumvents this source of estimation bias, as prediction error is orthogonal to the cost itself and the error term.

In addition, if plan or product choice causes subsequent usage, perfect foresight costs may be endogenous (See for example, Miraveti 2003, Heiss McFadden and Winter 2010, Abaluck and Gruber 2011, Handel 2011, Einav et al. 2011, Grub and Osborne 2012, and Jiang 2012, Duarte and Hastings 2012). A priori, fund manager choice is much less likely to cause future labor force participation than health care plan choice is likely to cause subsequent use of different health services or cell phone plan is likely to cause calling behavior. However, we find that our estimated demand elasticities calculated using actual (perfect-foresight) costs are smaller in absolute value than those using predicted costs.

Our rich individual-level data, variation in management costs across individuals, and incredibly large sample size all us to calculate an expected cost for each individual in each year using a predicted number of days worked each year and the expected wage earned over people with very similar characteristics at the start of the system. We can then re-estimate our model using this alternative cost measure free from the potential measurement error bias outlined above. Our predicted cost is constructed by taking cell-level means (or expectations since cell means are equivalent to regression predictions from regressions of costs on cell dummies) over finely defined cells by state of residence, age, wage, gender, starting SAR92 balance, wage and number of days worked in the first year of the system.<sup>5</sup> We broke these categories into fine enough cells to have approximately 100 workers per cell (the median cell has 97 workers). We then took the average number of days worked and wage level in each subsequent year over

---

<sup>5</sup> We also explored more parametric regression functions using linear, quadratic and cubic terms of characteristics and their interactions. Taking cell level means avoids overshooting predictions in tails often resulting from estimating regressions with many cubic and quadratic terms, and since we have the sample size to do it we decided on the cell means approach.

all workers in each cell, and assigned to each worker this cell-level mean. We then used these two means and the initial SAR92 balance to mechanically calculate management fees for each worker with each Afore given the Afore fee structure in 1997.<sup>6</sup> We then re-estimate our demand model using this expected cost measure.

Overall, the results using expected costs differ in predictable ways from results using perfect foresight/realized labor market outcomes. When calculating price elasticities, we find that demand is more elastic overall than it is in the perfect foresight mode, however the the change in elasticity from the model estimated on the actual data and the simulated model imposing zero impact of agente promotores is very similar. We find slightly lower demand-side cost savings in our counterfactual - 14% relative to 17%, since demand elasticity levels are lower using the perfect foresight cost measure.

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<sup>6</sup> Note we still assume workers assume current fees to hold going forward, though this seems a reasonable assumption.

# 5 Advertising Campaigns

## 5.1 Example television advertisements

Example video 1:<sup>7</sup> [http://www.youtube.com/watch?v=lieVrXkZ3G8&feature=player\\_detailpage#t=253s](http://www.youtube.com/watch?v=lieVrXkZ3G8&feature=player_detailpage#t=253s)

*En Español:*

Desorientada?  
Te preocupa el futuro?  
No te hagas bolas, llama al servicio telefónico de Afore Banamex  
Ellos te van a orientar,  
Llámalos! se trata de tu retiro  
Contestadora: Afore Banamex a su servicio?  
Por sus accionistas y empleados  
*Afore Banamex nace con experiencia*

*In English:*

Confused?  
Are you concerned about the future?  
Don't get confused! Call the Afore Banamex's call center  
They are going to guide you  
Call them! it's your retirement!  
Call center: Afore Banamex, how can I help you?  
For its stakeholders and employees  
*Afore Banamex born with experience.*

Example Video 2:<sup>8</sup> <http://www.youtube.com/watch?v=BUv3SL5VsOU>

*En Español:*

Aja! Con que ya se enteraron del Afore Banamex,  
Psss, Hey tu, que no piensas retirarte?  
Hormiga: Yo? No!  
Te da flojera pensar en tu futuro?

---

<sup>7</sup> Last accessed on February 24, 2013.

<sup>8</sup> Last accessed on February 20, 2011.

Todos ya están listos  
Si pierdes tiempo, pierdes dinero  
Tu futuro depende de ti  
Afiliate ya, que si no te apuras... se te va el camión  
Por sus accionistas y empleados  
*Afore Banamex nace con experiencia*

*In English:*

Aha! So you already know about Afore Banamex,  
Psss, Hey you, aren't you planning on your retirement?  
Ant: me? No!  
Are you lazy to think of your future?  
Everybody is ready  
If you lose time, you lose money.  
Your future relies on you  
Enroll now! 'cause if you don't hurry up... you will miss the train.  
For its stakeholders and employees  
*Afore Banamex born with experience.*

Example video:<sup>9</sup> [http://www.youtube.com/watch?v=SX6l\\_mcAEII](http://www.youtube.com/watch?v=SX6l_mcAEII)

*En Español:*

Ajaja, todas con afore Banamex, y tú qué?  
Guardaras ahí tu lana? Para el futuro?  
No confías en nadie eh?  
Ten confianza de que en Afore Banamex, tu dinero para el retiro está seguro  
Ándale! Decídate ya, la experiencia de afore Banamex da seguridad  
Por sus accionistas y empleados  
*Afore Banamex nace con experiencia*

*In English:*

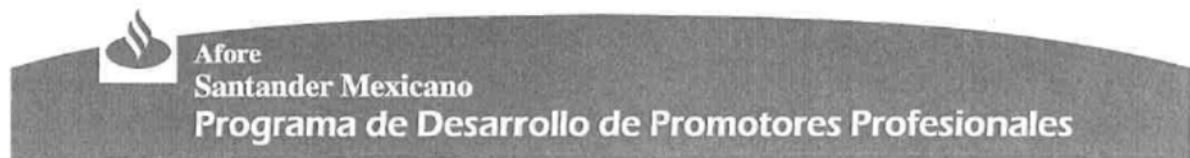
Ahaha, everybody (female) with Afore Banamex, and you?  
Are you going to put your money there? For your future?  
You don't trust in anybody, eh?

---

<sup>9</sup> Last accessed February 24, 2013.

You should trust that in Afore Banamex, your money for your retirement is protected  
Como on! Make your mind up now! The Afore Banamex's experience provides security.  
For its stakeholders and employees  
*Afore Banamex born with experience.*

## 5.2 Translation of Afore Santander Angente Promotor Training Handbook



### *Los expertos recomiendan...*



#### Advice for a winning attitude at Afore Santander Mexicano:

- Get up earlier
- Get on board. (Literally: Put the shirt on; this is a very colloquial expression that means that you should identify with Afore Santander, feel like you are part of their team, and hence put in the extra effort)
- I encourage you to work with me
- Feel like you're part of the universe, like you came to this world to do something and to be happy. This is a big responsibility, a lot of commitment.
- Plan and enjoy your work. You should like what you do.
- Organize your work to be more productive.
- Put yourself in the hands of God.
- You are a leader, a winner.
- Chase after your success, persevere.
- You are the best.
- You can get things with a smile and optimism.
- I wish you become number 1 soon, because you are already the best.
- In spite of problems and adversities, have fun with your job, you will get better and be successful.
- You are the best promoter, you are the best trained, feel this when you meet a client.
- Dream big, have high goals.
- Congratulations, you look good, they can tell you've reached success.
- The essence of man is to live, but to live well.
- Don't sort of work, because Santander will sort of pay you.

#### The Interview

What is the objective of the sales interview?



- Sell the product to the client
- Close the deal: affiliate or transfer.

Steps for planning the sales interview:

- It's important to plan, because it gives you a guide of what you will do during the interview
- The benefit of planning is simply to reach your objectives
- It's important to show respect for the client's available time
- This won't take more than five minutes, but sometimes more time goes by while talking if the client is interested, so it's OK to not be so direct (it's OK to take your time)
- Talk about a few other personal matters and then about formal business
- Fill in the application (which doesn't take much time)

There is a methodology:

1. Own presentation (formal, well-dressed/neat)
2. Probing questions to see if the person is a prospective client
3. Knowledge about the fact that Santander encourages people to affiliate
4. Check if the person is affiliated with Seguro Social (Social Security)... though not all of them are prospects for an affiliation with an Afore
5. Benefits of the Santander Mexicano system
6. Create a desire for affiliation (speak of the client's dreams and nightmares)
7. Magical questions: All good? What do you think?
8. Detect objections and go around them. There are many types of objections: true, false, or as a test. When the objection is detected, you can close the deal.
9. Close the deal.
10. Referrals (find prospective clients again)

#### Different ways to gain a client's trust

- Comment on something positive about their office, about their position in the firm
- Comment on something they like (look at pictures, see if they like soccer, or something else)
- Don't say that you're here to affiliate them
- Say that you're here to invite them to learn about an option to protect their future and their family's, you're interested in their company, interested in them, comment on their activities, their success, show authentic interest in them
- Inquiries come after breaking the ice
- "I'm at your orders" and then present the products
- Inquire with probing questions to get information, and try to perceive, perceive, perceive
- Ask yourself, what would you like to be asked? What wouldn't you like to be asked?
- Make notes of each problem, answer with questions to get more information
- It's important to have the knowledge to answer doubts related to Afores (social security numbers, SAR, number of weeks contributing to the pension system, Infonavit credits, official procedures, etc.), but all the solutions are only given at the end, after they've talked and you've taken note of everything. Asking questions focused on their problems, hold off and not give solutions, let them see that you are taking notes.

#### How to deal with objections and close the deal

Fears, desires, doubts, concerns of the client

- You must understand the client well and their objection to respond
- Answer each of their doubts  
Example:  
What would you need to choose or stay with an Afore?
- Be capable of giving an explanation of any information that comes in the quarterly report, the Private Pension Plan, etc., everything that is sent in the reports
- Know how to answer concerns regarding the strength of the company (Santander). About possible mergers (know the story of Santander)
- Don't start by pressuring the client, present the information little by little, with simplicity.
- "I would like to sit by myself to read the fine print on the back"  
Oh, very well, you're absolutely right, it's good that you want to read it, but don't worry, there's nothing to worry about. Here on the back it says that... etc. How about we sign this side for now, and tomorrow you give me the documents that are missing.  
And if you have any questions, I can clear them up.  
(You must know the back of the contract well)

#### Recommendations for dealing with objections

- Know what the client may ask and what's the best answer
- You meet different clients every day asking different things
- You have to know how much information they need

#### Some phrases for closing the deal

- Sir, where would you like to get your correspondence, home or office?
- Is your personal information correct?
- Could you sign here please?
- If it would clarify that question you have regarding our investments and the interest rates, and it would make you feel safer, should I bring the contract for your approval? In the morning or afternoon?

#### When is the ideal moment to close the deal?

- It's important to see that the client is interested, see if he/she needs a simple or a strong closing (ie, how much effort to put into closing the deal)
- There are clients who don't ask anything at all; you have to encourage them to give their opinion with a few questions
- Make the client feel our gratitude for their trust
- When you clear the objections; capitalize on that moment when they've seen the light. Include the invitation to sign from the moment the objection is being solved.

#### Closing phrases that don't give good results

- For example, don't ask the client "What do you think?" "Do you have any doubts?" at the end of the talk, and the client starts to want to get rid of us
- "Then, you're not affiliating your account with us?" doesn't work, because for starters it says NO
- Something very wrong, once you are very involved, is to talk bad about the competition. It's not ethical.

- Repeating the name of the competition... is not recommended. You have to recommend Santander. Better to say... “that bank”, and don’t extol their virtues as a bank, even though they might be a better bank.
- Santander Mexicano is in Mexico because it came to invest, it has expertise and is developing this project and is carrying it out in our country. We have experience.

### Planning

People generally don’t like to plan

- Because they don’t like to think (about the future)
- Because it’s hard
- That’s why a lot of people let destiny take control over their lives

Planning leads to a methodology, instruments.

Generally, we say that we don’t have a planner/daybook, but all that’s needed is a sheet of paper, not just leave it to our brain. We can’t keep everything in our brains. In the absence of a brilliant mind, a pale ink.

An excuse is that putting together programs and reports is a waste of time, that there are other priorities, that this time could be spent meeting with clients.

Sometimes we have trustworthy information and we don’t write it down because we believe that it is not necessary. We should be able to control the client, time and place.

Benefits:

Organizing work:

Avoid having three appointments at the same time.

Time and money are saved, and you will honor your commitments to your clients.

You have a specific plan for each interview.

Key aspects for planning:

Schedule

Organize

Embody or enact, specify the goals, the objectives.

Be clear on where you will take notes and which indicators are used at Afore Santander.

We have a planner and a board, make good use of them

There are two steps:

- 1) create the desire
- 2) present your objectives

You calculate the wage mass, etc. and you create a habit, which must be of less than 21 days to pursue a goal, a promise to yourself, to check up on your progress relative to the objectives, and you force yourself to make it happen. When a promoter accomplishes bringing a new file each day to his supervisor, it becomes a habit.

An excuse for not filling out reports is saying that we are salespeople and not administrators. It's a control, a work plan, I state what I did yesterday and what I'm going to do now.

Which basic elements are more useful regarding reports?

Schedule

Name

Address

Phone Number

Marital Status

Is he/she affiliated?

What are the personal gains of filling out a report?

It's a plan or part of the logistics that must be in place, and times and documents that control the work and the benefits that will be obtained.

Statistics of firms and clients visited and the periodicity of the visits. It's a log of what date I promised I would bring them the services.

If I administer my established quota/share, I can plan my day and my work will be more successful.

### Final phrases

Each person is their own creation, the image of their own thoughts and beliefs. People are just the way they think and believe.

Claude Bristol

Time is the currency of your life. It's the only currency that you really have and only you should determine how you invest it. Try to be careful, unless you're willing to let others spend it for you.

Carl Sandburg

We recommend that you go over these books, which can give you very good information as a complement to your sales efforts as a promoter:

1. Sales with NLP (Neuro-linguistic Programming) , Joseph O'Connor and Robin Prior / Ed. Urano.
2. The Closing (as in the closing of a business deal), Gary Karrass / Ed. Lasser Press.
3. The Essence of Service Marketing, Adrian Payne / Ed. Prentice Hall.
4. Total Client Satisfaction, Jacques Jorowitz and Michelle Jurgens Panak / Ed. McGraw Hill.

5. Sell the Impossible, Harry Beckwith / Ed. Prentice Hall.
6. The Six Hats of the Successful Salesperson, Dave Kahle / Ed. Norma.
7. Emotional Intelligence, Daniel Goleman / Ed. Javier Vergara.
8. Internal Training of Salespeople, Claudio L. Soriano / Ed. Diaz de Santos.
9. How to Succeed in Spite of Yourself, Everett T. Sutters / Ed. Diana.

### 5.3 Nielsen-Ibope Television Advertisement Archive

Nielsen IBOPE (IBOPE AGB México, S.A. de C.V.) is a Nielsen affiliate in Mexico that that monitors and measures the advertising that consumers are exposed to, and the products that they buy. They have built a database of 35 years of television advertising in Mexico, which they make available to researchers for academic purposes through their website Publicity Tracks (Huellas de la Publicidad), at <http://youspot.ibopeagb.com.mx/>.

We searched for and analyzed all advertisements attributable to Afores or to Consar during the inception period. We viewed them and recorded an indicator if they appealed to emotional factors or to fundamentals such as management fees. Appendix Tables X and XI list the advertisements we found and their content categorization for Afores and for Consar, respectively. The name of each ad was constructed as a brief description of the ad content.

APPENDIX TABLE X: LIST AND DESCRIPTION OF AFORE ADVERTISEMENTS  
FROM INCEPTION PERIOD IN NIELSEN-IBOPE VIDEO ARCHIVE

File Name and Description	Appeals to Emotion	Alludes to Fees	Alludes to Returns or Fees
01_Banamex-1996-Sept-explaining-changes-in-SAR.flv	1	0	0
1_1997_Amafore_makes_your_retirement_savings_grow.flv	0	0	1
2_1997_Amafore_wise_choice_for_your_best_retirement.flv	0	0	1
3_1997_Amafore_mistake_to_land_in_cuenta_concentradora_earn_more.flv	0	0	1
4_1997_Amafore_you_have_power_to_choose_best_afore.flv	0	0	1
5_1997_Amafore_you_have_control_of_your_own_account.flv	1	0	0
6_1997_Amafore_you_have_opportunity_to_earn_more_than_cuenta_concentradora.flv	0	0	1
7_1997_Amafore_peace_of_mind_keep_your_SS_savings.flv	0	1	0
1_1997_Atlantico_Promex_For_a_placid_retirement_opera_singer.flv	1	0	0
2_1997_Atlantico_Promex_If_you_dont_plan_on_marrying_a_millionaire.flv	1	0	0
3_1997_Atlantico_Promex_earn_good_money_retire_like_a_champ_boxing.flv	1	0	0
4_1997_Atlantico_Promex_earn_good_money_retire_like_a_champ_boxing_v2.flv	1	0	0
5_1997_Atlantico_Promex_For_a_placid_retirement_opera_singer_v2.flv	1	0	0
6_1997_Atlantico_Promex_If_you_dont_plan_on_marrying_a_millionaire_v2.flv	1	0	0
02_Banamex-1997-mentions-zero-point-two-commission-rate.flv	0	1	0
03_Banamex-1997-no-fee-mentioned-just-experience_seamstress_ants.flv	1	0	0
04_Banamex-1997-no-fee-mentioned-just-experience_ant_moving_coins.flv	1	0	0
05_Banamex-1997-no-fee-mentioned-just-experience_ant_moving_coins_v2.flv	1	0	0
06_Banamex-1997-no-fee-mentioned-says-you-might-miss-the-bus.flv	1	0	0
07_Banamex-1997-pays-you-interest_ants_moving_coins.flv	0	0	1
08_Banamex-1997-practically-zero-percent-commission.flv	0	1	0
09_Banamex-1997-your-money-will-earn-interest_construction_ants.flv	0	0	1
01_Bancomer-1997-no-fee-mentioned-charlie-chaplin.flv	1	0	0
02_Bancomer-1997-no-fee-mentioned-senate-short.flv	1	0	0
03_Bancomer-1997-no-fee-mentioned-customer-service.flv	1	0	0
04_Bancomer-1997-no-fee-mentioned-driving-blindfolded.flv	1	0	0
05_Bancomer-1997-no-fee-mentioned-hitchcock.flv	1	0	0
06_Bancomer-1997-no-fee-mentioned-hitchcock-short.flv	1	0	0
07_Bancomer-1997-no-fee-mentioned-marilyn-monroe.flv	1	0	0
08_Bancomer-1997-no-fee-mentioned-maybe-cantinflas.flv	1	0	0
09_Bancomer-1997-no-fee-mentioned-number-one.flv	1	0	0
10_Bancomer-1997-no-fee-mentioned-perfect-retirement-savings-system.flv	1	0	0
11_Bancomer-1997-no-fee-mentioned-security-confidence.flv	1	0	0
12_Bancomer-1997-no-fee-mentioned-still-registering.flv	1	0	0

13_Bancomer-1997-number-one-thanks-to-you.flv	1	0	0	0
14_Bancomer-1997-number-one-thanks-to-you-moto.flv	1	0	0	0
15_Bancomer-1997-holds-one-in-three-accounts.flv	1	0	0	0
1_1997-Bancrecer-Dresdner-Doesnt-take-bite-out-of-your-savings-apple.flv	0	1	0	0
2_1997-Bancrecer-Dresdner-no-fee-mentioned-offers-daily-account-statement.flv	1	0	0	0
3_1997-Bancrecer-Dresdner-we-only-charge-4-point-75-annually-on-balance-no-bite-out-of-apple.flv	0	1	0	0
4_1997-Bancrecer-Dresdner-no-fee-mentioned-offers-daily-account-statement-v2.flv	1	0	0	0
1_1997_Bital_scary_customer_service.flv	1	0	0	0
2_1997_Bital_construction_pulling_down_pants_slapstick_music.flv	1	0	0	0
3_1997_Bital_construction_pulling_down_pants_slapstick_music_v2.flv	1	0	0	0
4_1997_Bital_horrible_customer_service.flv	1	0	0	0
5_1997_Bital_scary_customer_service_v2.flv	1	0	0	0
6_1997_Bital_horrible_customer_service_v2.flv	1	0	0	0
7_1997_Bital_regrets.flv	1	0	0	0
8_1997_Bital_we_dont_care_about_your_past_absurd.flv	1	0	0	0
1_1997-Capitaliza-no-fee-mentioned-baseball-career-with-grandkids.flv	1	0	0	0
2_1997-Capitaliza-no-fee-mentioned-cable-channel-tie-in	1	0	0	0
3_1997-Capitaliza-no-fee-mentioned-cable-channel-tie-in-2.flv	1	0	0	0
4_1997-Capitaliza-no-fee-mentioned-fishing.flv	1	0	0	0
5_1997-Capitaliza-no-fee-mentioned-GE-over-100-yrs-in-Mexico.flv	1	0	0	0
6_1997-Capitaliza-no-fee-mentioned-rainbow.flv	1	0	0	0
7_1997-Capitaliza-no-fee-mentioned-high-standards.flv	1	0	0	0
8_1997-Capitaliza-no-fee-mentioned-part-of-GE-largest-co-in-the-world.flv	1	0	0	0
1_1997_Confia_Principal_soccer_announcer_goal.flv	1	0	0	0
01_Garante-1997-one-of-lowest-commissions-all-svcs-are-free	0	1	0	0
02_Garante-1997-no-fee-mentioned-soccer-star.flv	1	0	0	0
03_Garante-1997-Signing-up-costs-nothing-falling-parachute.flv	1	0	0	0
04_Garante-1997-no-fee-mentioned-the-retirement-you-want.flv	1	0	0	0
06_Garante-1997-no-fee-mentioned-the-seed-that-will-lead-to-blooming-future-roses.flv	1	0	0	0
07_Garante-1997-no-fee-mentioned-one-of-lowest-commission-in-market.flv	0	1	0	0
08_Garante-1997-no-fee-mentioned-sign-up-at-hecali-its-doesnt-cost-anything.flv	1	0	0	0
09_Garante-1997-no-fee-mentioned-dont-wrack-your-brain.flv	1	0	0	0
10_Garante-1997-a-variety-of-free-services.flv	1	0	0	0
11_Garante-1997-No-fee-mentioned-Christmas.flv	1	0	0	0
12_Garante-1997-vague-doesnt-cost-anything.flv	1	0	0	0
14_Garante-1997-dueling-mariachis-all-services-are-free.flv	1	0	0	0
15_Garante-1997-tricycle-kids-for-a-better-tomorrow.flv	1	0	0	0
16_Garante-1997-signup-at-Elektra-doesnt-cost-anything-v2.flv	1	0	0	0
17_Garante-1997-no-fee-mentioned-soccer-star-v2.flv	1	0	0	0

18_Garante-1997-no-fee-mentioned-sign-up-at-hecali-its-free-v2.flv	1	0	0	0
19_Garante-1997-puzzle-for-a-better-tomorrow.flv	1	0	0	0
20_Garante-1997-fake-commercial-one-of-lowest-commissions.flv	0	1	0	0
21_Garante-1997-wedding-I-do-to-this-afore-variety-of-free-services.flv	1	0	0	0
22_Garante-1997-tricycle-kids-for-a-better-tomorrow-v2.flv	1	0	0	0
23_Garante-1997-parade-in-mexico-balloon-release.flv	1	0	0	0
24_Garante-1997-soccer-star-total-control-of-my-investments.flv	1	0	0	0
25_Garante-1997-no-fee-mentioned-the-seed-that-will-lead-to-blooming-future-roses-v2.flv	1	0	0	0
26_Garante-1997-people-like-us-signup-at-Elektra-doesnt-cost-anything.flv	1	0	0	0
27_Garante-1997-see-if-you-made-the-right-choice-if-yr-savings-grew.flv	1	0	0	0
28_Garante-1997-talk-to-one-of-our-agentes-in-blue.flv	1	0	0	0
31_Garante-1997-talk-to-one-of-our-asesores-in-blue-v2.flv	1	0	0	0
32_Garante-1997-the-sun-rises-for-everyone.flv	1	0	0	0
33_Garante-1997-the-sun-rises-for-everyone-v2.flv	1	0	0	0
34_Garante-1997-the-sun-rises-for-everyone-v3.flv	1	0	0	0
35_Garante-1997-no-fee-mentioned-the-retirement-you-want-v2.flv	1	0	0	0
36_Garante-1997-no-fee-mentioned-the-retirement-you-want-v3.flv	1	0	0	0
37_Garante-1997-no-fee-mentioned-the-retirement-you-want-v4.flv	1	0	0	0
01_Genesis-1997-canoes-waterfall-snoopy-helicopter.flv	1	0	0	0
02_Genesis-1997-Incomplete-no-fee-mentioned.flv	1	0	0	0
03_Genesis-1997-50-pesos-for-every-day-your-account-statement-is-late.flv	1	0	0	0
04_Genesis-1997-Charlie-Brown-no-fee-or-other-info.flv	1	0	0	0
05_Genesis-1997-Diving-Snoopy-no-fee-or-other-info.flv	1	0	0	0
06_Genesis-1997-Diving-Snoopy-no-fee-or-other-info-v2.flv	1	0	0	0
07_Genesis-1997-Diving-Snoopy-no-fee-or-other-info-v3.flv	1	0	0	0
08_Genesis-1997-Charlie-Brown-Nightmare-choosing-afore-no-fee-or-other-info-v3.flv	1	0	0	0
09_Genesis-1997-Diving-Snoopy-no-fee-or-other-info-v4.flv	1	0	0	0
10_Genesis-1997-Typing-Snoopy-no-fee-or-other-info.flv	1	0	0	0
1_1997_Inbursa_commission-one-third-of-interest-earned-above-inflation-long.flv	0	0	0	1
2_1997_Inbursa_commission-one-third-of-interest-earned-above-inflation-short-version.flv	0	0	0	1
3_1997_Inbursa_no_commission_if_you_dont_earn_more_than_inflation_mother_daughter.flv	0	0	0	1
4_1997_Inbursa_no_commission_if_you_dont_earn_more_than_inflation_father_son.flv	0	0	0	1
5_1997_Inbursa_Fathers-Day-promotion.flv	1	0	0	0
1_Nacion_AFJP_man_with_cow_on_subway_positive_returns_for_a_lifetime.flv	0	0	1	0
01_Previnter_1997_says_vaguely_total_to_retire_depends_on_commission_and_interest.flv	1	0	0	0
02_Previnter_1997_no_info_better_with_us.flv	1	0	0	0
03_Previnter_1997_national_coverage.flv	1	0	0	0
04_Previnter_1997_backed_by_major_companies.flv	1	0	0	0
05_Previnter_1997_backed_by_major_companies_v2.flv	1	0	0	0
06_Previnter_1997_guarantees_your_future_and_your_excitement.flv	1	0	0	0



07_Previnter_1997_in_over_27_countries.flv	1	0	0	0
08_Previnter_1997_provides_a_free_estimate_of_what_youll_have_to_retire.flv	1	0	0	0
09_Previnter_1997_has_managed_intl_retirement_accounts.flv	1	0	0	0
10_Previnter_1997_soccer_transparency_experience.flv	1	0	0	0
11_Previnter_1997_experience_in_the_mexican_market.flv	1	0	0	0
12_Previnter_1997_experienced_socios.flv	1	0	0	0
13_Previnter_1997_will_they_take_more_out_of_my_salary.flv	1	0	0	0
14_Previnter_1997_will_they_take_away_my_IMSS_benefits.flv	1	0	0	0
15_Previnter_1997_experienced_socios_v2.flv	1	0	0	0
16_Previnter_1997_we_work_to_offer_you_good_returns.flv	0	0	1	0
17_Previnter_1997_agente_will_visit_you.flv	1	0	0	0
1_Previsol_AFJP_1997_what_will_you_be_when_you_grow_up.flv	1	0	0	0
2_Previsol_AFJP_1997_what_will_you_be_when_you_grow_up_v2.flv	1	0	0	0
3_Previsol_AFJP_1997_what_will_you_be_when_you_grow_up_v3.flv	1	0	0	0
4_Previsol_AFJP_1997_what_will_you_be_when_you_grow_up_v4.flv	1	0	0	0
5_Previsol_AFJP_1997_what_will_you_be_when_you_grow_up_v5.flv	1	0	0	0
6_Previsol_AFJP_1997_what_will_you_be_when_you_grow_up_v6.flv	1	0	0	0
1_Profuturo-1997-no-fee-mentioned-bus-they-explain-things-clearly.flv	1	0	0	0
2_Profuturo-1997-no-fee-mentioned-so-hard-to-decide_v1.flv	1	0	0	0
3_Profuturo-1997-no-fee-mentioned-taxi.flv	1	0	0	0
4_Profuturo-1997-no-fee-mentioned-so-hard-to-decide_v2.flv	1	0	0	0
5_Profuturo-1997-no-fee-mentioned-so-hard-to-decide_v3.flv	1	0	0	0
6_Profuturo-1997-no-fee-mentioned-so-hard-to-decide_v4.flv	1	0	0	0
7_Profuturo-1997-no-fee-mentioned-bus-they-explain-things-clearly.flv	1	0	0	0
1_Santander-1997-do-you-know-commissions-of-cuenta-concentradora-signup-with-us.flv	0	1	0	0
10_Santander-1997-ask-for-the-men-of-the-future-at-your-branch.flv	1	0	0	0
11_Santander-1997-the-only-difference-btw-us-and-other-afores-is-our-agentes.flv	1	0	0	0
12_Santander-1997-our-acct-statements-report-interest-and-commissions.flv	0	0	0	1
13_Santander-1997-ask-for-the-men-of-the-future-at-your-branch_v2.flv	1	0	0	0
14_Santander-1997-no-fees-mentioned-relax-you-have-a-future.flv	1	0	0	0
15_Santander-1997-no-fees-mentioned-touts-experience-and-size.flv	1	0	0	0
16_Santander-1997-no-fees-mentioned-signing-up-costs-nothing.flv	1	0	0	0
17_Santander-1997-no-fees-mentioned-relax-you-have-a-future_v2.flv	1	0	0	0
18_Santander-1997-no-fees-mentioned-relax-you-have-a-future_v3.flv	1	0	0	0
19_Santander-1997-no-fees-mentioned-choose-our-experience.flv	1	0	0	0
2_Santander-1997-no-fee-mentioned-donation-to-tarahumara.flv	1	0	0	0
20_Santander-1997-in-Chile-we-have-highest-returns-on-annuities.flv	0	0	1	0
21_Santander-1997-in-Peru-we-have-record-high-returns.flv	0	0	1	0
22_Santander-1997-in-Peru-we-have-record-high-returns-v2.flv	0	0	1	0
23_Santander-1997-in-Chile-we-have-highest-returns-on-annuities_v2.flv	0	0	1	0

24_Santander-1997-in-Argentina-we-have-most-clients-highest-returns.flv	0	0	1	0
3_Santander-1997-no-fee-mentioned-exp-in-latam-highest-returns.flv	0	0	1	0
4_Santander-1997-no-fee-mentioned-men-of-the-future.flv	1	0	0	0
5_Santander-1997-no-fee-mentioned-men-of-the-futurev2.flv	1	0	0	0
6_Santander-1997-no-fee-mentioned-men-of-the-futurev3.flv	1	0	0	0
7_Santander-1997-no-fee-mentioned-pie.flv	1	0	0	0
8_Santander-1997-no-fee-mentioned-piev2.flv	1	0	0	0
9_Santander-1997-account-in-yr-name-or-cuenta-concentradora-you-decide.flv	1	0	0	0
1_1997-Solida-Banorte-Max-14-cents-for-every-10-pesos-de-salario-base.flv	0	1	0	0
2_1997-Solida-Banorte-russian-nesting-dolls-low-commission-good-returns.flv	0	0	0	1
3_1997-Solida-Banorte-no-fee-mentions-put-your-signature-on-right-afore-contract.flv	1	0	0	0
4_1997-Solida-Banorte-youll-rture-in-the-blink-of-an-eye-ask-about-commissions.flv	0	1	0	0
5_1997-Solida-Banorte-no-fees-mentioned-christmas-tree-reflections.flv	1	0	0	0
6_1997-Solida-Banorte-shell-game-low-commission-good-returns.flv	0	0	0	1
01_Tepeyac-1997-Innovators-solar-energy-nothing-about-afore.flv	1	0	0	0
02_Tepeyac-1997-Innovators-Genetics-nothing-about-afore.flv	1	0	0	0
03_Tepeyac-1997-Innovators-Ecology-nothing-about-afore.flv	1	0	0	0
04_Tepeyac-1997-Innovators-volcanology-nothing-about-afore.flv	1	0	0	0
05_Tepeyac-1997-Innovators-painting-nothing-about-afore.flv	1	0	0	0
06_Tepeyac-1997-Innovators-painting-nothing-about-afore_v2.flv	1	0	0	0
07_Tepeyac-1997-Innovators-cardiology-nothing-about-afore_v2.flv	1	0	0	0
08_Tepeyac-1997-Innovators-Genetics-nothing-about-afore_v2.flv	1	0	0	0
09_Tepeyac-1997-Innovators-painting-nothing-about-afore_v3.flv	1	0	0	0
10_Tepeyac-1997-Innovators-archeology-nothing-about-afore.flv	1	0	0	0
11_Tepeyac-1997-Innovators-archetecture-nothing-about-afore.flv	1	0	0	0
12_Tepeyac-1997-the-sure-bridge-to-your-future.flv	1	0	0	0
13_Tepeyac-1997-Innovators-robotics-nothing-about-afore.flv	1	0	0	0
14_Tepeyac-1997-Innovators-music-nothing-about-afore.flv	1	0	0	0
15_Tepeyac-1997-Innovators-communications-nothing-about-afore.flv	1	0	0	0
16_Tepeyac-1997-Innovators-solar-energy-nothing-about-afore_v2.flv	1	0	0	0
17_Tepeyac-1997-Innovators-photography-nothing-about-energy.flv	1	0	0	0
18_Tepeyac-1997-Sponsors-Pavarotti-concert-in-Chichen-Itza.flv	1	0	0	0
19_Tepeyac-1997-the-sure-bridge-to-your-future_2.flv	1	0	0	0
10_Banamex-1998-no-fee-mentioned-sleep-well-knowing-backed-up-by-largest-bank.flv	1	0	0	0
11_Banamex-1998-no-fee-mentioned-soccer-best-team.flv	1	0	0	0
12_Banamex-1998-soccer-no-fee-mentioned.flv	1	0	0	0
16_Bancomer-1998-lowered-their-commission.flv	0	1	0	0
9_1998_Bital_reading_of_will_bequeaths_advice_to_son.flv	1	0	0	0
1_1998_Consolidar_AFJP_no_fee_mentioned_blind_soccer_ref.flv	1	0	0	0
2_1998_Consolidar_AFJP_no_fee_mentioned_cardboard_soccer_ref.flv	1	0	0	0

3_1998_Consolidar_AFJP_3-point-3_commission_forever_young.flv	0	1	0	0
05_Garante-1998-no-fee-mentioned-the-retirement-you-want-short.flv	1	0	0	0
13_Garante-1998-it-doesnt-cost-anything-just-bring-IFEt.flv	1	0	0	0
29_Garante-1998-signup-today-and-relax-about-the-future.flv	1	0	0	0
30_Garante-1998-signup-today-and-relax-about-the-future-v2.flv	1	0	0	0
6_1998_Inbursa_lowest_commission_highest_returns.flv	0	0	0	1
1_ING_Afore_1998_at_ease_about_my_retirement.flv	1	0	0	0
2_ING_Afore_1998_good_returns_and_service.flv	0	0	1	0
18_Previnter-1998-working-so-your-money-doesnt-lose-value.flv	0	0	1	0
1_Principal-1998-no-fee-mentioned-my-future-is-insured-v1.flv	1	0	0	0
2_Principal-1998-no-fee-mentioned-my-future-is-insured-v2.flv	1	0	0	0
8_Profuturo-1998-no-fee-mentioned-the-intelligent-investment.flv	1	0	0	0
25_Santander-1998-no-fee-mentioned-you-can-still-sign-up-with-us.flv	1	0	0	0
26_Santander-1998-services-card-acct-statement-no-fee-mentioned.flv	1	0	0	0
1_1999-banorte-general-no-fee-mentioned-life-passes-in-a-flash-long-version.flv	1	0	0	0
2_1999-banorte-general-no-fee-mentioned-life-passes-in-a-flash-short.flv	1	0	0	0
3_Principal-1999-female_construction_mgr_excellent_returns.flv	0	0	1	0
4_Principal-1999-no-fee-mentioned-cutting-diamond-brilliant-future.flv	1	0	0	0
<i>TOTAL PERCENTAGE IN ADD TYPE</i>	<i>81.1%</i>	<i>6.1%</i>	<i>8.5%</i>	<i>3.8%</i>

APPENDIX TABLE XI: LIST AND DESCRIPTION OF CONSAR ADVERTISEMENTS  
FROM INCEPTION PERIOD IN NIELSEN-IBOPE VIDEO ARCHIVE

File Name and Description	Appeals to Emotion	Alludes to Fees	Alludes to Returns or Fees	Alludes to Returns and Fees
1_1996_Consar_No_Mention_of_Afores_ask_your_employer_for_paperwork_to_consolidate_your_accounts.flv	1	0	0	0
2_1996_Consar_No_Mention_of_Afores_ask_employer_for_statement.flv	1	0	0	0
3_1996_Consar_No_Mention_of_Afores_your_only_account.flv	1	0	0	0
4_1996_Consar_No_Mention_of_Afores_very_poor_audio.flv	1	0	0	0
5_1996_Consar_Choose_the_Afore_thats_best_for_you.flv	1	0	0	0
6_1996_Consar_No_Mention_of_Afores_cuenta_individual.flv	1	0	0	0
7_1997_Consar_No_Mention_of_Afores_current_retires_will_not_be_affected_by_changes.flv	1	0	0	0
8_1997_Consar_No_Mention_of_Afores_know_your_rights.flv	1	0	0	0
9_1997_Consar_No_Mention_of_Afores_respectable_retirement.flv	1	0	0	0
10_1997_Consar_No_Mention_of_Afores_consar_protecting_your_future.flv	1	0	0	0
11_1998_Consar_Afores_you_can_withdraw_every_6_mos_or_save_more.flv	1	0	0	0
12_1998_Consar_guarantees_your_Afore_is_well_managed.flv	1	0	0	0
13_1998_Consar_Afore_account_statement_at_least_once_yearly.flv*	0	1	0	0
14_1998_Consar_you_can_choose_the_Afore_thats_best_for_you.flv	1	0	0	0
15_1999_Consar_psychic_ask_questions_that_matter.flv	1	0	0	0
16_1999_Consar_tomorrow_is_too_late_to_worry_about_retirement.flv	1	0	0	0
17_1999_Consar_no_mention_of_afores_take_care_of_your_retirement_savings.flv	1	0	0	0
<i>TOTAL PERCENTAGE IN ADD TYPE</i>	<i>94.1%</i>	<i>5.9%</i>	<i>0.0%</i>	<i>0.0%</i>

\*Add only says you can see your deposits and fees on the statement.

## A.6 System Background: Further Details

### A.6.1 Applicants and the Application Process

Mexico instituted its current privatized social security system on July 1, 1997. The system established individual ownership over retirement account contributions, and was designed to reform the previous pay-as-you-go system in a way that would increase financial viability, reduce inequity, and increase the coverage and amount of pensions.<sup>10</sup> The government approved private investment managers, the Afores mentioned in the text, to manage the individual accounts and established CONSAR (*Comision Nacional del Sistema de Ahorro para el Retiro* [National Commission of the System of Savings for Retirement]) to oversee this new *Sistema de Ahorro para el Retiro* (SAR – System of Savings and Retirement).

Firms that applied to be Afores needed to meet minimum capital requirements and have experience in the financial sector in Mexico. Potential Afores submitted feasibility studies to demonstrate a viable business plan that would be profitable in ten years at a rate of return for a competitive insurance company. These feasibility studies included fee schedules, advertising expenditures and projected client size, assets under management, and monthly flows into accounts. Twenty-four firms submitted applications and feasibility studies, and of those seventeen were approved to operate. Appendix Table X lists the firms who applied.<sup>11</sup>

Two of the rejected applicants, IXE and Scotia (Inverlat) entered the market several years later. Both exited not long after entering (see table entries). Since this initial group of successful applicants began operation at the inception of the system, several Afores have exited and/or entered the market. At most there have been twenty-one Afores in the market, and at a minimum there have been eleven. The peak occurred in December of 2006 after a handful of firms entered the market (see Duarte and Hastings (2009)), and the trough occurred in July of 2002, right before the reforms to the switching rules that gave the Afore who a person wanted to switch to the authority to complete the registration and switch the account (as opposed to the right residing with the Afore who was to lose the account).

### A.6.2 Assessing the Competitiveness of Fees

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<sup>10</sup> PowerPoint presentation by CONSAR on “Modernization of the Mexican Pension System,” New York, February, 2005.

<sup>11</sup> Source: Historical records from CONSAR.

At the end of the first year, CONSAR conducted an internal study to demonstrate the success of the system to congressional and executive overseers.<sup>12</sup> The study outlined CONSAR's approach to ensure competition in the system as well as their evaluation of how well the system operated in the first year. The following are some key points from this study.

First, when the system started in 1997, CONSAR did not enforce an explicit upper limit for the Afore fees, but trusted that fees would reduce to competitive levels given the large number of firms in the market.<sup>13</sup> CONSAR's position was that firms would enter, advertize and compete on fees, for customers who would choose a fund manager with low fees to save more money for retirement. Enrollments were much higher than predicted in the viability models submitted by the Afores. This was seen as a major success of the system. It also implied that Afores were more profitable than the original business models suggested. CONSAR expected competitive pressures described above to quickly erode fees to competitive levels.

Second, the report compared fees in Mexico to the main benchmark for pension reform in Latin America – the Chilean system which was established in 1984. At the time the Mexican System started, there were thirteen fund managers in Chile (called AFP's in Chile). At that time, AFP's charged flow fees and annual enrollment fees and a fixed fee per contribution. A list of these firms and their fees appears in Appendix Table XI.

Chileans must contribute 10% of their wage to the social security account, and the fee is taken out of their wage in addition to the mandatory 10% contribution. In other words, all Chileans deposit 10% of their taxable earnings to their social security account. A worker in an AFP charging a 2.85% fee would then have an additional 2.85% of his salary deducted from his paycheck.

To make the comparison between fees in Chile and fees in Mexico, CONSAR constructed an Equivalent Fee on the Wage (as opposed to the later defined Equivalent Fee on the Balance studied in Duarte and Hastings (2009)). This was a single fee taken as a percent of wage that would result in the same balance at the end of a 25 or 40 year holding period that the Afore's actual combination of balance and flow fees would yield. CONSAR chose a wage, balance and tenure length for this calculation, and then calculated using the Chilean fees and the Mexican Fees. The straight (not market share weighted) average across firms in each country was roughly the same – 1.98% for Chile and 1.92% for Mexico.<sup>14</sup> This calculation was taken as evidence that fees in the first year of the Mexican system were not too high when compared to an established system in Chile. However, Chileans contribute almost twice as much to

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<sup>12</sup> August, 1998 report on the system. CONSAR. The report was internally produced and used and does not have an official publication title.

<sup>13</sup> Page 4, 4<sup>th</sup> paragraph, chapter "*Evolucion de las comisiones de las Afores durante el primer ano de operacion*" in August 1998 report on the system, CONSAR Agosto 1998.

<sup>14</sup> Page 9, last paragraph, page 10, 1st paragraph and figure 10, chapter "*Analisis comparativo de las comisiones que cobraran las Afores,*" August 1998 report on the system.

their accounts from their wage as Mexicans do (10% versus 6.5%). Thus, if this calculation had been reported as a percent of contributions rather than as a percent of wage, the fees in Mexico would have been nearly twice the size as those in Chile ( $1.92/6.5=0.295$  versus  $1.98/11.98=0.165$ ). Interestingly, one comparison that does not appear in the initial report is a calculation of the real annual rate of return earned on the Afore accounts at the current fee levels under different assumptions of contribution levels and rates.

It was not until later in the subsequent administration that the size of fees and lack of competition in the system became a prominent focus. This was in part due to the slower-than-expected growth of revenues in the system accounts. This led to several reforms to increase competition starting in 2002.<sup>15</sup> One of the later reforms introduced a voluntary contribution account in which workers could invest in SEIFORES for their supplemental retirement savings. They also introduced voluntary retirement savings accounts for Independent Workers; workers who own their own businesses (independent contractors).

Several Afores offered these voluntary accounts as well as accounts for Independent Workers. Afores were allowed to charge different fees for these accounts than they did for the required pension accounts, even though all of these accounts are held in the same investment. Appendix Table XII shows these relative fees as of December 2006. Though these accounts are held in the same investment fund, the fees vary greatly between the social security accounts and those for Independent Worker or Voluntary accounts, with the fees for the latter often much smaller than the fees for the traditional social security accounts.

### A.6.3 Assessing the Effectiveness of Sales Agents

The August 1998 report also examined enrollment and the role of sales agents. For enrollment, CONSAR noted that the enrollment to the Afores during the first months of the system greatly exceeded the expectations set out in the viability studies.<sup>16</sup> This in turn implied that on later evaluation, the Afores would post much larger profits than they had presented as part of the feasibility studies that justified the fees implemented and a rate of return equivalent to a competitive insurance company.

Interestingly, the report also analyzed the role of Sales Agents in the recruiting process. CONSAR analyzed the relationship between market share and fees charged. They found that that the

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<sup>15</sup> For example, reframing fees and requiring worker signatures that they had seen an official table of comparative Afore fees with each switching application was one such effort. The effects of this policy are discussed in Duarte and Hastings (2009).

<sup>16</sup> Page 15, 2<sup>nd</sup> paragraph, chapter “*Evolucion de las comisiones de las Afores durante el primer ano de operacion*,” August 1998 report.

Afores with higher fees also had higher enrollment.<sup>17</sup> CONSAR concluded that Afore fees were not the critical factor in a worker's decision of which Afore to choose, and that the marketing by Sales Agent was likely an important matter in Afore choice. According to the results of regressions of an Afore's total enrollment on a 15 year equivalent fee on an assumed salary and the number of sales agents the Afore employed in the first year, CONSAR found that the number of Sales Agents was a significant determinant of Afore market share, but the equivalent fee on the salary was not.<sup>18</sup> They also then calculated the Afore market share for the population with income equal or lower than 3 minimum wages and the population of affiliates with income higher than 3 minimum wages, and reran the regression. Using Afore market share from lower income, they found that the number of sales agent was the stronger and highly significant, but when using the Afore share from high income workers as the dependent variable, neither the equivalent fee nor the relative level of Sales Agents explained Afore overall market share. While this seems to contradict the overall conclusion of the report that competition was successful in the first year of the system, no further conclusions were drawn based on these results for state of competition and potential evolution of fees going forward.

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<sup>17</sup> Page 15, 3<sup>rd</sup> paragraph, chapter "*Evolucion de las comisiones de las Afores durante el primer ano de operacion*," August 1998 report.

<sup>18</sup> Pages 1-5 of chapter "*Afiliación al Nuevo Sistema de Pensiones: Principales Resultados*," August 1998 report. Each regression had 17 observations; one for each Afore.



APPENDIX TABLE XII: APPLICATIONS AND SURVIVAL OF AFORES FROM SYSTEM INCEPTION

Name	Partners	Filed Authorization	Submitted Plan?	Authorized?	Survived to 01/08?	Operating in 02/11?*
Banamex	Banamex-Accival	Y	Y	Y	Y	Y
Bancomer	Bancomer, Aetna, Santa Maria International	Y	Y	Y	Y	Y
Bital	ING America Insurance Holding	Y	Y	Y	N - 11/02	N - 11/02
Garante	Banca Serfin, Citibank, AFP Habitat	Y	Y	Y	N - 02/02	N - 02/02
Genesis Metropolitan	Seguros Genesis; Metropolitan Life Insurance	Y	Y	Y	N - 09/99	N - 09/99
Inbursa	Banco Inbursa; Cia de Servicios Inbursa	Y	Y	Y	Y	Y
Previnter	Inverlat, AIG Co., Bank of Nova Scotia; Bank of Boston	Y	Y	Y	N - 10/98	N - 10/98
Tepeyac	Seguros Tepeyac; MAPFRE International	Y	Y	Y	N - 03/03	N - 03/03
Bancrecer-Dresdner	Bancrecer, Dresdner, Allianz Mexico Insurance Co.	Y	Y	Y	Y**	Y**
Profuturo GNP	Grupo Nacional Provincial, Provida Internacional, Banco Bilbao Vizcaya	Y	Y	Y	Y	Y
Santander	Santander Investment, Banco Santander Mexicano	Y	Y	Y	N - 01/08	N - 01/08
Banorte	Banorte, Belgica, Maatschappij Graafschap Holland N.V.	Y	Y	Y	Y	Y
Capitaliza	GE Capital Assurance, GE Capital de Mexico	Y	Y	Y	N - 12/98	N - 12/98
XXI	Mexican Social Security Institute (IMSS), Aseguradora Hidalgo, IXE grupo financier	Y	Y	Y	Y	Y
Principal***	Banca Confia, Principal International	Y	Y	Y	Y	Y
ING	ING America Insurance Holding;	Y	Y	Y	Y	Y
Atlántico Promex	Banca Promex, Banco del Atlantico; GBM, Valores Finamex	Y	Y	Y	N - 10/98	N - 10/98
Zurich	Zurich Life Insurance Co., private investors, Gabriel Monterrubio	Y	Y	Y	N - 07/02	N - 07/02
NCC – Pepsico	National Chamber of Commerce - Pepsico	Y	Y	N	--	--
IXE	IXE	Y	N	N	Entered - 07/04	N - 06/09
Cablevision	Cablevision	Y	N	N	--	N
Inverlat	Grupo financiero Scotia Inverlat	Y	N	N	Entered - 11/06+	N - 01/10
Pulsar – Asemex	Pulsar – Asemex	Y	N	N	N	N

Source: Historic documents from CONSAR. \* Several Afores have entered and exited over the years. As of February 2011 there were 14 Afores in the market. \*\* Operating as HSBC.\*\*\* Applied as Confia-Principal. + Entered as Scotia Afore.

APPENDIX TABLE XIII:  
MANAGEMENT FEES OF CHILEAN FUND MANAGERS (AFPS),  
NOVEMBER 1997

AFP	Fee as % of worker's salary	Fixed Fee in pesos	Fixed Fee in equivalent US\$ *
APORTA	3.40%	\$ 0	\$0.00
BANSANDER	2.99%	\$ 0	\$0.00
CUPRUM	2.99%	\$ 0	\$0.00
FOMENTA	3.25%	\$ 0	\$0.00
HABITAT	2.84%	\$ 0	\$0.00
MAGISTER	2.99%	\$ 500	\$1.18
PLANVITAL	2.55%	\$ 1,495	\$3.52
PROTECCION	2.94%	\$ 0	\$0.00
PROVIDA	2.85%	\$ 195	\$0.46
QUALITAS	2.89%	\$ 0	\$0.00
SANTA MARIA	2.93%	\$ 100	\$0.24
SUMMA	3.15%	\$ 230	\$0.54
UNION	2.98%	\$ 290	\$0.68

Source: Statistics Office, Department of Pensions of Chile. \* In November 1997, US\$1 was equivalent to \$424.96 Chilean pesos.

APPENDIX TABLE XIV:  
FEES CHARGED BY AFORES ON DIFFERENT TYPES OF ACCOUNTS IN THE SAME  
INVESTMENT FUND (DECEMBER 2006)

Afore	Social Security Accounts		Independent Worker Accounts		Voluntary Accounts	
	Flow Fee <sup>1</sup>	Balance Fee <sup>2</sup>	Flow Fee	Balance Fee <sup>2</sup>	Flow Fee	Balance Fee <sup>2</sup>
Actinver	1.02	0.20	0.0	1.25	0.0	1.25
Afirme Bajío	0.62	0.24	0.0	0.24	0.0	--
Ahorra Ahora	0.90	0.20	0.0	0.20	0.0	--
Argos	1.07	0.33	0.0	0.33	0.0	--
Azteca	0.90	0.40	0.0	--	0.0	--
Banamex	0.75	1.48	0.0	--	0.0	1.00
Bancomer	1.20	0.50	0.0	1.00	0.0	1.00
Banorte	1.25	0.40	0.0	0.40	0.0	--
Generali	0.92	0.30	0.0	0.30	0.0	--
Coppel	0.90	0.31	0.0	0.31	0.0	--
De la Gente	1.40	0.40	0.0	--	0.0	--
HSBC	0.50	0.50	0.0	--	0.0	--
Inbursa	1.32	0.30	0.0	--	0.0	--
ING	1.03	0.20	0.0	--	0.0	--
Invercap	1.10	0.33	0.0	--	0.0	--
IXE	1.23	0.25	0.0	1.725	0.0	1.725
Metlife	1.60	0.35	0.0	--	0.0	--
Principal	1.64	0.50	0.0	1.25	0.0	1.25
Profuturo	1.28	0.50	0.0	--	0.0	--
GNP	1.22	0.26	0.0	0.26	0.0	--
Santander	1.30	0.20	0.0	--	0.0	--
Scotia						
XXI						

Source: Consar. <sup>1</sup>SBC: basic salary for calculations is defined as 6.5% of the wage. Thus a Flow Fee of 1.02% charges (1.02/6.5)% of each contribution as an up-front load fee. <sup>2</sup> Annual percentage rate charged on assets under management.