

Pension Systems in Mexico: evolution and challenges

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Pension Systems in Mexico

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Development of Social Security

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Section I Development of Social Security in Mexico

- The modern concept of Social Security in Mexico had its origin as a constitutional law (1917).
- The efforts to expand the institutional social security infrastructure in the country were not part of an explicit and comprehensive public policy.
- Given this situation, the country does not have a national pension system but rather several institutional subsystems.

Cor I	nstitution 1917								
Private Sector Workers		1972 Infonavit Housing	1992 SAR	Social Security Law Reform	1997 SAR Law	SAR Law Reform	20 SAR Ref	Law	2007 SAR Law Reform
Public Sector Workers	General ISSSTE CIVI Law Pension Law	FOVISSSTE Housing		Reform		2002 SAR Law Reform			2007 ISSSTE La Reform
Open population	1943 Department of Health and Assistance	Special Regimes (ISSFAM, others)	1983 General Health Law		1999 Reforms to Special Regimes	SAR Law Reform	General Health Law and Public Insurance Reform	2006 Public Social Security System	2007 Sedesol Senior Adults

Section I

Development of Social Security in Mexico

- Social security benefits and in particular those corresponding to pension plans are very heterogeneous.
- Federal and state institutions distribute publicly available pensions both at the level of federal (for public workers ISSSTE and IMSS for private workers) as well as state government institutions (ex. Pemex oil company).

Federal ISSSTE*	State ISSSTE**	IMSS
 Health care Workplace liability insurance Disability and life insurance Retirement, due to age and for time served insurance Severance at old age insurance Full retirement services for pensioneers Total indemnity Mortgage loans Medium-term loans Short-term loans Funeral services Contribution to SAR Day-care centers Social benefits Sale and lease of housing 	 Health care Workplace liability insurance Workplace accident insurance Non-professional illness insurance Loans for retirement Pension due to disability, cause of death Life insurance Short-term loans Long-term loans Housing loans 	 Health care Workplace liability Disability and life Retirement for time served and severance at old age (IMSS workers) Housing loans Retirement Savings System (SAR), (affiliates) Day-care centers Social benefits

Section I

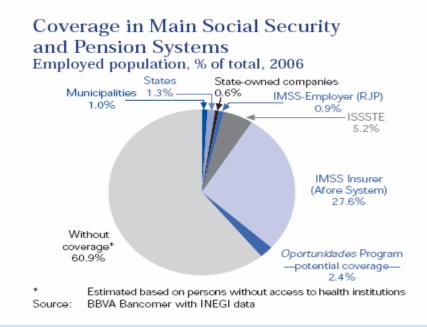
Development of Social Security in Mexico

- Various public departments, agencies and local governments often sign agreements with ISSSTE or IMSS to partially or totally receive their services.
- Ex. Workers of the public development banks (Nafin, Bancomext, etc) and Federal Electricity Commission (CFE) have a pension plan and in addition pay fees to the IMSS.
- Some local governments have their own social security systems but most partially or totally contract their services with the ISSSTE.

Pemex	CFE	ISSFAM				
Workplace liabilityIndemnityRetirementsLife insuranceHousing loans	 Life insurance due to death from natural cause Workplace accident insurance Contribution to SAR CFE housing fund IMSS: Health-care services Workplace liability Disability and life Social benefits 	 Full health-care services Lifetime retirement pension Lifetime pensions for military survivors Retirement insurance Military service insurance Sole economic compensation Funeral expenses for workers and survivors Work Fund Savings Fund Mortgage loans Aid to retired military personnel Scholarships for workers' children Social benefits Sale and lease of housing 				
* Services current prior to the reform of the ISSSTE Law in March 2007 ** Also considered were ISSSTELEON, ISSTAB, ISSTEY and ISSSEMOR Source: Legislation corresponding to each institution						

Section I Development of Social Security in Mexico

- Despite the enormous importance of IMSS and ISSSTE as social security institutions on a national level, the scope of their coverage is **limited** when we consider the economically active population or the country's total population. Pension plans are for formal workers and their beneficiaries only.
- Coverage is limited for institutional reasons, ex. independent workers do not have the legal obligation to become affiliated and pay fees into a pension system.
- The aim of the Opportunities Program is to protect the open population (who does not have social security), especially those with low income levels.



Section I

Development of Social Security in Mexico

Reforms in the IMSS pension system:

A new pension system based on defined-contributions with the guarantee of a pension for IMSS-affiliated workers.

- The Social Security Law (in effect since 1973) was modified in July 1st, 1997.
- The IVCM plan (that provided: disability, old age, severance at old age, and life insurance coverage) was plagued by serious financial imbalances.
- Insurance for retirement, old age and severance (RCV) were removed from the Institute (IMSS)
- The financial management of the resources was transferred to the Retirement Fund Administrators (AFORE), which could manage one or more Pension Funds.
- The operations involved in collecting fees and the certification of RCV rights remained in the hands of the Institute (IMSS)

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- 1) The new pension system offered workers greater legal security with regards to their pension since it enabled each individual to have an individual savings account in the AFORE of their choice.
- The resources in this account were also recognized as their property.
- Mandatory tripartite contributions—from the affiliate himself, from the employer, and from the federal government- to the system of individual accounts in the Retirement Savings System (SAR).

Financial regime	IMSS	ISSSTE
Contributions	6.5% SBC	11.3% SBC
	6.3% 3BC	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Joint savings (state co-financing)	n.a.	3.25 x 1 peso*
Guaranteed pension	1 SM	2 SM

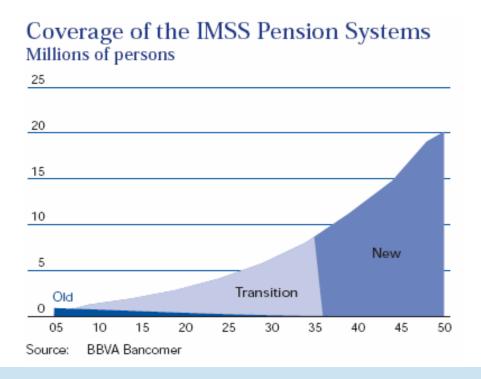
- 2) The system has diminished the fiscal cost of the IMSS "pay-as-you-go system", it would have increased given that the population is ageing.
- Grandolini and Cerda (1998) emphasized that the IMSS reform could not be postponed any longer because of the serious financial imbalances in IVCM insurance. These researchers reported that in accordance with the official estimates of the time, the actuarial deficit would have reached an amount equivalent to 141% of 1994 GDP on a 74-year horizon.

Present Value of Future Deficits in the IMSS-IVCM Insurance Pension December 31, 1994, thousands of 1994 pesos

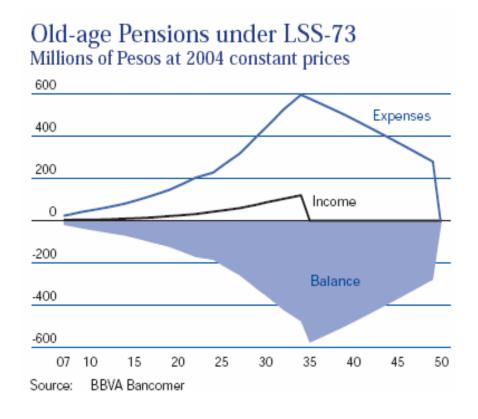
Assets		Liabilities						
Reserves Present value of future contributions Current affiliates Future generations	3.25 683.67 179.74 503.93	Present value of old-age pensions Present value of future obligations Current generation Future generations	96.93 2,390.61 1,017.40 1,373.21					
Total assets	683.92	Total liabilities	2,487.54					
Present Value of Future Pension Deficits: 1,800.62 (141.5% of GDP)								
Source: Grandolini and Cerda (1998)								

Two pension models during a long period of transition

- Starting in July 1st, 1997 all workers newly affiliated to the IMSS were incorporated into the new defined-contribution scheme,
- All workers who were paying fees under the defined-benefit system up to June 30th, 1997, at the moment of their retirement they were given the right to choose between the two plans, that which favored them best as pensioners.

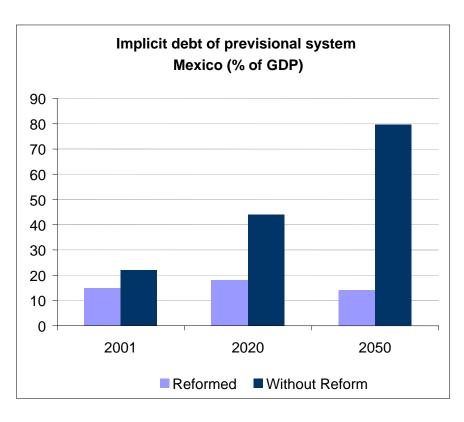


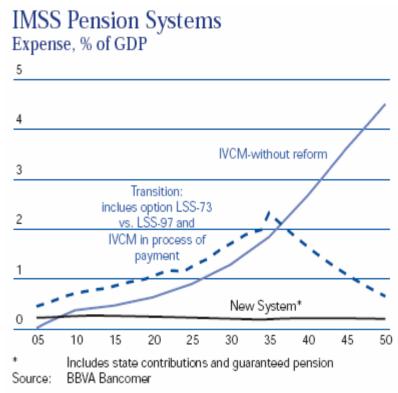
- Transition generation (people who affiliated before 1997) hold generous pensions, so there are no incentives for frequent contributions and
- Positive factor of this reform not fiscal cost



56.4% of the GDP (2004)

In summary, the reform was successful in diminishing fiscal costs, even with the effect of the transition generation

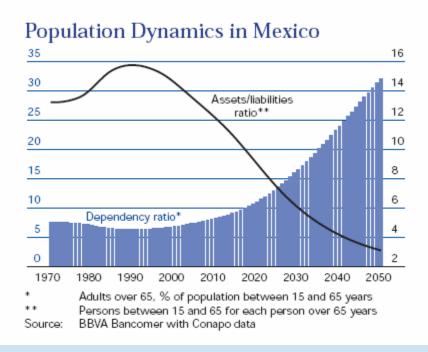




Source: Zviene y Packard (2002)

3) The reform system is financially feasible and immune from demographic trends

- The reduction in birth rates and the aging of the population have led to a situation in which the number of active workers for each retired worker is increasingly smaller, while, at the same time, advances in health care and the increase in life expectancy have increased the time during which the pensions are paid.
- Old models (defined benefit BD) are losing their economic viability as they do not have appropriate long-term funding.

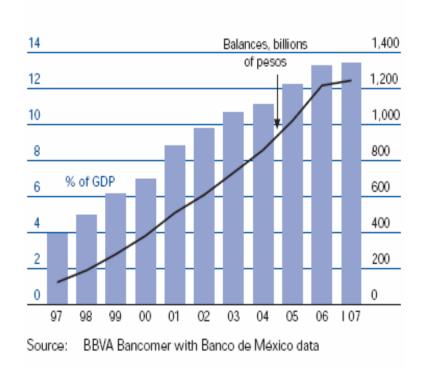


Positive factors of IMSS Reforms

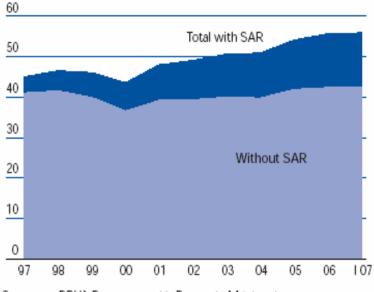
4) Increase domestic savings

The SAR resources managed by AFORE are now* the main source of growth of the country's financial and long-term savings. These resources *represent an increasingly greater percentage of the economy.

SAR Resources



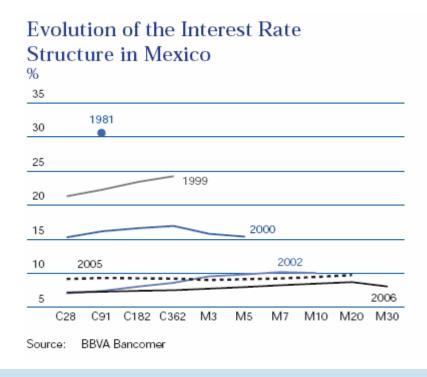
Financial Savings With & Without SAR % of GDP

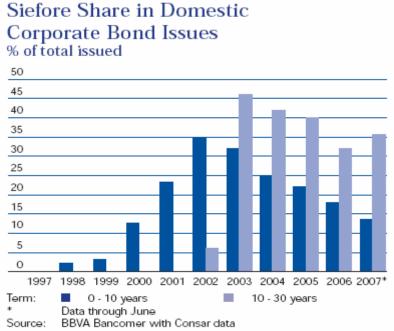


Source: BBVA Bancomer with Banco de México data

5) Development of *domestic financial markets

A positive correlation exists between institutional investment such as pension funds, and the development of financial markets. On the demand side, the contribution of SIEFORE to the effort to extend the curve of government interest rates has created, a benchmark for the placement of corporate bonds. In addition, the SIEFORE, as institutional investors, has registered a growing demand for corporate debt instruments.

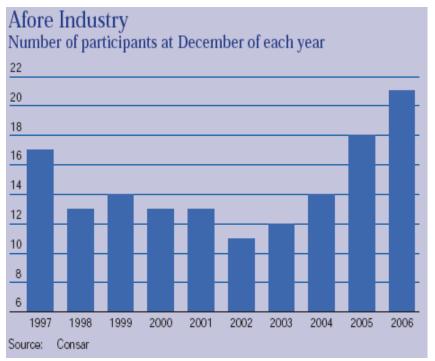


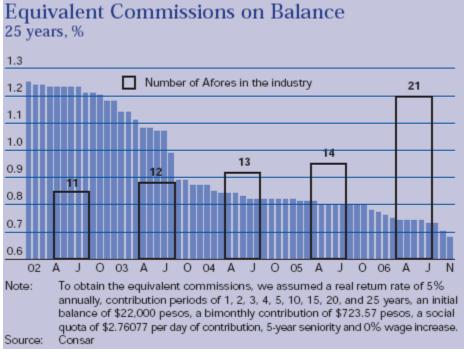


Positive factors of IMSS Reforms

6) Increasing competition that promotes lower commissions

- As of March 15, 2008, the commissions for cash flow will be eliminated and the AFORE will only be allowed to charge commissions on the account balance
- Workers will only have the right to transfer their individual account from one AFORE to another after a year or only to an Afore whose investment management funds have registered higher returns





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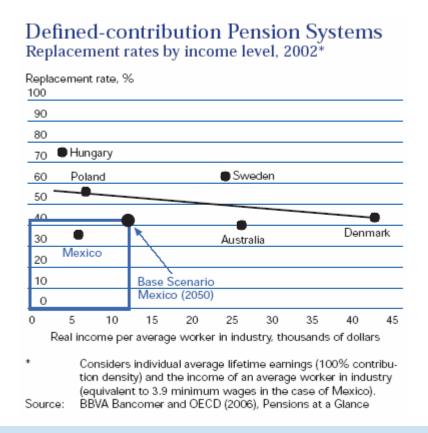
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Some challenges to 2nd generation reforms

1) Modest replacement rates

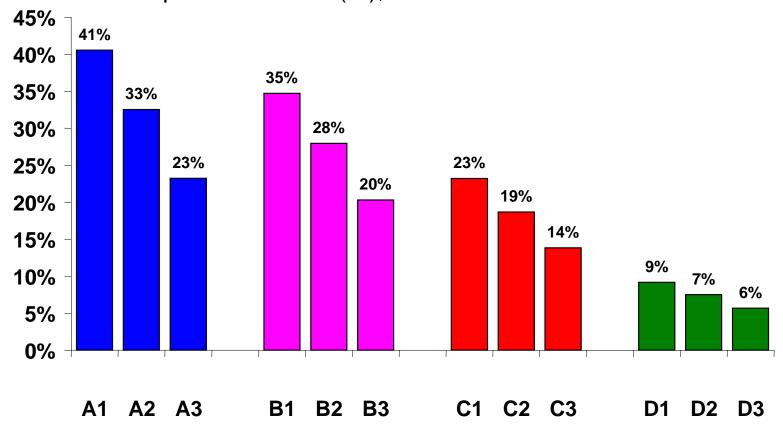
• The replacement rates that the IMSS defined-contribution plan will offer, will be relatively modest. These will be, on average, 43%, which is lower than the 52.7% average for the OECD countries.



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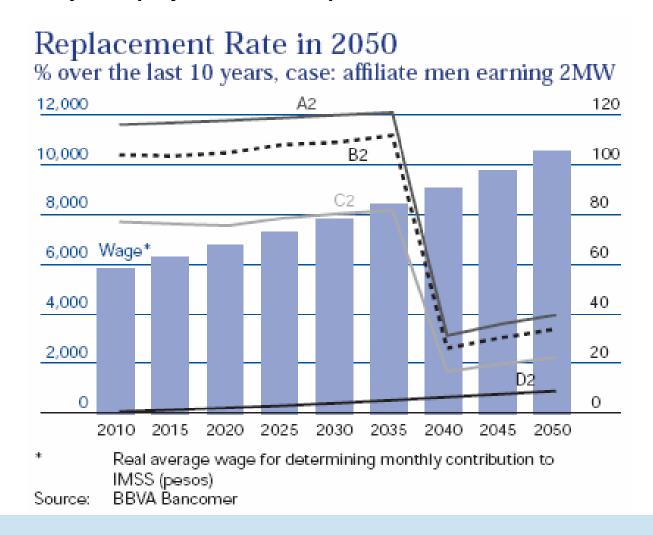
Section III Some challenges to 2nd generation reforms

Higher *density of contribution means higher replacement rates Replacement rate (%), Base scenario 2050



^{*/} Replacement rate over the last year

The system projects modest replacement rates



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Section III Some challenges to 2nd generation reforms

It is necessary to increase contributions

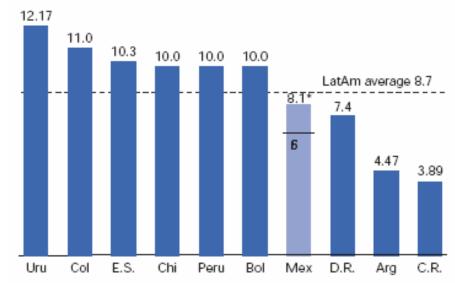
*Chile or LATAM average?

*Considering housing account?

Risks: labor force could become costly, discourage employment

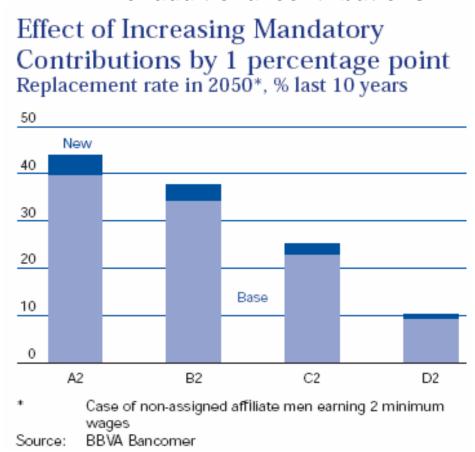
Contribution Rates for Capitalization % of worker's income

Mexico has lower contributions than Latam? average

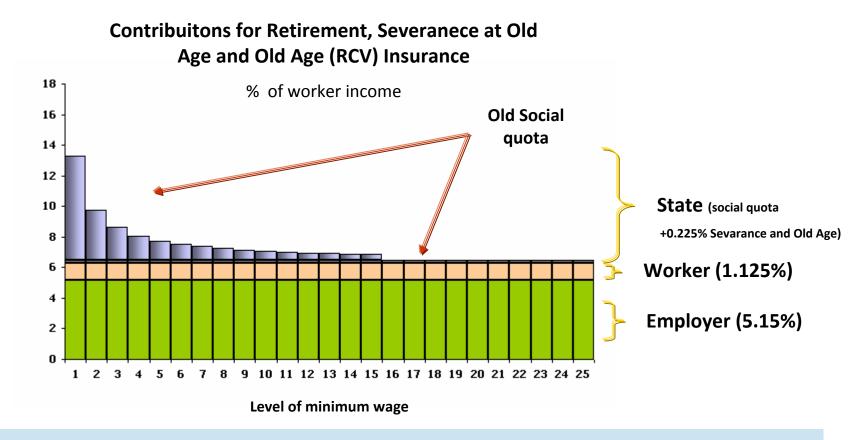


* Contribution for RCV 6.5% + social quota of 5.5% of the SMGVDF for each day of work (equivalent to 1.6% of the wage of an average worker earning 3.5 minimum wages) Source: AIOS Bulletin, Table No. 32 (December 2006)

¿How much will replacement rates increase with 1% of additional contributions?



Social quota: A monthly contribution by the federal government to the individual account for each day paid in and whose initial price was equivalent to 5.5% of the general current minimum wage in Mexico City on July 1st, 2007. The fixed value of that price will be updated quarterly per the national consumer price index.



In may 2009, a redistribution of government subsidies ("Social quota") was implemented. From that date it has been concentrated only to low income workers, lower to 3 minimum wages.

Contribuitons for Retirement, Severanece at Old Age and Old Age (RCV) Insurance

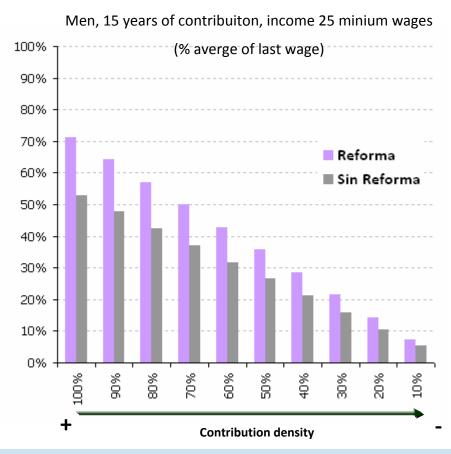




Redistribution of "social quota" increases replacement rates

- Positive and differentiated impact of the "social quota" in the contributions of lower-income workers.
- More contributions
 means better replacement
 rates for those workers.
 Also, a higher contribution
 density increase even
 more the replacement
 rates.
- The increase in benefits for those groups does not cause *sustainable fiscal costs.

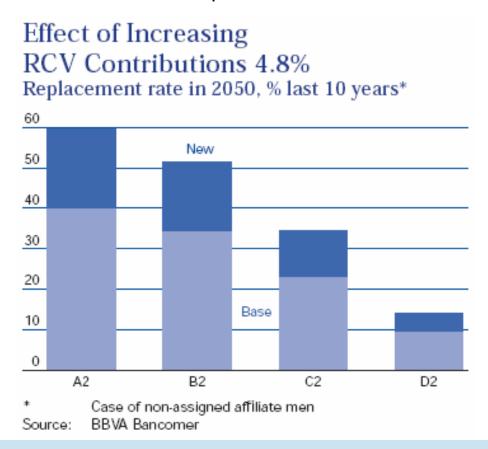
Pension Replacement rates

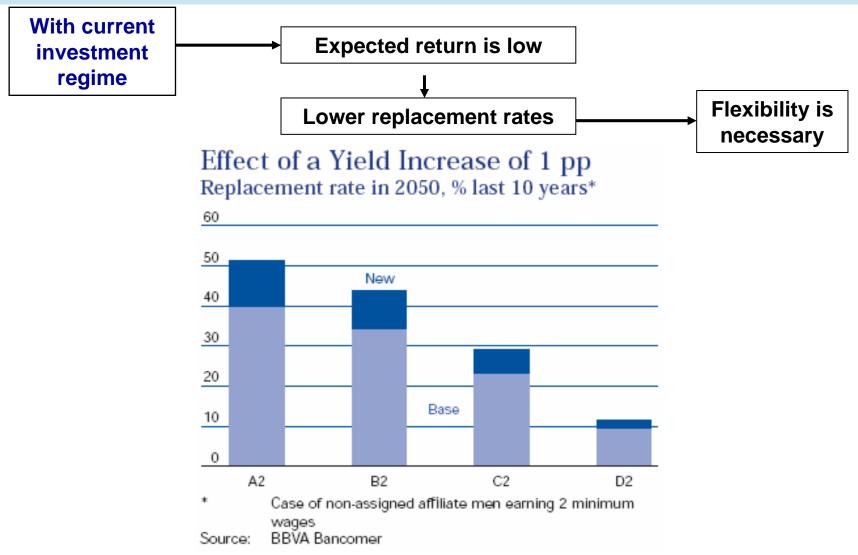


Some challenges to 2nd generation reforms

How to increase mandatory contributions?

Bringing mandatory IMSS contributions *in line with those of the ISSSTE by increasing them by 4.8%. This increase would elevate Mexico to contribution rates more in accordance with its development level.





Some challenges to 2nd generation reforms

July, 2007 main changes and innovations in investment regime:

- The number of basic SIEFORE was expanded from two to five. This expansion is only for worker under 56 years old, and therefore basic Siefore 1 remains unchanged.
- The affiliates can only choose to transfer to a Siefore with lower risk.
- Greater exposure to variable income assets. This will only be through protected capital notes and/or other instruments that are based on the permitted stock market indexes or subindexes and some in individual stocks.
- The risk exposure in variable income securities will be controlled by the level of value at risk (VAR) of the Siefore' net assets

Modification	s to	the	Sieror	e mve	stment	Regime
Cioforo			1 Coo		D: 10	A an arm

Siefore	Var. income ¹	Secur.inst.2	Risk ³	Age group⁴	Accounts⁵
Existing					
Basic 1	0	10	0.60	over 55	1.1
Basic 2	15	15	1.00	46 to 55	3.1
New					
Basic 3	20	20	1.30	37 to 45	5.7
Basic 4	25	30	1.60	27 to 36	9.2
Basic 5	30	40	2.00	under 27	18.7
Voluntary saving	s 30	40	2.00	All groups	37.7

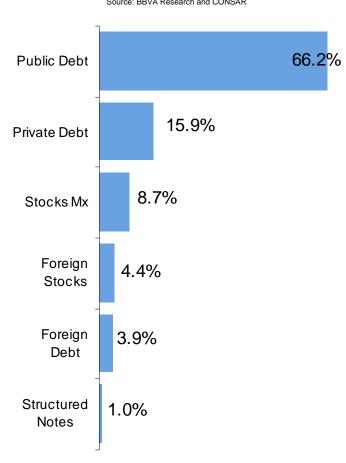
- Maximum % in variable income assets.
- Stock market instruments. Instruments or securities that represent credit rights. % of net assets
- 3 Risk parameter (VAR as % of assets)
- 4 Target age group (years)
- Potential accounts (millions), assuming that the assigned accounts have the same distribution by age as the non-assigned. Figures through March 2007.

Some challenges to 2nd generation reforms

More investment in capital markets one opportunity to increase returns

- The possibility that some of these pension funds can increase their exposure to a maximum of 30% in equity securities, already offers better conditions and tools for the Siefore to obtain better returns.
- In many developed countries, pension funds invest not only in equities and stock indexes but also in a wide range of asset types, which includes among others: real estate, infrastructure or private capital investments and expanded to stock indices of emerging economies.

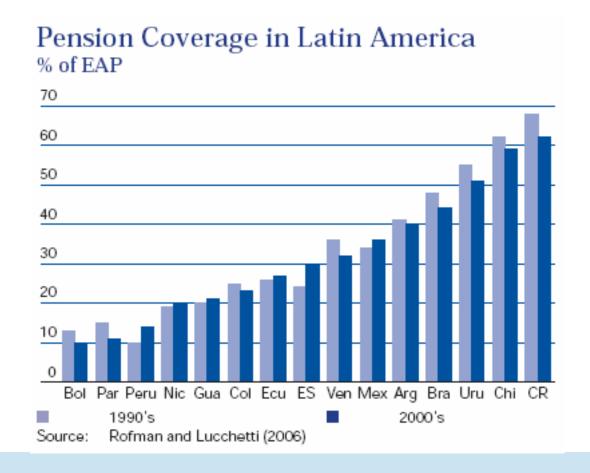
Portfolio diversification (% total)



Some challenges to 2nd generation reforms

2) Increase coverage of the pension system

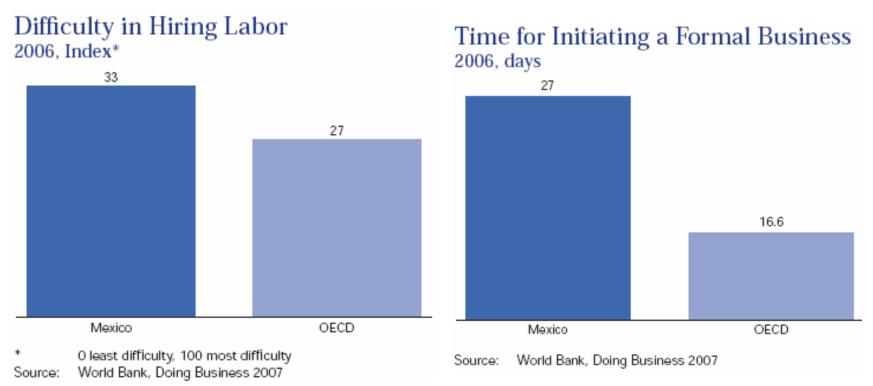
*Economic factors *also limit the advances in coverage and in the income level that the pension systems can offer to their affiliates.



Some challenges to 2nd generation reforms

Distortions in the labor markets

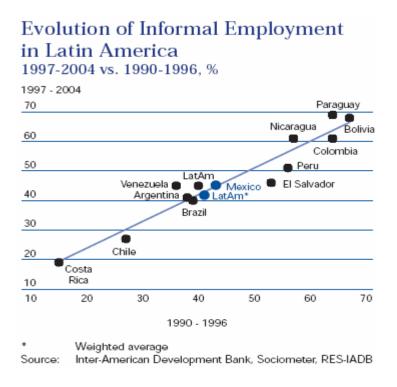
- There are serious obstacles in contracting workers in that it costs almost double to discharge them compared to the average OECD countries
- There is considerable crossing over between the formal and informal sectors which is closely related to *insufficient economic growth due to institutional deficiencies



Some challenges to 2nd generation reforms

The informal labor market is one of the main obstacles to the pension systems in achieving their objectives on the level of coverage and income replacement.

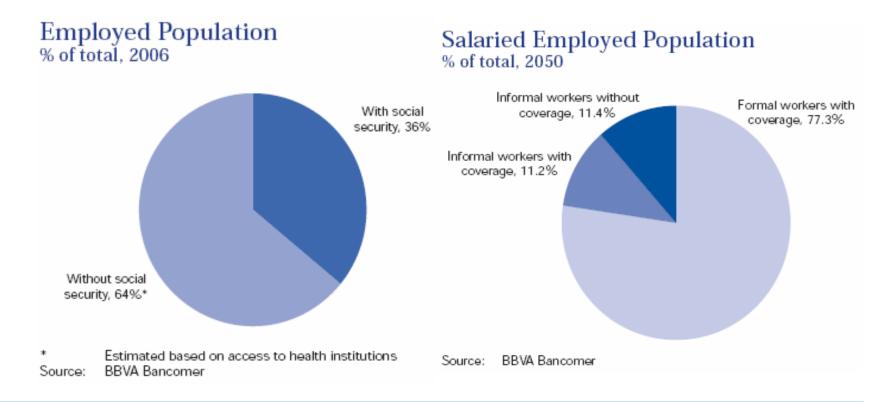
• In a defined-benefit system, failure to comply with the number of required weeks of fee payments can mean the permanent loss of rights for the affiliate. In the defined contribution model, it can involve low contribution density and therefore a low balance on hand available for retirement.



Some challenges to 2nd generation reforms

2) Increase coverage of the pension system

Public policy measures have not been developed that would allow incorporating independent and informal workers in the pension systems, simply due to two facts: 64% of the working population does not have access to social security services and 57% of the actively working population is outside the formal sector

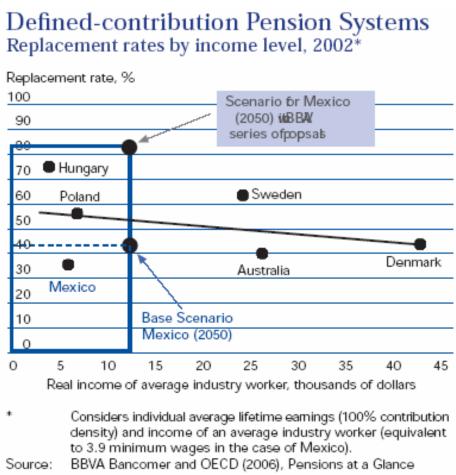


Section III In summary, some challenges to 2nd generation reforms

- 1) The system is incomplete and suffers lack of integration: it does not include public sector, independent workers and informal sector.
- 2) Modest private pensions With favorable macroeconomic and demographic scenarios, the system shows low coverage and replacement rates for the new generation.
- * Limitations are not system-idiosyncratic, but are related to lack of flexibility in labor markets that create low contribution densities, high volatility in formal labor, expansion of the informal sector, low wages, etc.
- * There is a low-density group (informal and independent workers) that require specific solutions.
- 3) A combination of proposals (portability, higher contributions, more flexibility in the investment regime, consideration of housing account, consideration of independent workers, reduce informality, etc) could allow * an increase in coverage and an improvement of replacement rates, in particular for low-density affiliates and in some cases for women.
- 4) In the macroeconomic front it is necessary for fiscal reform to support the system's reforms

In summary, *challenges to 2nd generation reforms

The system has the capacity to deliver better pensions with more adequate contribution* for the defined-contribution plan



Section III In summary, challenges to 2nd generation reforms

More Research and Proposals.... http://www.bbvaresearch.com

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Hacia el Fortalecimiento de los Sistemas de Pensiones en México: Visión y Propuestas de Reforma



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Toward the Strengthening of the Pension Systems in Mexico: Vision and Reform Proposals



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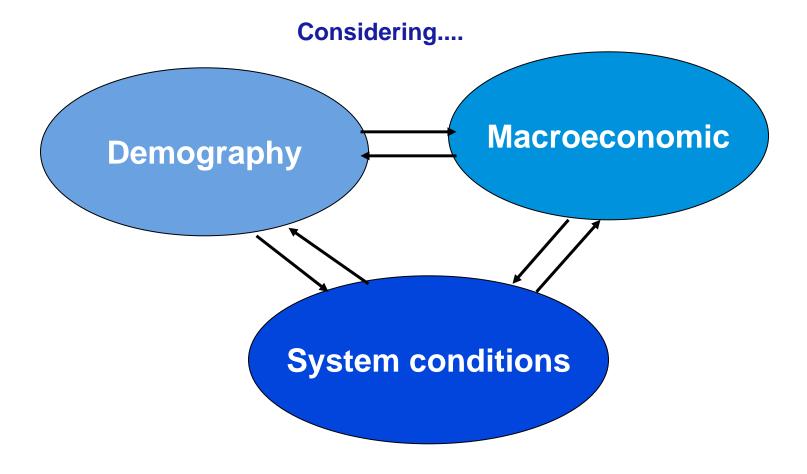
Challenges to 2nd generation reforms

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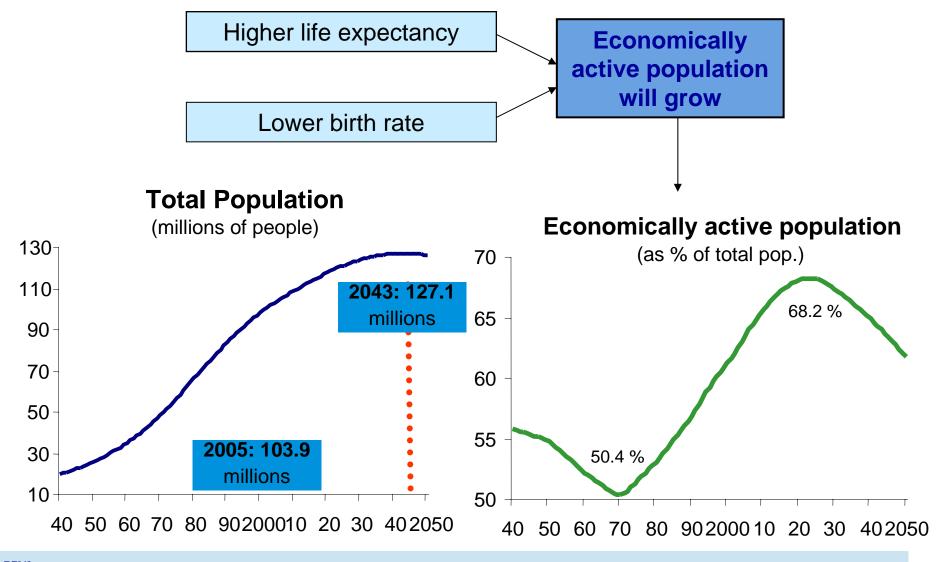
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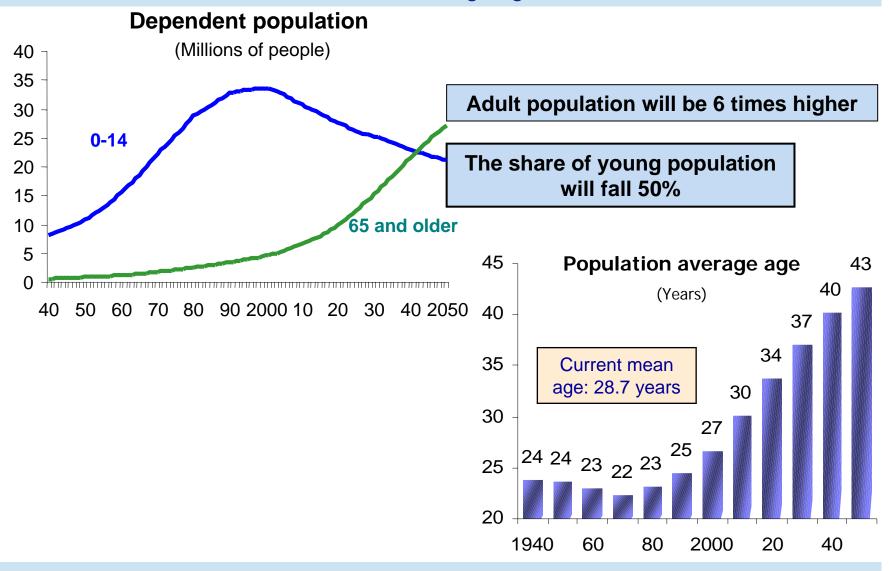
BBVA has developed a Pension System evaluation scheme



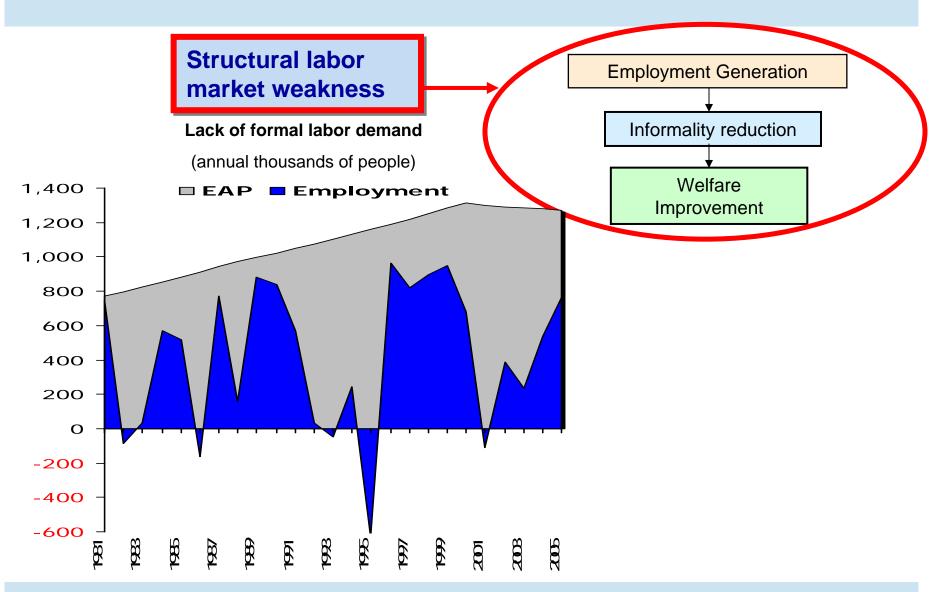
Population will continue growing until mid-2040



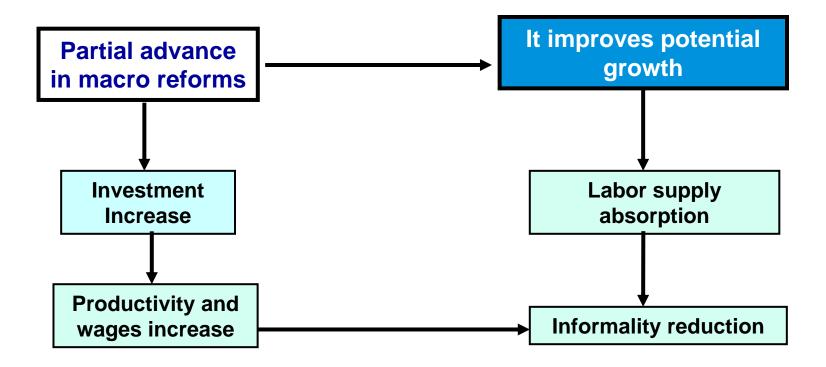
However, the 20's will witness the start of the Mexican population ageing



Some challenges for public policy

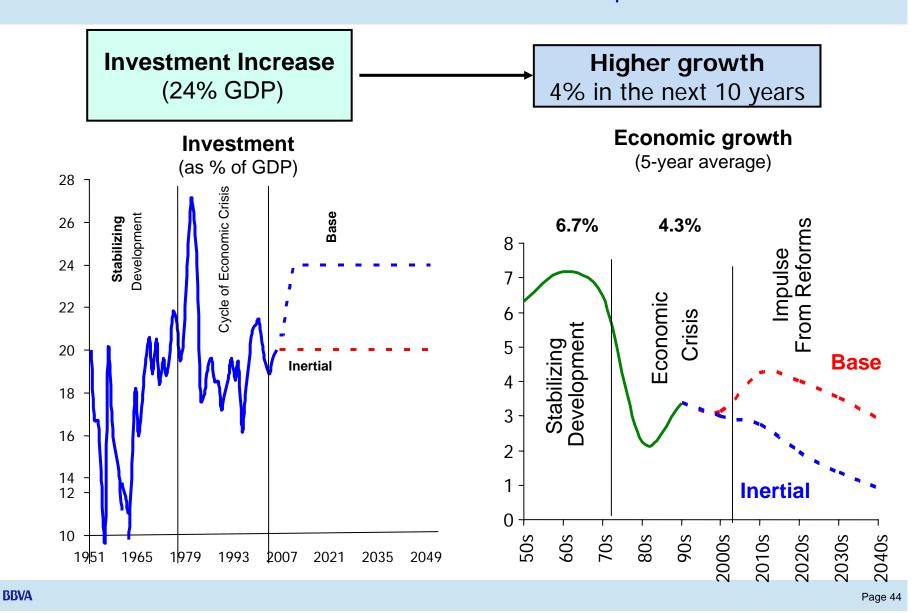


We have built a feasible and conservative macroeconomic (base) scenario

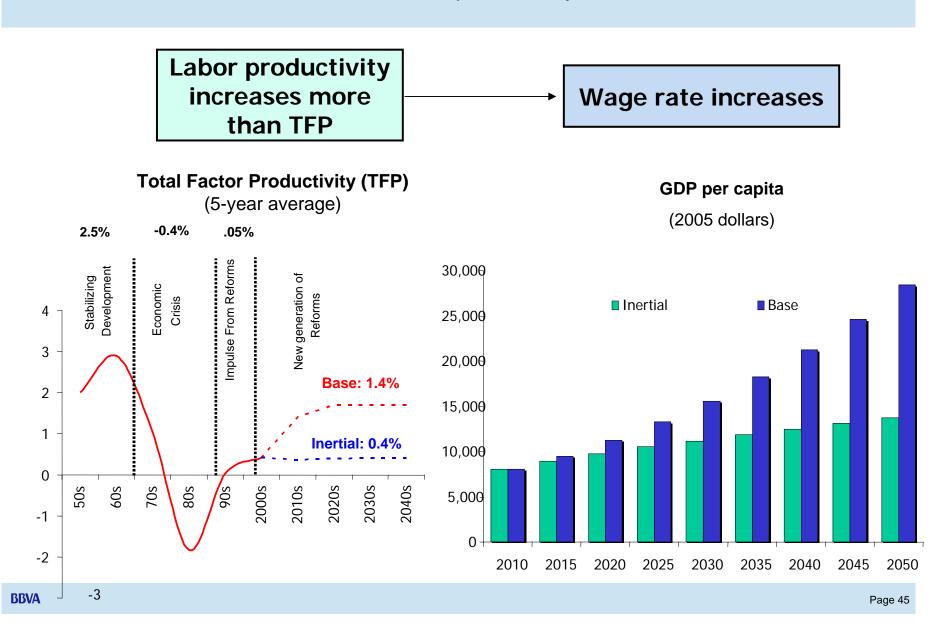


It allows us to compare it with the inertial scenario - status quo -

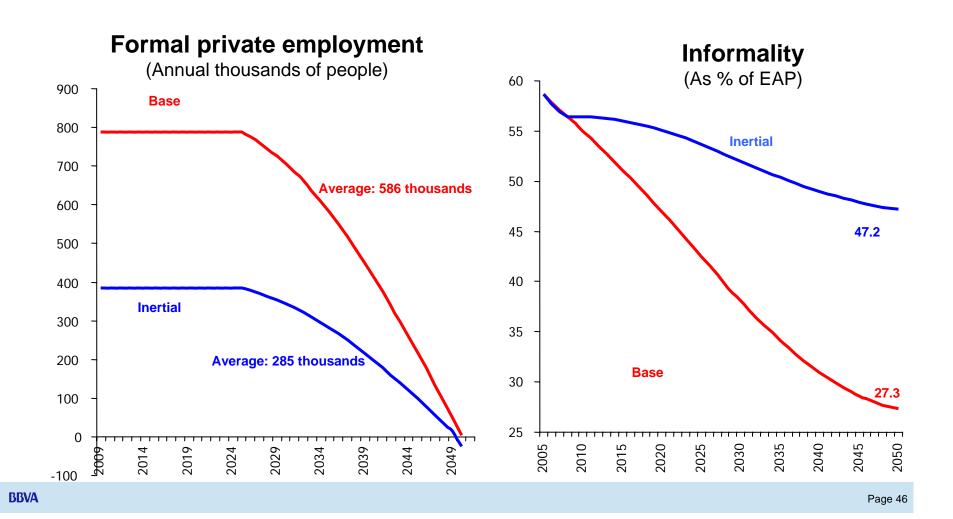
Further investment is necessary: economic reforms, a first step



The higher capital/employment ratio boosts productivity



Informality approaches OCDE rate ...



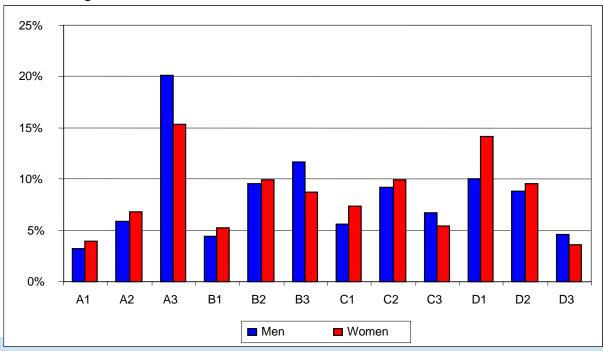
Density of contribution 4 groups, 3 wage levels, by gender

Criteria:

- Uniform distribution
- Different assumptions can be modeled
- 1: 1 or less minimum salaries (MS) (33% of affiliates)
- 2: 1 to 2 MS (37% affiliates)
- 3: 3 or more SM (30% affiliates)

- **A:** Density 96.2% → 38.5 years of contribution (28% of affiliates)
- **B**: Density $76.2\% \rightarrow 30.5$ years of contribution (22% of affiliates)
- C: Density $44.5\% \rightarrow 17.8$ years of contribution (25% of affiliates)
- D: Density 14.8% → 5.9 years of contribution (25% of affiliates)

Density of contribution distribution, December 2004



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Key assumptions

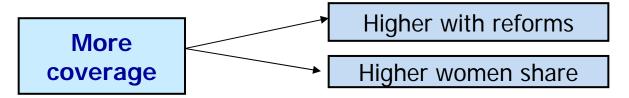
Affiliation

- + 20-24 years
- + Higher woman participation

Contribution Inertial scenario + Affiliates distribution stays constant From 39 to 45% + Formality increases (from 39% to 72% in 2050) -0.5% B and C every 5 + Group "B" increases 2.0 points C: 3, D:2 and vears E: 2.5 every 5 years and "C" by 2.5 points **Contributions** + According to legislation Returns

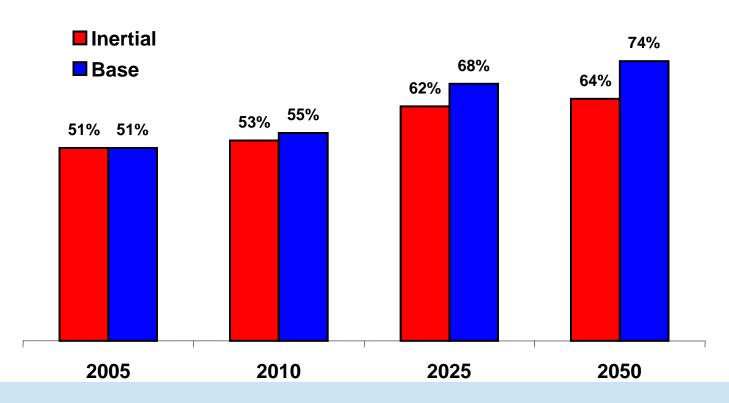
- +Individual Account (RCV) 5% (base scenario) and 3.3% (inertial), housing 3%
- **+Wages 2.8% (base) vs 1.1% (inertial)**
- +Commissions 0.2% of contribution, 0.5% over balance

More coverage

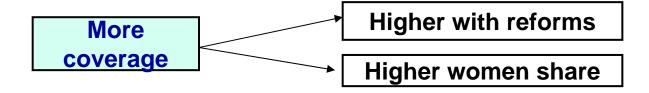


Coverage rates

(affiliates / population between 14 and 65 years)



Under any definition, coverage is higher



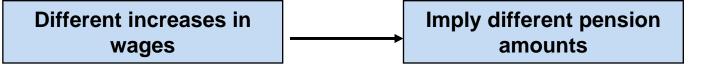
Coverage rates						
Affiliates ¹ Pensioners ²					ers ²	
Years		Inertial	Base	Inertial	Base	
	M	64%	66%	49%	49%	
2010	W	42%	44%	17%	17%	
	Т	53%	55%	31%	31%	
	М	71%	78%	54%	54%	
2025	W	53%	58%	22%	22%	
	Т	62%	68%	36%	36%	
	M	70%	83%	77%	81%	
2050	W	57%	66%	52%	54%	
	Т	64%	74%	63%	67%	

^{1.} Affiliates / population between 14 and 65 years

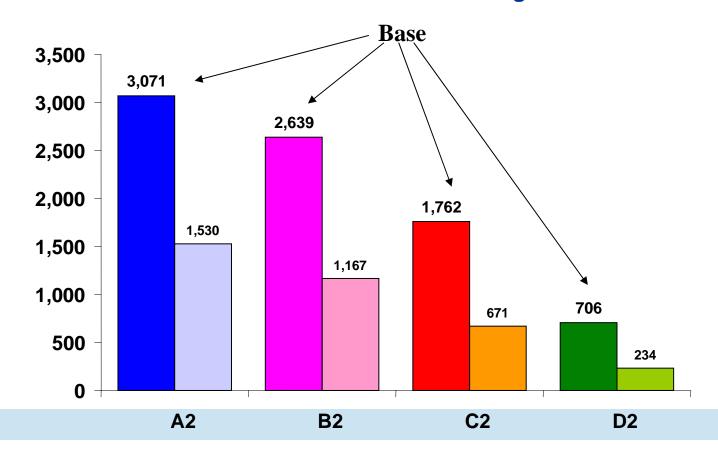
^{2.} Pensioners / population over 64 years

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Lower pensions in the inertial scenario



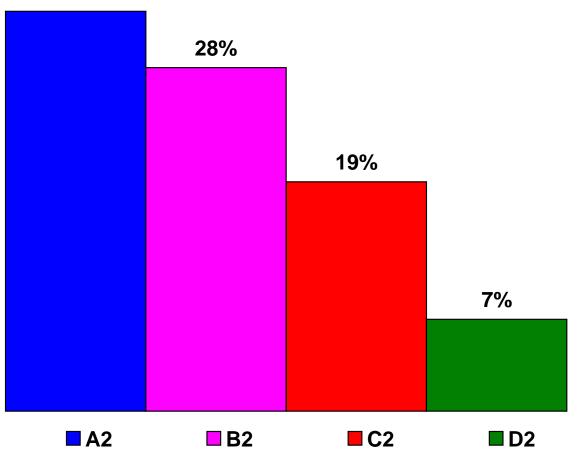
Average pension level (pesos), base and inertial scenarios without housing 2050



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The system projects modest replacement rates

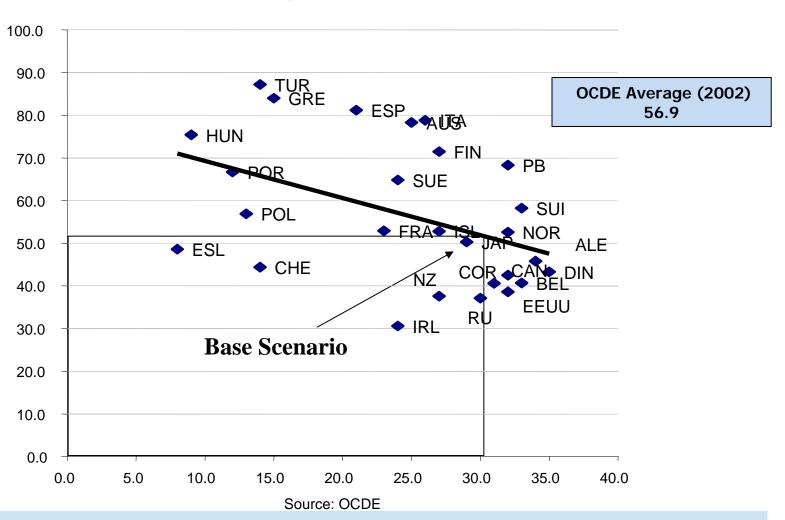




^{*/} Tasa de reemplazo sobre último año en hombres

BBVA Research Affiliation and contribution assumptions are in line with international experience

Replacement rates by income level, %



Replacement Rates are generous with the transition generation

The transition imply a fiscal cost

The system projects low replacement rates

Replacement rates - Men							
		2010		2025		2050	
Grou	Groups		Base	Inertial	Base	Inertial	Base
	1	110%	106%	112%	109%	42%	41%
Α	2	110%	106%	112%	108%	33%	33%
	3	106%	103%	109%	106%	23%	23%
	1	109%	106%	111%	109%	32%	35%
В	2	96%	95%	93%	96%	25%	28%
	3	81%	82%	82%	91%	17%	20%
	1	109%	106%	110%	107%	19%	23%
С	2	70%	71%	61%	66%	14%	19%
	3	41%	44%	41%	56%	10%	14%
	1	1%	1%	3%	4%	6%	9%
D	2	1%	1%	2%	3%	5%	7%
	3	1%	1%	2%	3%	3%	6%

BBVA

1973 Law Pension

Replacement rates between men and women are similar

Replacement Rates - Women							
2		20	10	2025		2050	
Groups	3	Inertial	Base	Inertial	Base	Inertial	Base
	1	110%	106%	112%	109%	44%	43%
A	2	110%	106%	112%	108%	35%	34%
	3	106%	103%	109%	106%	24%	24%
	1	109%	106%	111%	109%	34%	37%
B :	2	96%	95%	93%	96%	26%	29%
	3	81%	82%	82%	91%	18%	21%
	1	109%	106%	110%	107%	20%	25%
C	2	70%	71%	61%	66%	15%	20%
,	3	41%	44%	41%	56%	10%	14%
	1	1%	1%	3%	4%	7%	10%
D :	2	1%	1%	3%	3%	5%	8%
,	3	1%	1%	2%	3%	4%	6%

1973 Law Pension

^{*/} Replacement Rate over the last year

For the new generation, with the mandatory housing account, pensions could improve

Without housing account, pensions fall 30%

Replacement rate – New Generation 2050							
		Mer	Women				
Grou	ıps	With housing	Without housing	With Housing	Without housing		
	1	55%	41%	58%	43%		
Α	2	46%	33%	49%	34%		
	3	35%	23%	37%	24%		
	1	47%	35%	50%	37%		
В	2	40%	28%	42%	29%		
	3	31%	20%	32%	21%		
	1	32%	23%	34%	25%		
С	2	27%	19%	29%	20%		
	3	21%	14%	22%	14%		
	1	13%	9%	13%	10%		
D	2	11%	7%	12%	8%		
	3	9%	6%	9%	6%		

^{*/} Assumes base scenario and replacement rate over the last year

Replacement rates – New Generation 2050 Men Women							
Groups		Affiliates	"Asignados"	Affiliates '	"Asignados"		
	1	41%	38%	43%	40%		
Α	2	33%	31%	34%	33%		
	3	23%	22%	24%	23%		
	1	35%	32%	37%	34%		
В	2	28%	26%	29%	28%		
	3	20%	19%	21%	20%		
	1	23%	22%	25%	23%		
С	2	19%	17%	20%	19%		
	3	14%	13%	14%	14%		
	1	9%	7%	10%	8%		
D	2	7%	6%	8%	7%		
	3	6%	5%	6%	5%		

^{*/} Assumes base scenario without housing and replacement rate over the last year



Pension Systems in Mexico: evolution and challenges

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