

# **Projecting Pension Expenditure in Argentina 2008-2050: Fiscal consequences of the nationalisation**

**David Tuesta**

Chief Economist of Global Trends Unit  
Economic Research Department of BBVA

Budapest, March 24th, 2009

# OUTLINE

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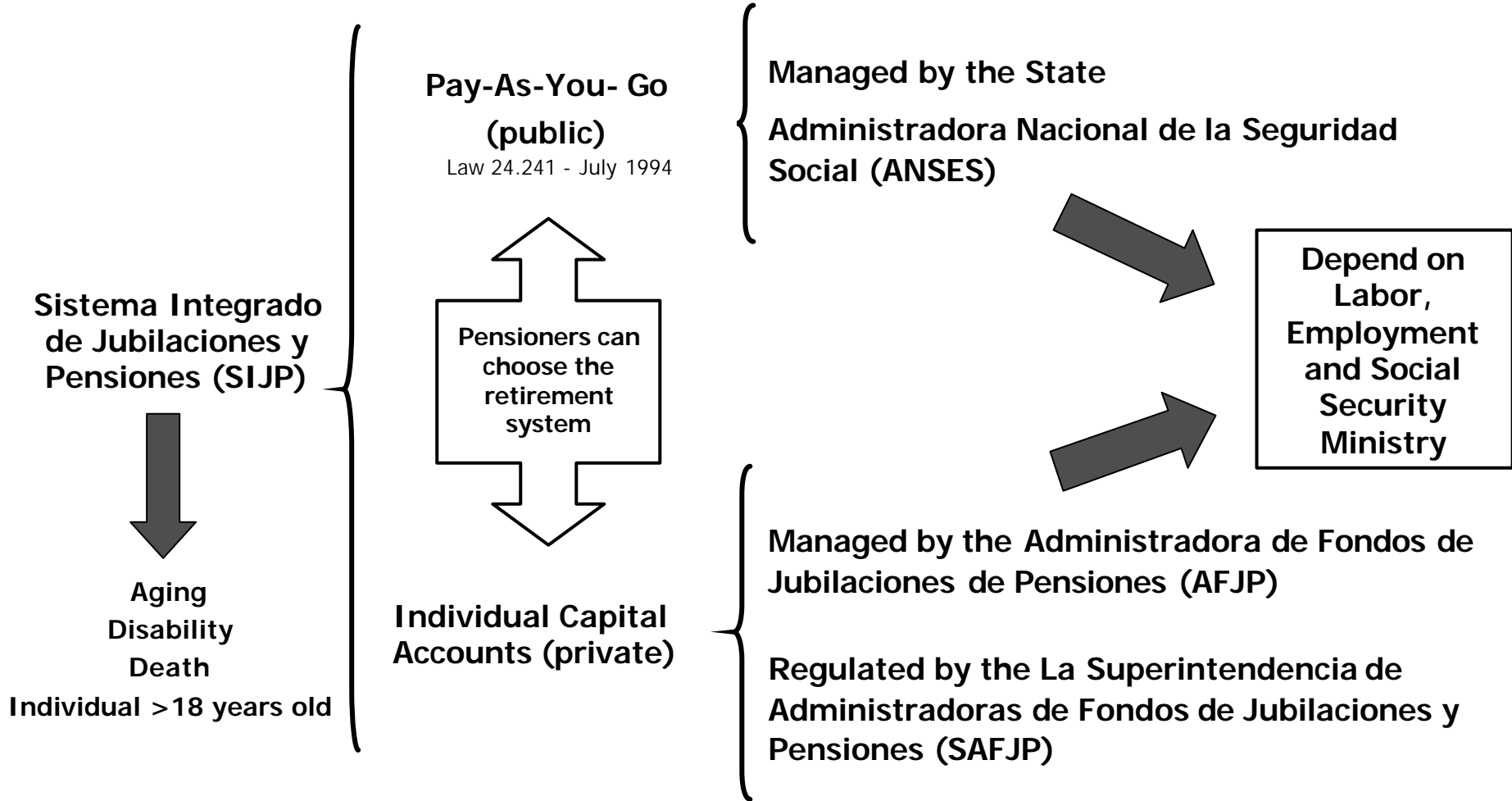
**1. Argentinean Pension System**

**2. The nationalisation and Projection methodology**

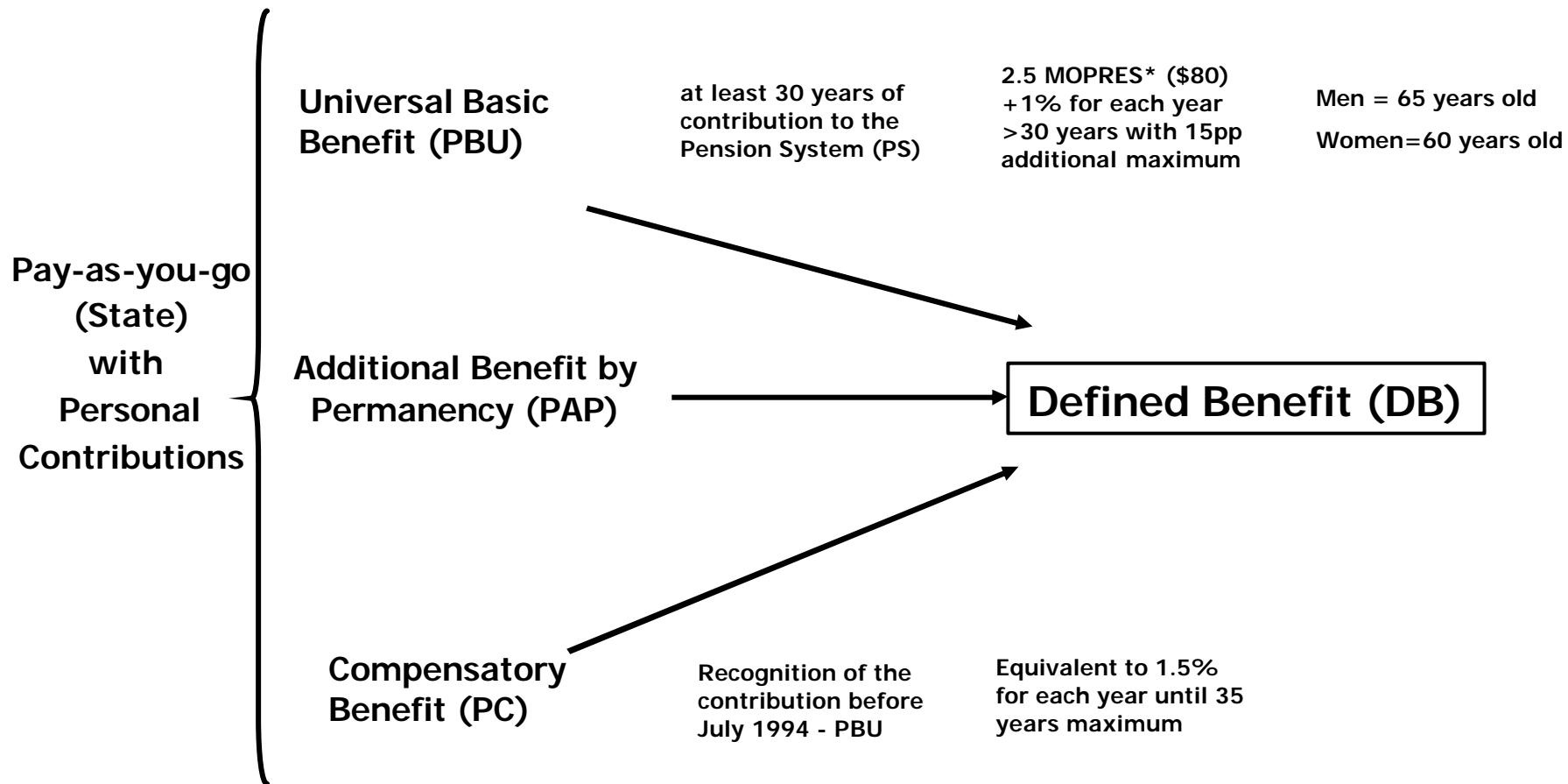
**3. Results**

**4. Concluding remarks**

# Structure of the Argentinean Pension System until 2008

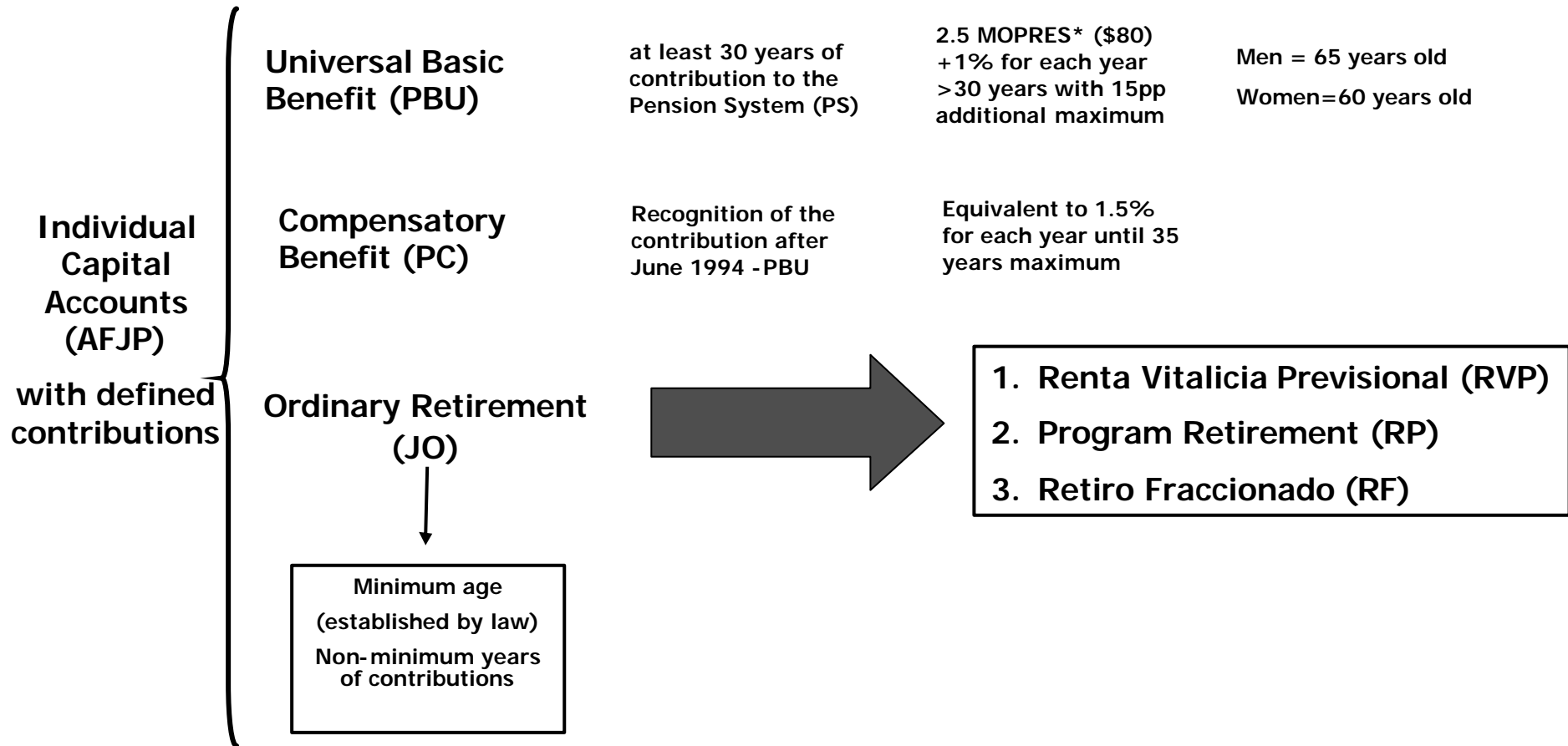


Employees have chosen among systems since 1994



\*MOPRE value \$ 80 since 1997, last increment. MOPRE definition by "Ley de Presupuesto Nacional".

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In 2007, law 26,222 inserted some changes in the system

**Direct changes  
to affiliates**

Periodically and free transit among systems

Pay-as-you-go option for "indecisive"

Automatic change to Pay-as you-go for certain affiliates close to retire

Improvement in the Pay-as-you-go regime

Increment to the maximum remuneration linked to previous contributions

Personal contributions unification at 11%

Maximum commission for the AFJP at 1% of the gross wages

**Changes with indirect  
impacts on affiliates**

Mutualization of the Disability and Death insurance

Modification in the portfolio investment choices

## Challenges for a pension system

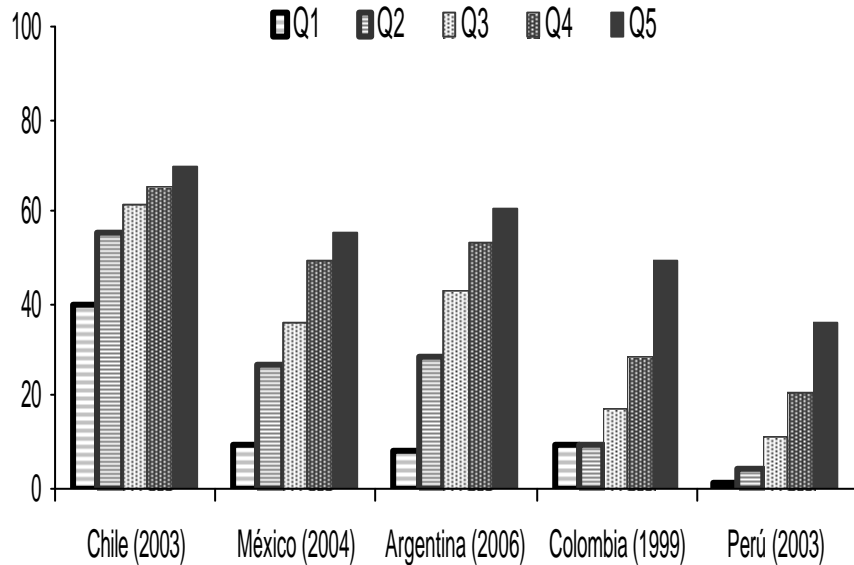
- Low levels of coverage because all citizens do not contribute for their pension fund
- Low wages (56% men and 67% women contribute below of the minimum wage - \$980-, meanwhile almost 43% of the population contribute 1/5 of that value)
- Total affiliates with capitalized regime, only 35.6% have an enough contribution density that allow them to get the government benefit (PBU y PC), in addition to the minimum pension.
- The public system was financially funded

**Labor informality and percapita income level are behind the low coverage**

# Challenges for a pension system

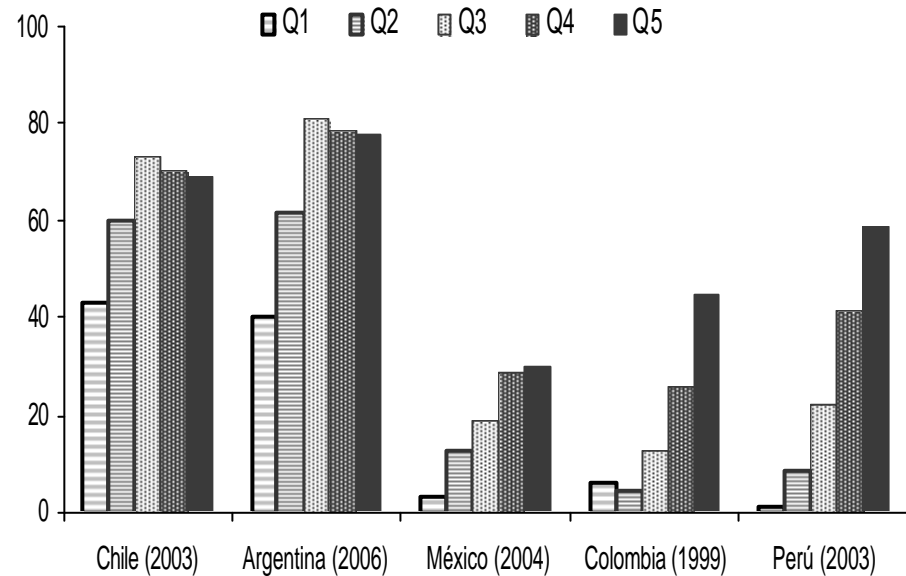
### Coverage as a % of Active Population- Quintiles

(Q1=poorest, Q5=richest)



### Coverage as % of older than 65 years old- quintiles

(Q1=poorest, Q5=richest)



**Labor informality and percapita income level are behind the low coverage**



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## Aggregate accounting.

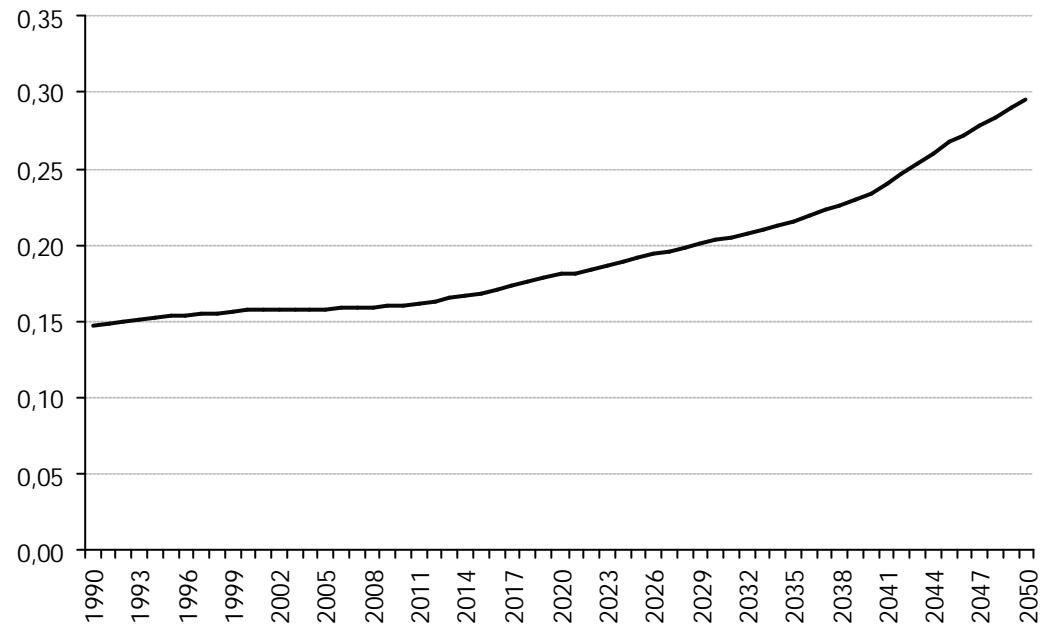
- We opt for the aggregate accounting methodology (instead of life-cycle or general equilibrium models) based on its popularity (Ageing Working Group, CBO) and simplicity. Public pensions expenditures over GDP can be decomposed as:

$$\frac{G_t^{pens}}{PGDP_t} \equiv \frac{L_t^{pens}}{L_t^{+65}} \frac{L_t^{+65}}{L_t^{16-64}} \frac{L_t^{16-64}}{L_t^s} \frac{1}{1-u_t} \left( \frac{G_t^{pens}}{P_t L_t^{pens}} \right) \left( \frac{GDP_t}{L_t} \right)$$

- Take-up ratio: proxy of the pension system coverage (institutional rules).
- Old-age dependency ratio (demography).
- Employment rate: participation and unemployment (socio-economy).
- Benefit ratio: real average pension over productivity (institutional rules and macroeconomy).

# Demographic trend.

Dependency ratio, 1990-2050  
(L>64/L>15-64)



Source: CELADE

The main scenario includes fertility, mortality and migration scenario from CELADE.

## Macroeconomy: participation and unemployment rates.

### Principales supuestos socio-económicos

	2007	2010	2030	2050
Tasa de participación				
Total	62,1%	61,0%	60,1%	60,5%
Mujeres	51,1%	51,2%	52,2%	54,1%
Hombres	73,9%	71,5%	68,4%	67,2%
Tasa de paro				
Total	8,5%	9,0%	8,5%	8,5%
Mujeres	10,3%	10,9%	11,3%	11,3%
Hombres	7,1%	7,5%	6,1%	6,1%

It was defined a central macroeconomic scenario based on the economically active population, unemployment rate, formality and productivity.

## Institutions: coverage and pension level.

### Principales supuestos, sistema de pensiones en Argentina

#### Escenario demográfico

Demo 1 CELADE 2005-2050

#### Escenario socio-económico

Macro 1 Desempleo 8,5% desde 2015, Actividad 60,5% en 2050  
BBVA Banco Francés

#### Escenarios institucionales

##### Pensión media

Pens 2 Pensión media de ex AFJP = 1,1 pensión media de reparto

Pens 1 Pensión media de ex AFJP = 1,3 pensión media de reparto

Pens 3 Pensión media de ex AFJP = 1,5 pensión media de reparto

##### Fondos acumulados en AFJP

Fondo 2 Rentabilidad real = 4,0% desde 2010 (0,0% en 2009)

Fondo 1 Rentabilidad real = 0,0%

Fondo 3 Rentabilidad real = -4,0% desde 2010

#### Supuestos comunes

Escenario macroeconómico 2008-2011: BBVA Banco Francés

Crecimiento de la productividad: 2,2% desde 2012

Tasa de cobertura 1,0 desde 2020

Pensiones medias aumentan con la productividad

Cotizaciones medias aumentan con la productividad

Cotizantes aumentan con la formalidad

Otros ingresos e ingresos tributarios se reducen al nivel pre-reforma (1993)

Tipo de interés de descuento = 4,0%

- We use three alternative institutional scenarios, which differ in pension levels, and reserve fund returns.

- Our approach is respectful with the main institutional features of the Argentinean pension system (contributions, reserve fund, financing sources, pension categories).

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**1. Argentinean Pension System**

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**3. Results**

**4. Policy implications**

**5. Concluding remarks**

## Main results: pension expenditure scenario, Argentina 2008-2050.

### Proyección del gasto público en pensiones en Argentina

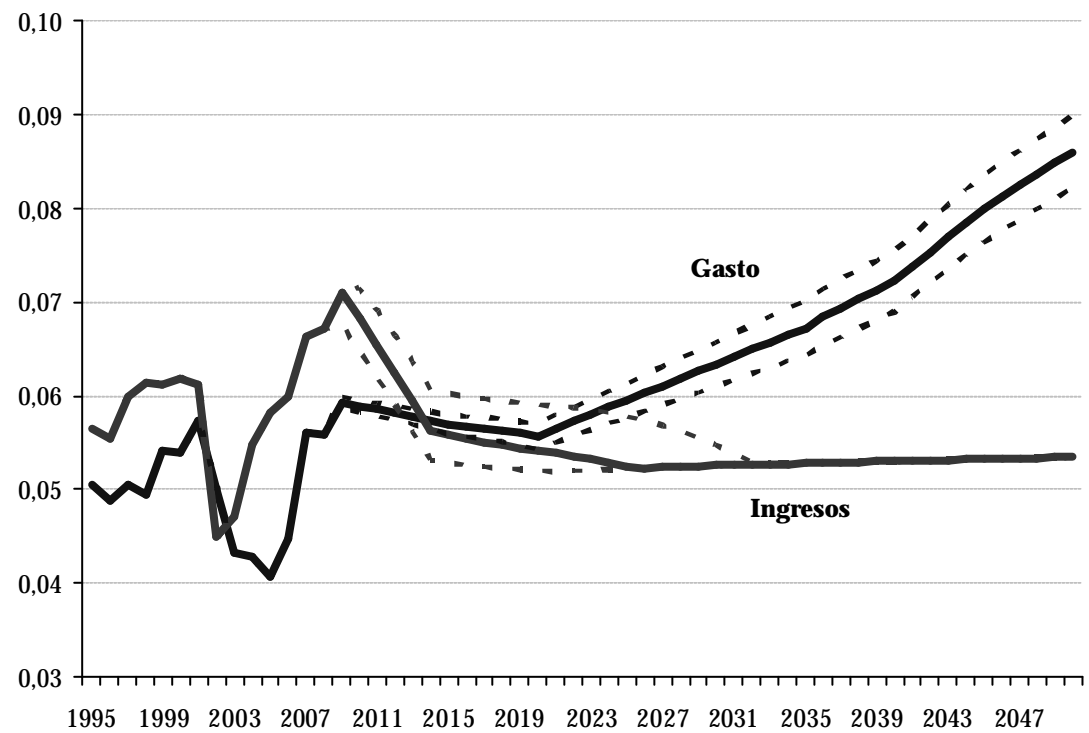
	<b>Gasto</b>	<b>Pensiones / Cotizante</b>			<b>Tasa de reemplazo</b>		
	% PIB	Tasa de cobertura	Tasa de dependencia	Tasa de empleo	(Gpens/P*Lpens) / (GDP/L)		
	<b>Gpens/P*GDP</b>	<b>Lpens / L</b>	Lpens / L+65	L+65/L15-64	L15-64/LS	1 / (1-u)	
<b>Escenario central</b>							
2007	5,6%	0,29	1,20	0,16	1,39	1,09	0,19
2015	5,7%	0,28	1,10	0,17	1,41	1,09	0,20
2030	6,3%	0,31	1,00	0,20	1,38	1,09	0,21
2050	8,6%	0,41	1,00	0,30	1,28	1,09	0,21

Public expenditure will increase 3.0 p.p. of GDP, mainly driven by the increase of the old-age dependency ratio (which doubles, up to 0.3) and by the incorporation of high average pension workers from the previous private scheme (until 2007 workers in the private system perceived a salary 30% more than workers in payg scheme).

# Main results: pension expenditure scenario, Argentina 2008-2050.

## Gasto e ingresos del sistema de pensiones de Argentina

(Escenarios central y alternativos, %PIB)



Fuente: Ministerio de Trabajo, MECON y SEE BBVA



## Main results: pension expenditure scenario, Argentina 2008-2050.

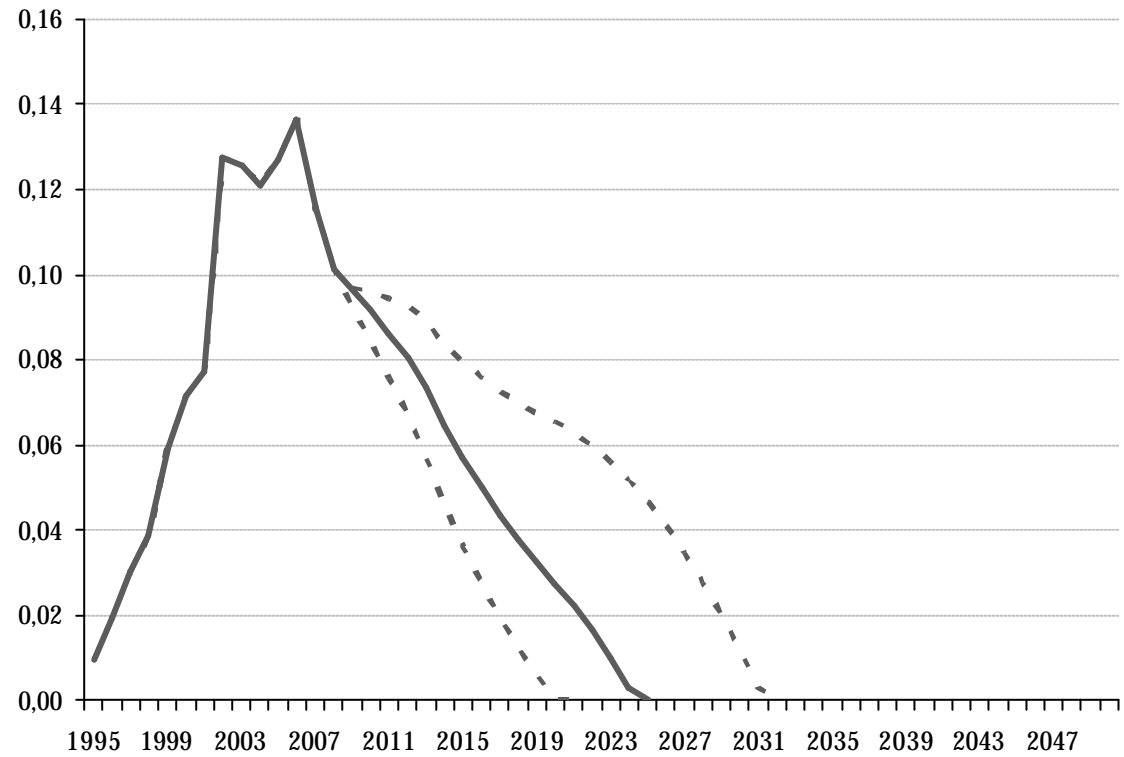
### Resumen de indicadores del sistema de pensiones de Argentina

(Escenarios central y alternativos, %PIB)

	Gasto elevado	Central	Gasto reducido
<b>Fechas clave</b>			
Gasto > Cotizaciones y otros ingresos	2011	2012	2013
Gasto > Total ingresos	2012	2014	2026
Fondo = 0	2022	2026	2033
Deuda acumulada hasta 2050			
(% PIB anual)	-1,1%	-0,8%	-0,4%
(% PIB 2007)	-40,3%	-29,4%	-14,3%

A table summarizing this set of indicators should be published and discussed every year (as is done in the US, by the Trustees).

### Fondo de reserva del sistema de pensiones de Argentina (Escenarios central y alternativos, %PIB)



Fuente: MECON, FIAP y SEE BBVA

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## Concluding remarks

- 1.** Argentina has recently unified the pension system, setting back a traditional DB pay-as-you-go system.
- 2.** Even assuming a relatively favourable macroeconomic and institutional scenario, expenses will increase in the following decades, as a result of the ageing process.
- 3.** In the central scenario, the system will register a shortfall in 2014 and wipe out all funds transferred to PF in 2026. In present value, the imbalance until 2050 will reach 29 points of the current GDP.
- 4.** Other emerging countries should take into account this fiscal burden, in case they debate following the Argentinean initiative.

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## Aggregate accounting: assumptions.

### Principales supuestos, sistema de pensiones en Argentina

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