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Financing retirement with real estate assets: an analysis of Mexico

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Current issues with the pensions system

- **Pension reforms** in the 90s in Latin America were focused on **financial sustainability** (due to the urgent need to bring down fiscal costs and the imbalances they caused)
- The **number of people covered by, and the sums received** from, pensions still leave much room for **improvement:** a significant proportion of the EAP is excluded from any pension scheme, while many do not have adequate pensions

Factors accounting for the current difficulties

- **Structural:** Internal problems in countries requiring deep-rooted (and time-consuming) reforms to solve them - informal economy, poverty, labour market failures- which cause low contribution densities
- **Parametric:** Pension schemes with quantitative rules limiting saving sufficiency: low contributory rates, early retirement age, minimum requisites for access to a pension, generous PAYG pensions
- **Demographic:** Longer life expectancy, population ageing
- **Markets:** Low interest rate's scenarios in the future

All these factors point to the need to save more (voluntary saving) or to turn other sources of wealth into capital flows (equity release)

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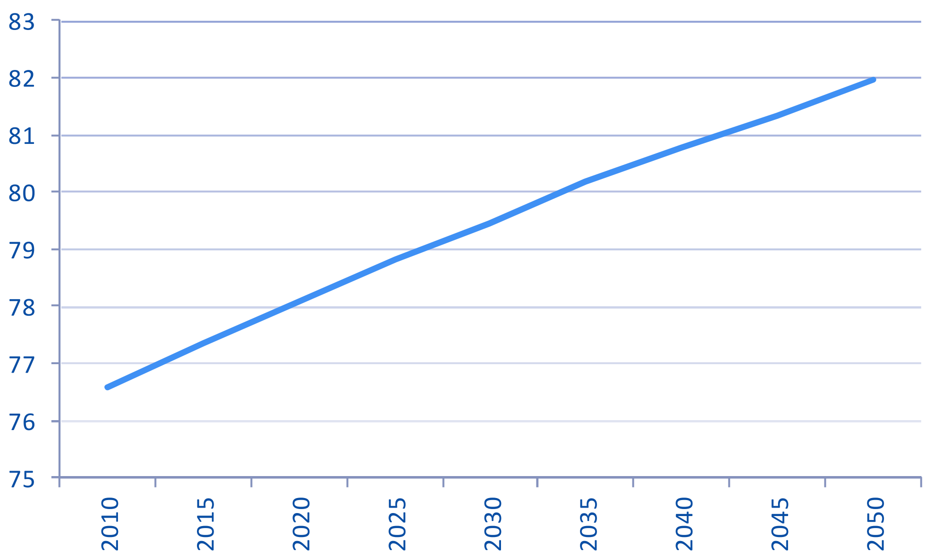
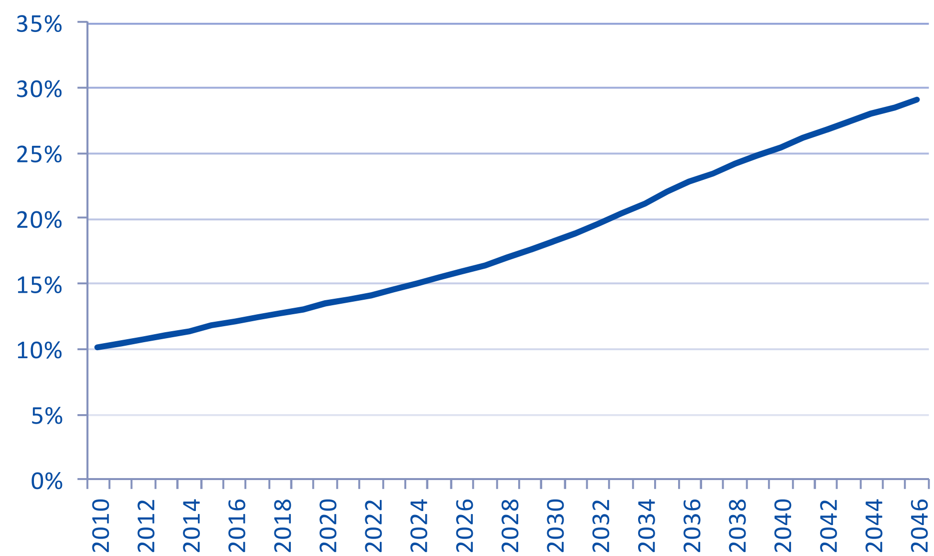
Demographic Trends

- **Increased life expectancy** poses a challenge in financing retirement income.
- Pension systems face problems that make them ineffective in delivering **adequate income** for an **even longer retirement period**.
- In Mexico, **life expectancy at birth** will increase from 76.6 in 2010 to **82 in 2050,** while the **dependency rate** (>65 y.o. / 15-64 y.o.) will rise from 10.2% in 2014 to **29.2% in 2050**. *(Source: CELADE - Population Division of ECLAC. 2013 Revision)*

Life Expectancy at birth, Mexico



Dependency ratio in Mexico (>65 y.o. / 15-64 y.o.)



Source: CELADE - Population Division of ECLAC. 2013 Revision

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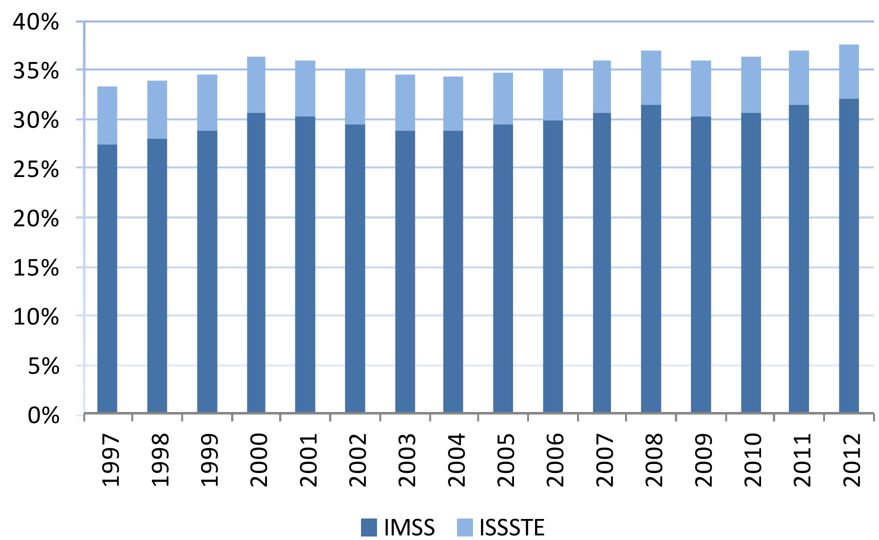
Pension systems coverage (Mexico)

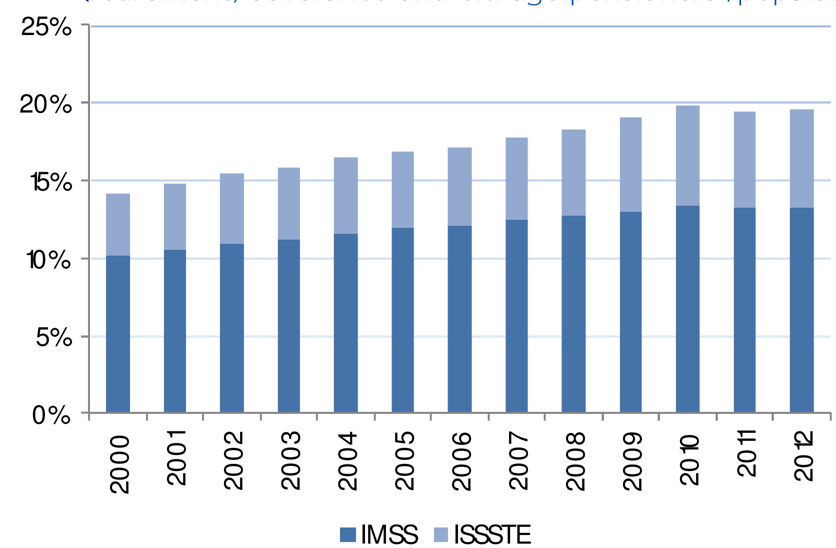
- Mexico's **labour coverage** rate **(37% EAP)** is affected by problems of informality
- **Old age coverage (19% of elderly adults)** has remained almost constant in the last few years. Population ageing is expected to have an increasing impact

IMSS and ISSSTE labour cover (as % of EAP)



IMSS and ISSSTE old age coverage

(retirement, severance and old age pensioners /population >60)



Source: BBVA Research with data from Felipe Calderón's VI Government report

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What are reverse mortgages?

- A reverse mortgage is a **non-returnable loan,** extended until the owner dies, using **the property as collateral**
- The capital lent may be used for:
  - **A one-off payment**
  - **A line of credit**
  - **Life or temporary annuities**

• The capital lent depends on the **age** of the borrower, the **interest** rates and predictions for future **housing prices**

- As well as the pension, **property goods may be transformed into resources available for old age** – assets which traditionally were passed on to the next generation as inheritance
- This market is well developed in the United Kingdom and United States

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Reverse mortgages in the United Kingdom

- Started in 1965
- Two types of products: *Lifetime mortgage* and *Home reversion plans*

	Lifetime mortgage	Home reversion plans
Property owner	Customer	Supplier (financial institution)
Characteristics	Interest on the loan is capitalised and repaid when the property is sold (on death or on moving to a care home)	Customers sell their property to the supplier, maintaining the right to live in it until they die or choose to go to a care home
Size of the market	Very small Annual average: 22,000 plans GBP1bn in loans	Even smaller: Under 1,000 plans a year
Suppliers	Financial institutions, building companies and non-deposit lenders	Financial services firms and specialist suppliers
Regulation	Since 2004	Since 2007

Source: BBVA Research based on Smith Institute (2012). Making the most of equity release: perspectives from key players

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Reverse mortgages in the US

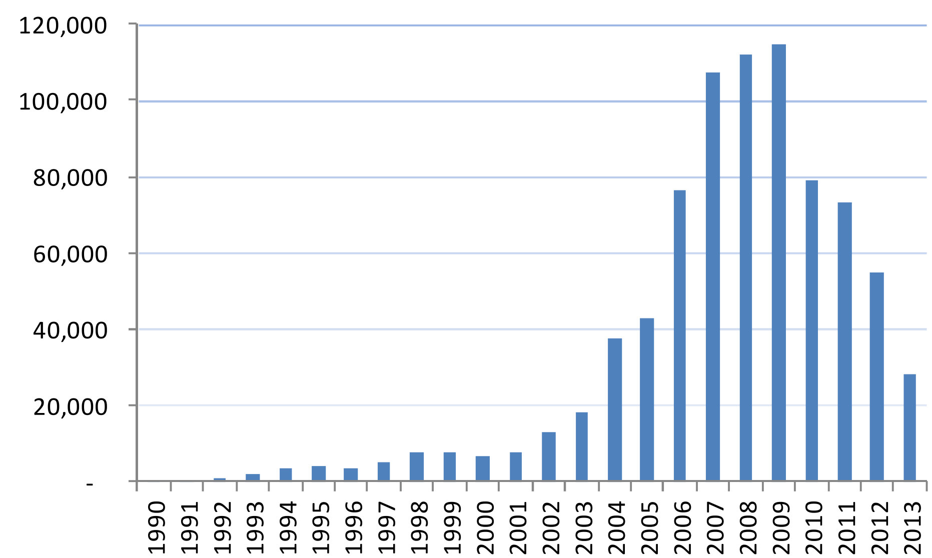
• Started in 1989. From 2002 to 2009 the market grew thanks to favourable interest rates and the rise in housing prices. Since 2010 the market has shrunk because of the financial crisis.

• There are **several formats.** The differences lie in the way in which the loan is received, where it is offered, its price and who offers it.

•**90% of RM** are **HECM** (Home Equity Conversion Mortgage), with federal guarantees through the FHA (Federal Housing Administration).

HECM characteristics	
Insurance	• Non-payment risk • Negative equity risk (loan > future value of house sale)
Requisites	• Over 62 years old • Resident in the property • Receiving independent advice
Payment terms	• Single sum, temporary income, lifelong income

Number of HECM loans



Source: National Reverse Mortgage Lenders Association (NRMLA), 2013

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Reverse mortgages in Spain

•Regulated by the 2007 Law 41 (Mortgage market reform)

	Characteristics of RM in Spain	
Suppliers	Banks, building societies, insurance firms	
Requisites	•At least 70 years old •Official valuation of the property	Owner and principal residence Independent professional advice
Characteristics	• No government protection • The debt is enforceable and the guarantee liable when the borrower dies • The owner can rent the property or change residence (to a care home) • Insurance against damages is obligatory	
Heirs' options	• Keep the property and take on the liability • Sell the property to cover the debt and keep the surplus	
Terms of payment	Single sum, temporary income, lifelong income	
Interest rate	Fixed (e.g. Euribor mortgage +2%)	

- Over 2,000 reverse mortgages have been sold
- Customer profile: 80 years old, property worth EUR300k and receiving income for about 15 years

Why the RM market has not developed?

- The **population at large prefers ownership** of property: it is considered an inheritance.
- RMs are new products which are difficult for consumers to understand, so the product suffers from information transfer problems.
- In the US, someone's **eligibility for government benefits** (e.g. *Medicaid*) may be affected if they take out a reverse mortgage, because of a sudden increase in financial wealth.
- The **property market crisis and the depreciation** in residential market valuations have dampened banks' interest in selling the product.
- **Property valuation risks**: it is difficult to forecast the value of a property in a context of severe price cuts in the property sector. The creditor can only claim against the assets of the debtor, and not those of the heirs.

Opportunities

- In some countries, **most of the adult population** own their homes (87.2% in Spain, 81% in Chile, 82% in Mexico)
- RM can help to **improve liquidity** during people's increasingly long retirement period, turning illiquid assets into liquid flows
- Solution to the "*Asset rich, income poor*" problem suffered by many older adults
- **Risk mitigation mechanisms** need to be designed (e.g.. property market volatility), to make reverse mortgaging schemes viable

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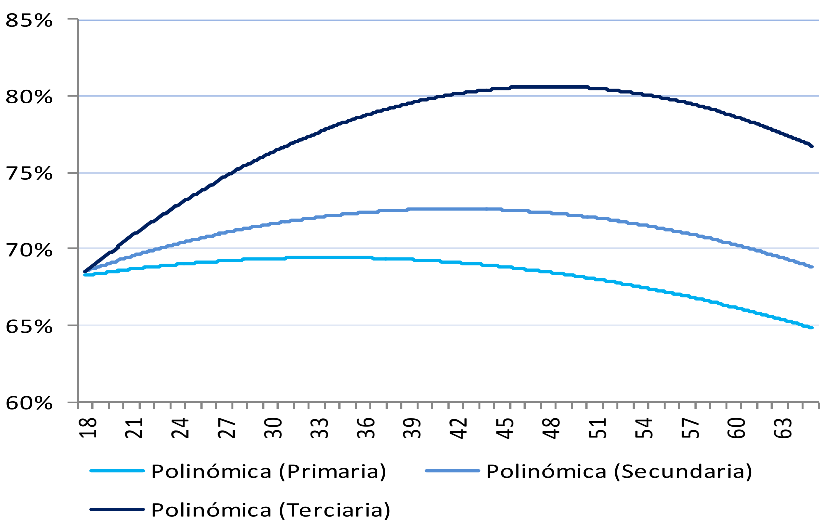
Potential for reverse mortgages in Mexico

- On a national scale, **82.4% of people over 60 own their homes** (Source: ENIGH 2012)
- The **average value of a home nationwide is USD 46,400**. (Source: Sociedad Hipotecaria Federal)
- At the moment, the IMSS Law 73 pension (**defined benefit**) gives an average **replacement rate (RR) of 75%**
- From 2031, pensioners will start to retire under Law 97 (**defined contribution**), which will give an average **RR of 37%,** due to **factors exogenous** to the pensions system: informality, low density of contributors, very low contribution rate and longer life expectancy -greater cost, therefore, of the life annuity-

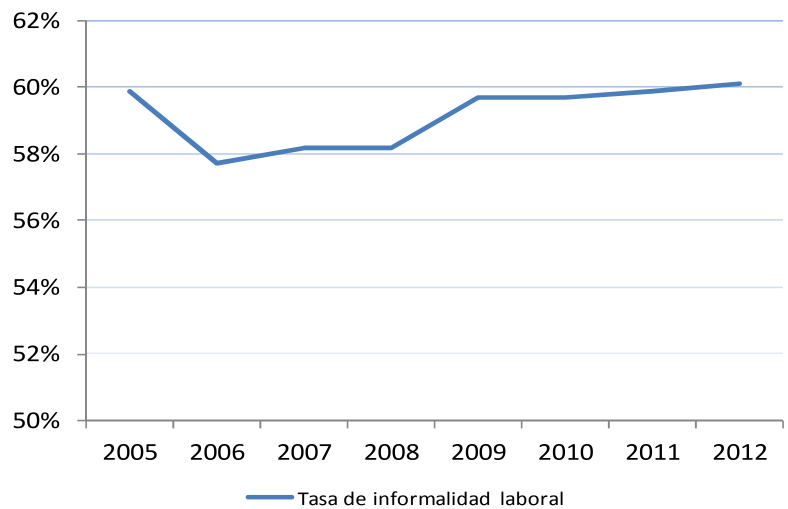
Contribution density by age and education

Source: BBVA Research with data from CONSAR



Informal labour sector as a % of EAP

Source: INEGI



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The MAPP2 Model

Methodology and Results

Macroeconomic and actuarial projections of IMSS pension system until 2050, under current parameters. *Alonso, Hoyo y Tuesta (2014)*

- Coverage (active workers and pensioners)
- Replacement rates

Data Sources

- CONSAR database 2011 (random sample 4 million individuals)
- CELADE demographic data
- SHF average value of a home
- ENOE 2011 (household survey)

$$Cont_t = DC*cr*W+CS$$

$$IA_t = IA_{t-1}*(1+i)+Cont_t$$

$$Pen97_x = Min\left[PMG, \frac{CI - MCSS_{x,y}}{\ddot{a}_x * (1+\alpha)}\right]$$

$$RR_x = \frac{Pen97_x}{W^t_{s,y,e,l,r}}$$

$$RM_x = \frac{ValueOfProperty_t}{\ddot{a}_x}$$

$$RRrm_x = \frac{RVrm_x}{WCotProm^t_x}$$

$$\ddot{a}_x = \sum_{k=0}^{\omega-x} v^k * {}_kP_x - \frac{m-1}{2m}$$

Where:
C= contributions
DC = contribution density
W = potential salary
CS= *Cuota Social* corresponding to the worker's income
cr= contribution rate (6.5% of salary)
Pen= Pension
RR= Replacement rate (annuity/ last salary)
RM= Annuity from Reverse Mortgage
$\ddot{a}_x$= Actuarial present value of a contingent Life annuity
${}_kp_x$= probability that an individual aged (x) will survive until (x+k) from EMSSAH 2009 mortality tables

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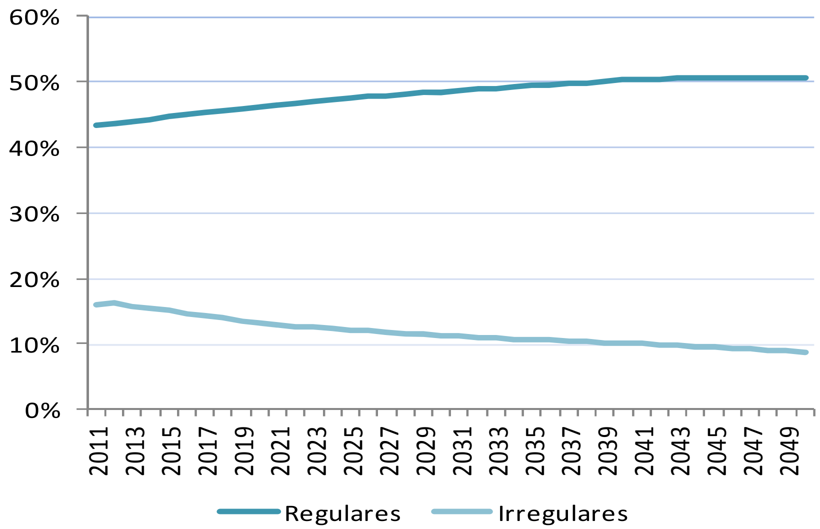
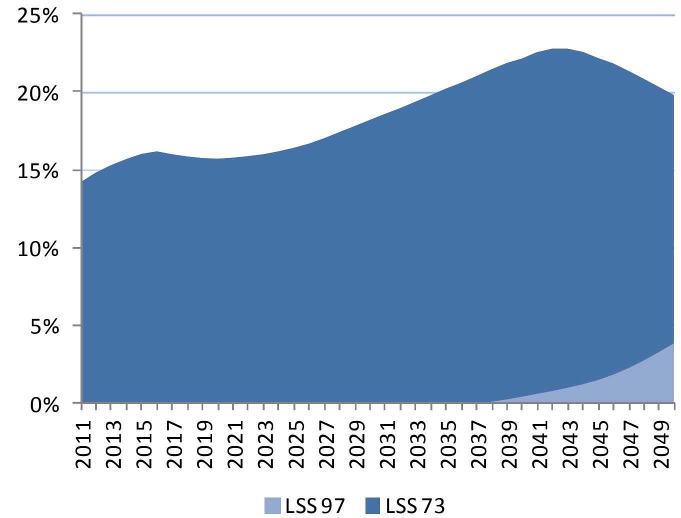
Projections for pension coverage

Labor Coverage: regular and irregular contributors
Source: MAPP 2, BBVA Research



Pensioners Coverage rate (people over 65)
Source: MAPP2, BBVA Research



- The IMSS **coverage** of regular contributors as a percentage of the EAP continues to be **low**, as it does not exceed **52%.**
- **Pension coverage** for those over 65 years old is **very low**. It would reach its maximum around 2043 (22% of the population)
- When the Afore generation begins to retire under LSS97, pension coverage will diminish as it will be even harder for workers with a low contribution density to be entitled to receive an old-age pension (25 years of contibutions)

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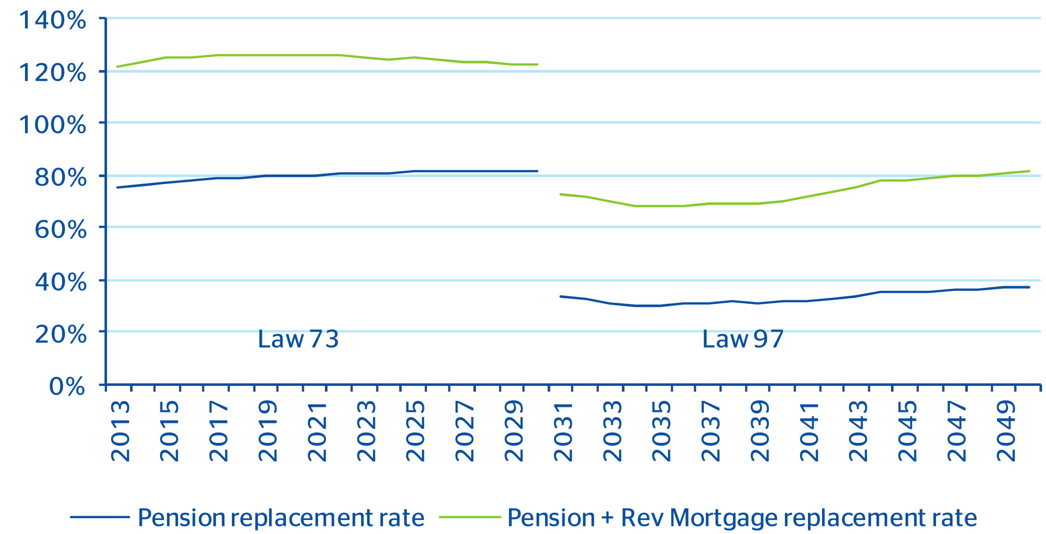
Potential for reverse mortgages in Mexico

- Using the MAPP2 pensions model, we made forecasts for the **replacement rates** that an average worker would obtain in 2013 and 2050, retiring at 65
- **Considering the RM income,** the RR in 2013 **would rise** from 75% to 122%, while **in 2050,** the RR rises from **37% to 82%.**

	2013	2050
Monthly Avg. Wage	390 USD	580 USD
Value of home	46,435 USD	67,102 USD
RR Pension	75%	37%
RR Pension + RM	122%	82%

Average rate of replacement with and without Reverse Mortgage



Source: MAPP2 BBVA Research forecast

Reverse mortgages can help to offset the low rates of replacement in the pension systems

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Reverse mortgages in the State of Mexico

- Since July 2013, r**everse mortgages** have been legal in the **State of Mexico** (**reforms to the Civil Code and to the State Financial Code**)

- Applicants must be **older than 60** and they can sign a contract with **private, social and public-sector institutions, as well as licenced individuals**

- Other characteristics:
  - **Life annuity** will depend on a market valuation of the property in which the elderly adult lives
  - An applicant may not receive more than **one reverse mortgage**, since the mortgage must be on the property where the person lives. The property must be within the boundaries of the State of Mexico
  - At the end of the contract, when the applicant dies, **the relatives can pay off the pensioner's debt** if they want to retain ownership of the property

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Conclusions and challenges

• A broader reflection about having a **wide range of income sources on retirement**

• Although the potential of the **reverse mortgage** scheme could help to offset the risk of longevity, we need to look at the **limitations** to its development, not only in the structural, but also in the cultural, context and that of the economic situation

• Risk mitigation mechanisms need to be developed, both for creditors and for debtors

• These schemes need to regulated appropriately, as well as proper information made available to consumers

•Reorganisation of companies that specialise in RM: banks, insurance companies, real estate companies

• **Public policies** should focus not only on the design of pension systems, but also on creating financial structures which promote the conversion of illiquid assets to a flow of liquid assets, which is increasingly necessary in view of increased life expectancy

Thank you!

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