



SOCIEDAD HIPOTECARIA FEDERAL

The International Experience: Housing Finance in Mexico

Evolution, Strategy and Challenges Ahead

Housing Finance International Conference
Promoted by Banco Central do Brazil
November 7-9, 2007, Salvador, Brazil

Contents

- I. *Introduction*
- II. Demographic Dynamics, Housing Demand and Financing Needs
- III. The Mexican Mortgage Market including FOVI/ SHF role
- IV. Securitization Model for Mexico and Current Strategy
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SHF mandate and activities

- SHF was created in 2001 as a government financial institution oriented to foster the development of the primary and secondary mortgage markets.
- Today it serves as a mortgage bank and as a financial guarantor.
 - SHF grants long term financing to financial intermediaries and covers their interest rate risk. SHF does not lend directly to individuals.
 - SHF offers products like mortgage insurance and financial guaranties.
- Until 2013, SHF will have the 100% guarantee from the Federal Government
- After 2009 SHF will not be able to grant finance, hence, it is necessary to develop alternative mechanisms of housing financing.
- SHF considers the securitization of mortgages as the most efficient mechanism of house financing.

SHF's Mission and Vision

- Based on SHF's mandate we developed our Mission and Vision

Mission:

Lead the development of a competitive market in order to allow all Mexicans be able to acquire residence.

Vision:

To be an innovative institution in solutions to develop social housing.

Mexico key figures & facts

- Population of 103 million, forming 26.1 million households.
- Population growth rate of 1.9%, and life expectancy of 75.3 years.
- 76% of households are in urban and semi-urban areas.
- Per capita GNI (PPP methodology) of USD \$9,590 in 2004.
- 46% of households in the informal sector.^{*/}
- Approximately 20% of population holds a checking or savings account.
- Mortgage Portfolio / GDP of 11.1% in 2004

^{*/} Informal household defined as that in which no single member is a wage earner in a firm that contributes to social security systems.

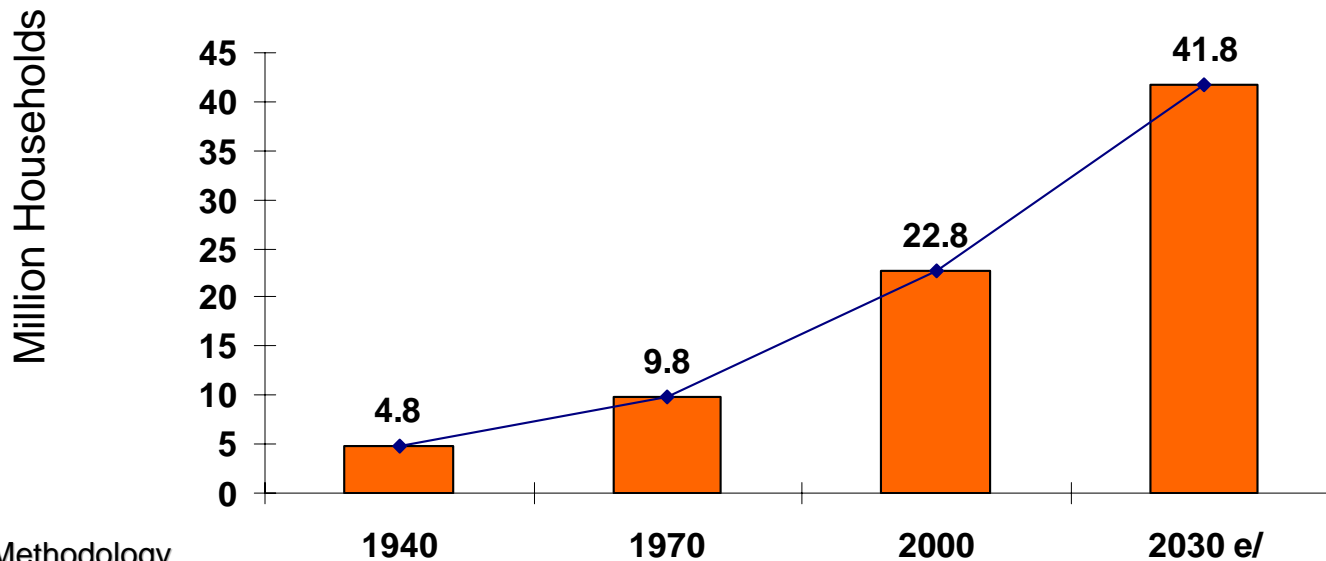
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Over the next 25 years, the number of households will grow at an annual rate of 2%.

From 2000 to 2030 the number of households in Mexico will grow 83%. These favorable population dynamics is coupled with annual per capita income of approximately USD \$9,500*

Number of Households in Mexico



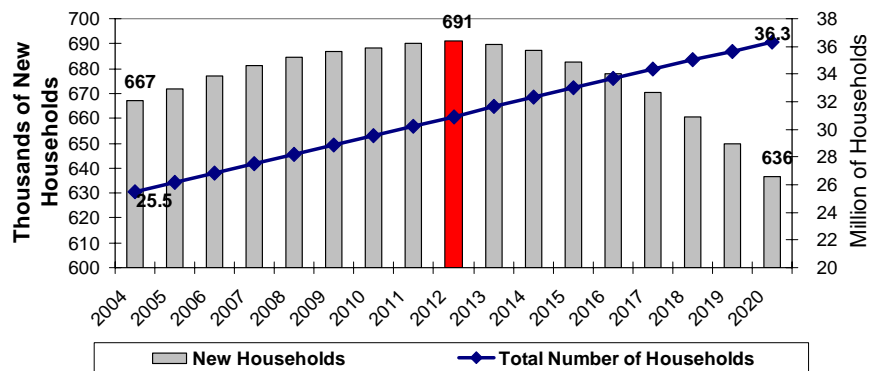
/* PPP Methodology

Source:CONAPO

Demographics show 2012 as the year with the largest number of household formation in the foreseeable future

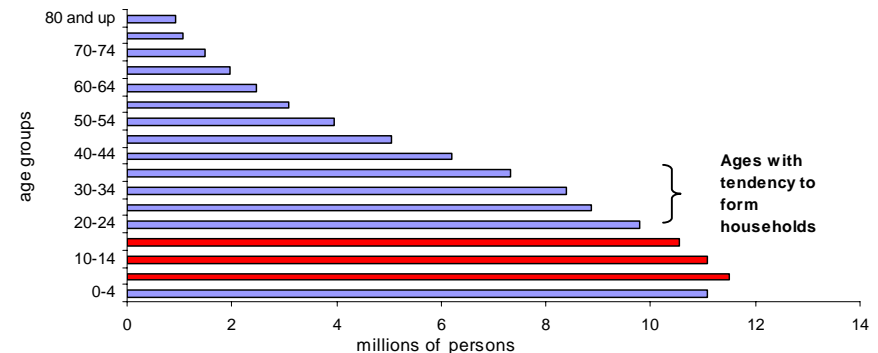
According to official estimates, 672,018 new households were formed during 2005 throughout the country. This figure will rise up until 2012, when 691,242 new households will be formed.

Household Formation 2004-2020



Source: Conapo

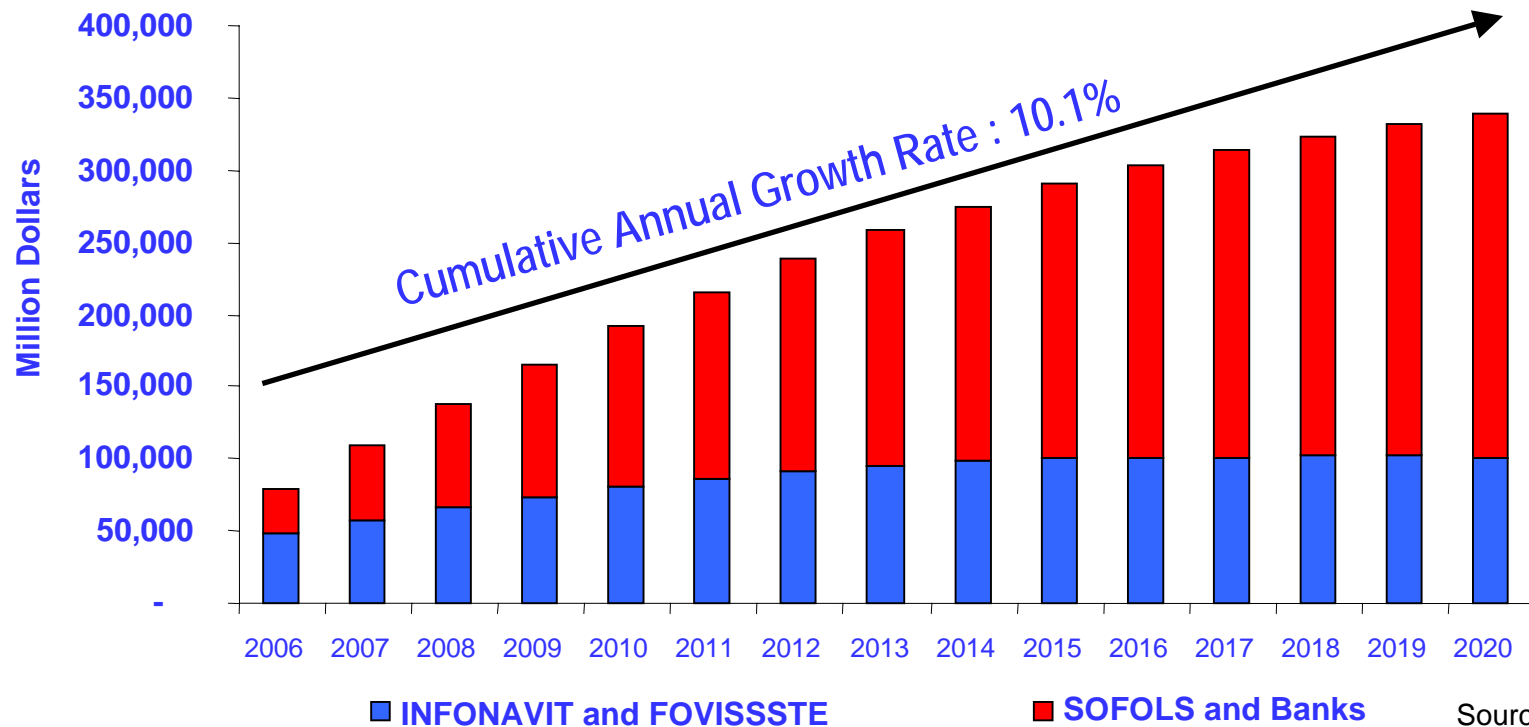
Population by Age Groups in 2004



Source: Conapo

Even under very conservative assumptions, SHF estimates that the residential mortgage portfolio will grow from USD \$79,600 million in 2006 to, at the very least, USD \$338,300 million in 2020.

Mortgage Portfolio in Mexico

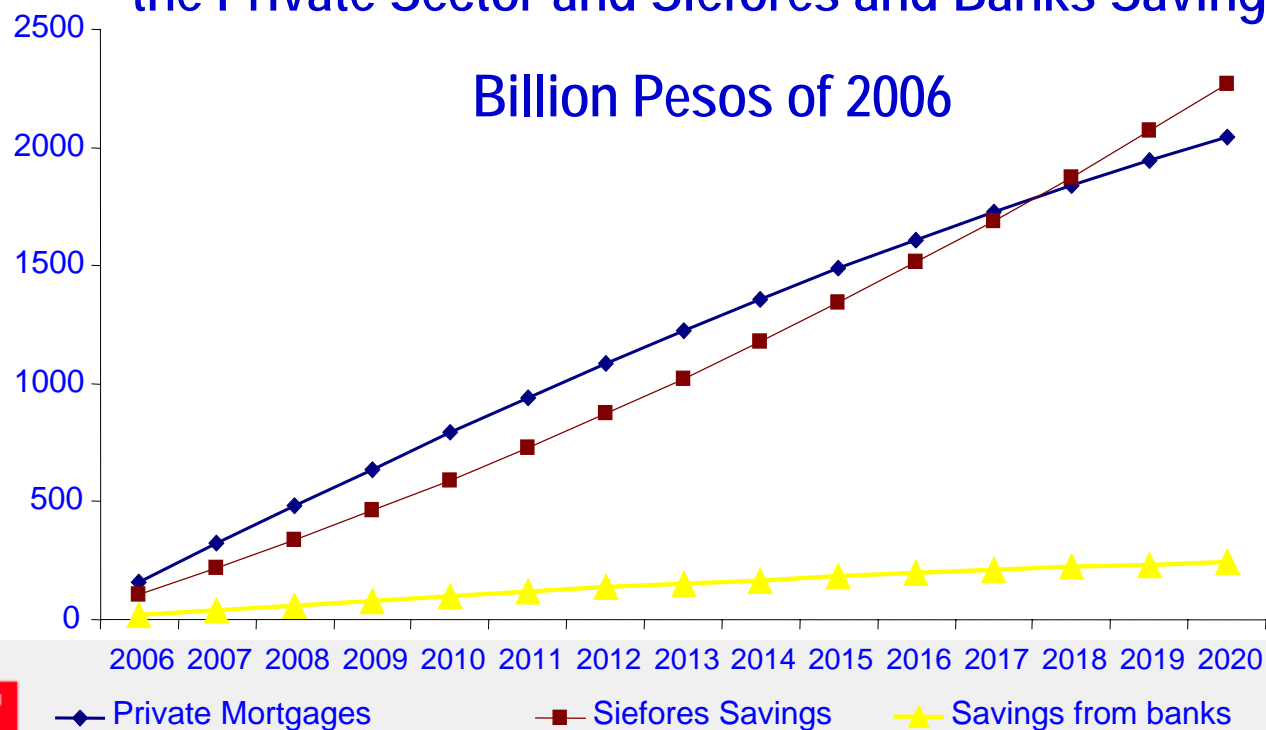


The projections of the mortgage portfolio are based on potential estimated demand assuming an 3% annual growth rate for GDP and the same levels for mortgage rates than those of 2006.

The flow of financial savings in the country will not suffice to finance the growth of mortgage portfolios.

Tapping into the savings of domestic institutional investors as well as foreign investors is an absolute must to maintain the growth of the mortgage sector.

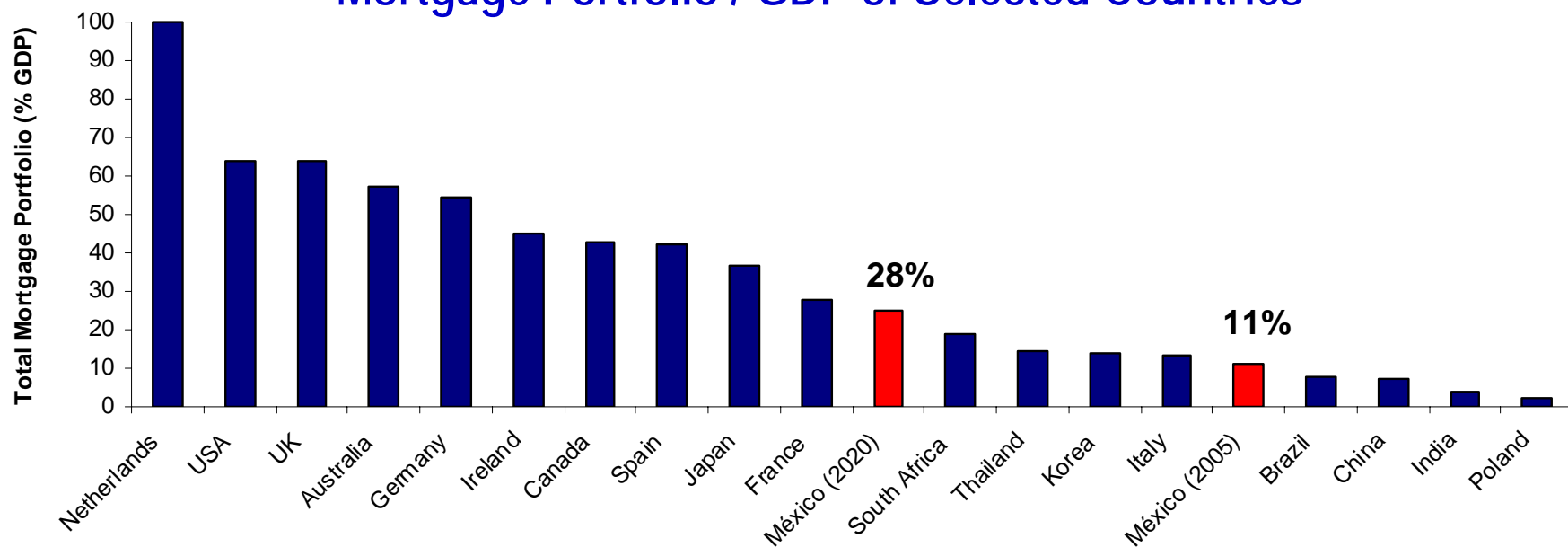
Accumulated Net Flow Needed for Mortgage Loans Granted by the Private Sector and Siefores and Banks Savings



If these conditions are met, Mortgage Portfolio/GDP will grow from 11.1% to 27.7% over the next 15 years

This growth comes from population dynamics coupled with a conservative scenario of disposable income growth for Mexican families.

Mortgage Portfolio / GDP of Selected Countries



Source: IMF, World Economic Outlook September 2004, Central Bank of South Africa, CMHC (Canada), SSKI (India), Komoco (Korea), GHB (Thailand), China On-Line, SHF (México), Michael Lea.

Figures for Korea, Thailand, Brazil, Poland, China, India and South Africa correspond to 2001.

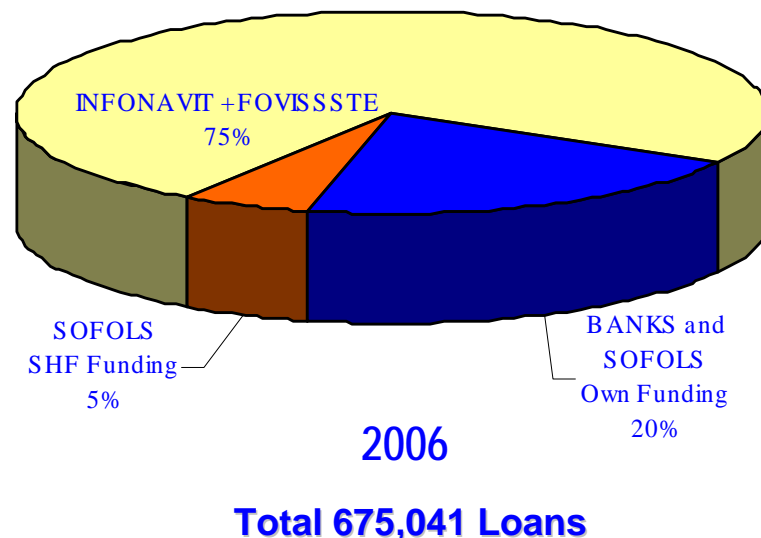
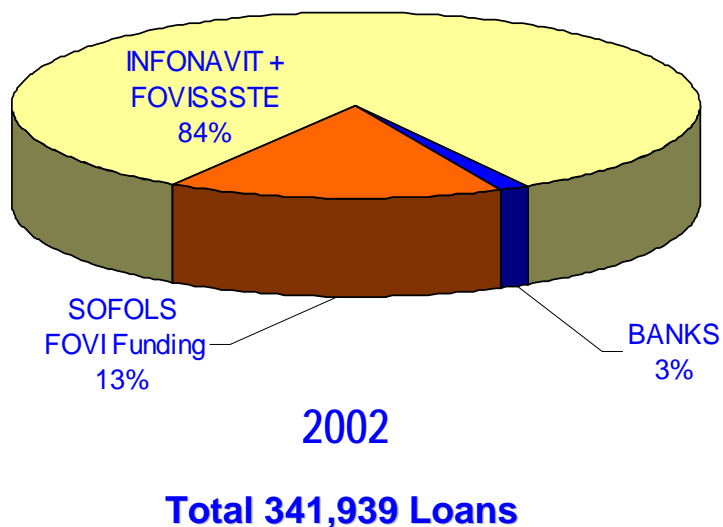
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The industry is still dominated by the two Federal Housing Funds, **INFONAVIT** and **FOVISSSTE**.

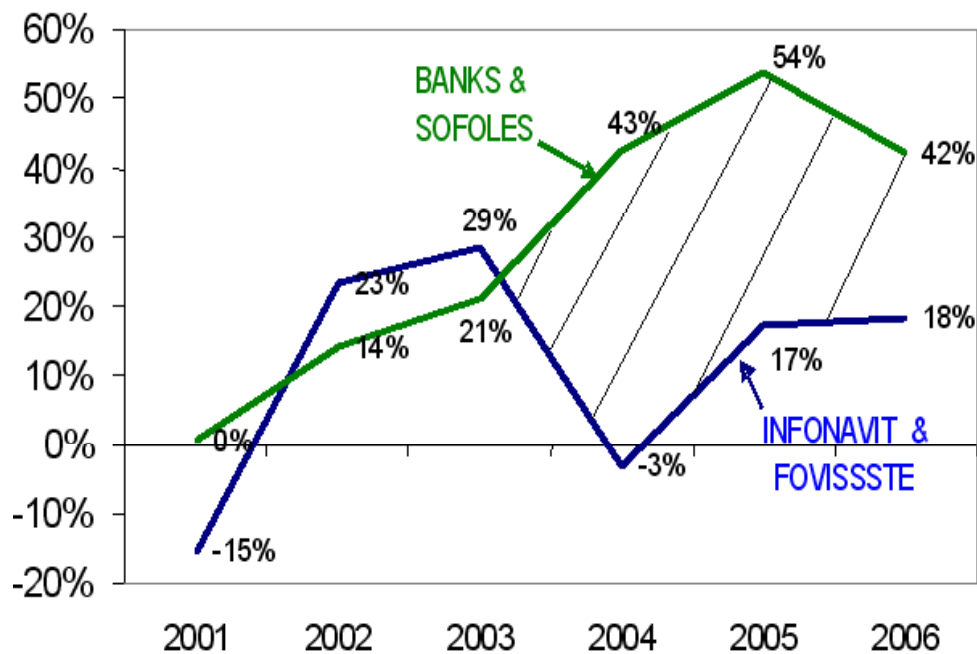
About $\frac{3}{4}$ of loan originations still do not involve a private intermediary undertaking at least part of the risk inherent in the transaction. FOVI/SHF has greatly diminished its importance as the funding source for mortgages originated by private intermediaries thanks to the development of the market.

Mortgages by Financing Source



But the market share of private intermediaries –banks and sofoles– is growing at a faster pace than Federal housing funds .

Yearly Rate of Growth of Mortgage Loans Originated by the Federal Housing Funds and the Private Intermediaries



INFONAVIT

- The board of directors is represented by workers, employers and the Federal Government.
- INFONAVIT receives on a monthly basis, 5% of the formal private sector workers payroll, and credits to personal accounts.
- INFONAVIT loans, interest rates and payments are indexed to the minimum wage (MW)*.
- INFONAVIT interest rates are not market rates, there is an implicit interest rate subsidy on all its lending.
- INFONAVIT relies on payroll deduction for its collections when borrowers are employed by firms in the private sector. Collection mechanisms for unemployed borrowers or those migrating to the public or the informal sectors still need to improve.
- Average dollar amount of their loans: \$22,000

FOVISSSTE

- Similar objective and sources of funding than INFONAVIT, FOVISSSTE is a wage-based housing fund for federal employees, and is the institution in charge of providing housing financing to over two million of federal government employees.
- The board of directors is represented by different government agencies and by ISSSTE (the public pension fund for federal employees).
- FOVISSSTE receives on a monthly basis, 5% of the federal employees payroll, and also collects through a pay-roll deduction mechanism.
- FOVISSSTE loans, like those of INFONAVIT, are indexed to the minimum wage and pay lower than market interest rates; however to a greater extent.
- FOVISSSTE lags behind INFONAVIT on revamping its operating procedures, particularly regarding the servicing of the loan portfolio.

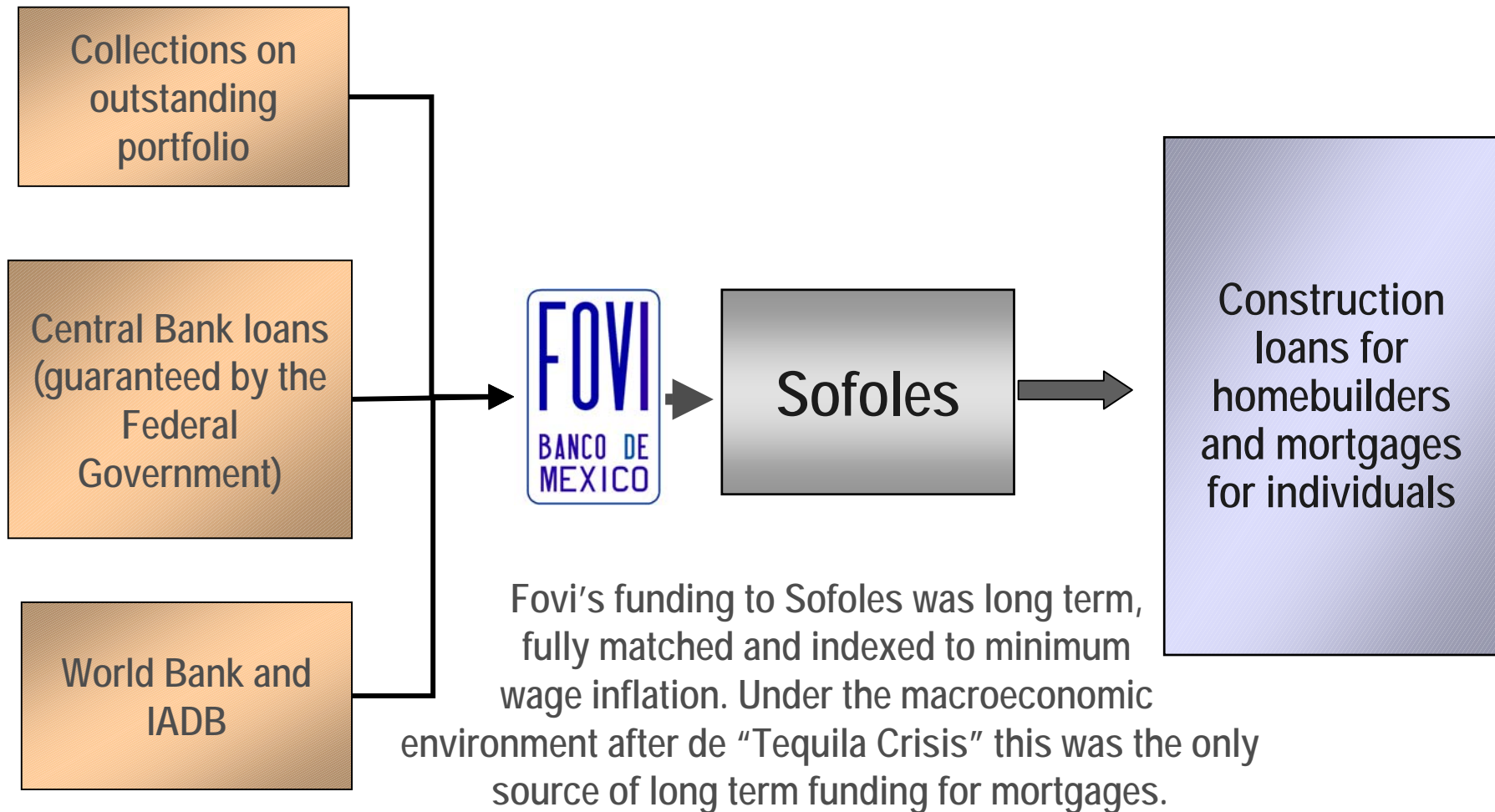
Banks

- Until 1994, banks were the only private intermediaries doing mortgages in Mexico.
- In 1995, the “Tequila Crisis” bankrupted the Mexican banking system and private banks abandoned the mortgage market. Past-due loans became rampant, specially in the mortgage portfolio of banks. Banks did not have efficient collection mechanisms or foreclosure procedures.
- By 2004 it became clear to banks they had been out of a profitable market, and they entered back aggressively by:
 - ✓ Undercutting Sofoles in price
 - ✓ Buying up the largest Sofoles
- Banks will originate approximately USD 7,300 millions of loans in 2007.

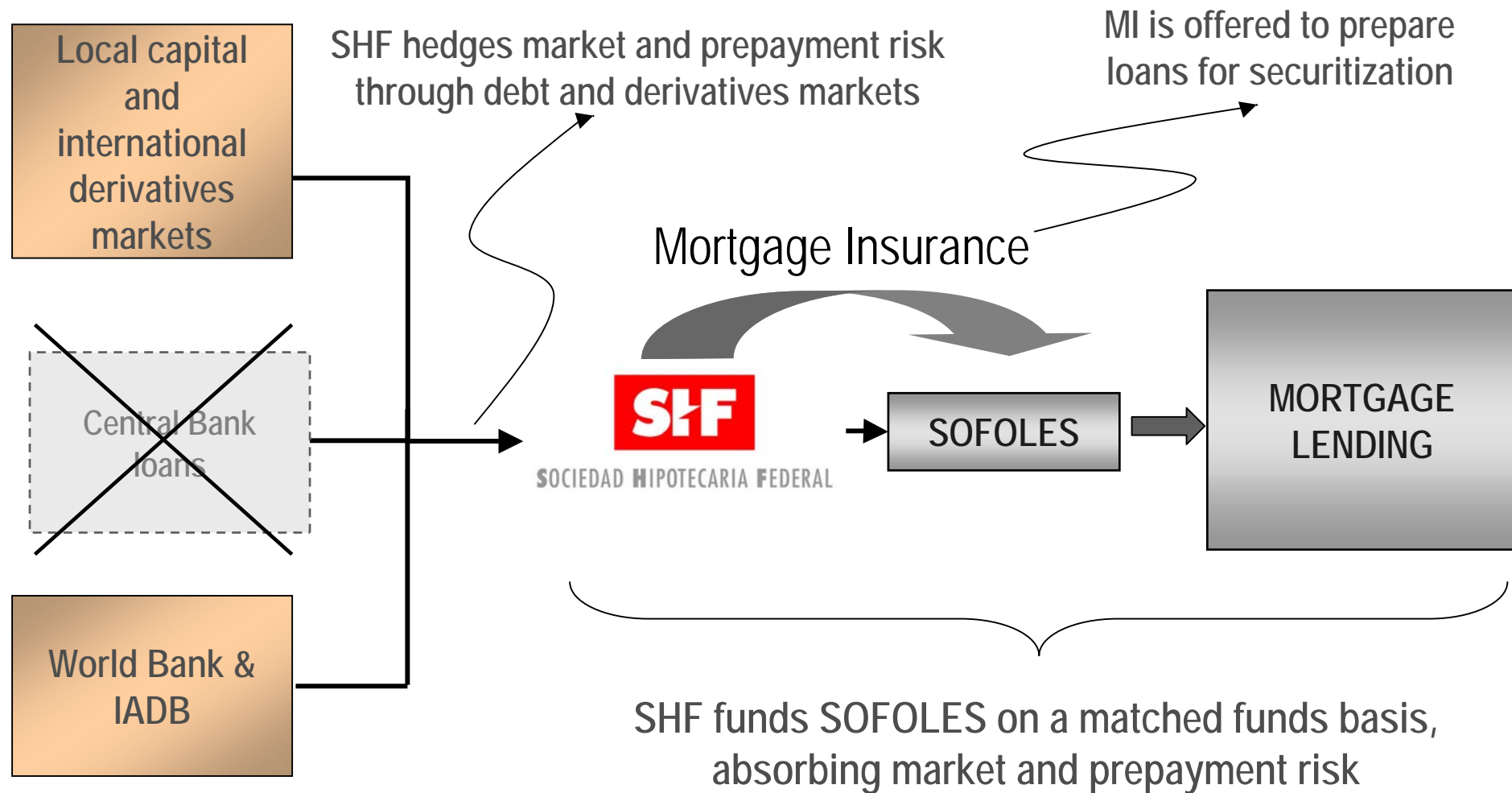
SOFOLES

- Sofoles were created in 1994 as a result of NAFTA. They are Non-bank banks similar to mortgage banks in US.
- They have two basic characteristics :
 - ✓ Cannot take deposits from the public.
 - ✓ Can only lend to a specific sector: housing, automobiles, education, etc.
- Since then, Sofoles have successfully been originating and servicing loans under FOVI & SHF programs:
 - ✓ Relatively homogeneous originating and servicing standards, as well as standardized loan product.
 - ✓ Sofoles will originate approximately USD 2,200 million of loans in 2007.

FOVI, which was managed by the Central Bank until the creation of SHF, started funding SOFOLES in 1995.



SHF started operations in 2002, overtaking the activities of FOVI and with a new capacity to get funding from the capital markets.



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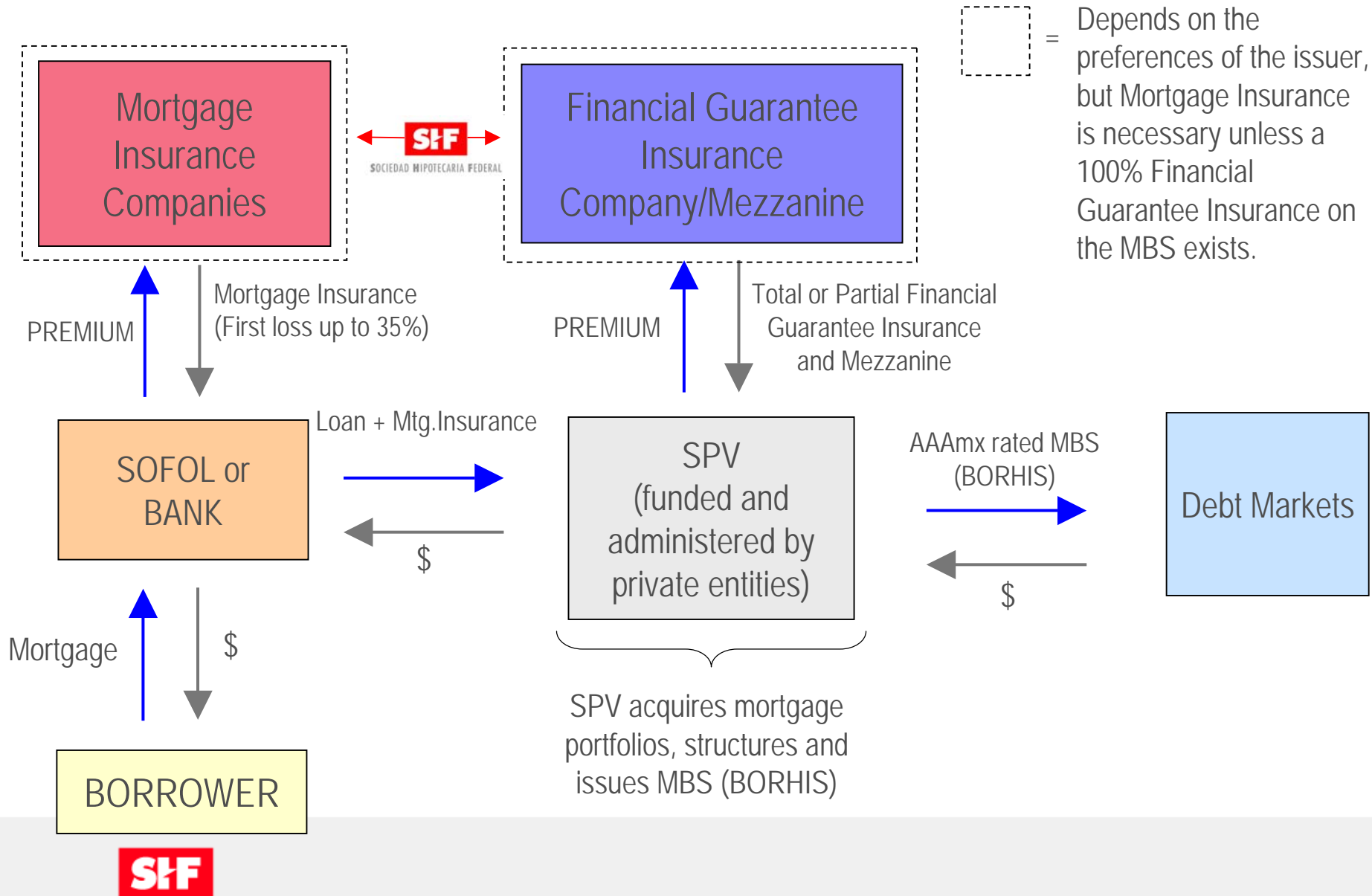
Participation of SHF in the securitization model

SHF does not perform the same activities that Fannie Mae or Freddie Mac: it neither purchases loan portfolios nor does it issue MBS with its own Guarantee attached. Instead the SHF:

- SHF offers Mortgage Insurance covering the first loss of up to 35% of loans, whether they are part of a pool of an MBS (BORHIS) or not.
- SHF offers Partial Financial Guarantees to structures that meet certain requirements. These usually do not cover more than 15% of MBS (BORHIS) outstanding balance.
- SHF supports the liquidity of the MBS (BORHIS) by continuously quoting bid-ask prices (with tight bid-ask spreads) for every issue in the market. All this activity is channelled through one of the eleven “BORHIS Market Makers”.

However, the goal of SHF is similar that that of the GSEs: to foster the liquidity to the mortgage markets as a means to promote the affordability of mortgages.

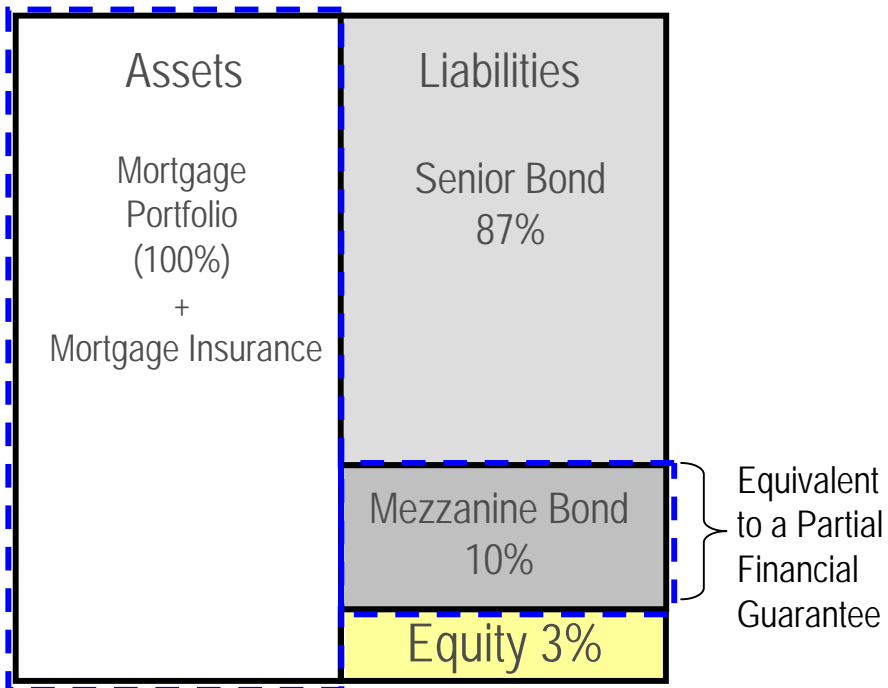
How is the market organized to issue MBS (BORHIS)?



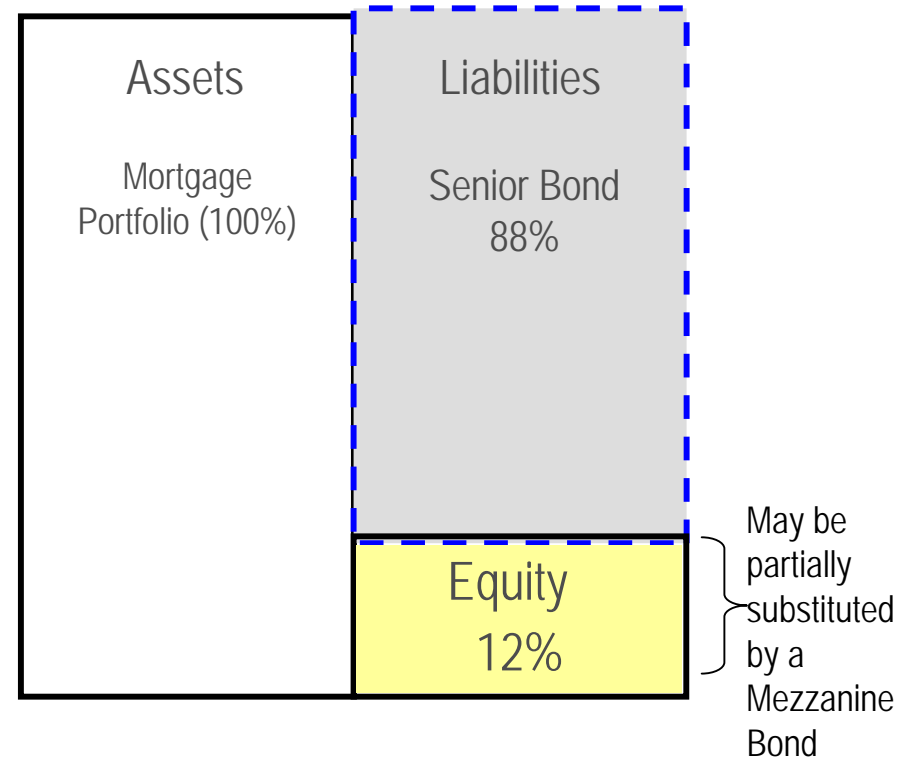
The securitization Model

Two type of structures are being placed in the market.

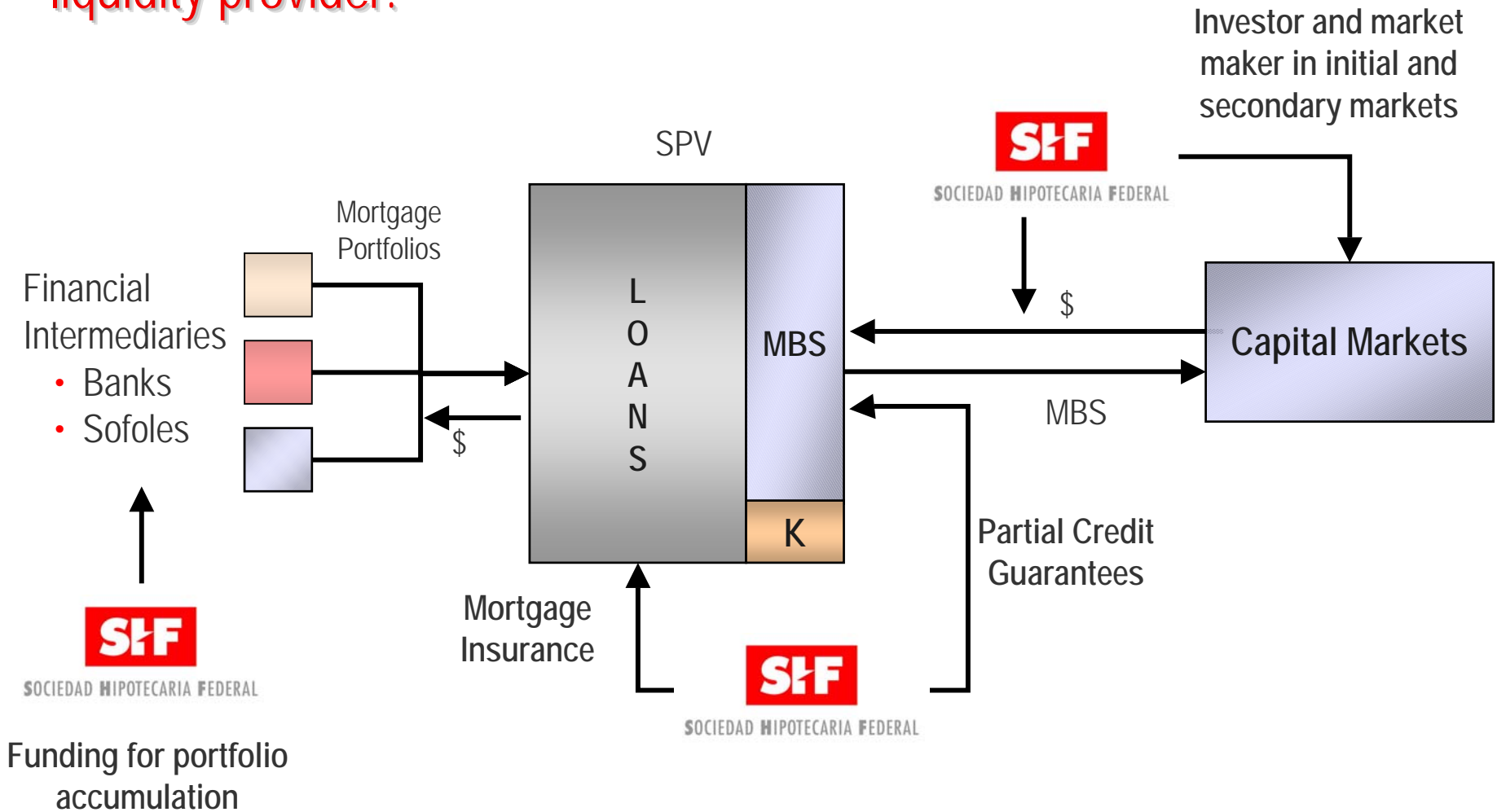
Mortgage Insurance +
Partial Enhancement
(Partial Financial Guarantee or
Mezzanine Bond)



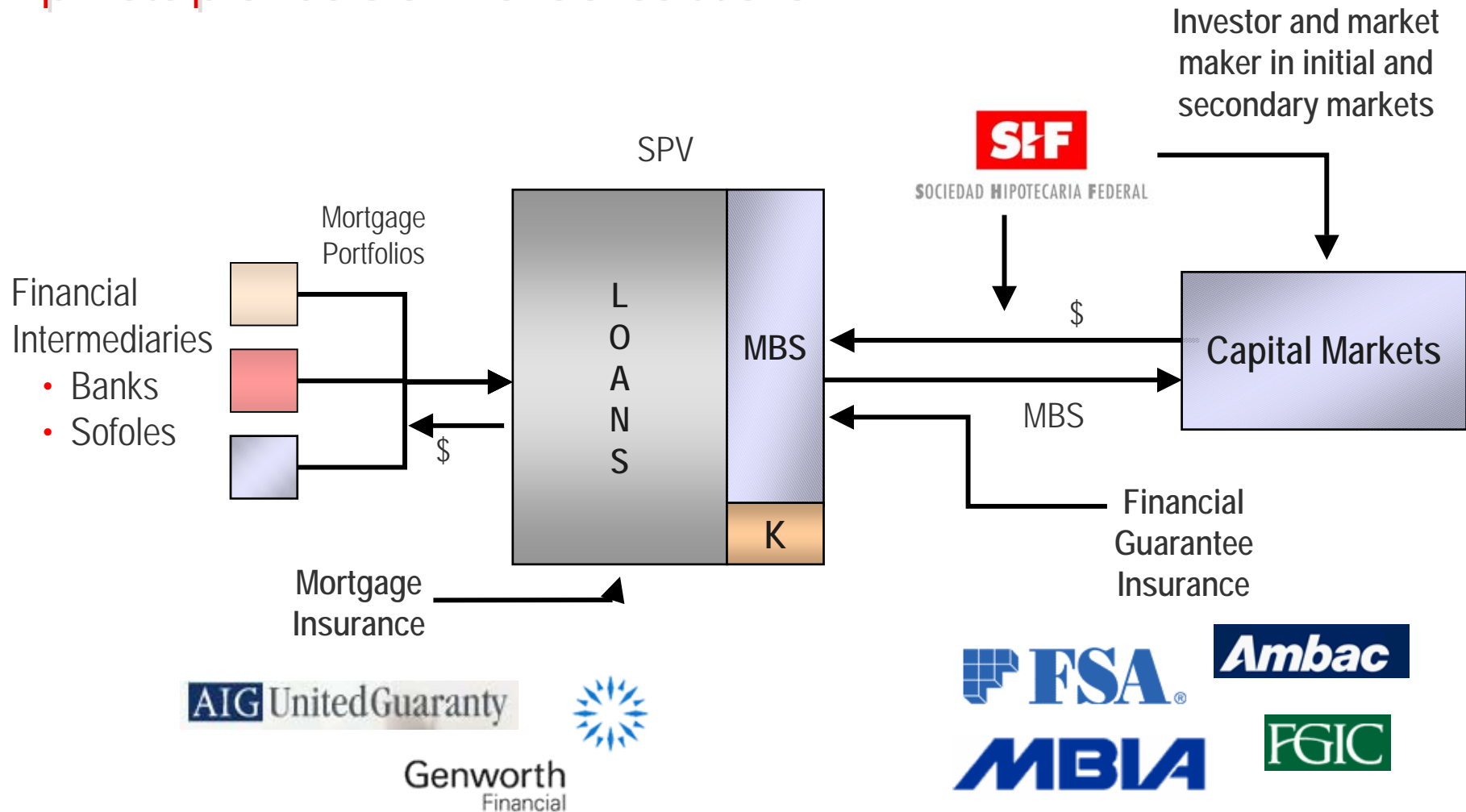
Full Financial Guarantee Insurance
(without Mortgage Insurance)



The basic model started with SHF's providing most products for the mortgage-backed securities (MBS) through its role as guarantor and liquidity provider.



SHF has been actively seeking the entrance of private providers of guarantees. The end-game is a market based system relying on private providers of financial solutions.



MI is not the only option available to support mortgage markets, but SHF thinks it is an obligated reference

- Mortgage insurance is viewed by SHF as the well-suited mechanism (of those provided by third parties) to promote a sound mortgage market and the development of securitization in Mexico.
- To obtain the insurance, each mortgage has to comply with new standard origination guidelines that have helped standardize the origination of new mortgages:
 - ✓ Credit Score: Borrower must be scored using a proprietary FICO score developed by Fair Isaac for SHF.
 - ✓ Appraisal: The appraisal of houses must follow the appraisal rules issued by SHF and be conducted by specialized entities licensed also by SHF.
 - ✓ Standard Documentation: The documentation in the loan files must follow the origination policies issued by SHF. Of special importance in this regard is the proof of income.

Is MI enough?

- There are at least three options to choose from to foster the development of a mortgage securitization market:
 - ✓ Mortgage Insurance (MI)
 - ✓ Financial Guarantee Insurance (FGI)
 - ✓ Investors in “mezzanine” and subordinated pieces of MBS.
- Developing markets for FGI and subordinated pieces of MBS can accelerate the creation of a liquid MBS market and lower mortgage rates.
- These markets should be viewed as very useful complements of MI when securitization is seen as the best option to channel funds to mortgage lending.

Mortgage Insurance in Mexico: Facts (1/3)

- Mortgage Insurance (MI) was introduced by SHF in Mexico on July 2004 with the following characteristics:
 - First loss with coverage ranging 5 to 35% of outstanding balance on loans with up to 90% LTVs.
 - Premium paid by lender on a monthly basis or up-front.
 - Clear underwriting guidelines used to underwrite every loan (no delegated underwriting thus far).
 - Claim may be made after foreclosure or cash-for-keys settlement, and SHF has the option to pay the claim or buy the loan at par.
 - Price depends on LTV, tenure of loan and coverage.

Mortgage Insurance in Mexico: Facts (2/3)

- Pricing by SHF of its MI products is such that it:
 - Covers the operational cost of delivering the insurance;
 - Accounts for the expected default rate and the severity of loss; and
 - Delivers a capital return equal to that set by our Board of Directors.
- In that sense, SHF is striving to set pricing a bit above market terms so as never to discourage entrance by private insurance providers.
- Another important feature of our product is the contractual obligation to pay the claim unless premiums were not paid or there is evidence of fraud. Making the payment promise unconditional was a necessity in our market to establish credibility of the product from the start.

Mortgage Insurance in Mexico: Facts (3/3)

- In an effort to promote the development of a competitive MI market, SHF has actively been seeking the participation of private companies in our market, with the following results:
 - Genworth and United Guaranty helped SHF shape MI contracts and underwriting guidelines of our program.
 - These companies have reinsured some of the risk underwritten by SHF through two independent quota-share contracts. The interaction between SHF and these insurers has meant a great deal of knowledge transfer taking place both ways.
 - Genworth and United Guaranty have both expressed interest on setting up their local insurance company, and are actively discussing with regulators the prudential set of rules under which the business would operate.

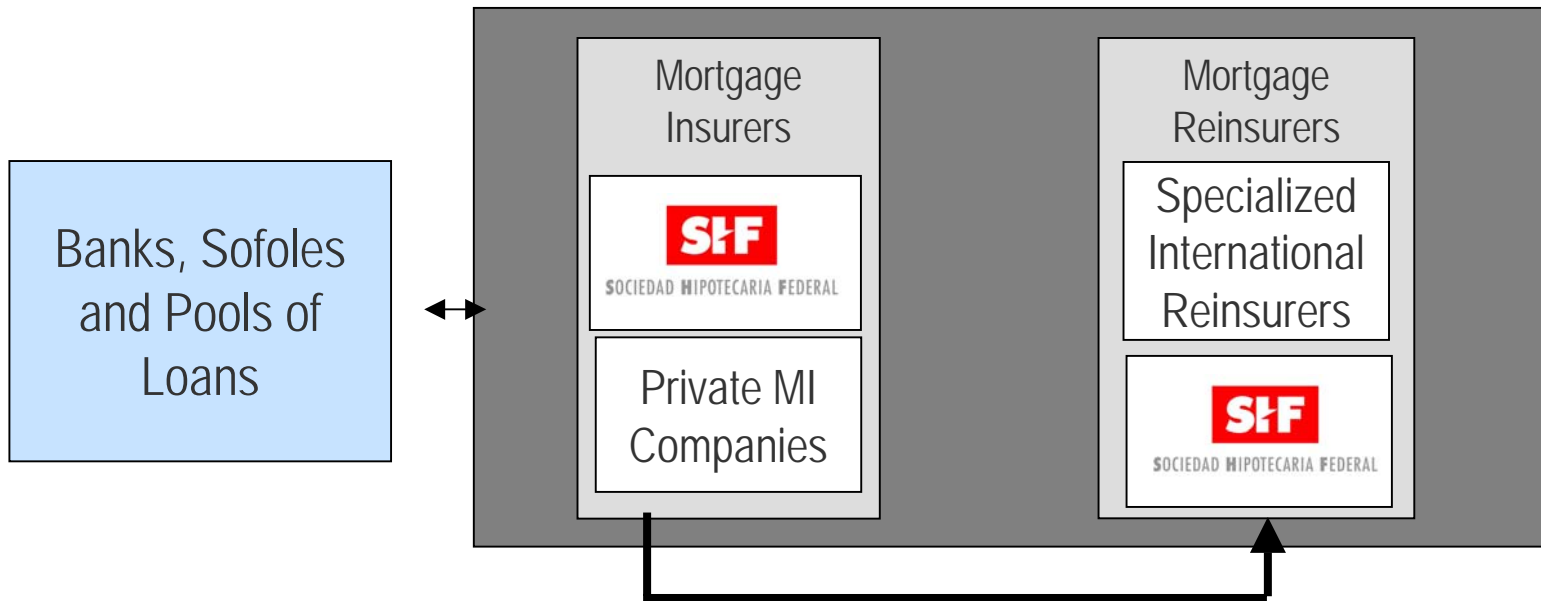
The reaction of the local market towards MI

- It is fair to say that without the full support of SHF and financial authorities, it would not have been possible to introduce MI in Mexico at this stage of development.
- SHF believes that now investors would seriously question MBS transactions without MI unless they are enhanced by relatively large junior tranches (with a shallow market for them) or by “full-wraps”.
- Pricing and operational issues (mainly regarding the underwriting of mortgage portfolios) still need to be sorted out between Sofoles and MI providers (including SHF) before these specialized lenders embrace the product.
- To the extent that securitization becomes the main source of funds for banks – something that should happen over the next two to three years - MI will be demanded by them as well.

Regulatory framework, a difficult balancing act

- So far, SHF has been offering its MI product without a clear prudential framework around it. However, this should change soon:
 - The Insurance Law was amended in April 2006 and MI is now a recognized product in the legislation so that only specialized monoline insurance companies licensed by the Ministry of Finance may offer the product.
 - The Insurance Commission and the Ministry of Finance discussed at length with SHF, Genworth and United Guaranty the draft regulation for MI, which was published towards the end of 2006.
- On the other hand, banks are offered capital relief of 50% on loans carrying valid MI, and MBS backed by portfolios with MI also get a capital relief of at least 50%. Banking authorities are now drafting the regulation that would be enacted this year under Basel 2, keeping the capital relief in place.

Fostering Mortgage Insurance in Mexico



1. **Short Term**: SHF offers MI, looking for reinsurance with specialized international insurance companies.
2. **Medium Term**: Private insurance companies, including affiliates of international firms, offer cover for residential and medium segments of the market, while SHF offers cover for social housing and special risks not covered by private monoliners.
3. **Long Term**: Private MI companies offer cover for all market segments, SHF offers reinsurance taking those risks private entities are not willing to hold.

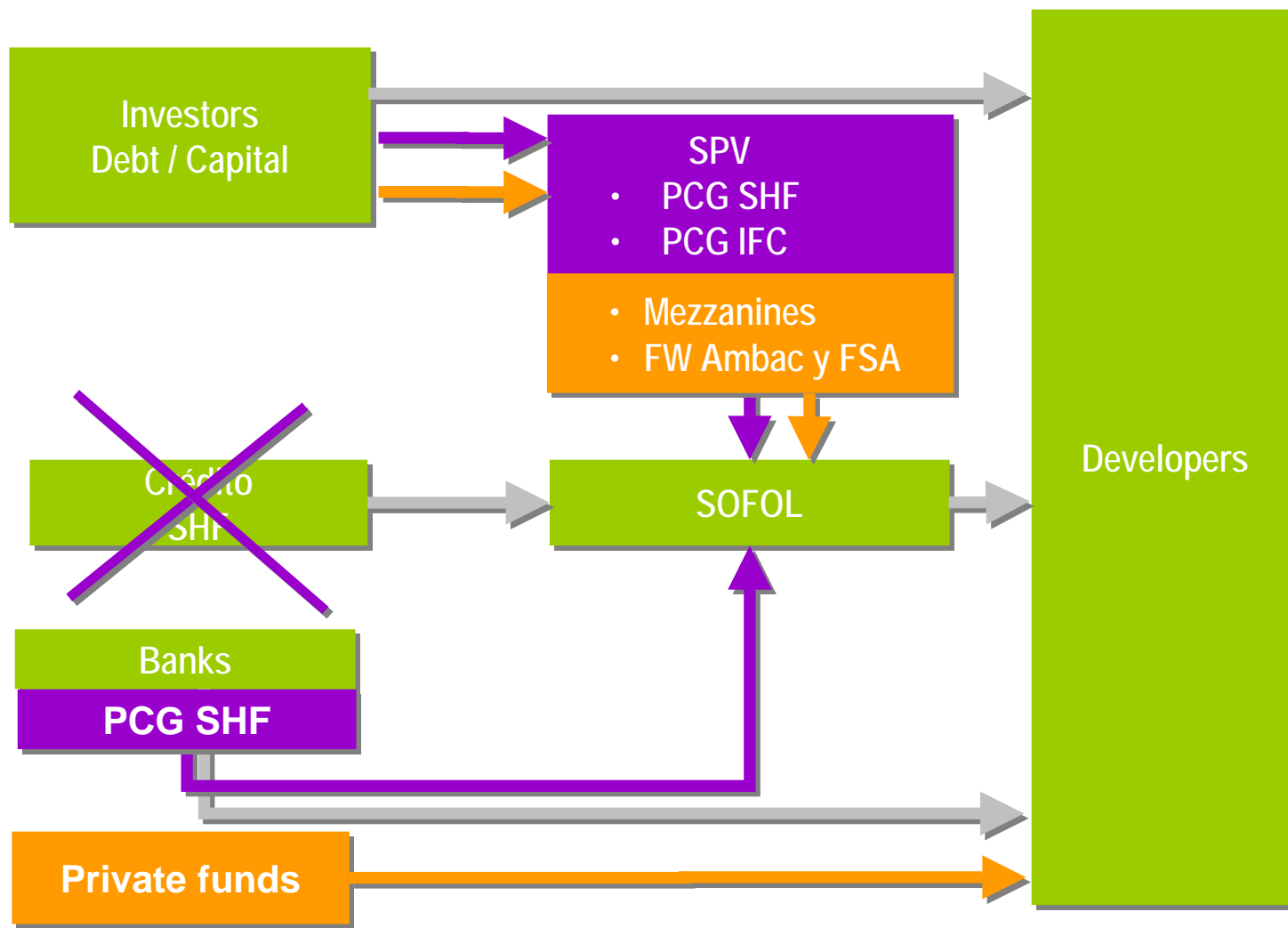
MI Closing comments (1/2)

- Judging from the Mexican experience, full support from financial authorities is needed before MI may thrive in an emerging market.
- The participation of private MI companies in the market will greatly facilitate the creation of the legal and operational infrastructure required, and will also be very valuable for promoting the advantages of MI with lenders, investors and rating agencies.
- Basel II is an excellent excuse to introduce the right incentives for lenders to undertake MI.
- MI may be easier to introduce in a market where the securitization of portfolios is (or is bound to be) the main source of funds for the mortgage industry.

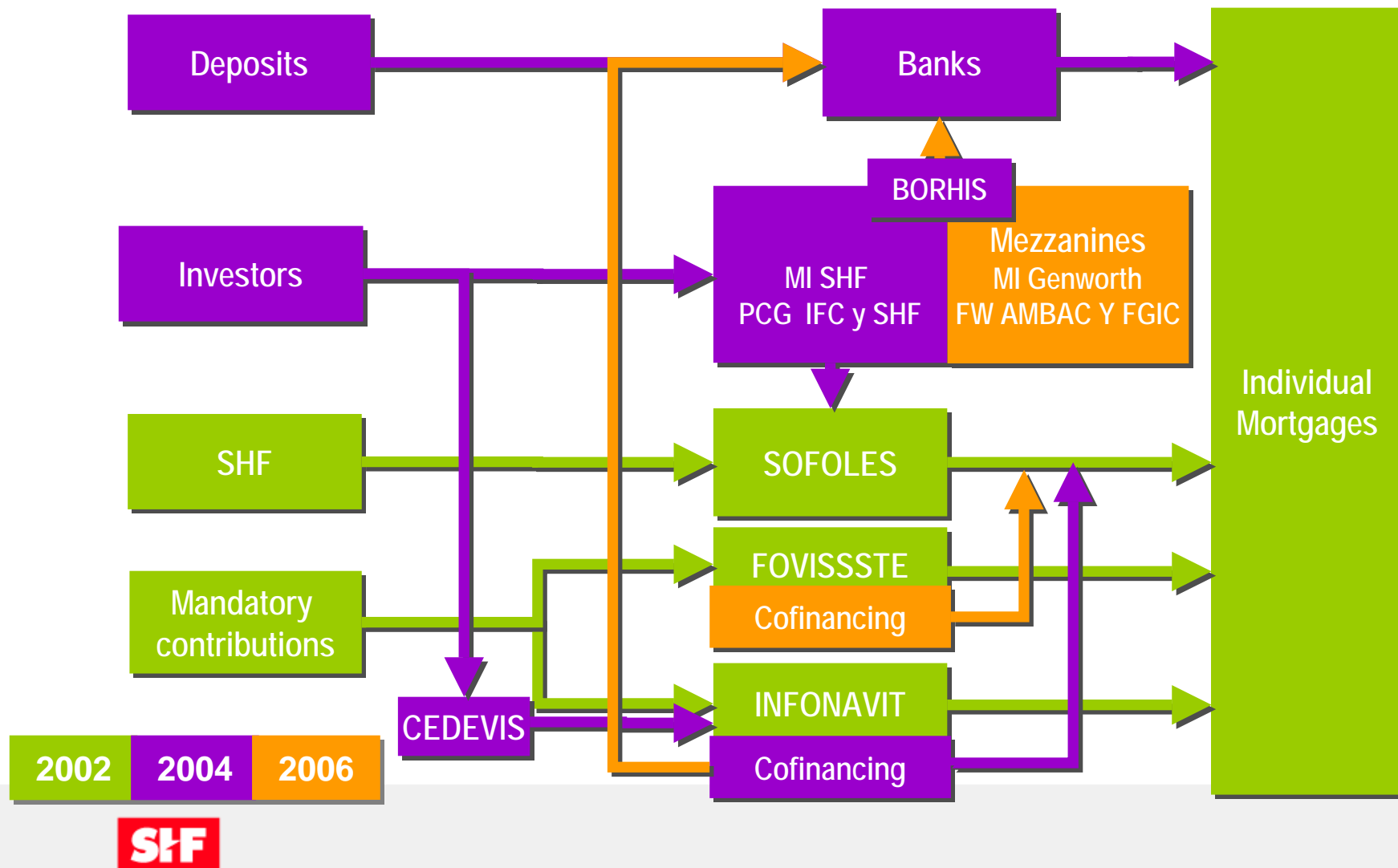
MI Closing comments (2/2)

- Government intervention to “kick-start” the MI industry and entice the entrance of private companies is key, but authorities should be mindful of:
 - Delineating the exact role government agencies involved in the mortgage market play, and
 - Setting a clear exit strategy from the market place, most likely differentiating among market segments.
- There are some other issues that need to be addressed before private MI companies feel comfortable enough. We have found of particular importance appraisal standards and strong enough statistical evidence on portfolio performance.

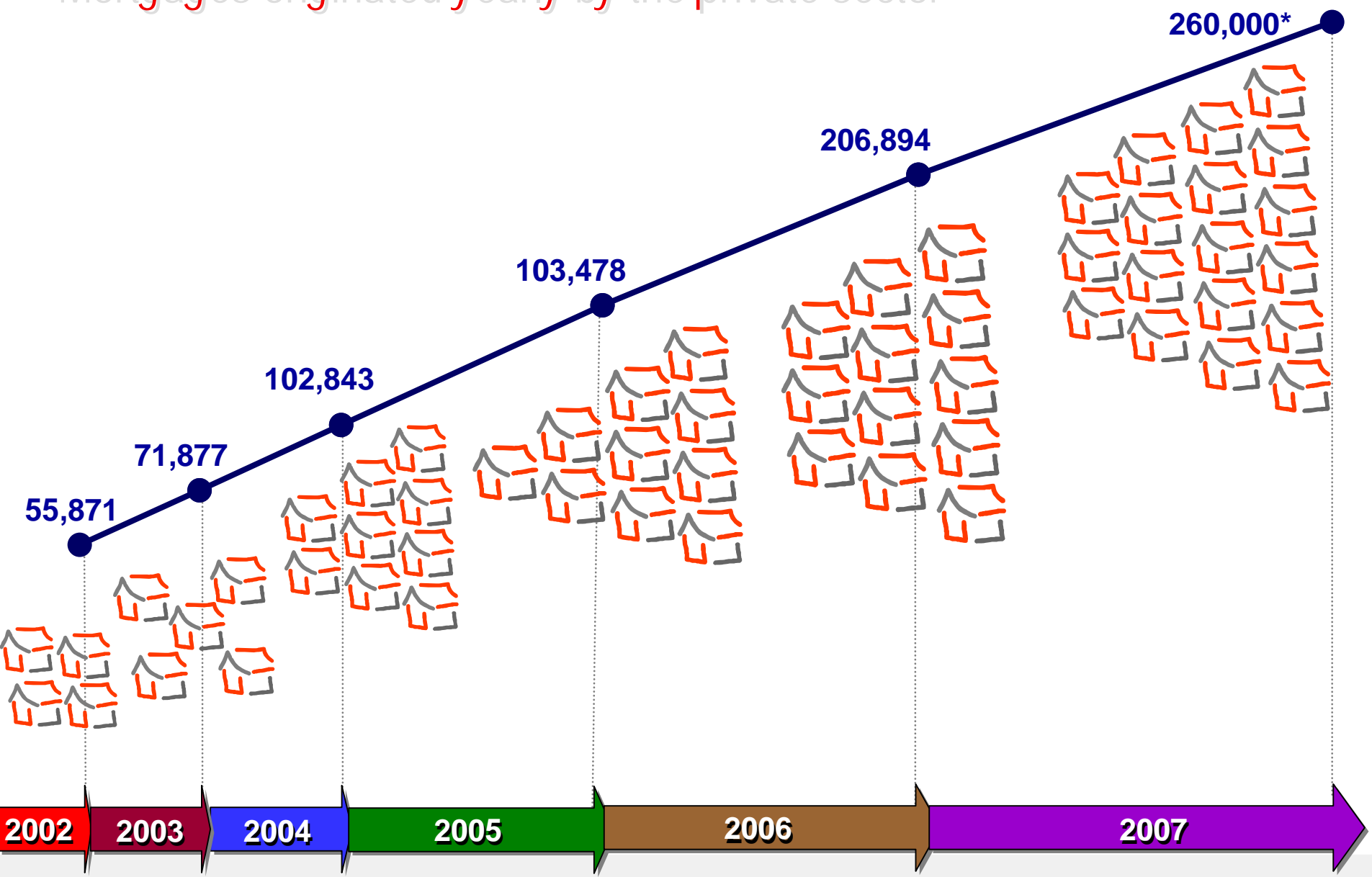
Evolution of the housing finance system for construction loans



Evolution of the housing finance system for individual mortgages

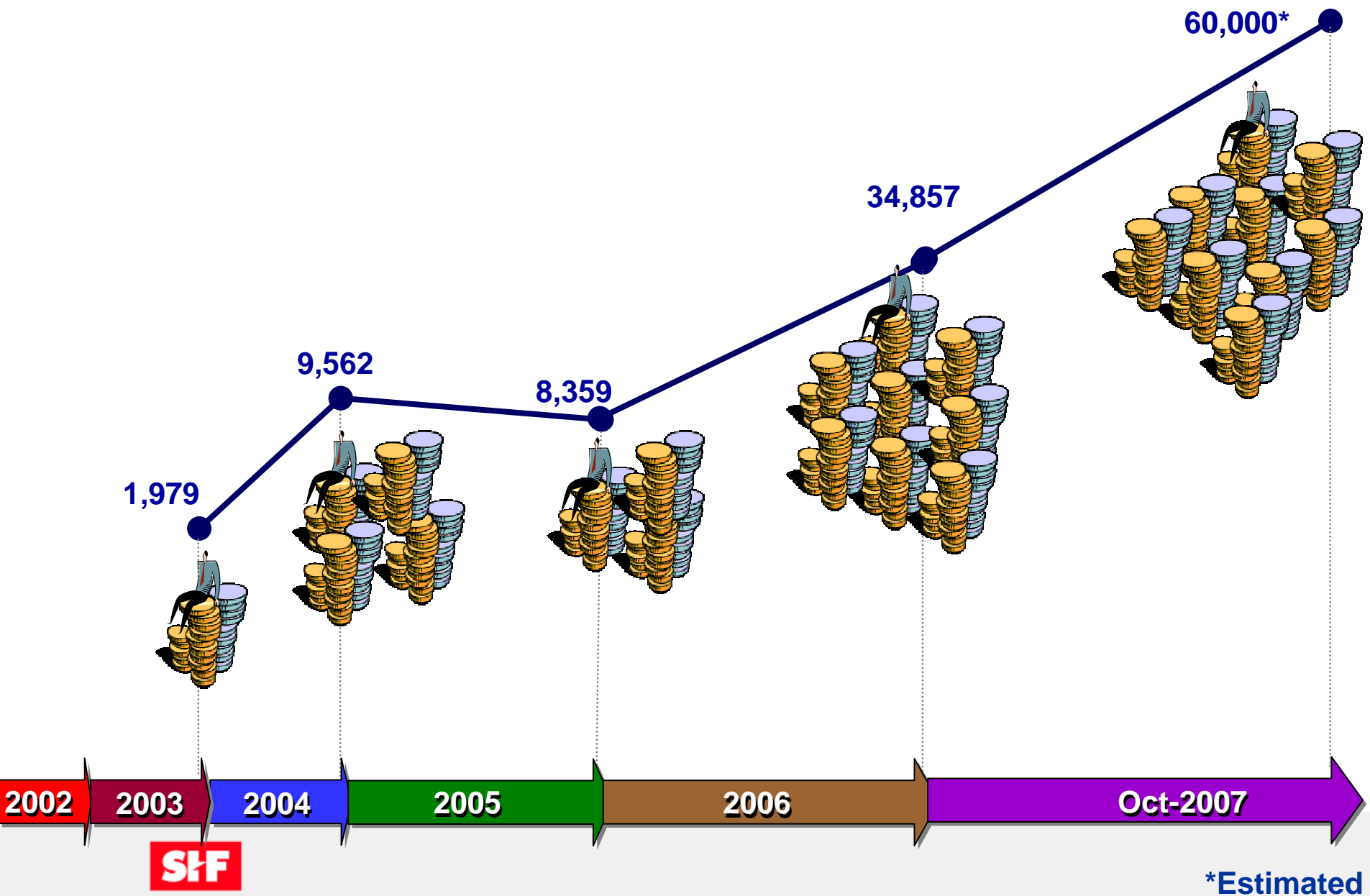


Mortgages originated yearly by the private sector



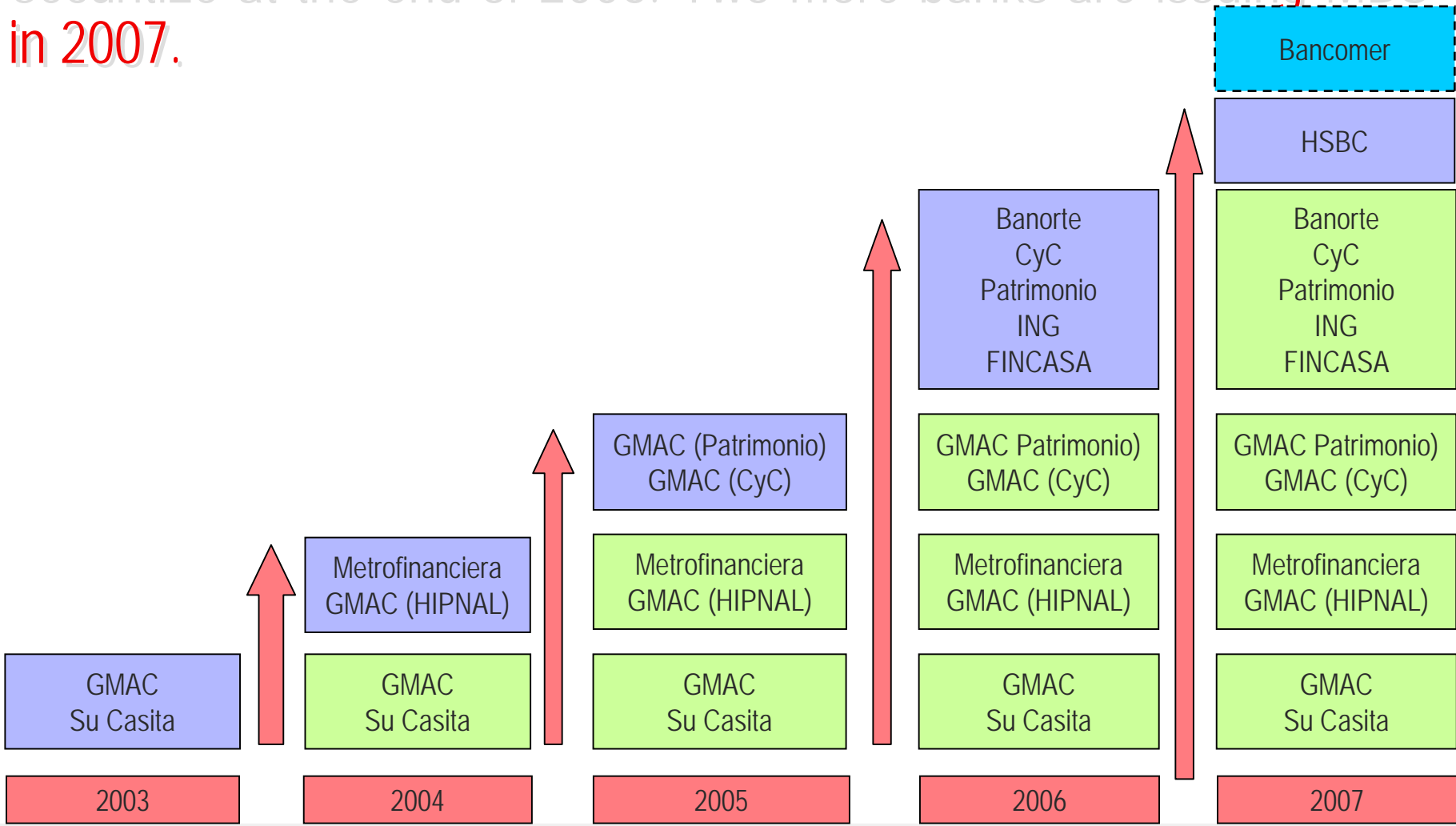
*Estimated

Number of mortgages securitized yearly by the private sector



*Estimated

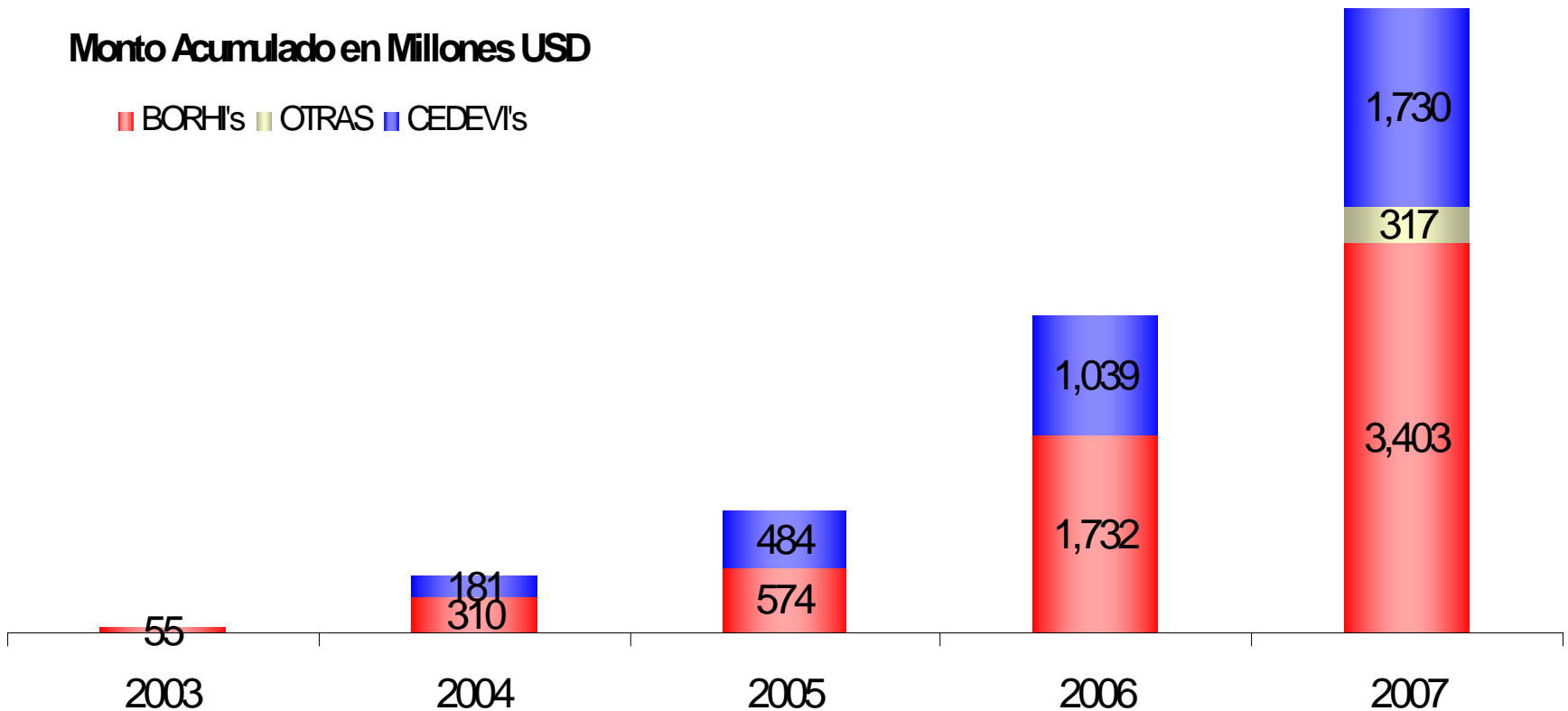
The number of participants in securitizations has steadily increased, first Sofoles, then Banorte was the first bank to securitize at the end of 2006. Two more banks are issuing MBS in 2007.



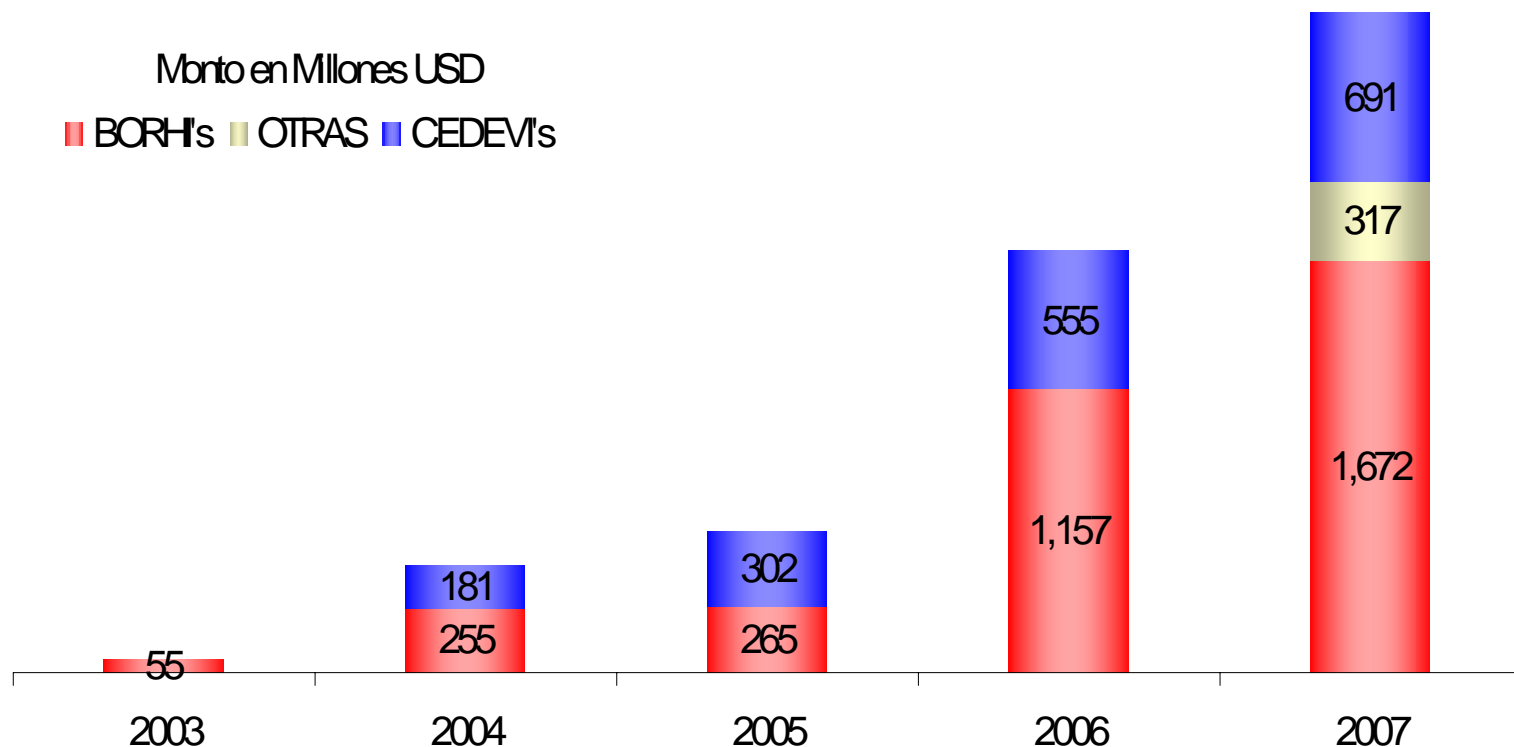
The RMBS market, just born on Dec-2003, will represent 30% of funding sources for private lenders in 2007 and should become the main source of funds for mortgages sometime in 2009.

Monto Acumulado en Millones USD

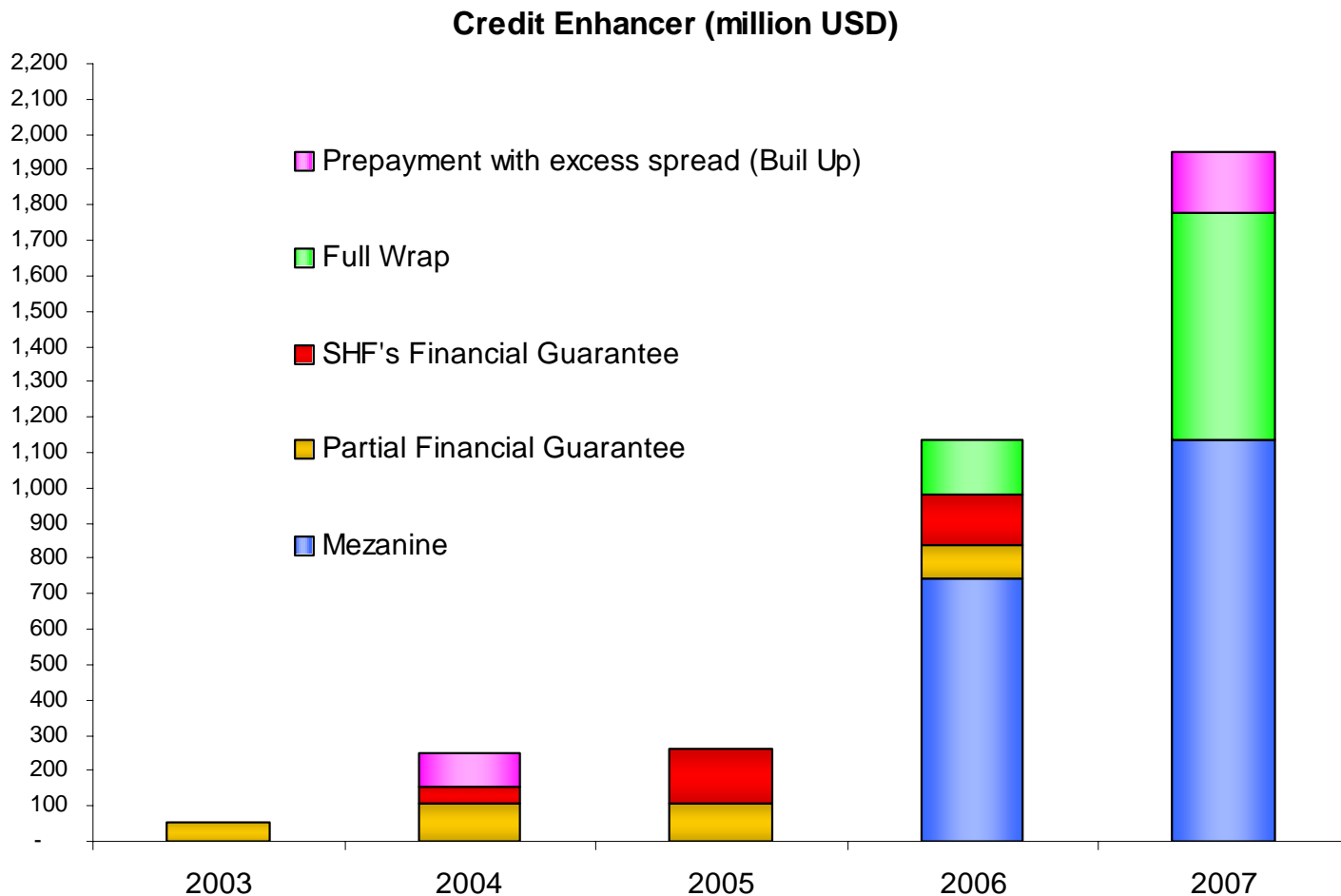
■ BORHI's ■ OTRAS ■ CEDEVI's



To finance such volumes of credit it is necessary to promote an efficient market for mortgage backed securities.

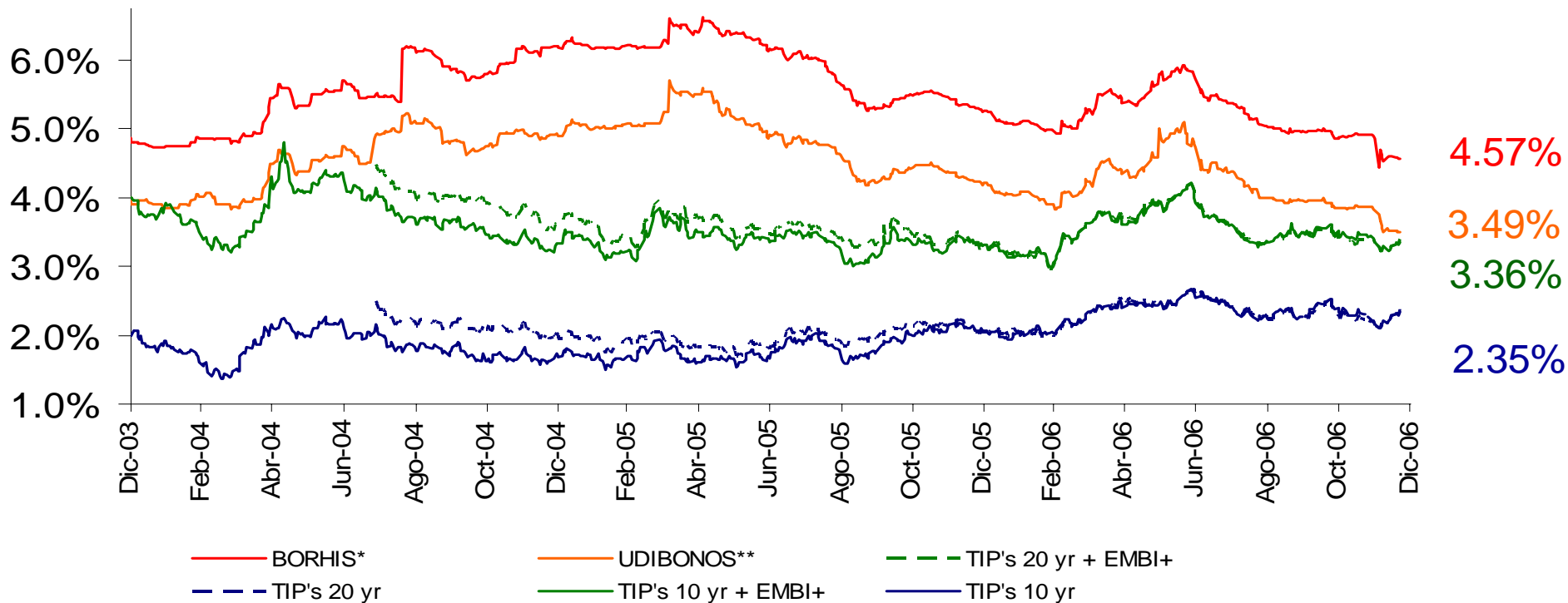


Credit enhancements provided by private entities have rapidly developed after a few successful transactions enhanced by SHF or the IFC.



BORHIS offer very attractive yields to Foreign Investors

YTM: BORHIS* vs. "Mexican Government Real Rate Benchmark", "TIP's + EMBI+", TIP's
(Dic-2003 – YTD)



*Weighted Average YTM (calculated, at each time, with the outstanding amount of each issue). Source: VALMER; Mexican Price Vendor.

**Government Real Rate Benchmark (with similar duration to that of the BORHIS).

TIP's = Treasury Inflation Protected Bonds; EMBI+ = Emerging Markets Bond Index (Mexico).

Today there are 11 Market Makers participating in SHF's program to foster the liquidity of BORHIS in the secondary market.

SHF acts through these institutions, and quotes prices both ways on every security at very tight margins throughout the day.

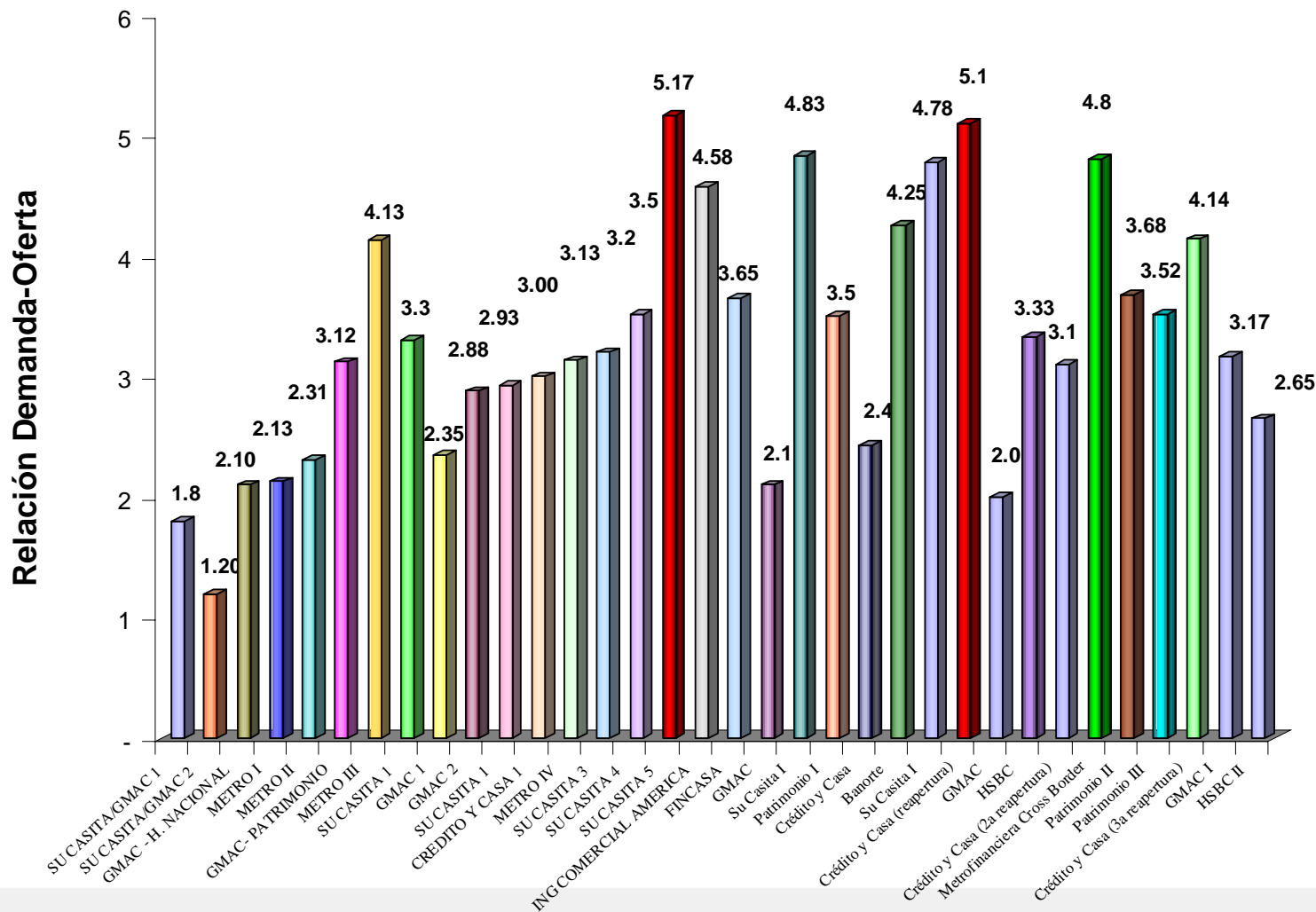
BORHIS

SHF

SOCIEDAD HIPOTECARIA FEDERAL



Though Borhis are a relatively new product in the Mexican market, the demand for these type of Bonds has consolidated....



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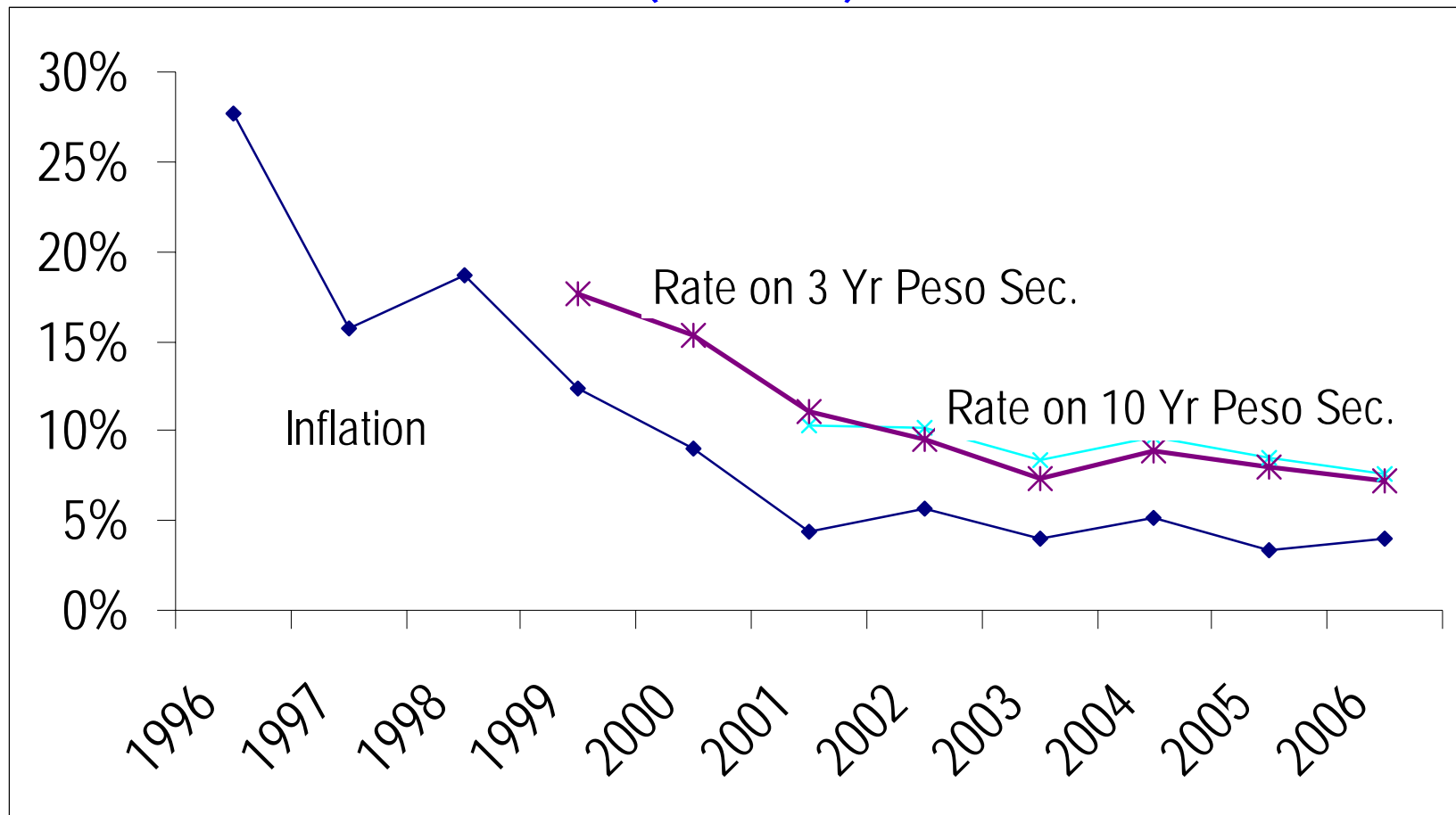
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Housing finance has benefited from a host of reforms that took place over the last decade.

- Stabilization programs based on prudent fiscal and monetary policies made inflation and interest rates decrease sharply over the last 10 years.
- Social security reform introducing defined contribution plans based on personal accounts managed by private pension funds, fostered long term savings as well as demand for long term & long duration securities.
- The creation of a long-term yield curve for government securities enabled the pricing of fixed-rate mortgage products.
- The reform of state-level civil codes enabled the sale and purchase of mortgage portfolios without over-burdensome requisites.
- Reforms of federal laws that enabled a more efficient recovery of guarantees.

Inflation reduction and the development of a yield curve for peso securities have been instrumental to housing finance.

Inflation and Interest Rates on Government Securities (Year-End)



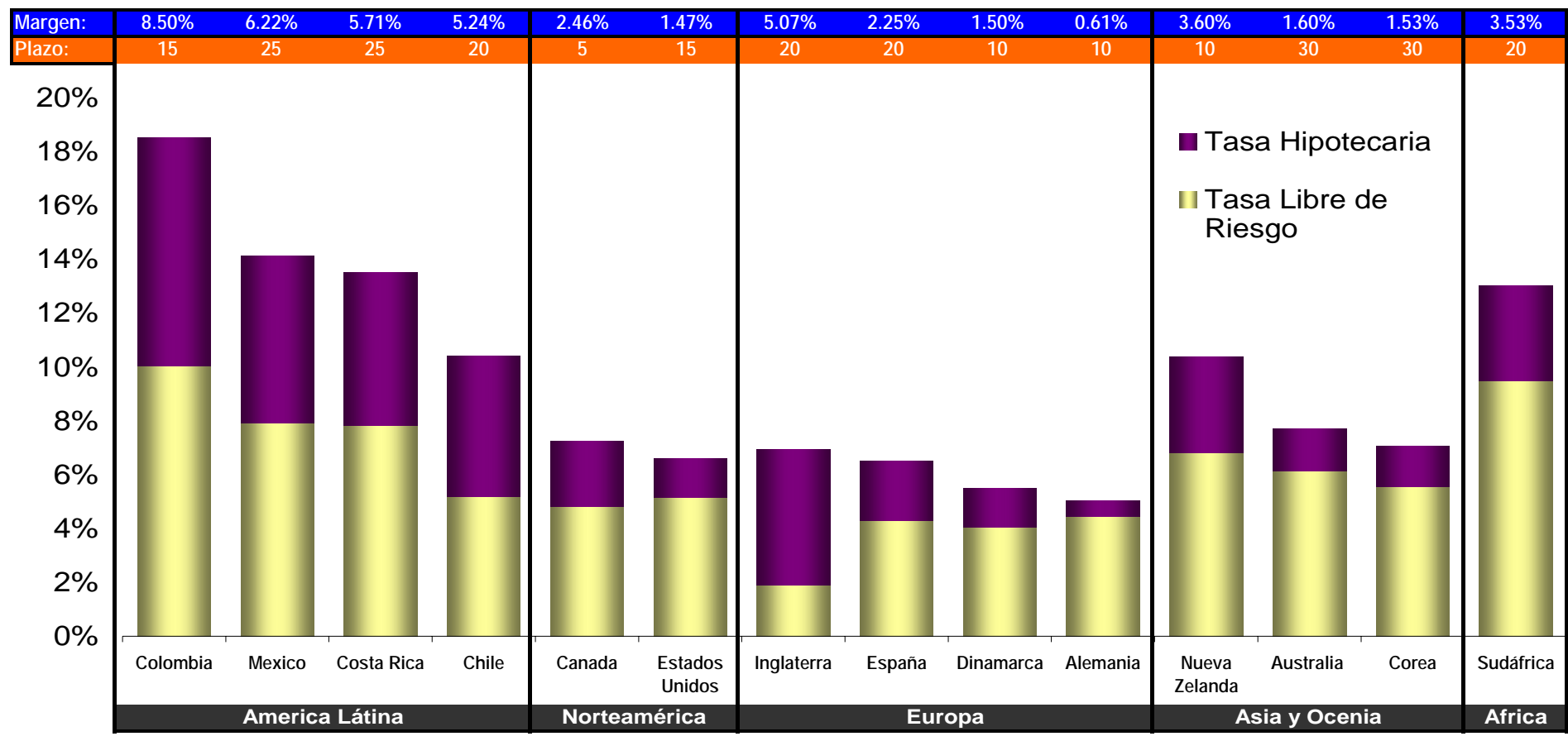
SHF's strategy for the future

The institutional strategy is focused in the satisfaction of Mexican families housing needs:

1. Promote major affordability to residential mortgage financing to the current attended population.
2. Promote affordability to residential mortgage financing in the non attended population (less than 5 MW) through SHF's aggressive strategies.
3. Promote an adequate offer of urban land for social housing.

The spread between the final borrower and the risk free rate can be greatly reduced to match some more efficient international standards.

Tasas fijas expresadas en la moneda de cada país a los plazos señalados (tasas nominales)



Fuentes: Bancos Centrales de todos los países y Bancos Internacionales: HSBC, Santander, BBVA, Citigroup y Standard Bank (Sudáfrica). El plazo está expresado en años al vencimiento

Margen: Diferencia entre Tasa Hipotecaria y Tasa Gubernamental de Similar Duración (Tasa libre de Riesgo)



SHF is promoting standardization through larger size issuances

Size of Borhis-UDIS issuances in Millions of pesos

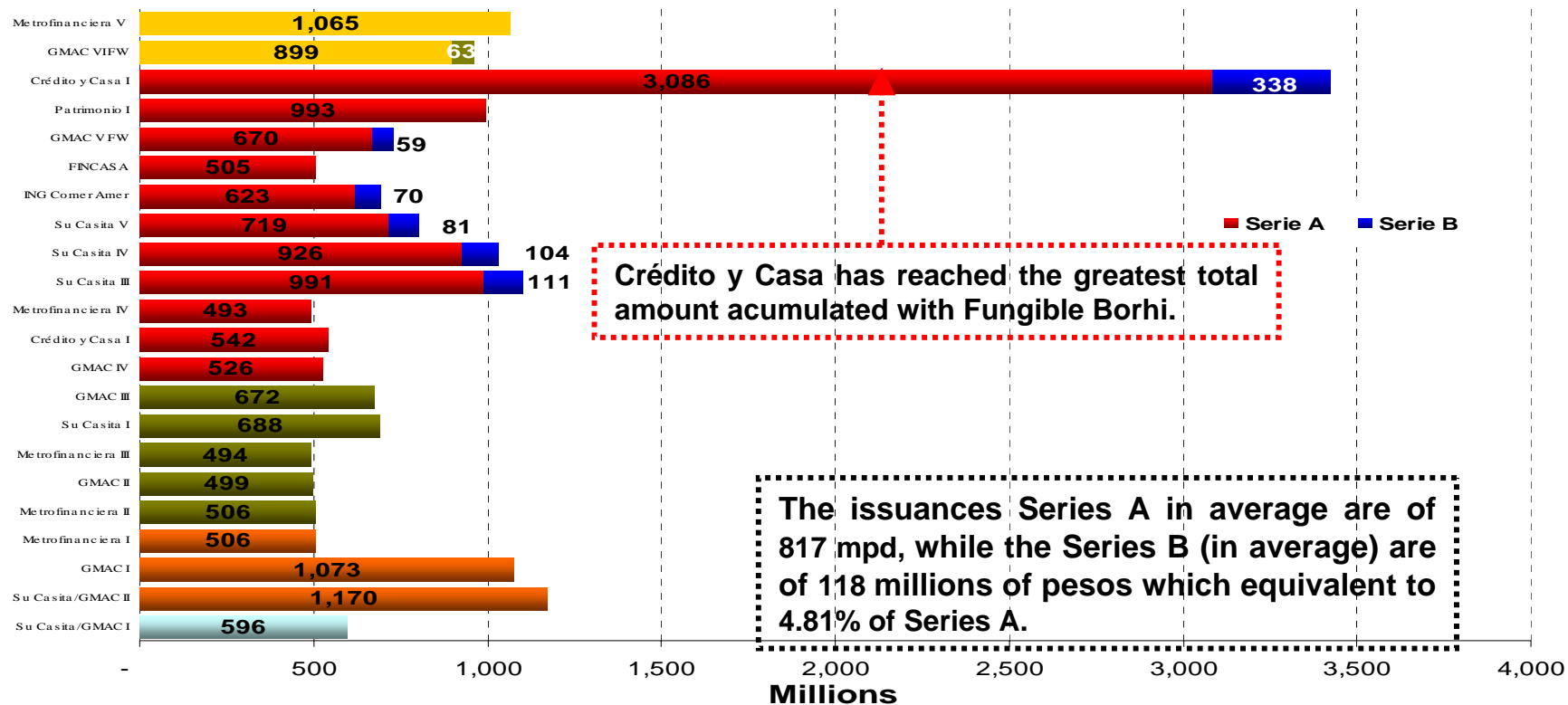
Serie A

Serie B

Total

18,241,833,613.45

826,485,838.62



Information for investors should improve in quality and availability as volume grows: the Bloomberg example*

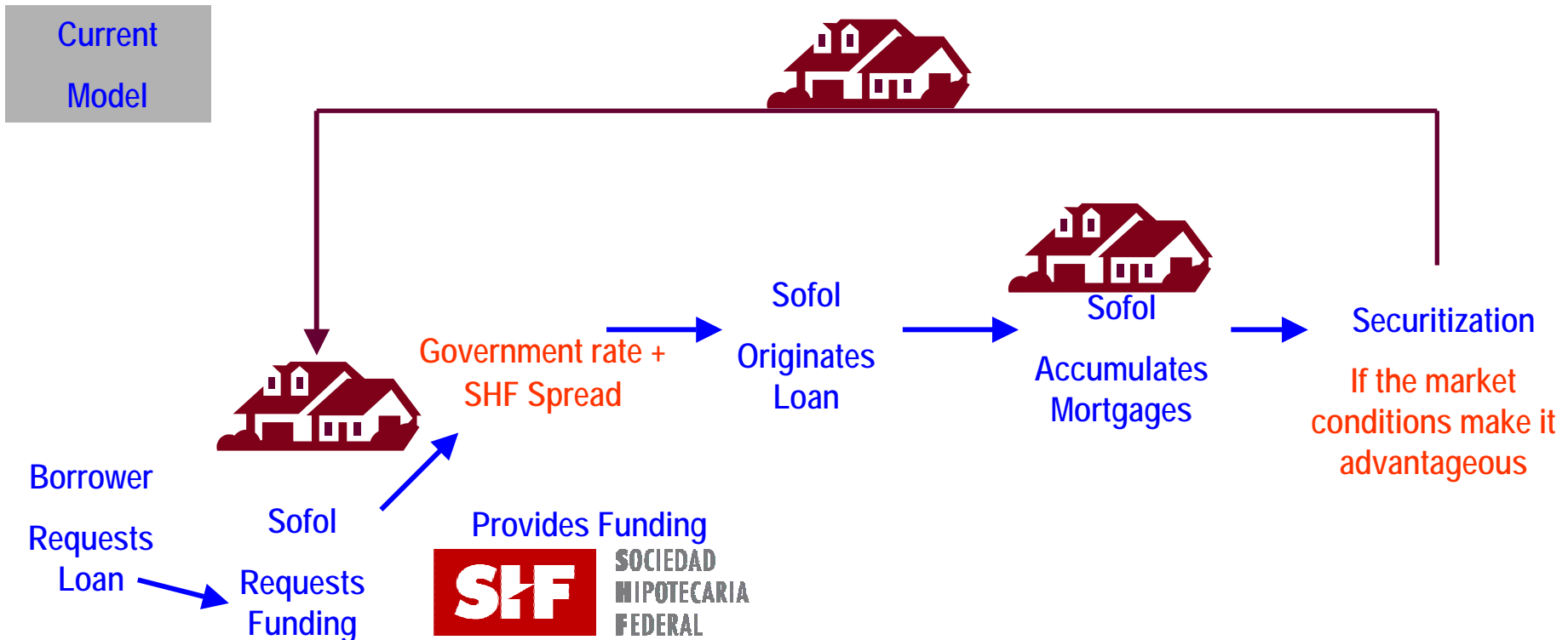
Trustee	Description of the issue	Calculator	Placement Agent	Description of the issue	Calculator
1 GMAC	x	x	1 CSFB	✓	x
2 Metrofinanciera	x	x	2 IXE	x	x
3 Su Casita	✓	x	3 ING	✓	x
4 Crédito y Casa	x	x	4 Banamex	x	x
5 ING-Comercial América	x	x	5 ING-Deutsche Bank	x	x
6 Fincasa	x	x	6 IXE-Deutsche	x	x
7 Patrimonio	x	x	7 ING-Barclays	✓	x
8 Banorte	x	x	8 Santander-Barclays	x	x
9 HSBC	✓	✓	9 HSBC	x	x
			10 INVEX	✓	✓

SHF is working with the banking and securities commission to issue changes in the regulation to standardize content, format, quality and opportunity.

* There are only some issues for Su Casita in Bloomberg, for HSBC there are calculators and descriptions.

However, cheaper funding coming from the market (compared to that of SHF) has not yet translated into cheaper products for the consumer at the lower end of the income spectrum.

The process is long, more than 28 months in average



Securitization market should be a continuous and reliable source of funds for mortgage originators.

Securitization should prove to be:

- a) A continuous source of liquid and safe funding from the capital markets.

- b) An accessible market with known and executable interest rate that allows to eliminate the market risk between credit origination and its securitization.
Today it takes, in average, about 35 months between these two events.

Hipotecaria Total is a company that will sell securitization services to mortgage originators. Its value proposition is to achieve a) and b) above.

SHF will continue pursuing its two projects aimed at streamlining the process to securitize as soon after origination as possible:

- Issuance of “Fungible BORHIS” of which two already took place in 2006.
- Launch of HiTo, a company offering services to streamline the process from loan origination to securitization of portfolios.

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Mortgages

A Danish model in Aztec dress

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One of the world's most robust mortgage systems may be exported to Mexico and other emerging markets

...some economists have touted the Danish approach as an ideal model for emerging-market mortgages. Mexico is about to become the first country to give it a try...



Building a framework for Covered Bonds in Mexico

- CBs are highly rated instruments: however, while their ratings are comparable to those of government and agency bonds, they offer a somewhat higher yield.
- CB holders benefit from a dual claim, first against the issuer of the bonds, typically a regulated bank, and also against the cover assets which are refinanced by the bonds. Retained assets: preserved margin and the commercial relationship with borrowers.
- As a different asset class, CBs adds value to local and global fixed income capital markets.
- CB rating is higher than unsecured debt (thanks to the underlying assets) and represent an alternative funding source for credit institutions.

Despite the growth of the mortgage market, almost half of the population is still not served by the existing mechanisms.

Market Segmentation by Income and Labor Condition (Percentage of households living in urban areas)

Households with Social Security	5.89%	16.29%	10.45%	14.09%
Households without Social Security	23.68%	17.27%	5.66%	6.67%
	0 to 3	3 to 6	6 to 9	9 and more

Monthly Income (Number of Minimum Wages)

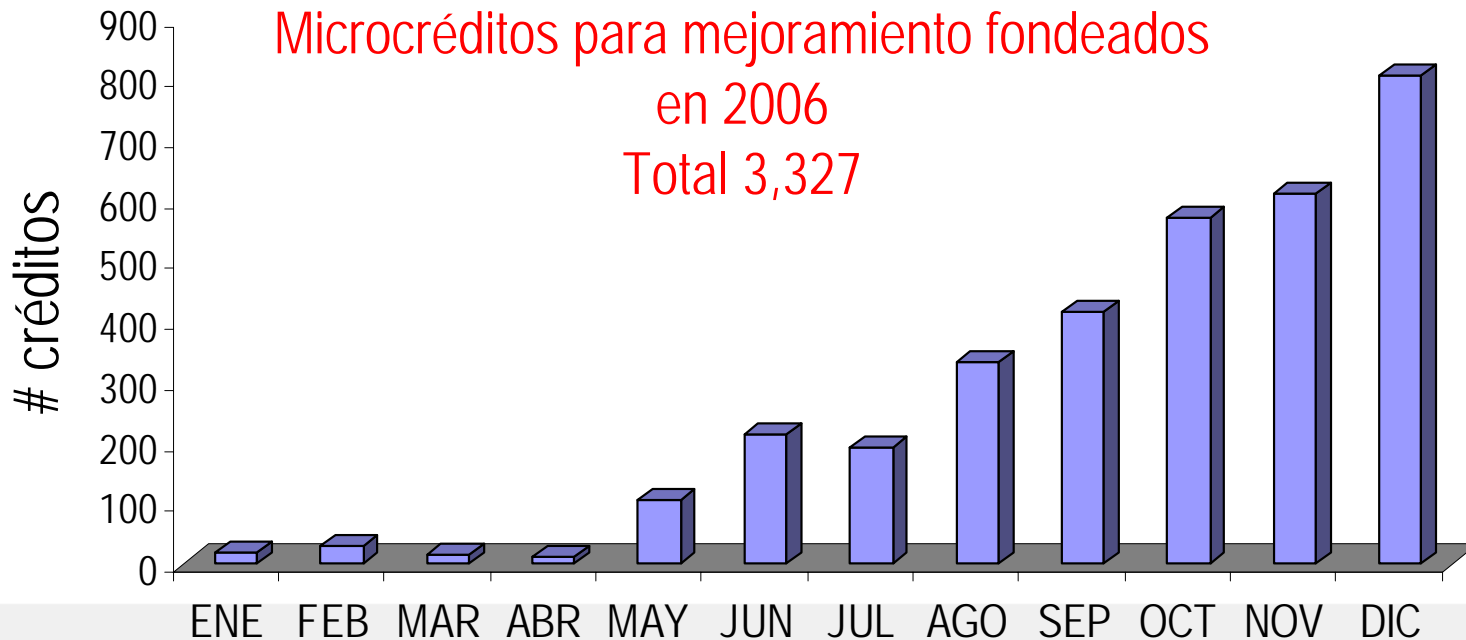
Underserved Market
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SHF is promoting more accessibility in the unserved mortgage market by aggressive strategies.

- The Federal Government has implemented a national subsidy program targeted to low income families (below 5 minimum wages).
- The subsidy is larger as family income decreases. The subsidy is designed to attract private market participants to grant a mortgage loan along with the subsidy and it also makes use of the existing MI products.
- The amount of the subsidy increases if the mortgage loan is used for buying existing homes in an attempt to promote secondary markets for houses.

SHF is promoting more accessibility in the unserved mortgage market by aggressive strategies.

- In 2006 SHF funded 3,327 microcredits for home improvement. The goal for 2007 is to grant at least 20,000 microcredits, up to the end of October there has been 17,555 granted.



Promote an adequate offer of urban land for social housing.

- The main obstacle for having social housing is the shortage of urban land for this purpose.
- Government intervention, at the three different levels, plus private participation is a necessary condition to solve this problem.
- Today the developers provide the urban infrastructure needed for the projects and this system is less efficient, from the urbanistic and financial view, that if urban infrastructure is provided with an integral long term view of the cities.
- The quality of life will improve if there exists better planning and execution of urban infrastructure including housing, demand for labor, communications, water systems, etc.

Promote an adequate offer of urban land for social housing.



Land is aggregated among different owners to have a centralized project for land development

Government entities commit to provide the needed permits, licenses and support for the projects

Land is developed and sale to housing developers

Houses are sell under conforming requirements.



The objective is to produce a profitable market for social housing under sustainable urban development.

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The International Experience: Housing Finance in Mexico

Evolution, Strategy and Challenges Ahead

Thanks for your time!!!

Any questions???

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