An experience of guarantee scheme for mortgage credit:

The Morocco FOGARIM

(Olivier Hassler -May 2016)

Moroccan market overview

- Population: 33.5 million, GDP per capita: 3,200 $, unemployment: 9.9%
- Financial macro-data:
  - Low inflation: 1.5%
  - Low interest rates: T. Bonds = 2% 1 year, 2.7% 10 years
  - Bank credit to the economy: 85% GDP
  - Bank loans –to-deposit ratio: 105% (June 2016)
  - Institutional Investors' assets (including CDG): 90% GDP
- Housing needs
  - Demographic growth: +1.1% per year
  - Urban population: 60%, out of which 66% homeowners
  - Est. Housing needs: about 800,000 unit shortage, declining (125 million in 2004) + 150,000 new households per year
  - Housing production: ~200,000 units per year (incl. 40,000 plots), ~1/2 in affordable segments
- Housing finance
  - 18.5% GDP, 23% of bank credit
  - Maturities up to 25 years, rates below 6% (May 2016), ¾ of loans fixed rate
  - Numerous lenders, but 5 main ones = >80% market share

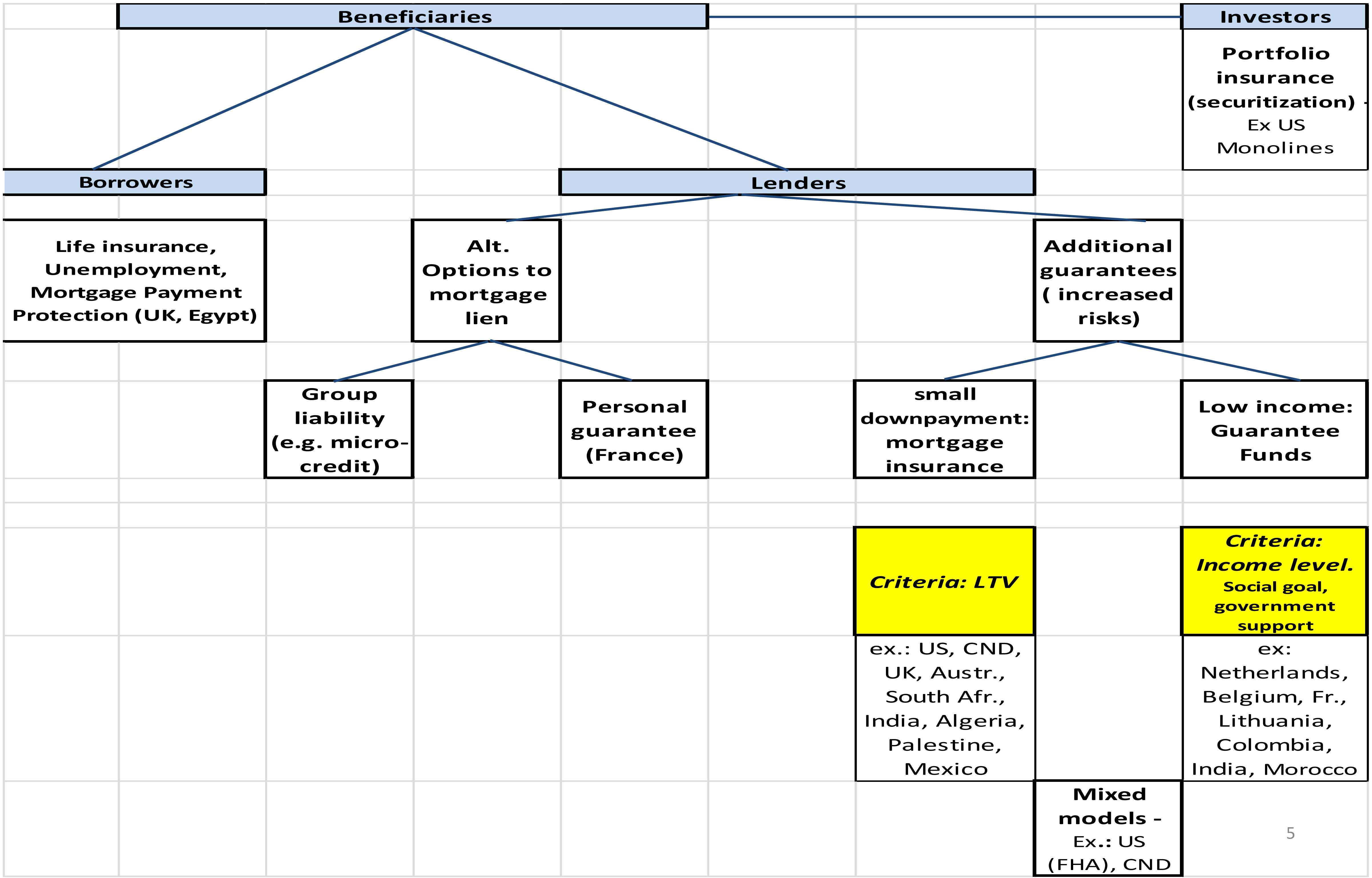
Moroccan Housing Policy – broad features

- 4 New Towns, organized urbanization perimeters
- Active supply side support:
  - 2 2010-2020 programs:
    - « social housing »: 50 to 100m² MAD 250,000 max ($ 25,000) before VAT
    - «High Total Housing Value » units (« FVIT »), for households earning 1.5 minimu wage at the most (MAD 3,500 per month in 2016): 50 to 60m², MAD 140,000 max with VAT ($14,000)
  - Tax incentives for developers who build at least 500 units over 5 years
- A powerful public player: Al Omrane, both a land developer and housing developer (diverse market segments, but 90% of FVIT production)
- 2010-2015: agreements with 970 developers, 465,000 social units, 52,000 FVIT units
- « Slumless Cities » Program. 2 components:
  - Direct assistance to households , with 2 options: FVIT unit, or sale at below market prices of individual plots (50 to 80m²) for self-construction
  - Restructuring of illegal settlements
- Rental housing (29% of urban housing stock): new rental law, new tax investives to rental investments

Finance for Housing – Government Policy

- Savings mobilization for housing
  - Securitization framework since 2002 (little used)
  - Instauration of a tax free Savings-for-housing scheme (2012)
  - Development of a covered bond framework (on-going)
  - Development of a Real Investment Trust framework (on-going)
- Direct demand side subsidies until 2005
  - Complex assistance mechanism to enhance affordability , an objective of lesser importance with the fall of interest rates
  - Indirect subsidization now through the reimbursement of VAT on affordable housing (social or FVIT)
- Promotion of housing finance
  - Tax deductibility of mortgage interest
  - Creation in 2004 of guarantee funds – basically replacing direct assistance to households

Credit risk protection instruments - Typology



Damane Assakane Guarantee Funds – Common features

- Households who do not already own a home in the same region and did not State housing support before
- Loan characteristics:
  - First mortgage
  - Monthly installment < 40% incomes
  - 25 year max
  - Fixed interest rate – freely set
- Risk-based insurance premium (risk proxy: LTV). Premium = 0,65%*LTV*coverage ratio
- Trigger: at least 9 month arrears and mortgage execution proceedings initiated
- Indemnification within 30 days of the claim (definitive amount set after forced sale)
- Initial capital base calibration (State endowment): 12.5% of exposures
- Management: by the « Caisse Centrale de Garantie », a State financial body with special regime that manages about guarantee schemes, supervised by the Central Bank

FOGARIM

- Targeted population: independent workers or salaried workers not part of the social security system
- Income criteria: replaced by a maximum monthly installment – MAD 1,750 in general, 1,000 for borrowers in the Slumless Cities program
- Price ceiling: MAD 250,000 ($ 25,000) without VAT
- Loan characteristics:
  - LTV < 100%, or 80% in the case of the Slumless Cities program, transaction cost included
  - Future lien commitment before the sub-division of a master title possible (Slumless Cities program)
- Coverage rate: up to 70% of the loan balance, 80% for Slumless Cities program borrowers
- Insurance premium: between 0.25% and 0.51% (VAT included) based on LTVs . Implicit subsidy likely
- Slumless Cities program loans isolated in the fund's capital due to their specific risk profile

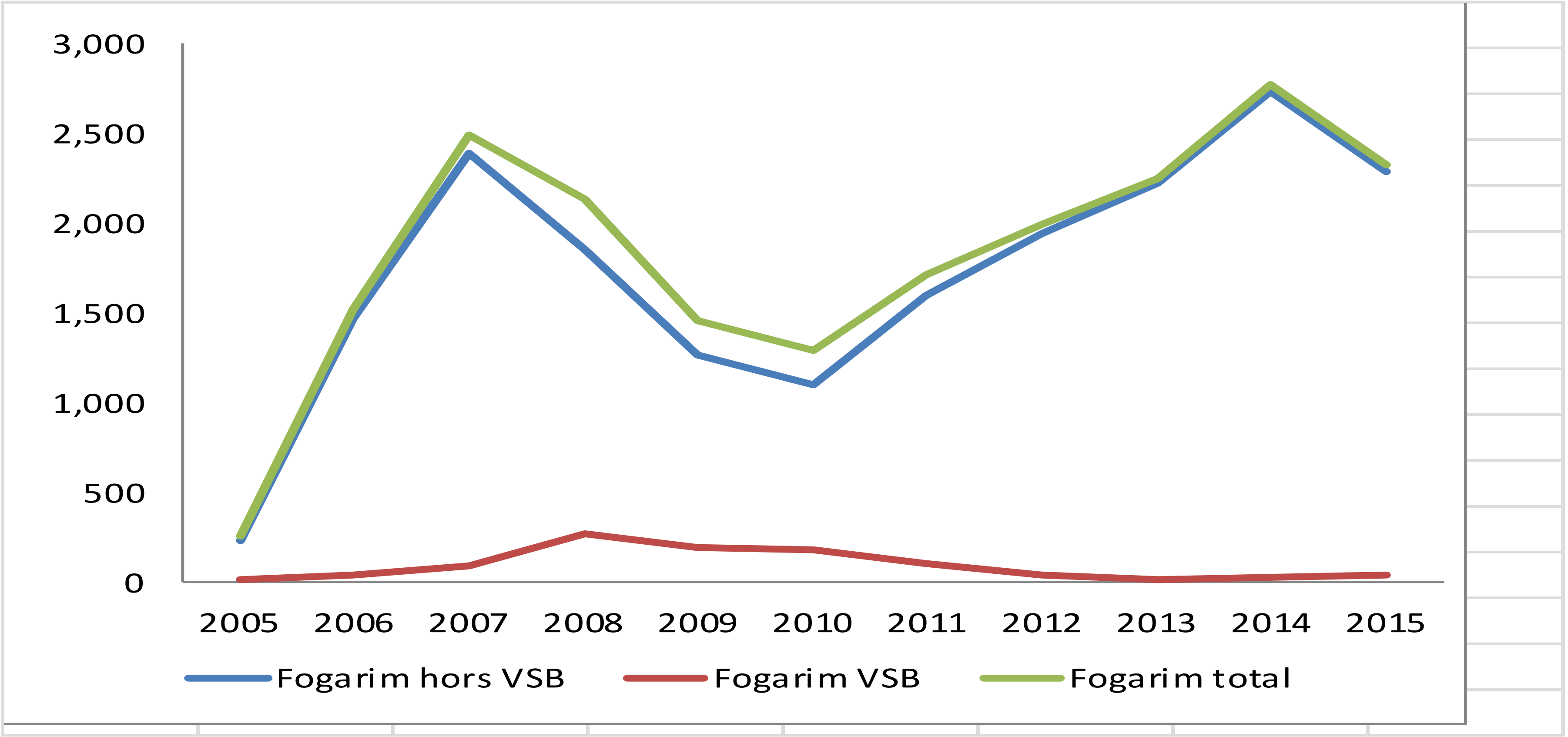
FOGALOGE

- Valuable complement to FOGARIM –avoids in particular cliff effect in the population coverage
- Targeted population: middle-income groups, public and private sector employees, independent workers, Moroccan expats
- Loans characteristics:
  - Up to 100% LTV, including transaction cost
  - Fixed interest rate (freely set)
- Coverage ratio: 50% of loan balance, with a MAD 400,000 ceiling ($40,000)
- Insurance premiums: between 0.19% and 0.36% (VAT included)

Activity

- FOGARIM +FOGALOGE =
  - ~20,000 guarantees per year (FOARIM = 15,000)
  - 20-25% of new mortgage loans
- FOGARIM: 131,000 guaranteed borrowers 2004-2015 (Slumless cities borrowers: 10%)
- After an increase in 2007-2010, loans within the Slumless Cities program strongly declined ("VSB" in the chart below):

Guarantees extended yearly (MAD million)



Activity, Ctd

- 8 participating banks, including 3 major housing lenders and the new postal bank AL Barid
- The decline of activity in 2008-2010 resulted from:
  - The temporary removal of tax incentives
  - The suspension of guaranteed loans origination by 2 major players
  - Tightening of underwriting criteria by banks for recently bancarized borrowers
- Very low portion of loans for owner-driven construction, the main housing delivery channel for low income households

One likely factor: the widespread practice of paying builders in kind through the allocation of one flat in a typically 3 story house , which allows to build without borrowing

- Actual borrowers 'incomes in 2014 demonstrate the social impact of the scheme: between $ 350 and 500 for non- VSB borrowers, below $ 350 for 53% of VSB borrowers
- FOGARIM: a slight majority of non-salaried borrowers
- Interest rates of Fogarim supported loans: since 2011, somewhat higher than average mortgages, by 0.20/ 0.40 % . No significant difference between up)à

Portfolio quality *source : CCG*

% of loans (in numbers) end 2015:	Current	1-2 arrears	Sub total	3-9 arrears	9 arrears & more
Fogarim without VSB	84,4%	7,07%	92,1%	6,2%	1,7%
Fogarim VSB	81,7%	6,83%	88,5%	7%	4,5%
Fogarim total	84,9%	7,05% est.	91,9%	6,19%	1,9%
	Fogaloge (2014)		93,5%		
	Banking system – Households credit (2013)		93,9%		

Fogarim portfolios quality *Source : CCG*

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Cumulative guarantee executions 2004-2015:

- Fogarim without VSB loans: 5.6%
- Fogarim VSB loans: 15.5%

Selected Risk Factors

- Bank account history: if less than 6 month, increased risk
- LTV:
  - Increased risk if LTV > 60%, but in a non-linear way
  - Clear impact on risk of 100% LTV vs 90% or 95%
  - In practice, fairly high downpayments in general – 20%-30% for non-VSB loans (an increasing trend due to lenders' more cautious policy), 20% for VSB loans
- Borrowers' category – for instance, lower risk with non- resident Moroccans
- Location
- Gender : credit risk higher by 30% with men vs women

A few Lessons from Fogarim

1) Former slum dwellers (VSB program): higher risk, and policy implications
   - An important factor: previous banking experience
     - One goal of the scheme: promote financial inclusion
     - But must be accompanied by financial education programs
   - Some moral hazard cases (delinquency contagion in relocation developments)
   - Value of credit less approach (builders' payment in kind)

2) Non VSB Loans: risk level close to market average
   - Importance of previous banking history, hence of prior savings requirement for informal sector borrowers
   - No moral hazard or adverse selection behavior observed on the lenders' side

3) Improved knowledge of the risk: a major side benefit for market players, government and regulators
   - A quasi credit information platform
   - Useful lessons to be drawn for provisioning rules and prudential regulation
   - Possibility to measure implicit subsidies liked to government guarantees

More General Lessons: Potential Benefits of State-backed Housing Guarantee Funds:

- Orient market activities towards social goals
  - Make lending to population with higher risk profile economically viable
  - Use the scheme as a lever to broader policy objectives, e.g. : urban policy, financial inclusion
- Through advantages and incentives to market players
  - Transfer of a large part of credit risks
  - Reduction of uncertainty (law of large numbers), an important factor of the cost of risk management
  - Reduction of assets risk weight for capital adequacy purposes
  - Implicit protection against macro-economic risks to targeted populations are especially sensitive

  Ex.: US FHA (100% coverage at the same price as private – first loss- mortgage insurance), Canada (government back-up of private mortgage insurance)

State-backed Housing Guarantee Funds: - Conditions of Viability I) Credibility

- No doubt allowed about the robustness of the coverage
  - Lenders' exposure on the guaranteeing entity
  - Trust to be ensured (capital base, rating)
  - Clear and limited grounds for rejecting claims or claw backs, transparent rejection rate
- Credible capital base of the essence, but balanced calibration needed
  - If insufficient: credibility lost
  - If large surplus: transfer back to the State budget likely
  - Option between capital appropriation and government back-stop (easier for public budgets, but possible doubts about capacity to meet commitments in the future)

  Examples of mixed mechanism: Netherlands (capital ratio=1/2%), US FHA (minimum capital ratio=2%)
- Actuarially sound premiums required

  Even if partially subsidized

State-backed Housing Guarantee Funds: - Conditions of Viability
II) Ensure lending soundness

- Danger: generation of undue risks for the State
  - Moral hazard risk

  The transfer of risks must not induce relaxation of credit discipline or irresponsible lending
  - Negative selection of insured loans
- Strict definition of lending therefore standards required

  Example UK “Help-to-buy “ scheme (2010-2017):
  - Thorough verification of ability to repay, including assessment of non-salaried incomes and estimation of irreducible living expenses
  - No delinquency history in the last 12 months
  - Sole property owned by the borrower
  - Stress tests if variable rate mortgages
- Prevention of regulatory arbitrage
  - Avoid total capital reduction in the financial system (unchanged risks)
  - Avoid windfall benefits (required additionality)