

Mortgage Regulation and Policy Dialogue

EBRD Workshop

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Agenda for Today

1. Recent market trends in the region
2. Pending EU Legislation
3. Primary market regulation
 1. Transparency issues
 2. Material consumer protection issues
 3. Consumer insolvency
4. Fiscal support for local currency lending
5. Secondary market regulation
 1. Issuer perspective
 2. Status of covered bond legislation, government perspective
 3. Investor perspective
6. Country-specific discussion

1. Recent Market Trends

Market Dynamics, Drivers

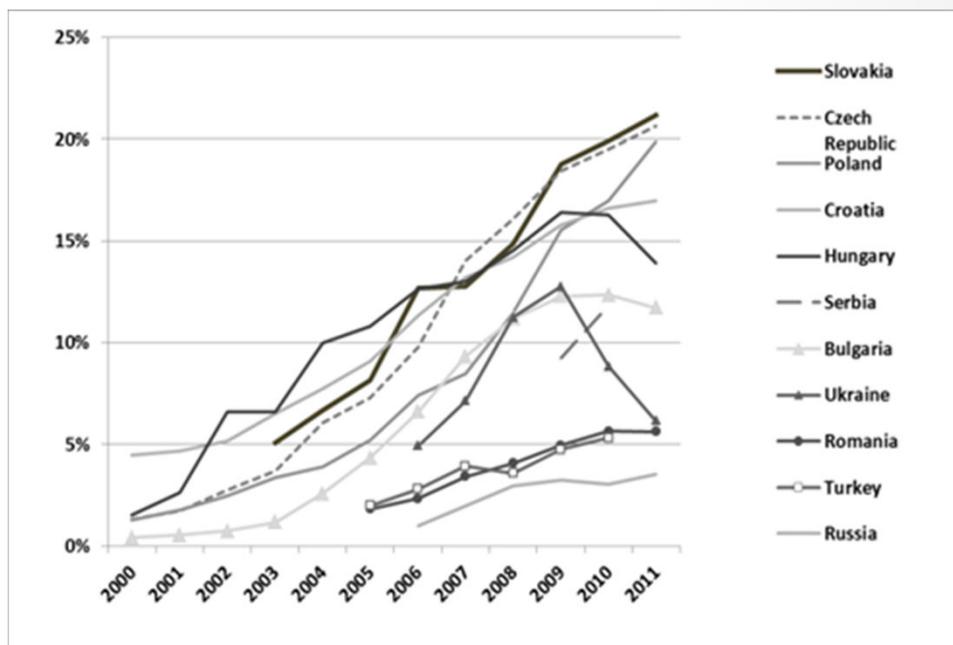
Growth phase (00-08):

- High monetary policy pass-through products
 - Foreign currency, combined with
 - adjustable-rates (ARM)
- Subsidization of local currency products (Romania/Poland < CzechR < Hungary)
- Product innovation (home equity / investment, esp. CzechR, Hungary, Poland)
- Structural factors, esp. aggressive greenfield entry and interbank lending

Consolidation phase (>08):

- Increasing defaults, isolated crisis
- Reduction of capital allocation / interbank

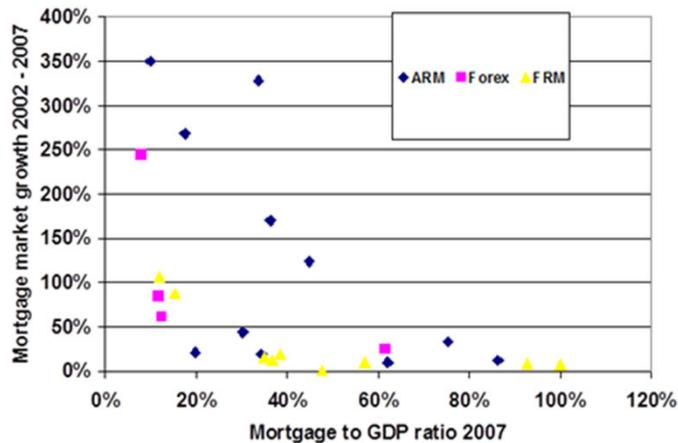
Housing loan to GDP ratios, 2000 – 2011



Source: National central banks, ECB, Finpolconsult.

Foreign Currency Loans as Growth Factor

Mortgage market growth 2002-2007 and product choice in the EU perspective

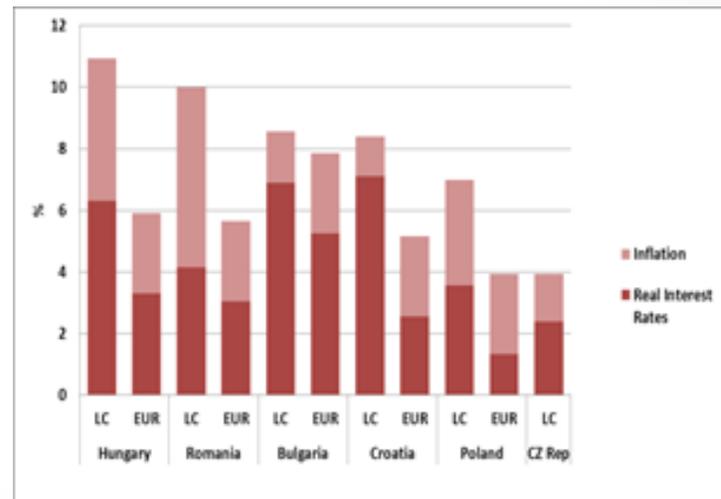


- FX growth drivers ctd
 - Front-loading of LC loan payment-to-income through high nominal rates (high inflation and/or high real rates)
 - Euroization of property market.

- FX growth drivers

- Aggressive greenfield examples: Millennium in PL, Erste in HU, HGAA in Cro
- Depth of funding markets, interbank and bonds
- Aggressive pass-through (as Ireland and Spain with Euribor interbank rates)

Local and foreign currency nominal and real interest rates, end of 2011

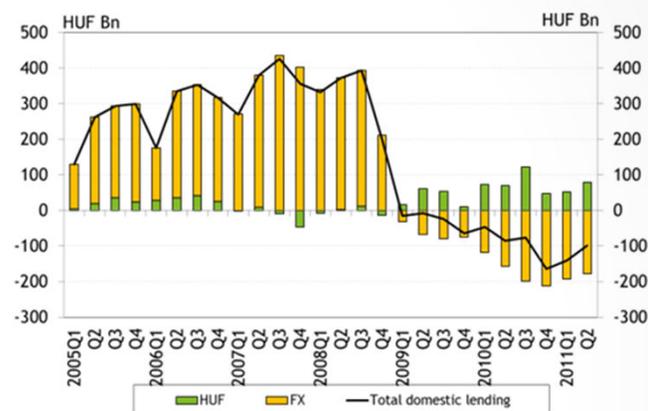


Source: national central banks, ECB, Finpolconsult.

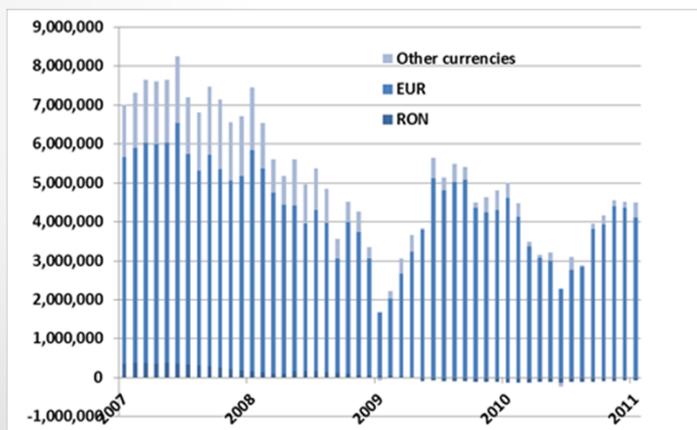
New Lending Dynamics

- New lending:
 - Strong decline in Hungary, stabilization in RO.
 - Entirely FX in Romania, Croatia Serbia
 - Poland and most drastically Hungary have seen dominance of LC lending. 2011 LC share for Poland was 62%, and for Hungary ca 80%.
 - New FX lending in the region is now in EUR (or USD, Ukraine/Russia). CHF discontinued in Hungary and Poland.

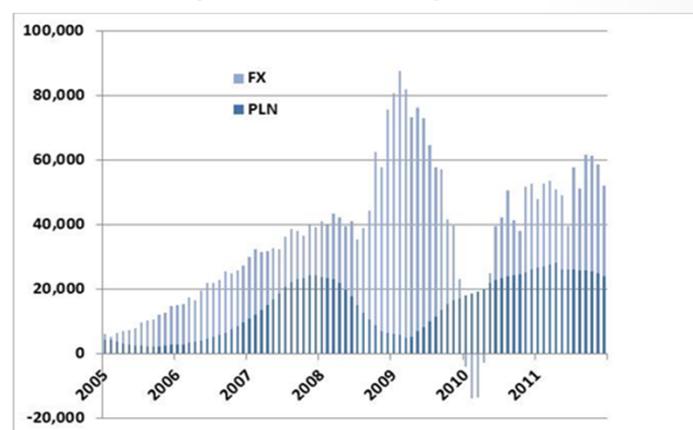
Hungary, new lending



Romania, change in outstanding



Poland, change in outstanding

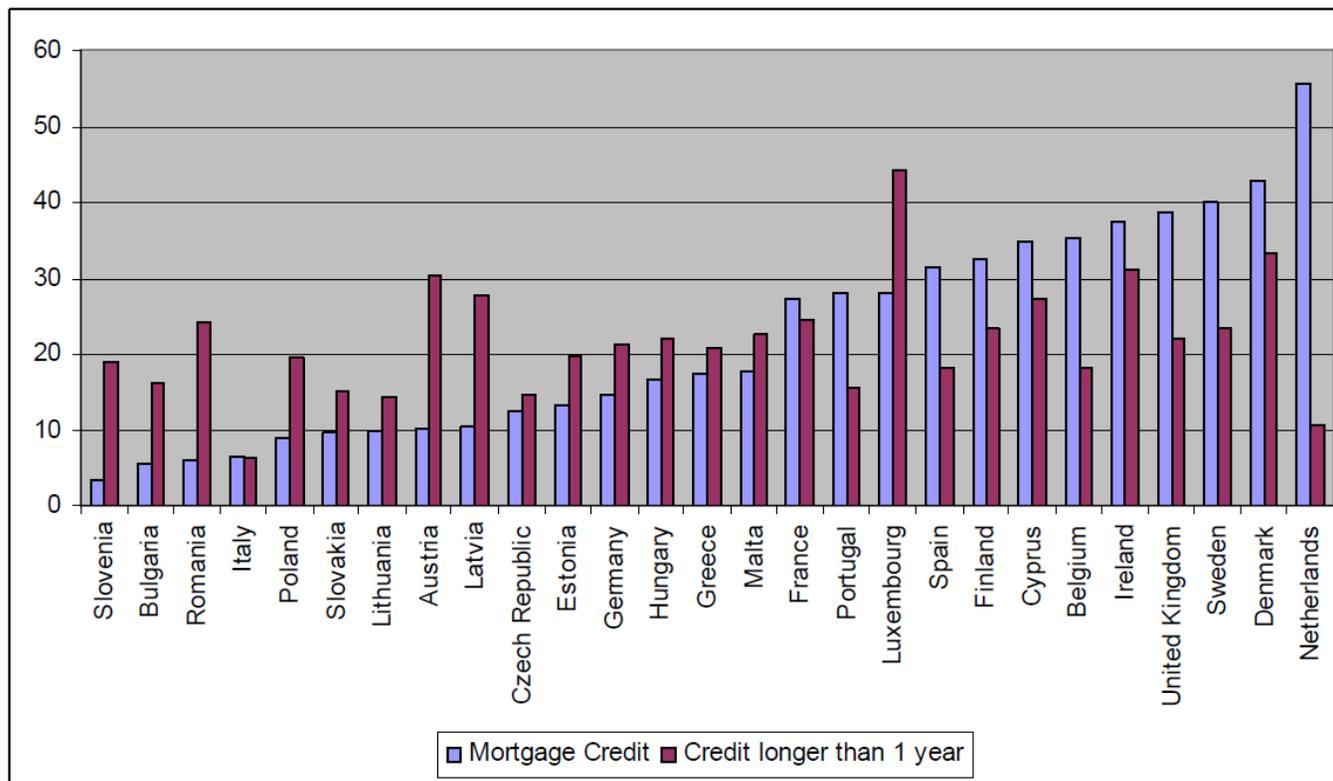


Source: National central banks, ECB, Finpolconsult.

Note: outstanding changes entail devaluation effect on outstanding portfolio.

Result of Lending Boom - Household Debt Levels

Graph 13: Consumer use of credit (share of households with credit, %)



Source: *Consumers' views on switching service providers*, Eurobarometer, European Commission, January 2009, p. 37 and 52

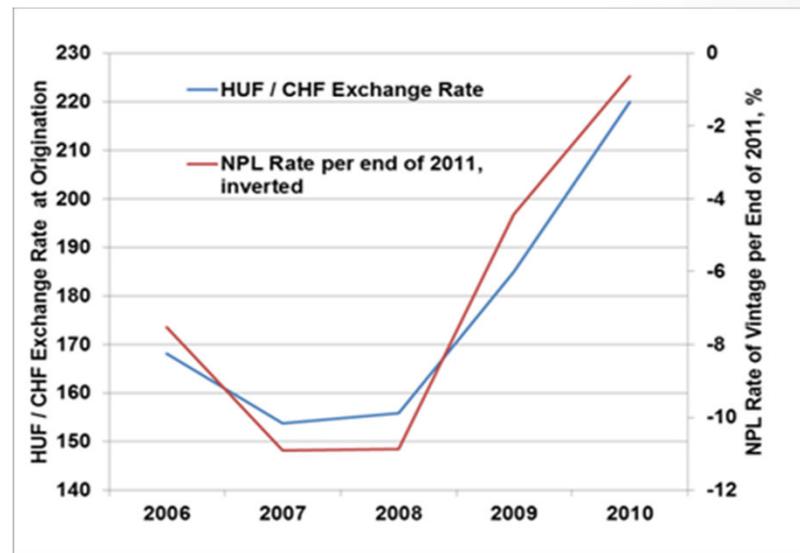
Portfolio Performance I

- Default motive: cash flow stress
 - Unemployment
 - Wage cuts (esp. public sector)
- Default motive: negative equity
 - HU(56% of FX loans over 90% LTV, Central Bank),
 - PL(32% of CHF loans over 100% LTV, Central Bank; some 300,000 loans according to the Polish FSA),
 - SRB ('close to 100%' for CHF, 10-15% for EUR; interviews)
 - RO beginning issues as devaluation accelerated in 2012.
- Does negative equity matter?
 - No: default penalty (residual debt), loss of primary residence, stigma
 - Yes: U.S., UK experiences.

- Headline owner-occupied default rates are low
 - RO 2% (BCR)
 - CRO 1.5-2% (2 lenders),
 - SRB ca 4% (Central Bank),
 - PL 2% (Central Bank),
 - TK 1.5% (Central Bank)
 - HU is outlier.

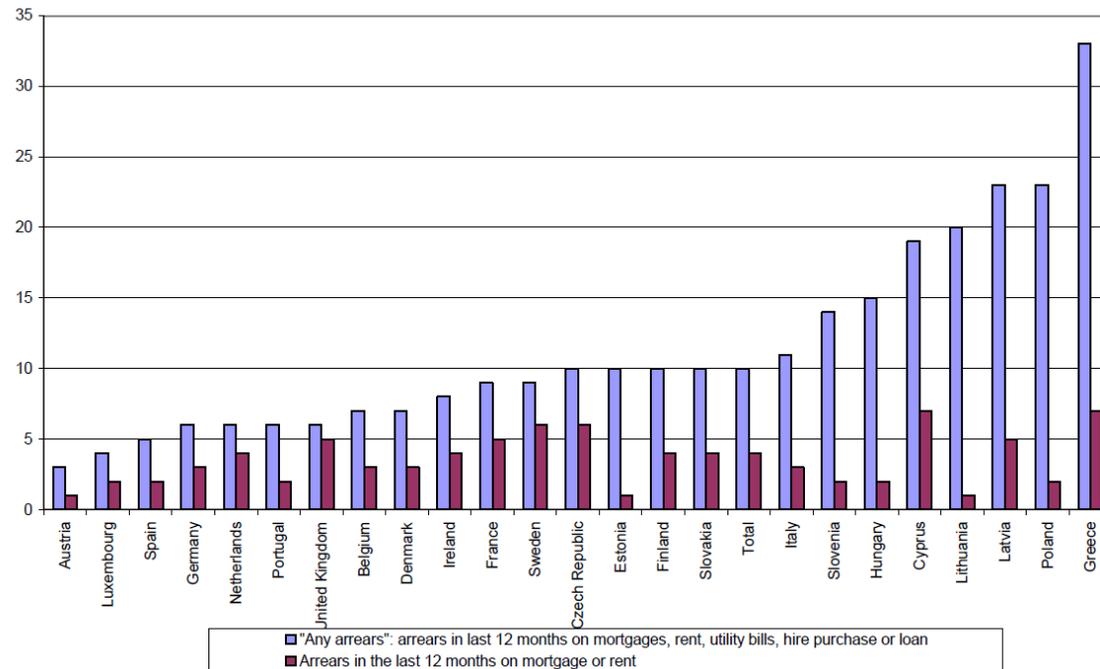
Mind distortions re ECB / SNB bailouts if comparing e.g. to U.S.

Hungarian NPL ratios by loan vintage, Dec 11



Comparable Arrears Data are Hard to Come By

Graph 15: Arrears in the last 12 months



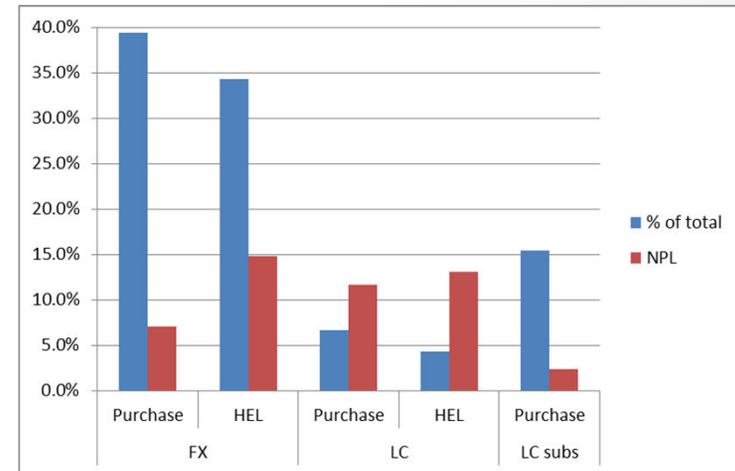
Source: *Towards a common operational European Definition of over-indebtedness*, European Commission, 2005 & 2008

- Europe dominated by banks with low legal reporting requirements (US with securitization higher), most info is survey-based.
- Lack of harmonization of national definitions (EBA)

Portfolio Performance II

- Product innovation and subsidies
 - Risk layering
 - e.g. Hungary FX and reviewable rate with banks rolling over CDS cost = dual shock, estimated 25% of HU FX loans were interest-only, repayment vehicle performance issues.
 - Generic high-risk
 - e.g. home equity loans for consumption purposes (HU close to 40% of outstanding)
 - Subsidies significantly reduce default rates
 - however, potentially extreme fiscal cost (HU Orban I vintages).

Hungary product type and NPL, Dec 11



Hungary CHF and HUF interest rate history



Source: MNB, Finpolconsult. Note: NPL = sum of 'bad' + 'doubtful' categories.

2. EU Legislation Trends

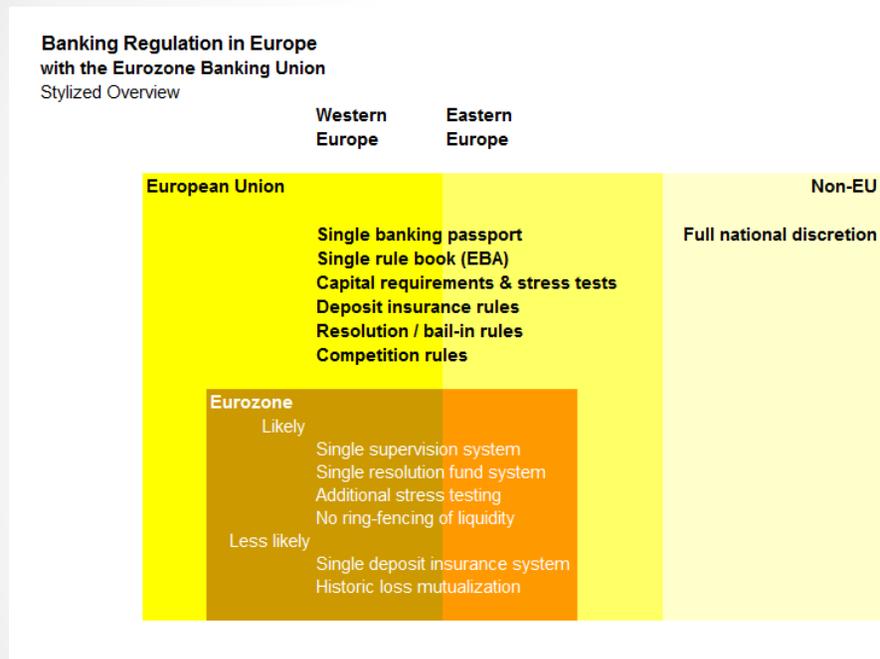
Broader Mortgage Market Crisis Response

Policy option	United States	Europe
Central bank policies	'Unsuccessful' Fed bailout as credit crunch pre-empts prepayments; lender recapitalization is priority.	'Successful' ECB/BoE bailout as ARM react directly to rates; yet conceals structural consumer insolvency (inability to pay normal rates).
Fiscal policies	FHA refinancing of private Subprime. Restructuring programs HAMP/HARP. GSE/mortgage tax deduction reform (?) Fed buys/repos w Treasury guaranty.	ECB credit easing (private ABS repo, covered bond purchases, recently loans). ESFS backs nationalization of bank debt. National write-down policies/bank recaps.
Legislation, general	Dodd-Frank, interagency guidances.	Proposed EU Directive, EBA rules pending (?).
Legislation, transparency	Single-page information sheet (plan).	ESIS and APRC mandatory.
Legislation, underwriting	Qualified residential mortgage (LTV limits); specific responsible lending rules (fully-index/amortizing).	Responsible lending rules in proposed EU Directive. Wide national discretion range (ex. Forex, from ban, HU, to stress-testing, PL).
Legislation, products	ARM caps mandatory. Prepayment penalties on high-rate loans outlawed.	UK: non-conforming ban (?), forex bans in AT and HU. Suitability criteria via EU Directive (?).
Legislation, funding	Basel III (leverage ratio), skin in the game f. MBS, covered bond law	CRD (leverage ratio unclear), skin in the game f. MBS
Foreclosure prevention	De-facto foreclosure moratoria and restructurings.	De-facto foreclosure moratoria and restructurings (IRE, LAT, HU).
Institution-building	Consumer Financial Protection Bureau	None (in consumer protection)

CARRP Directive on Credit Agreements Related to Residential Property

- **CCD not primarily designed to regulate mortgages**
 - Mortgage lending excluded from mandatory CCD transposition (EUR 70K threshold)
 - Many items not adapted to mortgage finance (e.g. prepayment, rescission, underwriting rules).
 - CEE nevertheless saw implementation (Croatia, Romania).
- **CARRP large discretion and uncovered areas remain**
 - *“taking account of national and regional differences in the market for residential immovable property and hence for the associated credit and related services.” Parliament version.*
 - *“In particular, Member States should be able to maintain or introduce national provisions in areas such as contract law relating to the validity of credit agreements, property law, land registration, contractual information, and post-contractual issues not regulated here.” Parliament version.*
- **Some material protection impact, highlights**
 - Variable rates, FX with heightened transparency,
 - Tighter underwriting standards (yet no hard limits, Liikanen),
 - Some delegations to Commission (APRC, ESIS, valuation, underwriting), amount contested.
- **Contrasts with product design intervention in the region**
 - Ex-post product design changes (Serbia, Hungary).
 - Large room for discretion remains.
 - Detailed discussion in the next section.
- **CARRP Timeframe**
 - KOM, Parliament, Council version reconciliation until Q1 2013

Banking Union Project



Source: Finpolconsult.

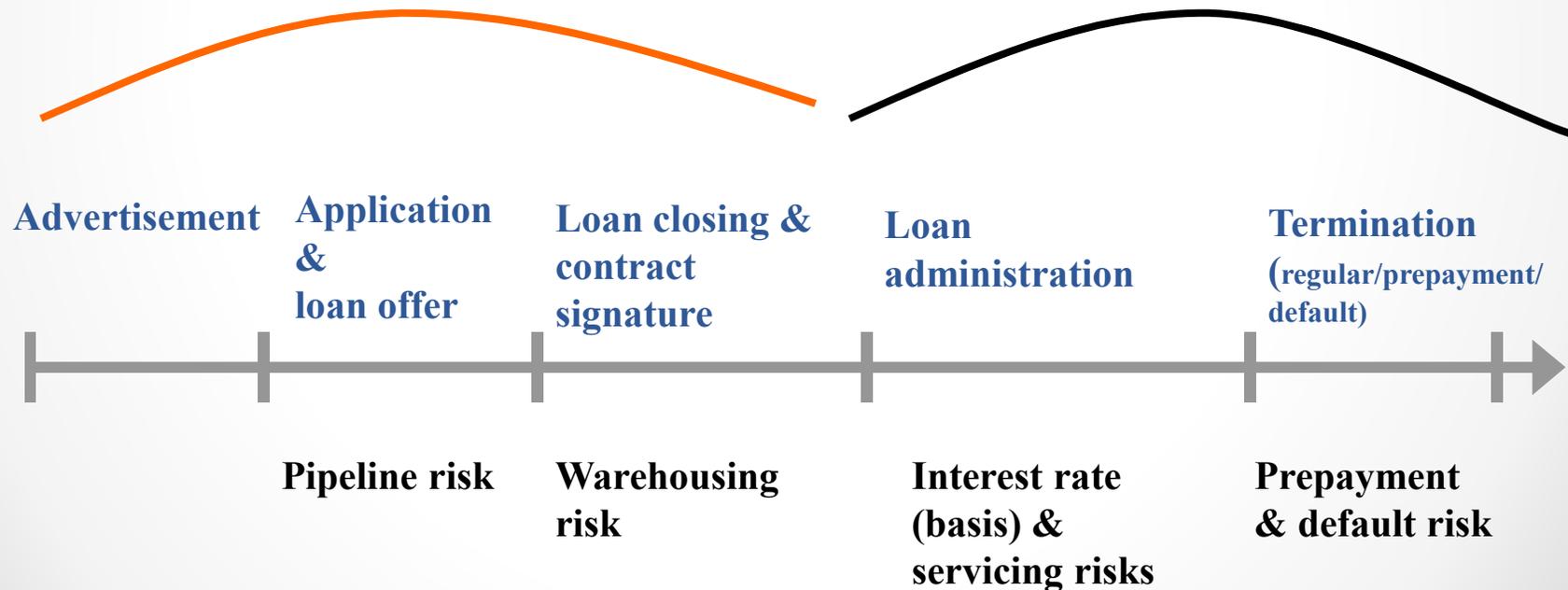
- **Critical issues**
 - Mutualization of historic losses unlikely → phasing in,
 - Bottom-up vs. top-down approach on deposit insurance, resolution funds,
 - Conflict of interest for ECB,
 - Detail on liquidity ring-fencing TBD.
- **Liikanen report**
 - Ring-fence of trading assets,
 - Hierarchy of bail-inable instruments, not to be held by other banks,
 - Higher CR for both trading assets and real estate demanded,
 - Improving bank governance.
- **Impact for CEE**
 - Non-Eurozone EU members: unclear role of / voting rights in EBA, future of liquidity ring-fencing,
 - EBRD Transition Report with full discussion.

3. Primary Market Regulation

Primary Market Regulations and Associated Risks

**Transparency, pre-
contractual information**

**'Material' consumer
protection**



Region - Transparency / Pre-contractual Information Regulations

- **ESIS**
 - CARRP: proposal to delegate detail to KOM.
 - Hungary, Turkey with equivalent schemes, codes.
- **APRC scope**
 - CARRP: interest, commissions, taxes, fees for credit intermediaries and any other fees as well as the cost of insurance or other ancillary products, where these are obligatory in order to obtain the credit on the terms and conditions marketed.
- **APRC product risk stress**
 - CARRP: 20% devaluation on FX, 'worst' and 'best' case scenarios of variable interest rates (Parliament)
 - Interest and FX stress, as well as combinations, in the region exists, but generally as underwriting limits (see below).

	Croatia	Hungary	Poland	Romania	Serbia	Turkey
Source of Law (last change)	CP law (Jan 11)	CP and BR law (April 12)	BR law (2009 bis), no CP law	CP law (Nov 2011)	CP law (Dec 2011)	Housing finance law (2007)
Transparency / pre-contractual information	Mandatory APRC.	HFSA Code of Conduct. Mandatory APRC.	APRC recommended but not regulated.	Mandatory APRC.	n.a.	Single page information, mandatory APRC.

Source: Finpolconsult.

CARRP - Transparency / Pre-contractual Information Regulation

Issue	Commission Proposal (March)	Parliament Amendments (July)
Pre-contractual information / credit intermediaries	Standard advertisement info & ESIS. Intermediary authorization, registration, supervision, professional requirements, personalized information.	In addition: Personalized information with additional time before signature. Delegated acts empower Commission to define ESIS.
APRC	Broad APCR (CCD definition) mandatory. Not required in advertisement. Delegated acts empower Commission to define APCR.	Exclude registration cost, include valuation cost. Use in advertisement. Delegated acts empower Commission to define APCR. APRC based on 20% devaluation, 'worst' and 'best' case scenario for variable rates.
Advice, explanation	No advice requirement for banks or credit intermediaries. Adequate explanation in a personalized manner.	Materially unchanged
Reflection period	None.	Yes, except if notary involved

Broad vs. Narrow APRC

Some Current Practices

	Excluded	Partially included	Included	United Kingdom Mortgage	Germany I Bank distribution	Germany II Broker distribution	France I Mortgage	France II Credit logement
Broad								
Non-mandatory costs								
Personal insurances (life, mortgage protection)				Partially included	Partially included	Partially included	Included	Included
-- repayment vehicle								
Surety								
-- mortgage insurance							not applicable	Included
costs								
-- mortgage collateral				Partially included	Partially included	Partially included	Included	not applicable
Collateral protection costs (fire insurance)				Included	Included	Included	Included	Included
Distribution costs/broker fees				Included	Included	Partially included	Included	Included
Bank fees / points				Included	Included	Included	Included	Included
Narrow								
Funding costs				Included	Included	Included	Included	Included

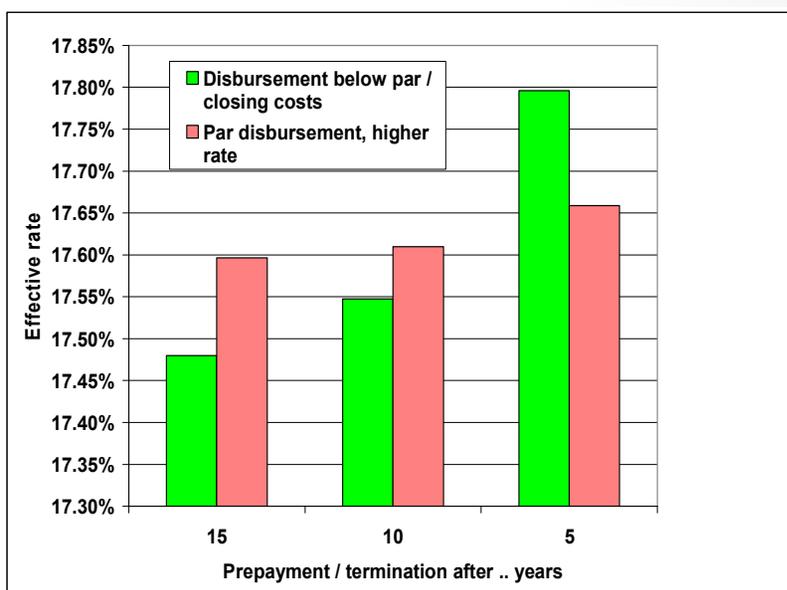
- **Main issues:**

- Sureties: insurance vs. mortgage registration, great variety in Europe.
- Definition of 'mandatory' ancillary costs.
- Third party cost may be unknown at the time of loan offer.

APRC - Prepayments Shorten Loan Durations and Alter Results

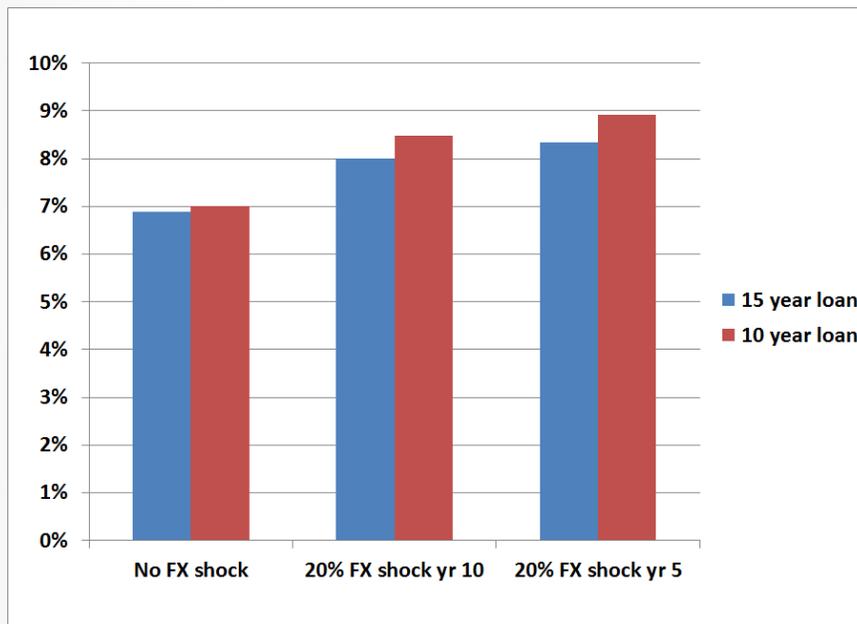
- **Loan duration assumptions:**
 - Crucial for APR calculation in long-term mortgage lending,
 - Assuming contractual maturity leads to misleadingly low picture on cost,
 - Prepayment assumptions needed, esp in countries where prepayment fees are low and on FRM.
- **Interest rate assumptions:**
 - In ARM lending assumption of constancy of interest rate is standard,
 - CARRP suggests substituting by 20 year average of rates.
- **Possible solution:**
 - Classify mortgage products before applying APRC.

Typical APRC arbitrage: 2 main types of local currency fixed-rate mortgage loans in Ukraine



Source: Finpolconsult, EU-TACIS project.

APRC - Impact of FX Stress under CARRP



Source: Finpolconsult.

- Ca. proportional increase in the APR.
- Timing of assumed shock essential.
- Inconsistency with APR approach on ARM risk (worst/best case scenarios).
- CEE can use CARRP and mandate consistent stress for both FX and LC (PL cumulative).

Underwriting Regulations - Income

Region

	Croatia	Hungary	Poland	Romania	Serbia	Turkey
Payment-to-income ratio, income definition	No limit.	30%-50% LC 23%-38% FX, depending on net income.	50% (42% for FX), 65% if income level > national average, net income	35% (all loans 40%), without FX differ, net income	No LC limit. FX 50% for EUR loans	50% max, LC loans only
Payment shock, rates	None	Caps on interest rate increases	None	None	Retroactive indexation, spread fixed to initial level.	Interest rate cap mandatory.
Income stress	None	Min income for FX is 15 times minimum wage, or income in FX.	Cumulative FX (30%) and interest rate (400 bp) shock	Cumulative FX shock and interest rate shock	None	None

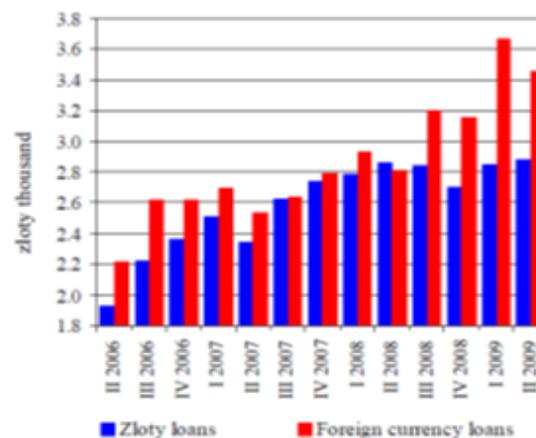
CARRP

Issue	Commission Proposal (March)	Parliament Amendments (July)	Other
Creditworthiness assessment	Appropriate processes (list of indicators), data and borrower information access. Duty to credit denial. Delegated acts empower Commission to define.	Enhanced list of indicators including negative amortization and income stress. No duty to credit denial.	
Payment to income rules, income stress testing	Delegated acts empower Commission to define.	Not in delegated acts.	Liikanen: hard PTI limit
Income verification	Borrower should contribute all available information.	Borrower required to contribute (possible penalty).	

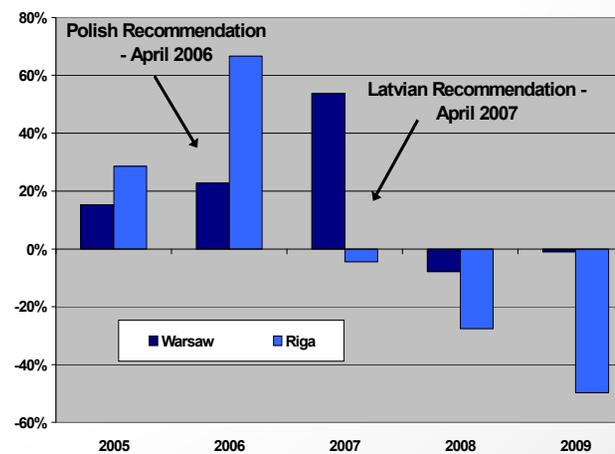
Problems with PTI Tests

- **Threshold calibration**
 - FX interest rates are systematically below PTI limits, raising back-end default risk,
 - Radical income stress (Hungary) pushes households into LC lending, raising front-end default risk,
 - Widely differing national PTI levels for LC lending.
- **Stress calibration**
 - Cumulations of FX and interest rate shock are likely product-specific
 - Hungary yes (reviewable rate)
 - Poland no (interbank index),
 - How replicable is the Polish experience (Romania, Serbia)?
- **Implementation**
 - Poland FX-LC income differential collapsed during 2007 house price boom.

Poland Income Differential PLN and FX Loans



Apartment price inflation in Warsaw and Riga, regulatory intervention points



Underwriting Regulations - Collateral

Region

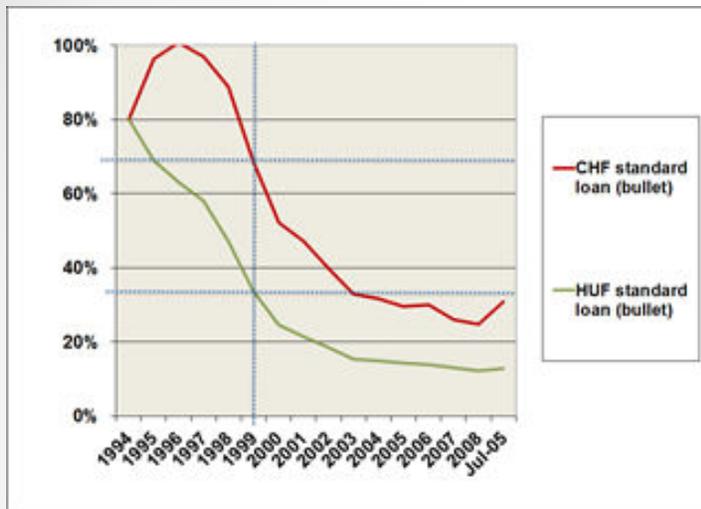
	Croatia	Hungary	Poland	Romania	Serbia	Turkey
Loan-to-value ratio	No official limit (bank practice 90%).	FX LTV 60% LC LTV 80%	No official limit. FX recommended limit of 80%.	FX LTV 75% LC LTV 85%.	FX LTV 80% LC LTV n.a.	LC LTV 75%
Valuation standards	Open market.	Open market.	Open market. Appraisal intervals depend on	Open market.	Open market.	Open market.

CARRP

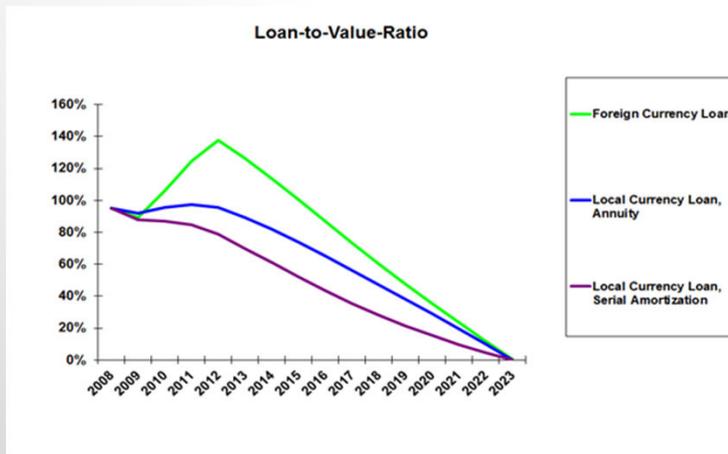
Issue	Commission Proposal (March)	Parliament Amendments (July)	Other
Loan-to-value ratio	Delegated acts empower Commission to define.	Not in delegated acts.	Liikanen: hard LTV limit
Valuation standards	Not in Directive.	Appropriate valuation rules, reference to FSB.	

Problems with LTV Tests

Current LTV Ratios, historic FX and LC Products



FX LTV (Hungary) vs. LC LTV Profiles



● Sources: Finpolconsult computations

- **Threshold calibration**
 - FX LTV driven empirically by availability of LC credit (high in Croatia, Serbia), crisis experience (low in Hungary),
 - FX vs LC LTV differential should be stress-related,
 - For full downside risk protection FX LTV must be very low → extreme rationing,
 - CARRP: 20% devaluation stress would suggest e.g. FX LTV of 70 and LC LTV of 85,
 - LTV limits are highly procyclical (Romania), cyclical variation?
 - Goal is not underwriting but current LTV.
- **Alternatives mitigating devaluation risk**
 - Faster FX amortization, e.g. serial instead annuity → invest affordability gain,
 - Negative amortization limits and / or FX caps → insurance premium,
 - Planned negative amortization products (PLAM) → see below.
- **Implementation**
 - Romania Prima Casa with 95% LTV preference has led to arbitrage,
 - V = sustainable valuation?

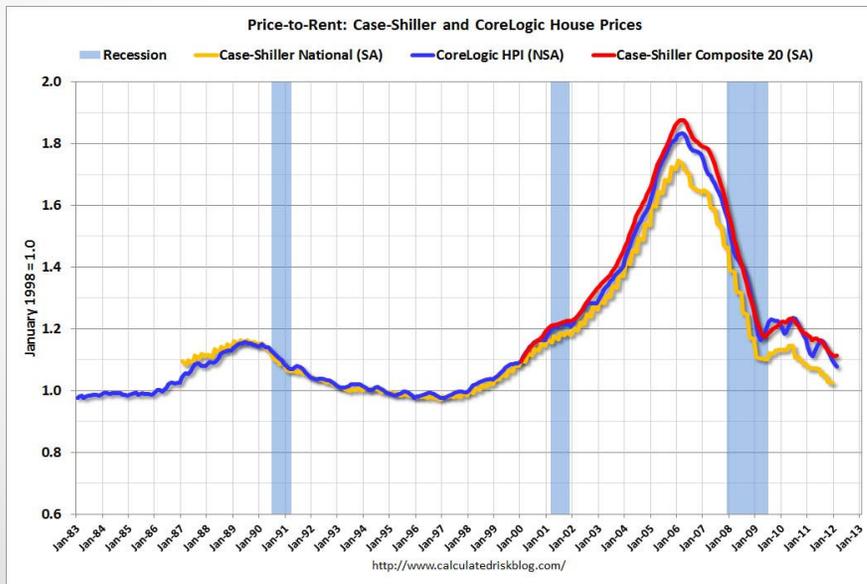
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Valuation - Data Issues

Market Monitoring

- No national hedonic house price indices (except Turkey, started 2011),
- Urban rent survey systems absent (all cases).

US house price to rent ratio



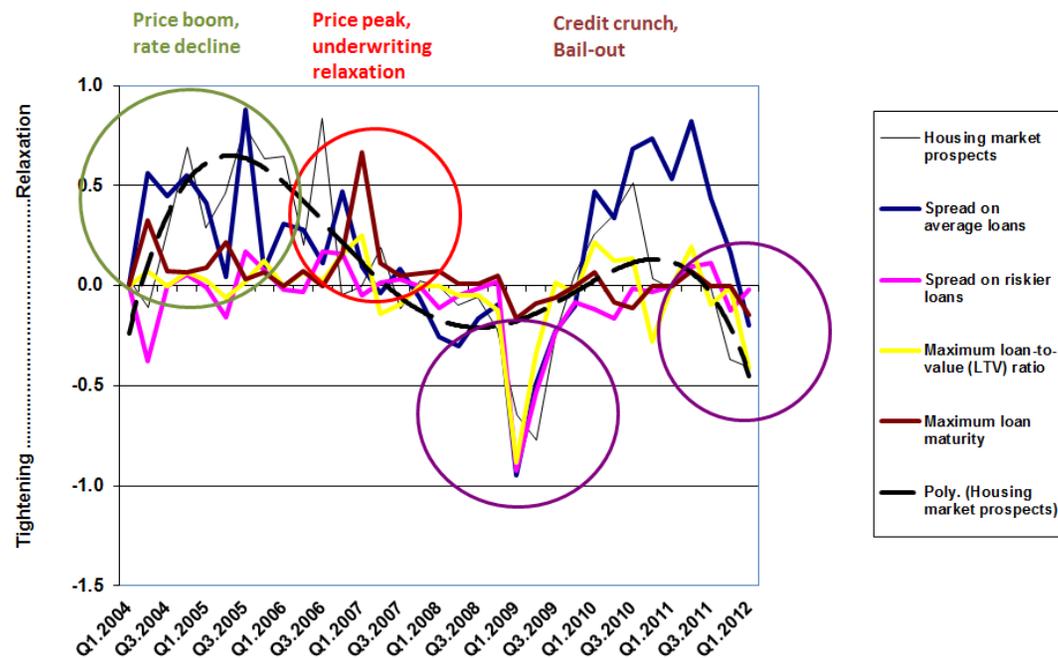
● Source: Calculated Risk

Valuation Methods

- Rent data needed inter alia to develop mortgage lending value concept:
 - income method,
 - Imputed rents, conservative growth assumptions
 - Minimum discount factors
- Currently dominant open market valuation
 - tracks house price inflation, developer profit,
 - flagrant misappraisals (e.g. 25% correction by BCR Romania).
 - At least haircuts as buffer.

Underwriting Standards – Dynamics in the Credit Cycle

Case Poland



Often forgotten driver of credit relaxation: amortization!

LTV unchanged (but procyclical as no tightening with rising prices)

Region - Mortgage Product Regulations

	Croatia	Hungary	Poland	Romania	Serbia	Turkey
ARM reference index	Not mandatory, reviewable-rate lending market practice.	Mandatory (interbank, gov bond).	Not mandatory, interbank rate is market practice.	Mandatory (interbank).	Mandatory (interbank).	Legislation not completed
ARM spread fixing	None.	3 years and longer over index	None.	Life of loan over index	Life of loan over index	
FRM early repayment	Universal right, indemnities banned.	Universal right, yield maintenance indemnity max 3 yrs.	Universal right. Indemnity subject to negotiation.	Universal right, Indemnities limited to 1%.	Universal right, Indemnities banned.	Universal right, Indemnities limited to 2%.
Introductory rates	None	n.a.	n.a.	Introductory rates are prohibited	Discouraged by ex-post fixing of spread to initial level.	N.a.
Negative amortization	None	FX-LC preferential conversion option & FX debt ceiling	Max 25 year amortization assumption.	None	None	FX lending prohibited, no rules on LC negative amortization.

CARRP - Mortgage Product Regulations

Issue	Commission Proposal (March)	Parliament Amendments (July)	Other
Amortization rules	Not in Directive.	In creditworthiness assessment rules. Warnings on dangers of repayment vehicle loans.	
Products, general	Suitability in conjunction with credit assessment.	Materially unchanged.	
Early repayment (FRM)	Early repayment right subject to conditions. Exclusion possible. Member State discretion on indemnities.	'Specific charge' formulation may limit MS discretion on indemnities. 'Flexibility' when FX loan is prepaid.	
Rate adjustment (ARM)	Delegated acts empower Commission to define APRC assumptions. No material limits (e.g. caps).	Option for MS to demand long-term average rate annexed to ESIS.	
Foreign currency lending	Not in Directive.	Conversion option. Mandatory warning when negative amortization ceiling reached.	ESRB, FSB recommendations

FX vs. LC Products Regulation Summary

FX Products

- **Underwriting**
 - All cases ex Croatia: borrower rationing approach, protecting lenders →recession,
 - Vastly diverging LTV, DTI and stress testing numbers,
 - No material protection approach (e.g. FX or negative amortization caps).
- **Conversion rules**
 - Exist in many jurisdictions (no prepayment fees (CARRP?), conversion at going FX rate), generating e.g. latent FX duration risk (if LC alternative existed).
 - Lender decides about LC rate after conversion. Safety valve?

LC Products

- Still not sufficiently adapted to high inflation / real interest rate environment.
 - Mandating to offer at high rates means reputation risk for regulator (Serbia),
 - Fiscal strategies explored below.
- **‘Goodhart’s Law’:**
new sources of risk
 - Personal loans > LTV limits,
 - Interest-only phases,
 - Introductory rates,
 - Mandatory reference index use,
 - Mandatory lifetime spread fixing,
 - Prohibition / extreme limitation of prepayment indemnities (FRM).

→more detail on risks below

Alternative to Forex – Price Level-Adjusted Mortgage (PLAM)

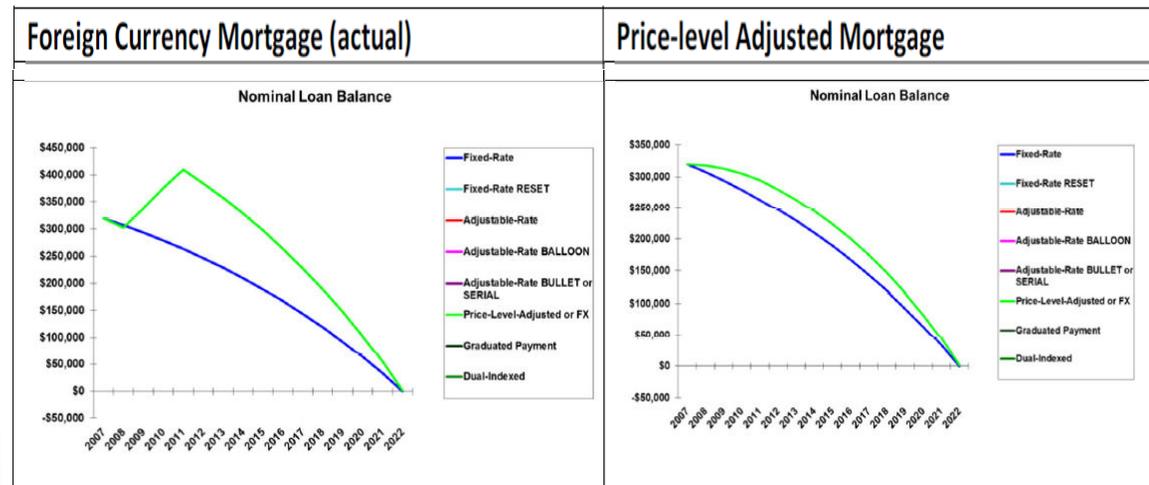
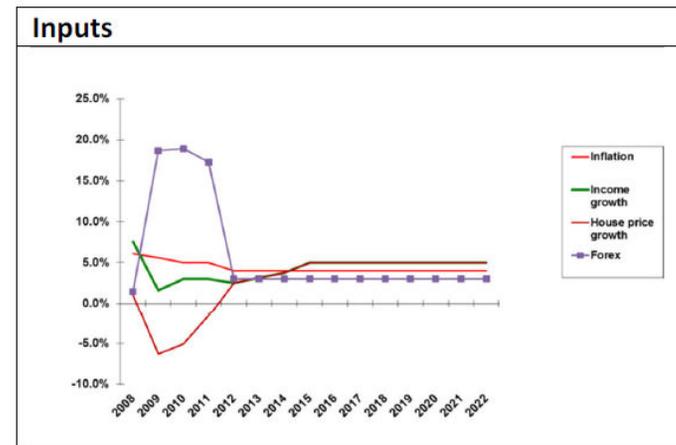
Application to Hungary 07 bis

Mechanics

- Interest rate is fixed at “real” rate,
- Balance is adjusted by price index,
- Payment is recalculated on every balance adjustment.

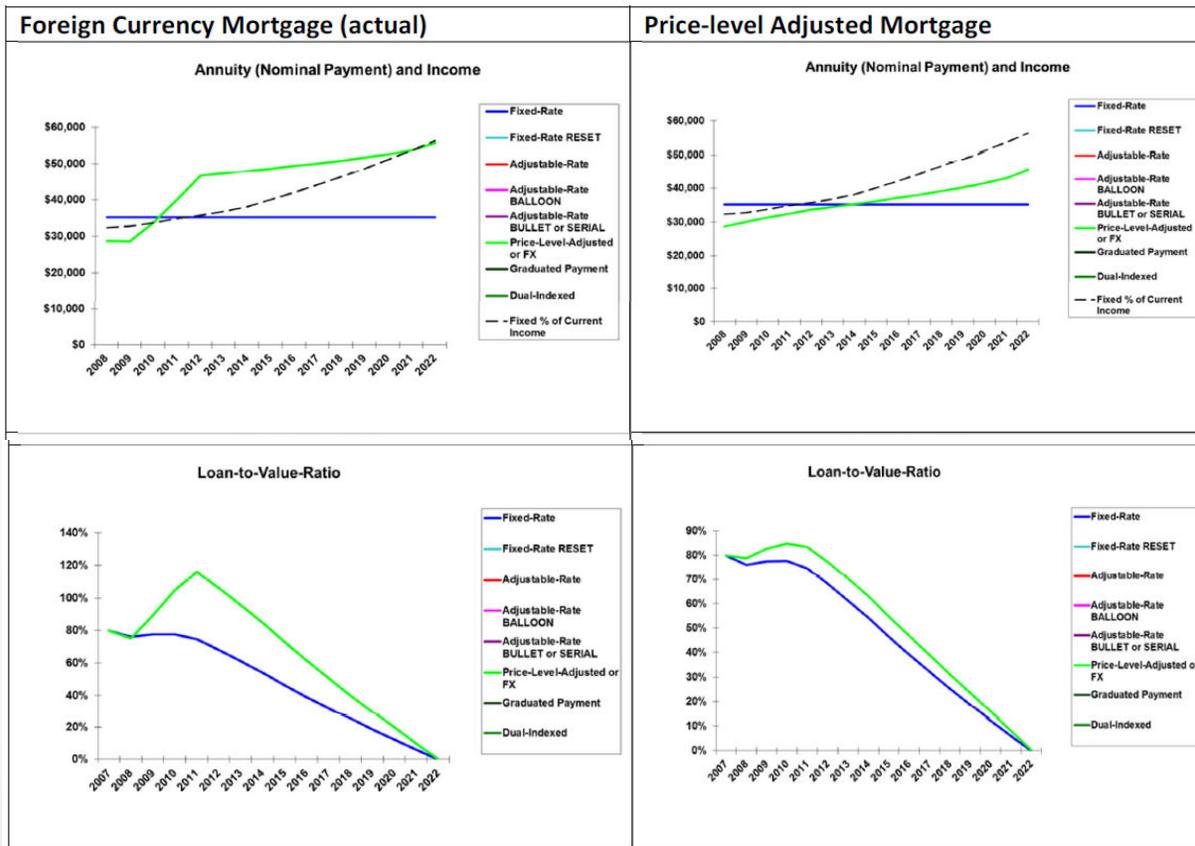
Issues

- Identical with FX if exchange rate follows purchasing power parity (long-run),
- Avoids interest arbitrage, speculation issues distorting FX,
- Assumes that incomes & house prices rise at least with price index.



Source: Finpolconsult, for Wharton School

PLAM – Application to Hungary



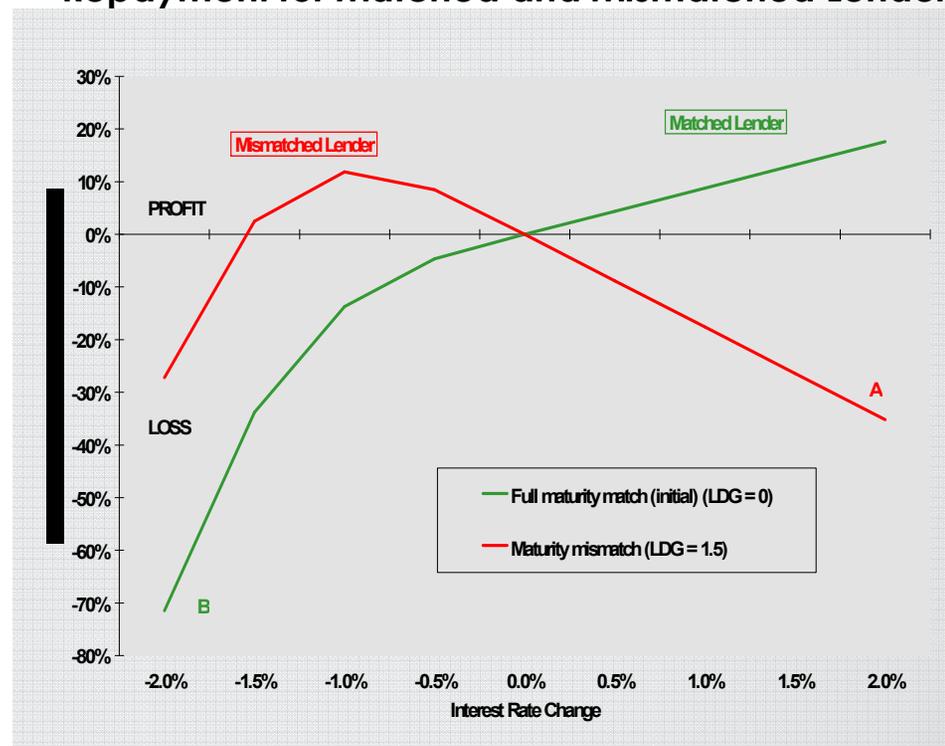
Experiences

- Hungary and Poland used versions of PLAM in the early 1990s. Failures as initial transition inflation overshooted.
- Worked in Latin America for decades (Chile, Colombia).
- Needs flexible and high LC funding liquidity, unless financial system widely uses indexation allowing for pass-through →disadvantage vs. FX

ALM Impact of Severe Prepayment Indemnity Caps, Funding Options

- Impact:
 - Higher financial incentive to prepay,
 - The duration of assets shortens as the duration of liabilities remains constant,
 - Result is severe negative transformation risk, including for matched lenders.
- Cases:
 - French matched covered bonds issuers faced insolvency in the 1980s as interest rates fell **(B)**,
 - Lenders often react by funding with short-term liabilities and running mismatch **(A)**.
- Options:
 - Permit prepayment indemnities or other call protection (non-callable),
 - Change funding instrument to callable bonds or pass-through.

Simulation of Capital Risk Resulting from Early Repayment for Matched and Mismatched Lenders



Pricing Impact - Callable vs. Non-Callable FRM

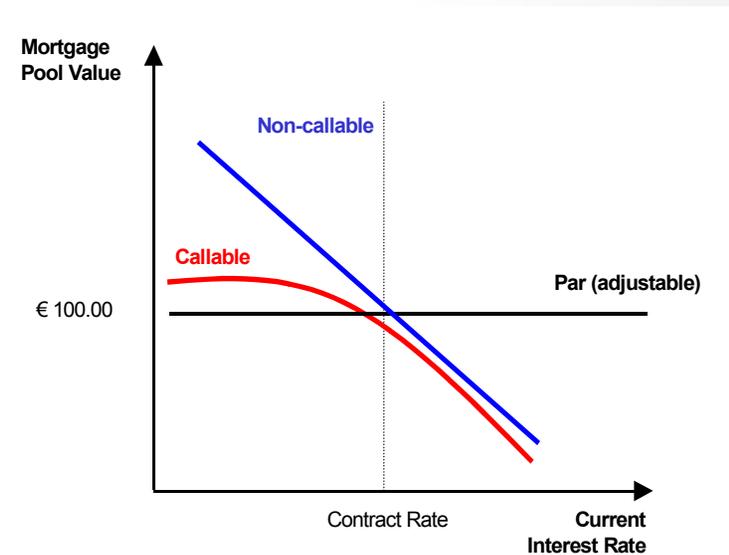
- Non-callable = call protection features
- Callable = no call protection features, only interest rate (options) premium
 - Price like non-callable fixed-rates when interest rates rise,
 - And like adjustable-rates when interest rates fall
 - Convexity → duration changes.
 - Option premium can be quite high and volatile, 70-100bp on average for 30 yr loan.



Prepayment Option Cost for 30 Year Callable Fixed-Rate Mortgage Bonds, Danish Data

Source: Realkredit Danmark

Pricing of Mortgage Loan Pools, With Callable FRM

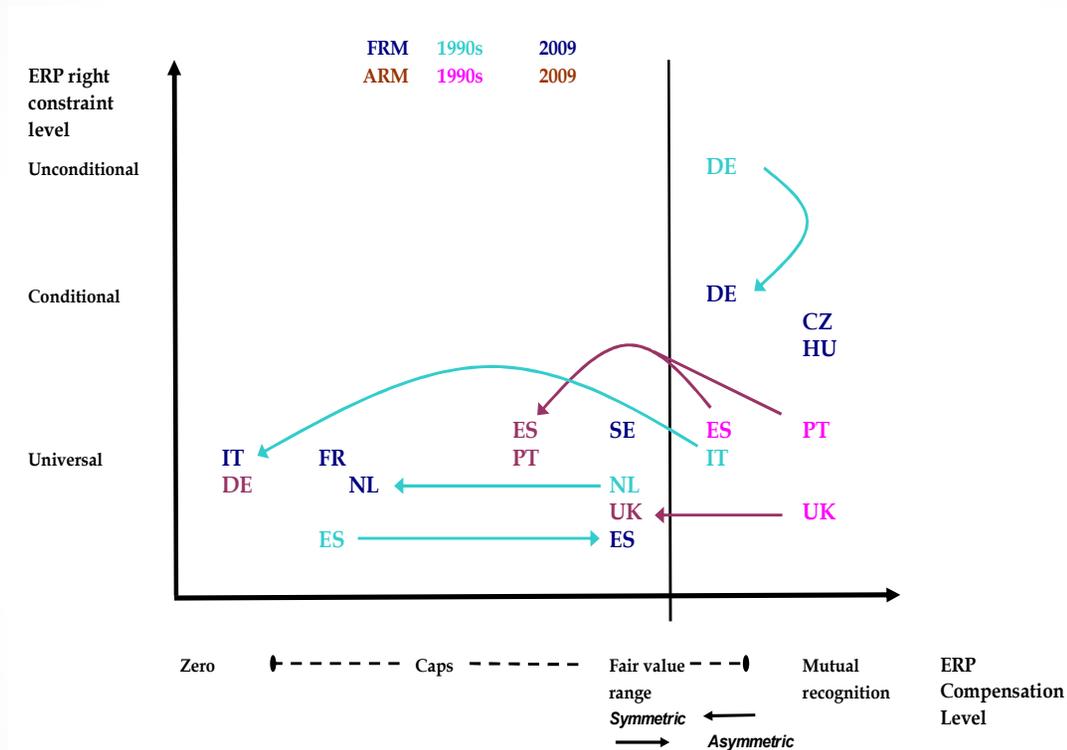


Source: Finpolconsult

Non-callable FRM – Call Protection Features & Regulations

- **Option 1: Yield-maintenance indemnity (YMI) (ex-post)**
 - Formula eliminating the financial gain from refinancing → non-callable FRM
 - Legally limited through limits to applicable fixed-rate period.
 - YMI may still lead to loss, unless additional lost servicing profit is added.
 - SWEDEN (without lost servicing profit), GERMANY (10 yr limit, lenders can still legally exclude), after 2007 reform SPAIN (with lost servicing profit), NETHERLANDS (movers are exempt)
- **Option 2: Fee / penalty (ex-ante)**
 - Ex-ante fee mismatches with ex-post cost for lender → partially callable FRM
 - UNITED KINGDOM (targeted to initial fixed-rate periods, similar to YMI), de facto FRANCE after Scrivener law led to industry practice of charging 3% fee.
 - Prohibition or severe caps imposed on YMI in ITALY, CROATIA, SERBIA (0%), BELGIUM, ROMANIA(1%) → callable FRM
 - Adjustable rate loans with prepayment fees, compensating for lost servicing profit SPAIN, PORTUGAL (0.5%)
- **Option 3: Discount origination**
 - Issuance below par at reduced interest rates, DENMARK → partially callable FRM

EU Member States – Prepayment Regulations



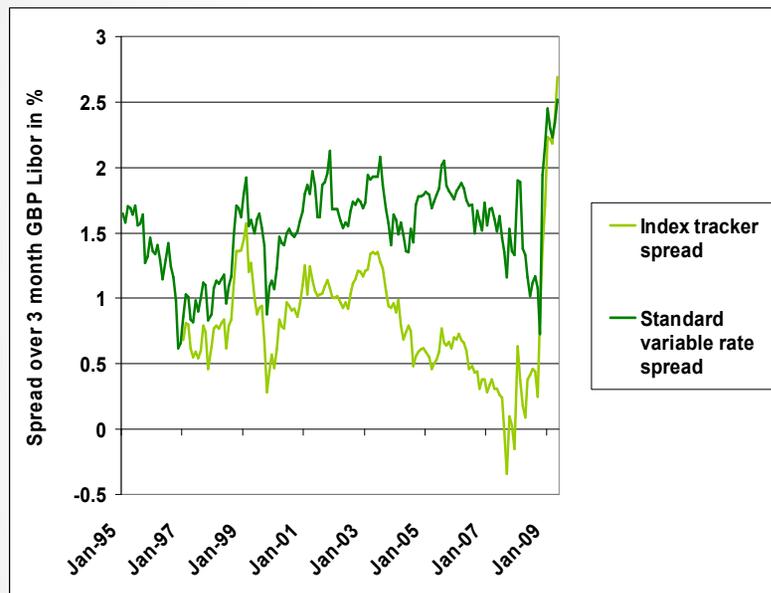
- Region often above fair value (Czech rep, Hungary discussions),
- Pressure to reduce or eliminate indemnities, however, counter movements (Spain) to re-establish FRM,
- CARRP leaves large room for national discretion (exclusion, indemnities).

Index-linked Adjustable-Rate Mortgages

- **Crisis experiences**
 - Interbank indices lack liquidity → Libor = !, Euribor = ?
 - Indexation may increase rate volatility vs. reviewable-rate alternative,
 - Market may tilt against FRM (Spain, Italy),
 - ARM caps are practiced where FRM already exists (i.e. not in Spain, Ireland),
 - Lifetime spread fixing over interbank potentially large loss-maker,
 - Large basis risk as bank cost of funds increase (Spain, Ireland!),
 - Reviewable rate products with unsolved consumer protection issues (Ireland, Hungary).
- **CARRP issues**
 - Tends to define variable rate product as index-based, reviewable?
 - Volatility: no mandatory downside risk protection e.g. caps. Disclosure of historic ARM pricing average & scenarios, optional).
- **Regional issues**
 - Elimination of reviewable rate product (Serbia, Hungary, Romania),
 - No enabling legislation for cost of funds-based product,
 - Volatile government bond rates vs. 'stable' interbank rates (but no liquidity), Hungary with two optional indices (government bond and interbank),
 - Lifetime spread fixing (Serbia, Romania, but not Hungary, 3 yrs roll-over).

Index-Trackers vs. Reviewable Rate ARM

UK, spreads of index trackers vs. standard (lender-reviewable) variable rate product



Source: Bank of England, Finpolconsult computations.

- North-south divide in regulations: north permits reviewable (increasing court interventions), south permits only index trackers.
- UK and Ireland move back into reviewable (no index tracker offers).
- Denmark: index trackers sold to capital market with administration fee adjustment option by lenders.

EU legal comparison ca 2005

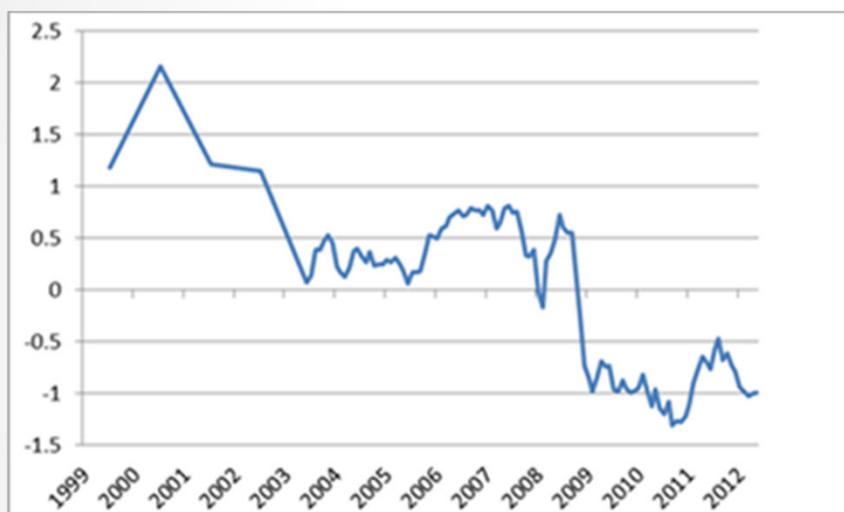
Table 2: Adjustment Regimes for ARMs, Lender Options and Constraints

	Compulsory Base Rate Indexation	Spread/Fee or Rate Adjustment Option by Lender	Indexed vs. Reviewable in Practice	Interest rate or payment caps widely practiced?
Denmark		•	Not applicable*	Yes
France	•		Indexed	Yes
Germany		•	Indexed**	Yes
Italy	•		Indexed	No
Netherlands		•	Reviewable	No
Portugal	•		Indexed	Yes
Spain	•		Indexed	Yes
UK		•	Reviewable	No

Sources: EMF-MOW (2003), Dübel (2003), Merrill Lynch (2003).
 Notes: ARM: Adjustable-rate Mortgages. *Prices for Danish floating rate bonds are determined by public auction. **Preisklauselverordnung of 1998 requires lenders to seek the approval of the Federal Office of Economic Affairs (Bundesamt für Wirtschaft), de facto impact as product innovation or cross-border barrier unclear

ARM - Spanish Experiences with Euribor

Euribor minus Long-term Deposit Rates



Source: Bank of Spain, Onvista,, Finpolconsult computations.

The performing index tracker portfolio in Spain is a loss maker, on a mark-to-market basis.

Irish banks have offered clients 10% lower principal for prepaying into reviewable rate (insufficient)

Pricing of Euribor based Covered Bond issued by Spanish Cajas



Linked Contract Rules

Private developer project escrow account process practiced in Turkey



Source: Finansbank. Note: Turkey with legal linked contract assumption.

- **Transparency**
 - Disclosure of economic ties bank & developer e.g. joint marketing, 1-1 relations.
- **Material protection**
 - Technical separation of consumer and developer capital (cash escrows / project SPVs);
 - Lender liability for consumer-developer contract (linked contract assumption);
 - Mandatory third-party completion guaranty;
 - Legal limitations on consumer equity or debt finance involvement.

Restructuring and Insolvency

Foreclosure / Consumer Insolvency Legislation

- **Foreclosure interventions**
 - Elevated caseloads: where consumer insolvency rules are absent or restrictive, with the risk of high residual debt remaining with households, gov tends to intervene.
Cases: Hungary foreclosure limits, Ireland de-facto moratorium, exception Spain.
 - Low caseloads: Romania (as per Feb 12) with higher foreclosure activity.
- **Consumer insolvency rules**
 - Consumer insolvency laws in Romania, Poland, proposed in Hungary, Croatia.
 - Debt discharge rules reduce the risk of long-term hardship (esp for young households). Plans in Hungary, Croatia?
Ireland to reduce to 3 years (risk of very low default penalty).
 - Preferentiate restructurings and short-sales. France: Amicable solution with legal preference, Ireland de-facto. Spain: law proposals on short sales.
- **Extra-judicial foreclosure rules**
 - U.S. experiences (robo-signed foreclosure deeds). US Fannie/Freddie penalties against states with long foreclosure delay (e.g. New Jersey).
 - CEE: too early to draw conclusions.

Consumer Insolvency Law Compared

Table A1. Overview of insolvency laws in selected European countries and the United States

Country	Legislation	Purpose	Eligibility	Extra-judicial settlement
USA	Bankruptcy Code (11 th Chapter of the United States Code)	Firstly, to give an honest debtor a 'fresh start' in life by relieving the debtor of most debts, and secondly, to repay creditors in an orderly manner to the extent that the debtor has property available for payment	Chapter 7 Individual, partnership, corporation or other business entity, irrespective of the amount Chapter 13 Any individual as long as unsecured debts are less than \$336,900 and secured debts are less than \$1,010,650; corporations and partnerships are not eligible	Not compulsory, not common
France	Code de la consommation	To address the situation of over-indebtedness of natural persons	Any well-intentioned debtor who cannot meet his personal debts	Depends on the applied insolvency procedure. Renegotiations are compulsory with the mostly applied procedure
Germany	Insolvenzordnung	To satisfy creditors' claims, while giving the honest debtor the opportunity to have remaining debts discharged	Any debtor who is (or is about to be) insolvent	Yes, compulsory
Ireland	Bankruptcy Act of 1988	To satisfy creditors' claims by selling debtors' assets	Any debtor who has assets available that are sufficient to produce at least €1,900.	Very common, not compulsory
Spain	Ley 22-2003, de 9 de julio, Concursal	To satisfy creditors' claims while protecting the debtor from the consequences of over-indebtedness	Any debtor who is (or is about to be) insolvent	Not compulsory
England and Wales	Insolvency Act and Insolvency Rules of 1986	To free the debtor from overwhelming debt, while making sure that the assets are shared out fairly among the creditors	Any debtor who is insolvent	Not compulsory

Consumer Insolvency Law Compared

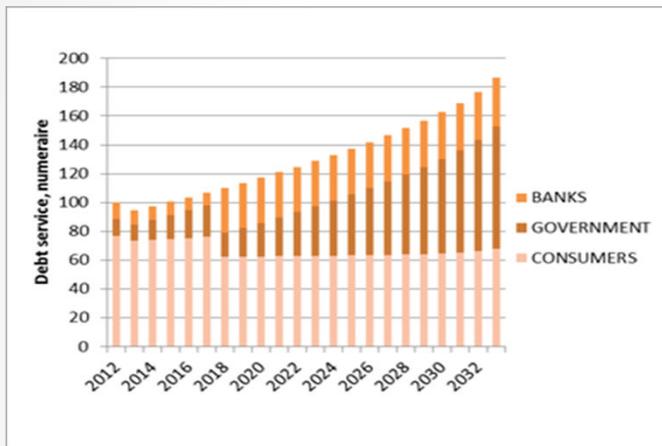
Table A1. Overview of insolvency laws (cont.)

Country	Liquidation and foreclosure	Exemption	Good conduct and discharge	Restrictions and punishments
USA	<p>Chapter 7 Liquidation and foreclosure possible, depends on the exemption law of each state</p> <p>Chapter 13 No liquidation foreseen. The debtor keeps his property and repays debt over time. Creditors with secured claims have the right to receive at least the value of the collateral, and may therefore proceed to foreclosure</p>	<p>Chapter 7 Exemption law is regulated at the state level, but some states allow choosing between state and federal exemption provisions. Exemption laws vary widely and typically provide for a share of home and other personal property to be exempted</p> <p>Chapter 13 Debtors can typically keep their property</p>	<p>Chapter 7 No period of good conduct; immediate discharge, typically after 4 months</p> <p>Chapter 13 After the debt settlement plan of 3-5 years, court may decide to have remaining debt discharged. Some debts are not discharged, including certain long term obligations, home mortgages, debts for alimony or taxes</p>	
France	Liquidation is possible, if imposed by judge	Part of debtor's property and income are exempted to provide for enough to cover living expense	Debt settlement plan of max. 10 years, but typically 5 years. Partial and total debt discharge are possible	Names recorded at the National Database on Household Credit Repayment Incidents (FICP)
Germany	Liquidation is possible, if imposed by judge	Part of debtor's property and income are exempted to assure a life in dignity	Period of good conduct of 6 years, possibly followed by a debt discharge	A register at court stores the names of insolvent debtors for three years
Ireland	Yes. All property (including the family home) is transferred to a trustee, with the exception of 'necessaries' up to a value of €3,100. The court may decide to appropriate income or pension for the benefit of your creditors	Essentials up to a value of €3,100 or more if approved by court	Legislation does not foresee automatic discharge. Discharge is possible in several cases when certain conditions are met, e.g. debt has been repaid, unsecured creditors agree to have a discharge or after a period of good conduct of 12 years	Names recorded at the Bankruptcy Register. Names include the discharged and are not removed from records Restrictions concerning managing and directing a company. Bankrupts may not hold certain public offices
Spain	Liquidation is possible, but mostly for companies. Securitised claims may be enforced	Exemptions not explicitly mentioned	not applicable	Possible in case the debtor does not follow the decisions of the court
England and Wales	Yes. All assets (including the family home) are transferred to a trustee	Essentials and tools of the trade	Automatic discharge after 12 months	Restrictions concerning obtaining new credit, carrying out business or managing a company. The bankrupt may not hold certain public offices

Source: Own compilation based on the legislation of the different countries.

Portfolio Restructuring Case

Hungary FX legacy portfolio post-restructuring debt service simulation



Source: MNB, Finpolconsult.

- **Case: Hungary CHF portfolio restructuring**
 - No retroactive interest rate intervention (Serbia)
 - Retroactive FX caps, 2 main buckets
 - LC conversion: borrower NPV ca 50%, bank NPV loss ca 50%. 80% conversions by cash.
 - FX restructuring with bank and gov FX caps: borrower NPV ca 54%, bank NPV loss ca 19%, government NPV loss ca 26%.
- **Preliminary evaluation**
 - Contingent government liability depending on FX rate development (nominal FX cap only)
 - Low second default likelihood as substantial (excessive) borrower NPV reduction.
 - Still lower borrower NPV reduction than under Orban I (>70% Gov NPV loss).

Fiscal Support, esp. for Local Currency Lending

Fiscal Support for Credit Access I

High-LTV Lending / Insurance

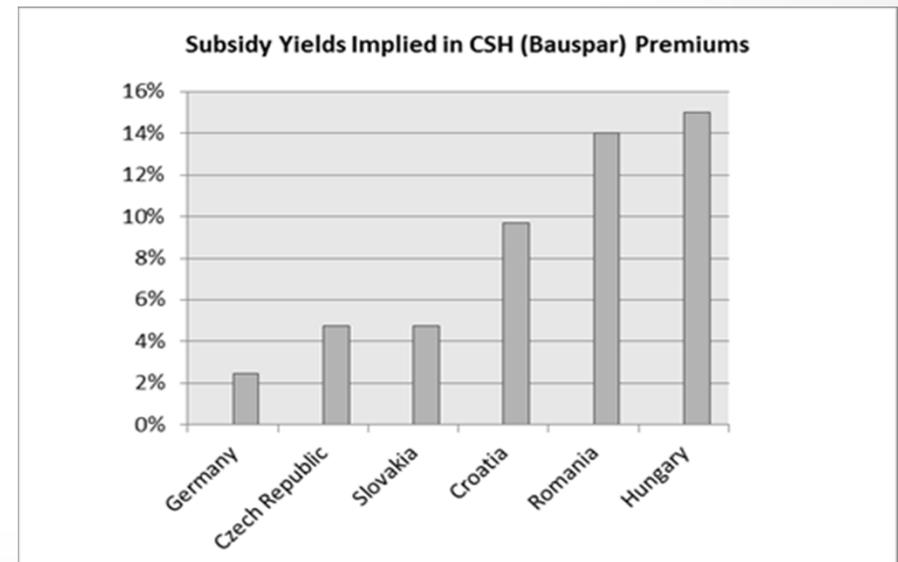
- **Supports higher first mortgage lending or provides second mortgage**
 - Serbia with pari-passu insurance model (70-30), historic second mortgage program (PTO) modelled after France, new high-LTV program for low-income?
 - Romania with self-targeted high-LTV insurance program for low-income (Prima Casa)
 - Positive: supported mortgage lending volumes post-crisis.
 - Negative: arbitrary market split, regulatory arbitrage
- **Critique**
 - Little actuarial determination of cost, contingent fiscal liabilities.
 - NOT targeted to LC lending!
 - Not really low-income.
 - Risk of selling regulatory favors, i.e. no calls in case of crisis.
- **Potential extensions**
 - Potential basis for U.S., NL-style MBS programs.

Fiscal Support for Credit Access II

Contract Savings for Housing (Bausparen)

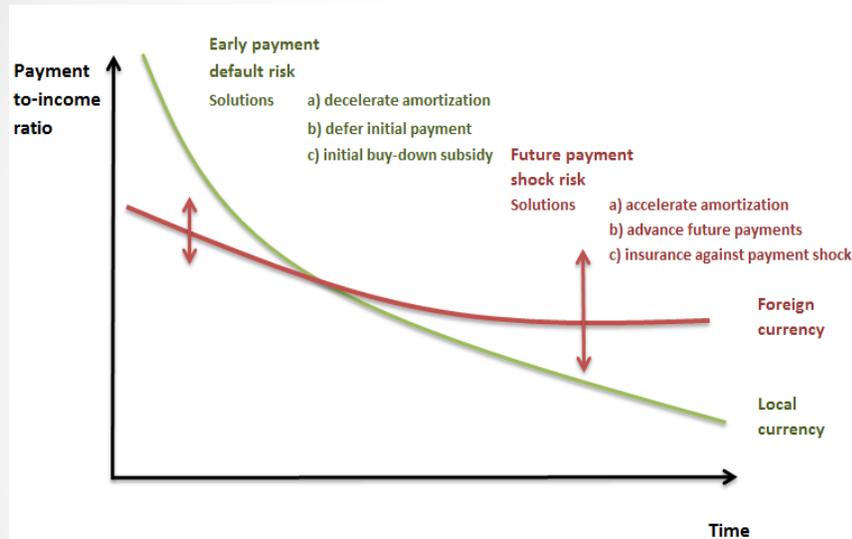
- Classic S&L product, produces small (second mortgage) FRM loans and equity
 - In Romania, Croatia, Hungary first did not take off due to the FX boom
 - Still insufficiently integrated (esp. Croatia, Romania), e.g.LTV limits.
 - Targeted to LC lending (major driver in Czech rep and Slovakia), ex Croatia.
 - Faulty subsidy design, irregularities.
 - Direct fiscal cost.
- How to reconcile when there is both, contract savings and insurance (Romania)?

Source: national CSH laws, Finpolconsult.

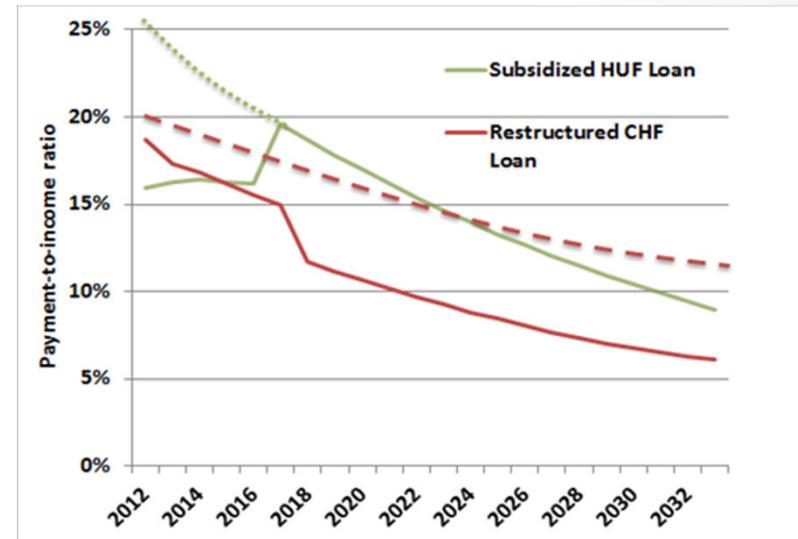


Fiscal Support for LC – PTI Profiles

Tilt effect, strategies to address default risk in LC vs. FX mortgage lending (PTI profile)



Hungary – PTI profile of HUF / CHF loan products post subsidies / restructuring



- LC causes 'tilt' effect of DTI, LTV due to inflation (long-term lending only)
- LC demands initial burden reduction..
 - Interest rate buy-down subsidies (Czech rep, Hungary),
- ..or shift of burden to later phases
 - Reduced initial amortization,
 - Lower initial rates.
- FX creates automatic shift, but high risk.

Source: central banks, FHB, Finpolconsult.

Successful Czech Interest-Buydown Program

Interest Rate Buy-Down Program in the Czech Republic

In % p.a.	1995	1996	1997	1998	1999	2000	2001	2002	2003
Market rate	n.a.	11.4	12.9	14.2	10.3	8.8	7.9	6.8	5.5
Rate buy-down	n.a.	4.0	4.0	4.0	4.0	4.0	2.0	1.0	0.0
Ex-post rate	n.a.	7.4	8.9	10.2	6.3	4.8	5.9	5.8	5.5

- **Interest rate buy-down program**
 - Subsidy formula: $s(t) = r(t-1) - r_{\text{norm}}$, $r = \text{market rate}$, $r_{\text{norm}} = 7\%$
 - Subsidy cap: $\max(s(t)) = 4\%$, upward rounding of $s(t)$ to higher integer
- **Pro**
 - Sustainable since rate decline triggered elimination of subsidy (2003),
 - Cap on rate subsidy limits fiscal risk.
- **Con**
 - Wasteful subsidy over entire life of loan (e.g. limit to first 5 years),
 - Lag structure of formula leads to unintended variations in after-subsidy rates,
 - There is risk that rates rise again, rather than drop (here cap on rates), perpetuating an untargeted subsidy program,
 - Some countries have defined far too low norm interest rates, e.g. Hungary late 90s,
 - What if politicians wish to define a new, lower norm rate?

Housing Policy Design

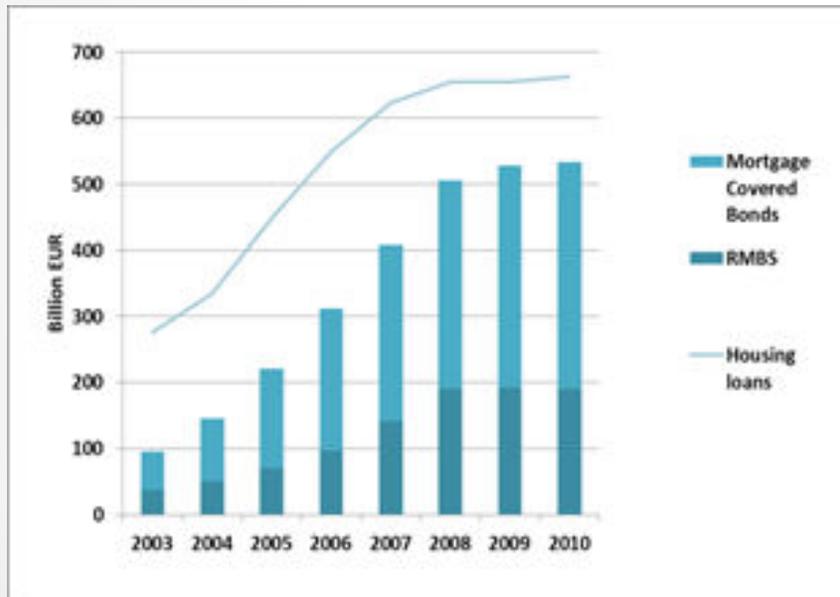
Some issues, cursory

- Backlog in both private and public/non-profit rental sector development (Romania, Serbia, Hungary, Turkey). High likelihood of subprime lending going forward.
- Croatia reviving non-profit rental, Poland with successful system (TBS), still lacks capital market access.
- National housing agencies absent (Croatia, Hungary) or in need of overhaul (Romania, Turkey TOK), Poland with multiple purpose agency model (analogy KfW).
- Poland is the only country in the sample with a multi-faceted and partly decentralized housing policy approach as well as sufficient capacity.

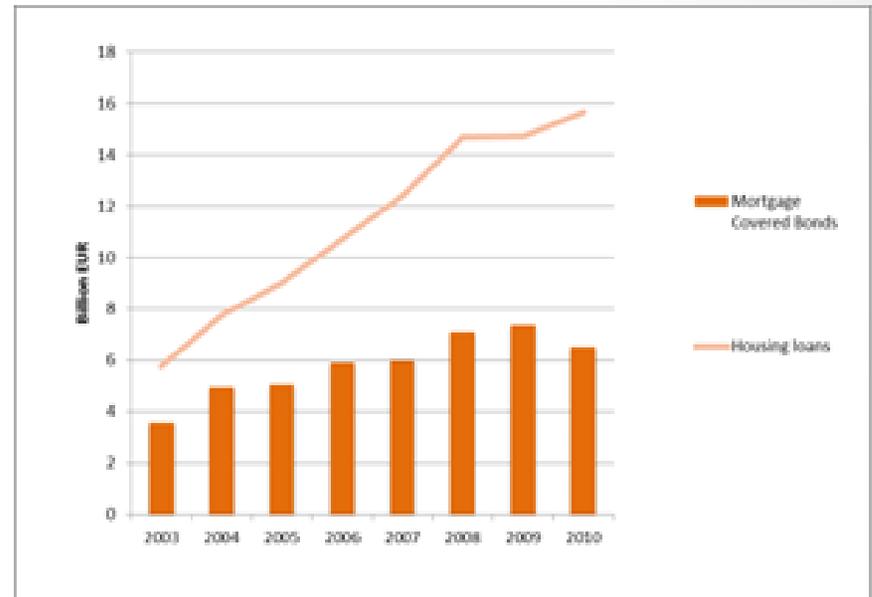
Secondary Market Regulation

Intro - Mortgage Securities and Housing Credit Booms

Spain



Hungary



- Allow for bulky, cross-border investment, replaces sovereign credit as capital flow vehicle (U.S., Spain).
- Not a necessary condition for housing credit boom.
- Not responsible for credit booms in CEE countries.

Source: Central banks, ECBC, SIFMA, Finpolconsult.

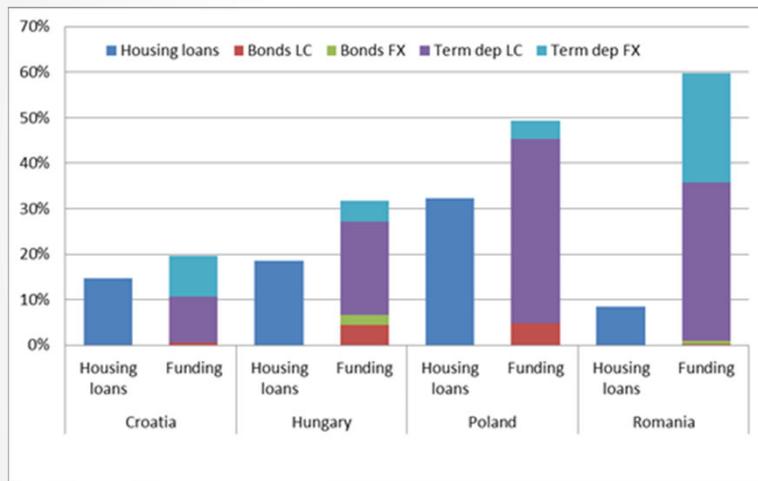
Issuer Perspective – Sources of Funds and Impact of Regulations

- **Sources, pricing of funds**
 - Foreign lenders/greenfields: interbank deposits/loans,
 - Local lenders/incumbents: domestic retail deposits & interbank swaps,
 - Interbank durations have seriously shortened with crisis,
 - Internal transfer pricing has increased, remained volatile.
- **Bank funding regulations**
 - Initial discrimination against bonds through loan-to-deposit ratio (LDR). Strategy change (e.g. IMF) from LDR to NSFR
 - FX version foreign funding adequacy ratio (FFAR, Hungary)
 - NSFR not sufficient for mortgage lending (treatment of deposits, cuts duration gap only minimally)
 - Vienna II as temporary substitute to limits on ring-fencing (Banking Union)
- **Primary market regulations**
 - Prepayment models required if indemnities are cut, callable bonds
 - FX-LC conversion option with highly complex ALM impact
 - ARM basis risk implies selling interbank indexed debt

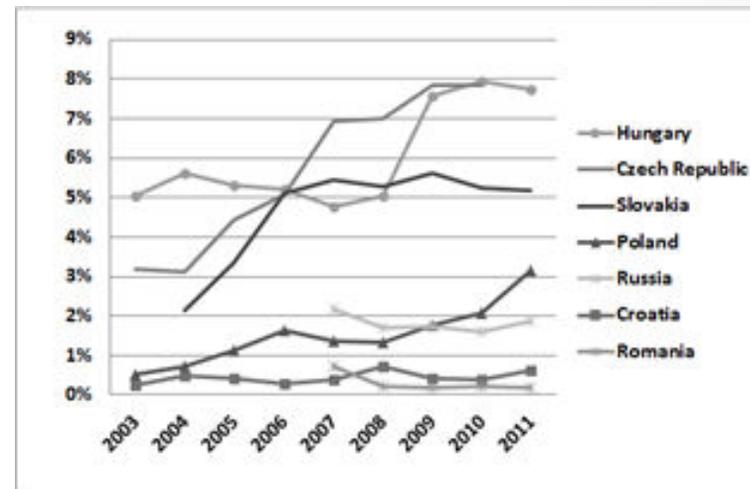
Issuer Perspective

– Insufficient Use of Bank Bonds

Housing loans and 'long-term' bank funding sources, % of total assets



Bank bond outstanding % of GDP



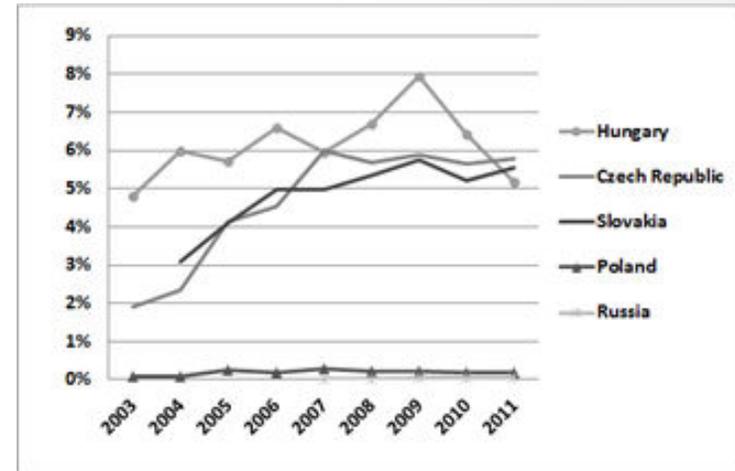
Still low mortgage portfolio shares (10-20%, Poland 30%):

- FX deposit shortage
- How long-term are term deposits? Exception contract savings (2-5 years).
- How many core deposits are there in the region?

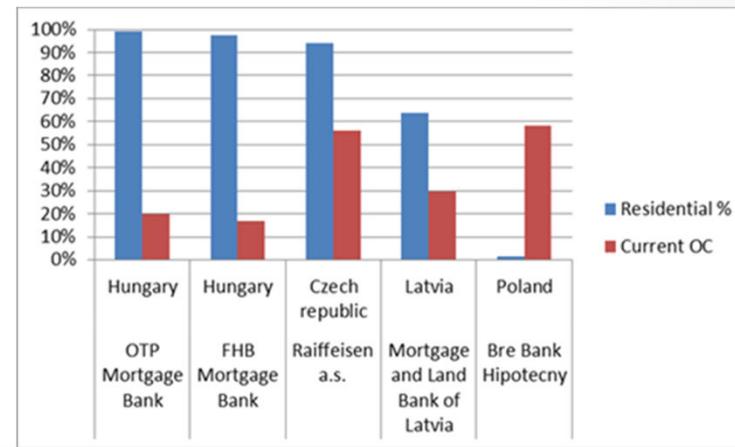
Current Covered Bond Programs

- Growth drivers
 - FX vs. LC lending (Czech, Slov), mortgage credit growth (Russia),
 - Interbank funding, LDR, arbitrage (Slovakia),
 - Access, capital - special vs. universal bank (Poland), 26 issuers only,
 - Investor appetite (diverging).
- Issues
 - Due diligence cost, licensing (Caja experiences)
 - Credit risk
 - Elevated credit risk implies high overcollateralization (OC), and high issuer downgrade sensitivity.
 - Cost of swaps
 - FX, X-currency swaps by third parties too expensive, as cover cannot post margin (asymmetry).
 - No rating uplift for mother-written swaps.
 - Centralized issuer models have failed

Covered bank bond outstanding % of GDP

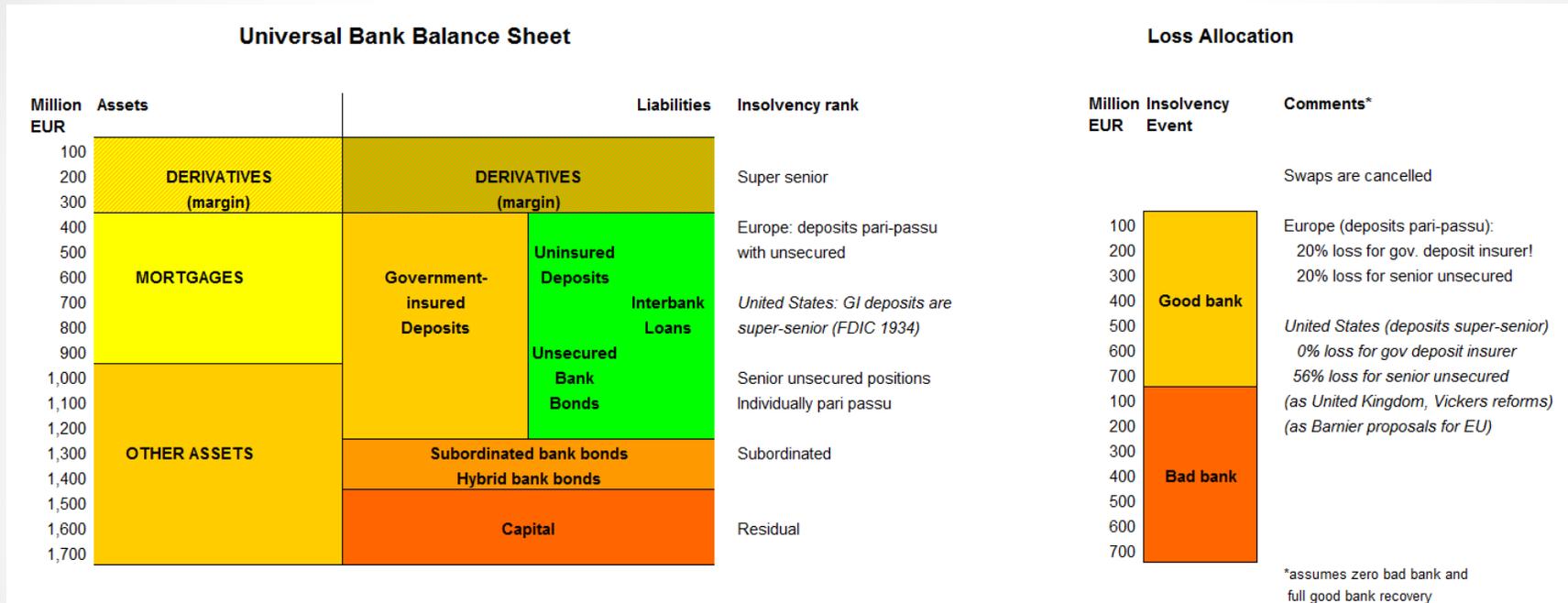


Current CEE covered mortgage bond program characteristics



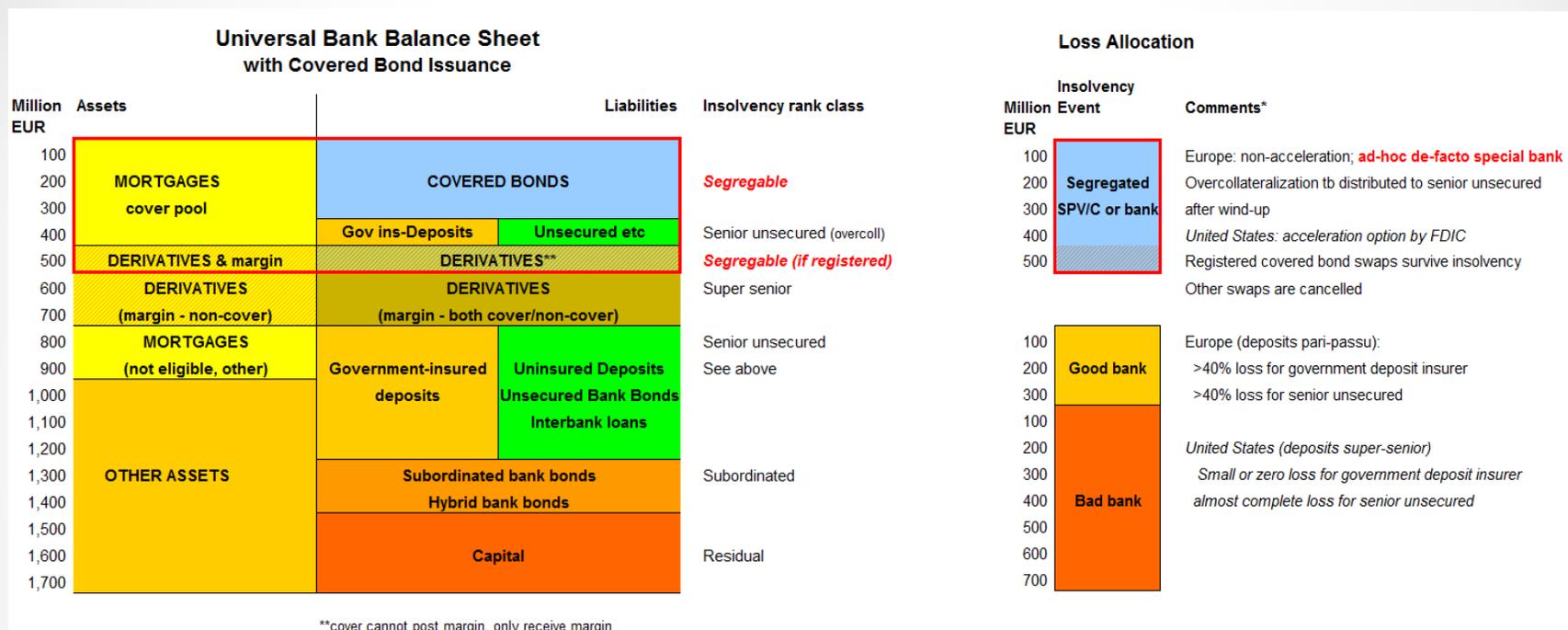
Source: FitchRatings, Finpolconsult.

Government Perspective - Loss Allocation in a Universal Bank Insolvency



- **British reforms:**
 - Vickers: deposits are super-senior, and assets/liabilities essential for British economy are ring-fenced
- **EU proposals:**
 - Barnier: deposits are super-senior, short-term senior unsecured non-bailinable, other debt bail-inable acc to rank
 - Liikanen: assets/liabilities that are non-essential (trading) are ring-fenced
- **Resolution practice:** mostly bail-out, e.g. Landesbanken, RBS, Bankia, MPS, some subordinated bail-in (Ireland)

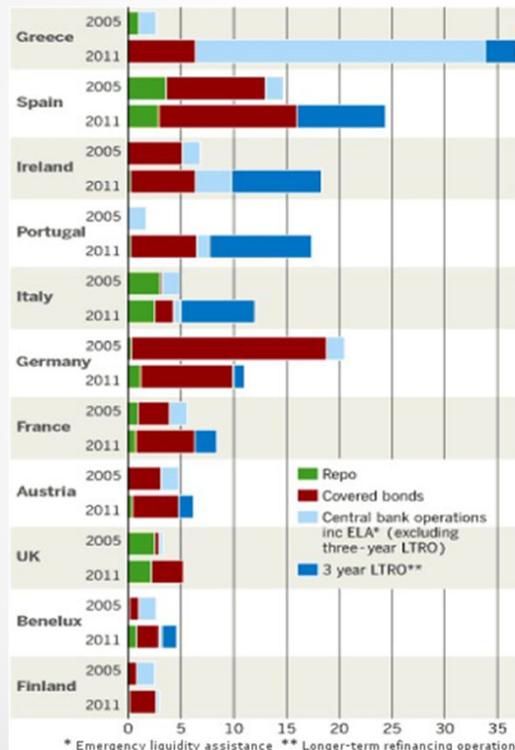
Loss Allocation when Funding through Covered Bonds



- A covered bond has dual character as a sleeping special bank and good bank
 - Sleeping special bank: with few exceptions, assets and bonds are segregable in an insolvency as a separate unwinding entity under a special administrator, non-acceleration principle.
 - Good bank: asset substitution options through the cover monitor in the going concern.

Government Perspective – Cherry-picking and Subordination

Asset encumbrance, % of assets



Source: BAFIN, Carmel Asset Management, April 2012

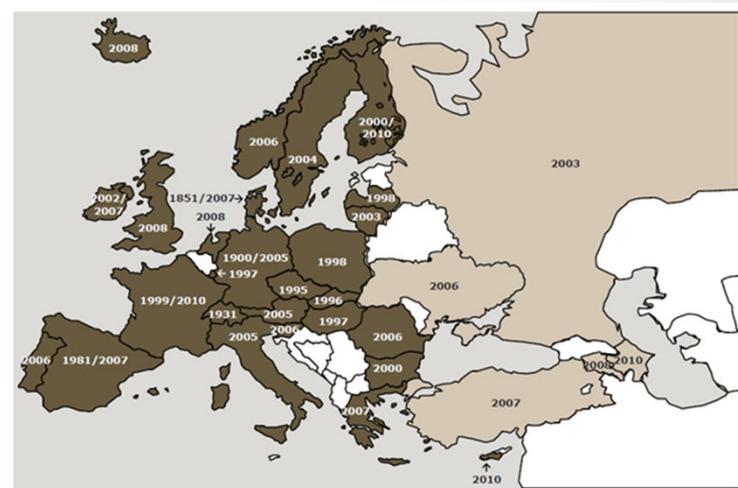
Note: Double counting is possible, as covered bonds may also be used as collateral for LTROs

- **Cherry-picking**
 - Deposits/unsecured left with riskier assets,
 - Two good banks – ‘bridge bank’ / covered bond – on their own in insolvency,
 - Regulatory reaction:
 - Issuance limits (UK, Australia).
- **Subordination (of deposits, unsecured)**
 - High levels of asset encumbrance through LTRO, swaps (margins),
 - High OC levels of covered bonds to boost rating,
 - Strategic covered bond issuance (e.g. through Slovakia in Eurozone),
 - Regulatory reaction:
 - Acceleration of bond in insolvency case (claws back OC),
 - Strict ex-ante OC limits (Romania),
 - Avoiding large OC through pass-throughs (Denmark Realkreditobligationer)

Status of Covered Bond Legislation Projects

- **Current discussion**
 - Existing laws: Poland, Hungary, Romania most comprehensive.
 - New laws: Croatia?
- **Issues**
 - **Special bank reform**
 - Liberalization (against broader bank insolvency reform?)
 - Sub-participations vs true sales (Poland)
 - **Asset eligibility (Romania)**
 - Inclusion of public sector assets
 - Inclusion of foreign mortgage assets
 - LTV limits
 - Pooling of FX and LC loans
 - **Static vs. dynamic pools**
 - Historic laws in Romania, Russia, Ukraine encompass both; applied in Russia.
 - Danish system with different capital centers

Covered bond legislation map



Combining static and dynamic pools in one legislation, Danish issuers

Table 2. Danish issuer positions

Issuer	Type	Balance principle	Issuing principle
BRFkredit	SDO	General principle	Pass through
Danske Bank	SDO	General principle	Euro style
DLR Kredit	SDO	Specific principle	Pass through
Nordea Kredit	SDRO	Specific principle	Pass through
Nykredit/Totalkredit	SDO	General principle	Pass through
Realkredit Danmark	SDRO	Specific principle	Pass through

Source: Danske Markets

Source: Verband dt. Pfandbriefbanken, Danske Bank.

Rating Agency Methodology Changes that Might Affect CEE

S&P, programme categories summary

Exhibit 13: Programme categories, ALMM risk categories, and maximum credit rating uplift to issuer's ICR

Programme category	1	2	3
Funding options range	ALMM manageable via asset sales and third-party liquidity. No limits on when or how funds can be raised.	ALMM manageable via asset sales or third-party liquidity. No limits on when or how funds can be raised.	Access to third-party liquidity is limited resulting in forced asset sales.
Funding options strength	Long covered bond market history. High systemic importance of covered bonds. Several banks would be able to lend. Adequate demand for cover pool assets.	Limited covered bond market history. Systemic importance of covered bonds. Several banks would be able to lend. Adequate demand for cover pool assets.	Short covered bond market history. Low systemic importance of covered bonds. Banks would be unable to lend. Uncertain demand for cover pool assets.
Jurisdictions	Denmark France (special-law-based) Germany Spain Sweden	Australia Canada Finland France (general-law-based) Ireland Italy Luxembourg Netherlands Norway Portugal UK	Greece US
ALMM risk category	Maximum credit rating uplift to the issuer's issuer credit rating (ICR)		
Zero	Unlimited	Unlimited	Unlimited
Low	7	6	5
Moderate	6	5	4
High	5	4	3

Source: S&P, Credit Suisse

Some Issues

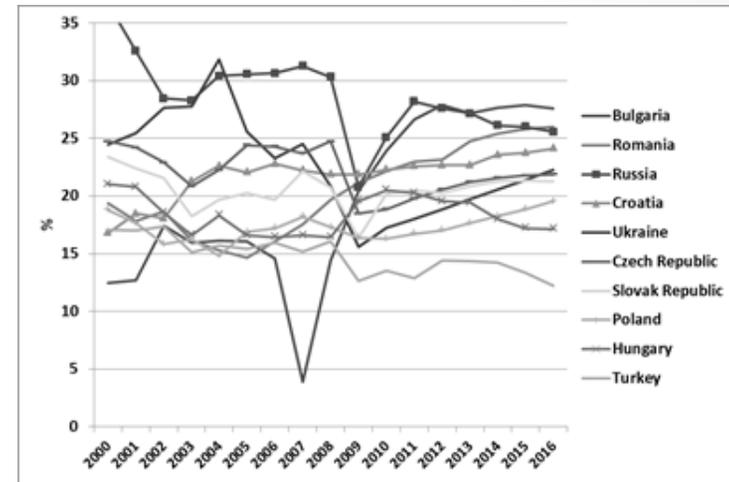
- Focus of cash flow stress on liquidation scenario, high OC not sufficient (Spain)
- Preference for pass-through and soft bullet structures, minimum liquidity req.
- Tight swap counterparty rating and margin definitions, only asymmetric swaps.

Source: Sabine Winkler, Credit Suisse

Mortgage Securities - Local Investors

- **Local institutions**
 - Reduced pension fund capacity
 - Reduction of contributions (Poland),
 - Renationalization (Hungary),
 - Financial repression (Croatia),
 - but increasing in Romania.
 - Increasing insurance capacity
 - Accept sovereign ceiling, including below investment grade.
 - Generally look for LC duration to avoid zero interest rate policy - but Solvency!
 - Relatively uneducated regarding mortgage-related risks, esp. cash flow risks (pass-through), demand bullets.
- **Local retail**
 - Increasing capacity, as incomes grow.
 - Accepting some LC duration, demand bullets.
 - Largely uneducated of risks. Banks sell e.g. subordinated debt (Croatia).

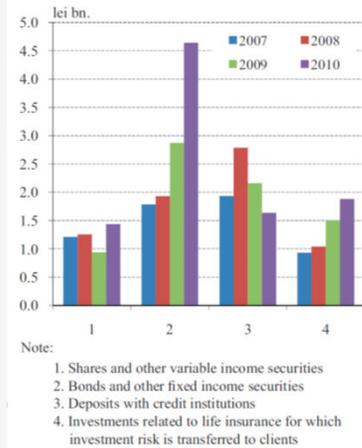
National Savings Ratios, 2000 – 2010, Forecast



Some Romanian Data, 2011 FSR

Insurance Co Investments

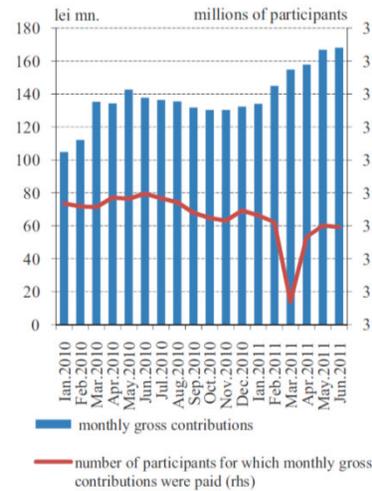
Chart 3.51. Key investments of insurance companies



Source: ISC, MPF

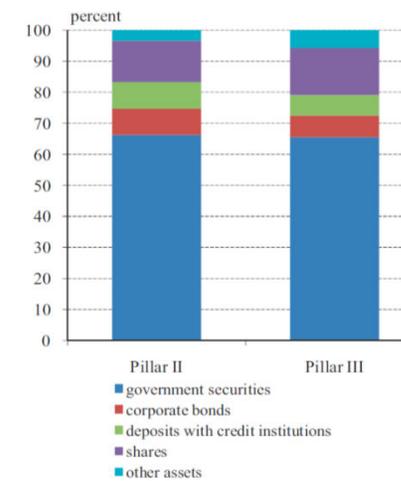
Pension Fund Contributions, Investments

Chart 3.53. Developments in contributions for Pillar II



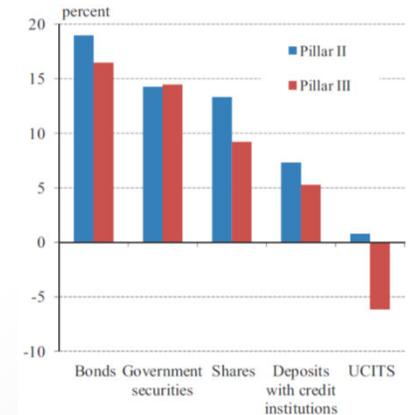
Source: PPSSC

Chart 3.54. Breakdown of investment portfolios at the end of 2011 H1



Source: PPSSC

Chart 3.55. Average annual interest rates on the main financial investment assets in 2010



Source: PPSSC

Returns on Different Investments

Mortgage Securities – Foreign Investors

- **General**
 - Increasing country-risk sensitivity due to Euro crisis, country-by-country differentiation.
- **European institutions**
 - Investment-grade focus and highly rating sensitive, i.e. issues w. Croatia, Hungary, Romania.
CB programs have been successful recently in piercing sovereign ceilings (e.g. Hungary, Italy) and maintained investor base.
 - Usually do not analyze underlying issuer and cover pool extensively.
 - Preference for EUR, bullets.
 - Increasing problems with duration through Solvency.
- **Anglo-saxon investors**
 - Investment including below investment grade.
 - More opportunistic, deal-oriented.
 - Greater familiarity with mortgage cash flow risk (but wary of legal risk).
 - EUR or USD with duration, bullets and pass-throughs.
 - LC funds seeking for duration, spread compression trade.
 - Problem: fast exit, requires liquidity (e.g. Hungary sovereign, but not covered).

Country-specific Areas for Dialogue

Romania

SUGGESTED PRIORITIES FOR DIALOGUE	<p>LC product design and affordability concept. Prima casa programme design.</p> <p>Consumer insolvency law.</p> <p>Integration of Bauspar system, review of subsidies.</p> <p>Bank insolvency law.</p> <p>Covered bond law.</p> <p>Broader issues:</p> <p>Fragmentation of regulators.</p> <p>Intersections between developer, public utility and local government finance.</p> <p>Improved housing policy design (private and social rental, mortgage insurance programme).</p> <p>Capacity-building with national housing agency.</p>
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Serbia

SUGGESTED PRIORITIES FOR DIALOGUE	LC product affordability initiative. Review of consumer protection law, mitigation of retroactive elements. Bank insolvency regulation. Review of reserve requirements for bonds issued. Passing of existing MBS regulation and drafting of covered bond regulation. Possible support for MBS deal with publicly insured mortgage loans Broader issues: Housing policy capacity building (rental sector, upgrading of national mortgage insurer into national housing agency).
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Croatia

SUGGESTED PRIORITIES FOR DIALOGUE	Consumer insolvency legislation (due mid-2012). Basic consumer protection legislation. Covered bond legislation (new). Integration of CSH (Bauspar) system. Broader issues: Public sector covered bonds (high municipal loan demand) Housing policy capacity building (rental sector, establishment of national housing agency).
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Hungary

<p>SUGGESTED PRIORITIES FOR DIALOGUE</p>	<p>LC product design and affordability concept. Modified FX product regulation. Integration of Bauspar system, review of subsidies. Consumer insolvency legislation. Bank insolvency legislation, deposit insurance reform, followed by mortgage bank reform.</p> <p>Broader issues: Housing policy capacity building (private and social rental, rationalization of mortgage subsidies, national housing agency).</p>
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Annex



Suggested Priorities for Dialogue I

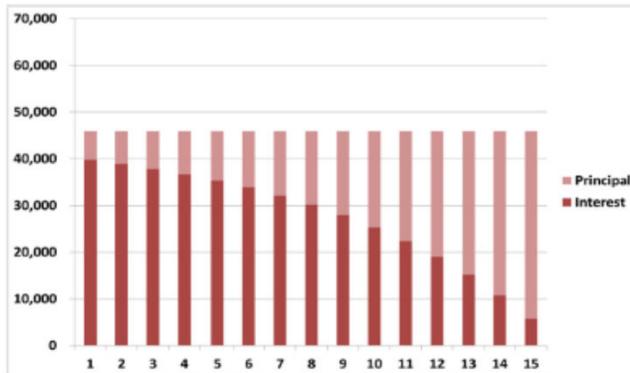
- **Local currency product design and fiscal support**
 - Local currency product design workshop (priority in: HU, RO, SRB, TK).
 - Savings for housing programs/Bausparen: review of design and subsidies (priority in CRO, HU, RO), possibly additional legislation (PL).
 - Mortgage insurance design, re-focusing on supporting LC lending.
 - Tax support and subsidy design issues to support LC lending.
- **Primary market regulation**
 - APRC and transparency regulation, suitability in mortgage finance (all countries).
 - Modified FX product regulation, evaluation of material protection options (priority in HU RO, PL, SRB).
 - Index choice, interest rate adjustment, spread and early repayment regulation (all countries).
 - Consumer insolvency legislation (priority in CRO, HU).

Suggested Priorities for Dialogue II

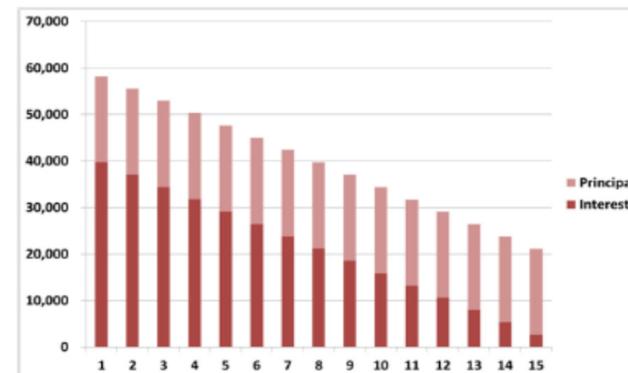
- **Housing policy infrastructure**
 - Alternative house price valuation standards (all countries).
 - Development of house price and rent indices (all countries).
 - Housing policy institutions performance and design (priority in RO, HU, CRO, SRB, TK).
- **Secondary market regulation**
 - Ad-hoc workshops covering bank resolution, deposit insurance and covered bond law design where new laws are being designed (RO) or old laws reviewed (PL, HU); part of broader bank regulation reform initiative with EU KOM.

A Few Points on Amortization General Alternatives

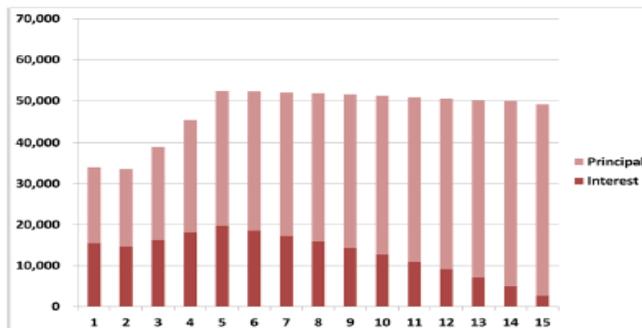
Annuity Loan



Serial Amortization Loan



Foreign Currency Loan



Note: CHF loan parameters for Hungary 2008 – 2011 & 2012 – 2023 forecast

Same house price

Same LTV

Fixed rate mortgage

Highly different cash flow profiles

Source: Finpolconsult