Mortgage Market and Regulation Trends in CEE Countries

National Bank of Poland

Warsaw, November 14, 2013

Hans-Joachim Dübel
Finpolconsult

Agenda

1. Primary market trends and regulations

2. Secondary / bank bond market trends and regulation

Empirical findings based on study financed by EBRD (2012)

http://finpolconsult.de/mediapool/16/169624/data/Housing_Finance/CEE/CEE_Mortgage_Regulation_EBRD_Oct_12.pdf

Primary Market Trends
Housing Loans

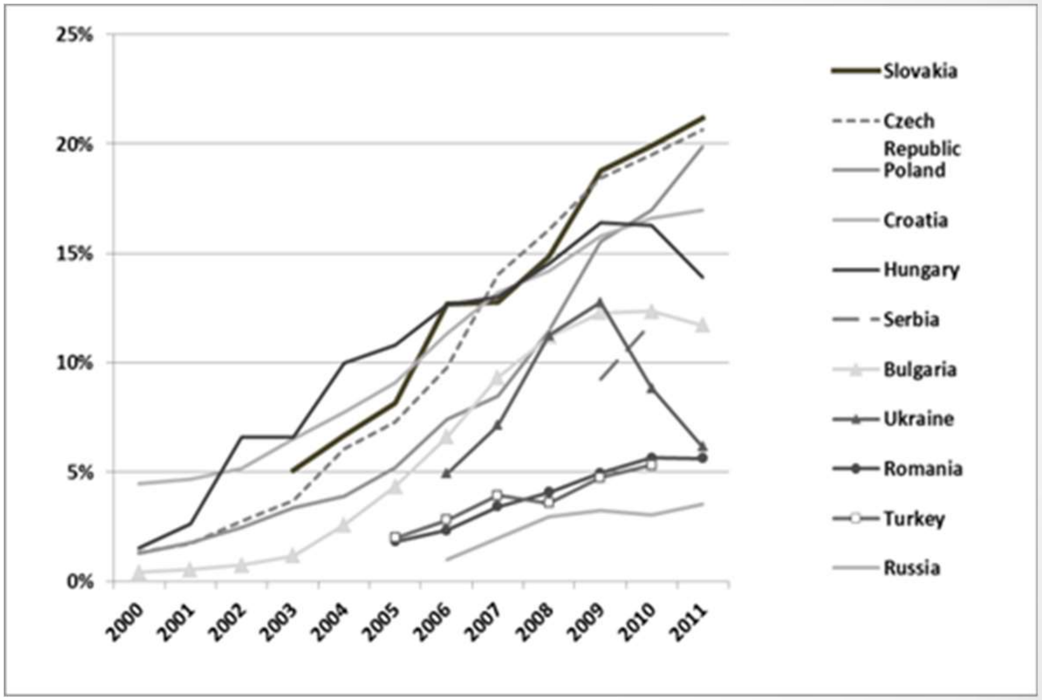
Growth phase (00-08):

- **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)** (CzechR, Hungary, Poland)
- **Structural factors** aggressive greenfield entry X-border interbank lending.

Consolidation phase (>08):

- **Increasing defaults, isolated crisis,**
- **Reduction of X-border lending, equity allocation.**

Housing loan to GDP ratios, 2000 – 2011

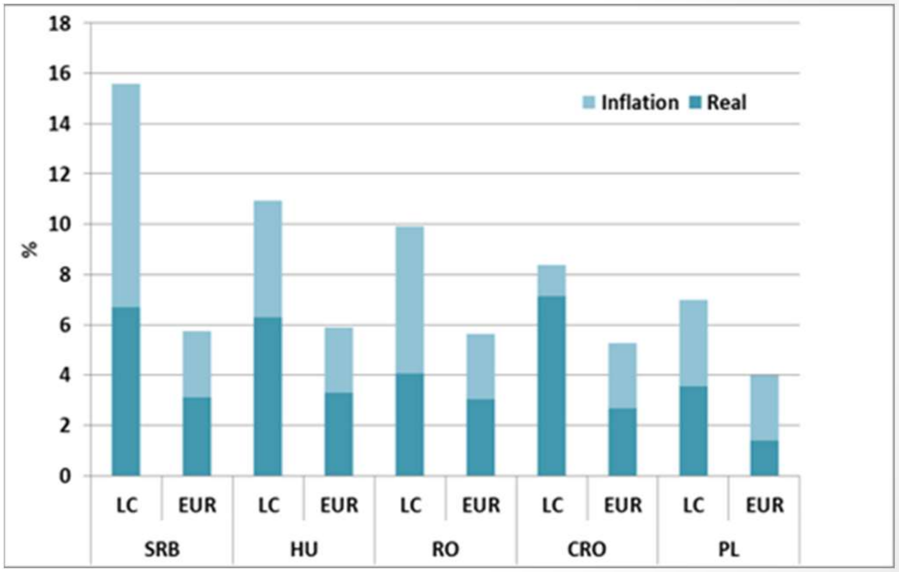


Source: National central banks, ECB, Finpolconsult.

Primary Market Trends
FC Lending as Historic Growth Driver

- **Determinants of FX use:**
  - **FX as entry vehicle** Millennium in PL, Erste in HU, HGAA in CRO, RZB in SRB.
  - **Front-loading of LC loan payment-to-income ratio** (high inflation and/or high real rates),
  - **Depth of funding markets,** both interbank and bonds,
  - **Aggressive pass-through of US/Euro policies pushes demand** (as Ireland and Spain with Euribor interbank rates),
  - **Euroization of property market** (e.g. RO, CRO).

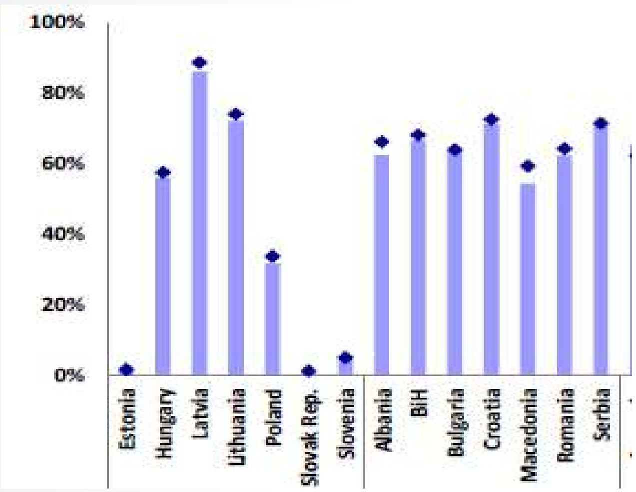
Local and foreign currency nominal and real interest rates, end of 2011



Source: national central banks, ECB, Finpolconsult.

Primary Market Trends
Recent Advances of LC Lending

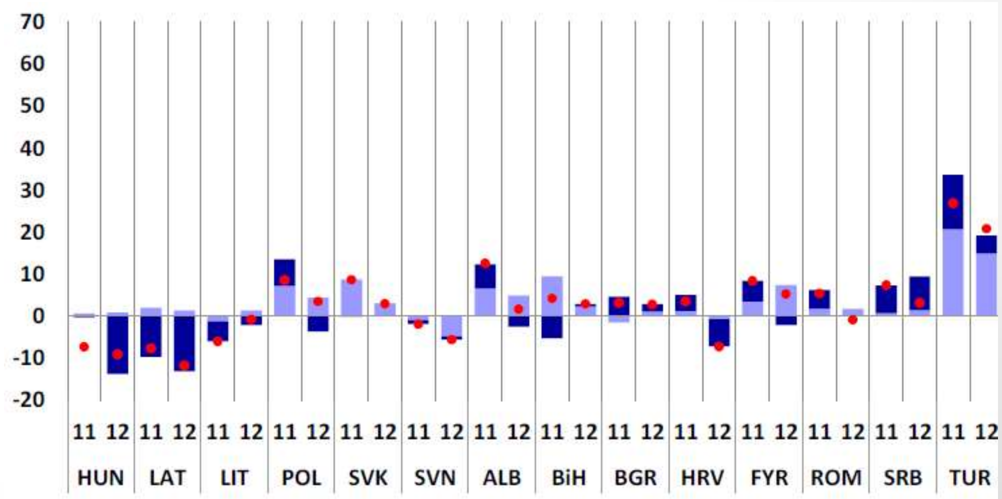
FX to total Lending Ratio, latest



Turnaround cases

- **Poland and Hungary have turned to LC, joining CzechR**
- 2011 LC share for Poland was 62%, and for Hungary ca 80%.

Contributions to Net Lending – FX (dark) vs. LC (light)



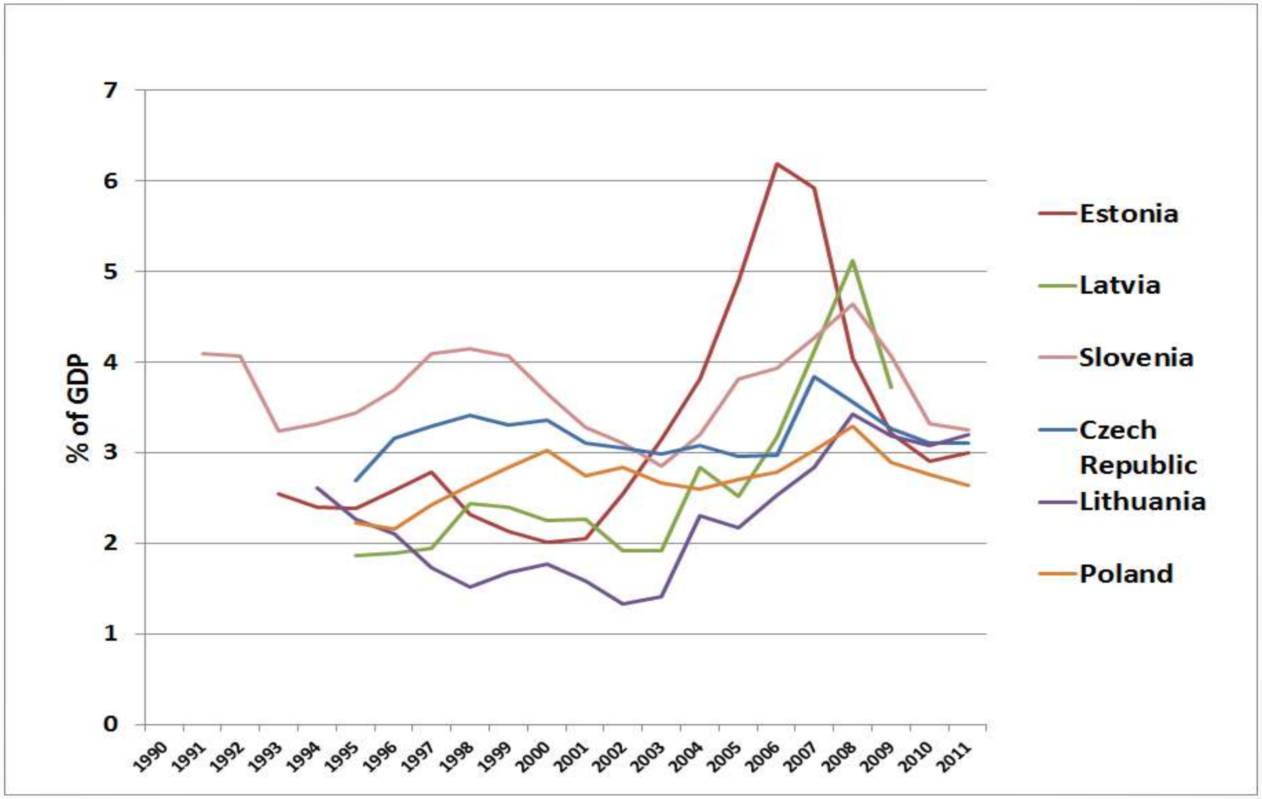
Regulatory initiatives,

Liquidity ring-fencing.

Source: EBRD.

Primary Market Trends
Stimulation of New Construction

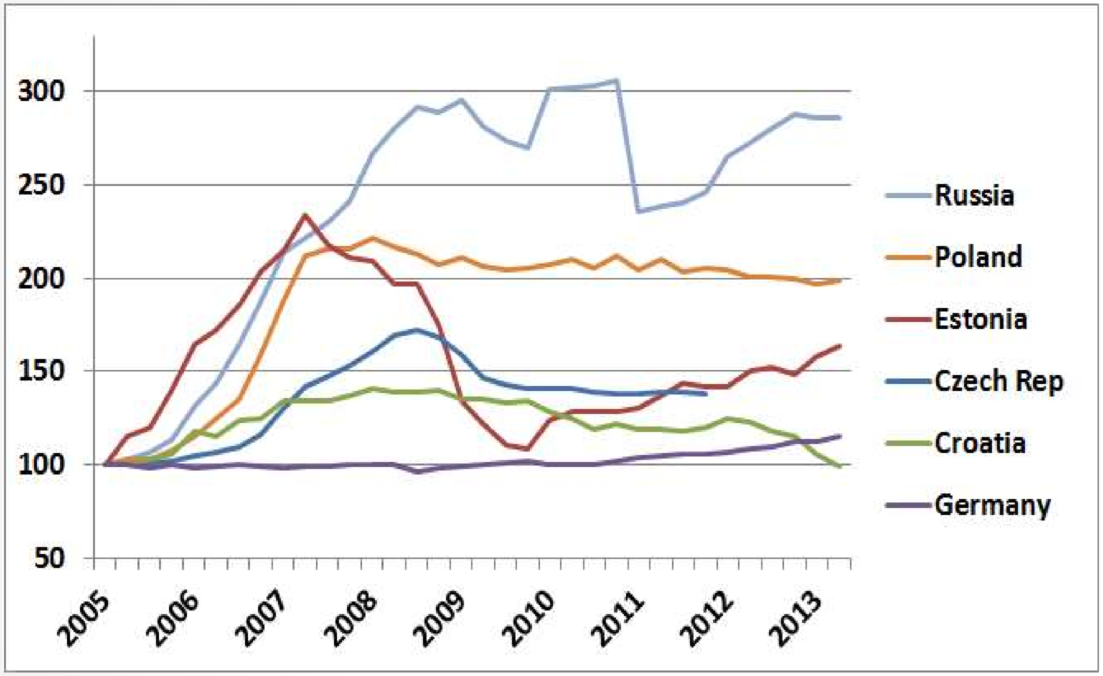
Gross Fixed Capital Formation Dwellings / GDP



Source: BIS, Finpolconsult reindexing.

Primary Market Trends
House Price Inflation

House Prices (existing or all flats), Q I 2005 = 100



Source: BIS, Finpolconsult reindexing.

Nominal currency units.

'Real Estate Clock'

- Price growth
  - Baltics,
  - (East Germany).
- Consolidation, top
  - Russia,
  - Poland,
  - Czech Rep.
- Price decline
  - Hungary,
  - Croatia,
  - Romania,
- Consolidation, bottom
  - Ukraine..

Portfolio Performance
General

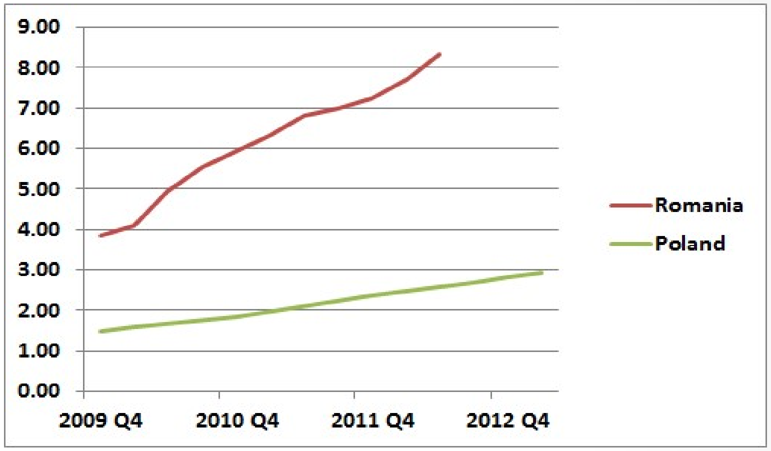
Some Figures

- Headline owner-occupied default rates are moderate
  - CRO 1.5-2% (2 lenders),
  - SRB 4% (Central Bank),
  - PL 2% (Central Bank),
  - TK 1.5% (Central Bank)
  - Ro and HU - elevated
- Consumer and housing loan NPL have been widely rising.

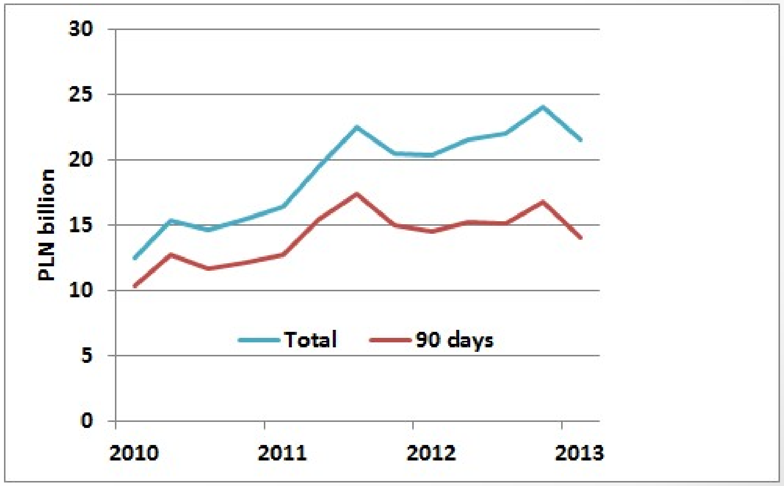
Default motives

- Cash flow stress
  - Unemployment,
  - Wage cuts (esp. public sector),
  - Interest rate adjustment.
- Negative equity

NPL Ratios Housing/Mortgage Loans, Poland vs. Romania

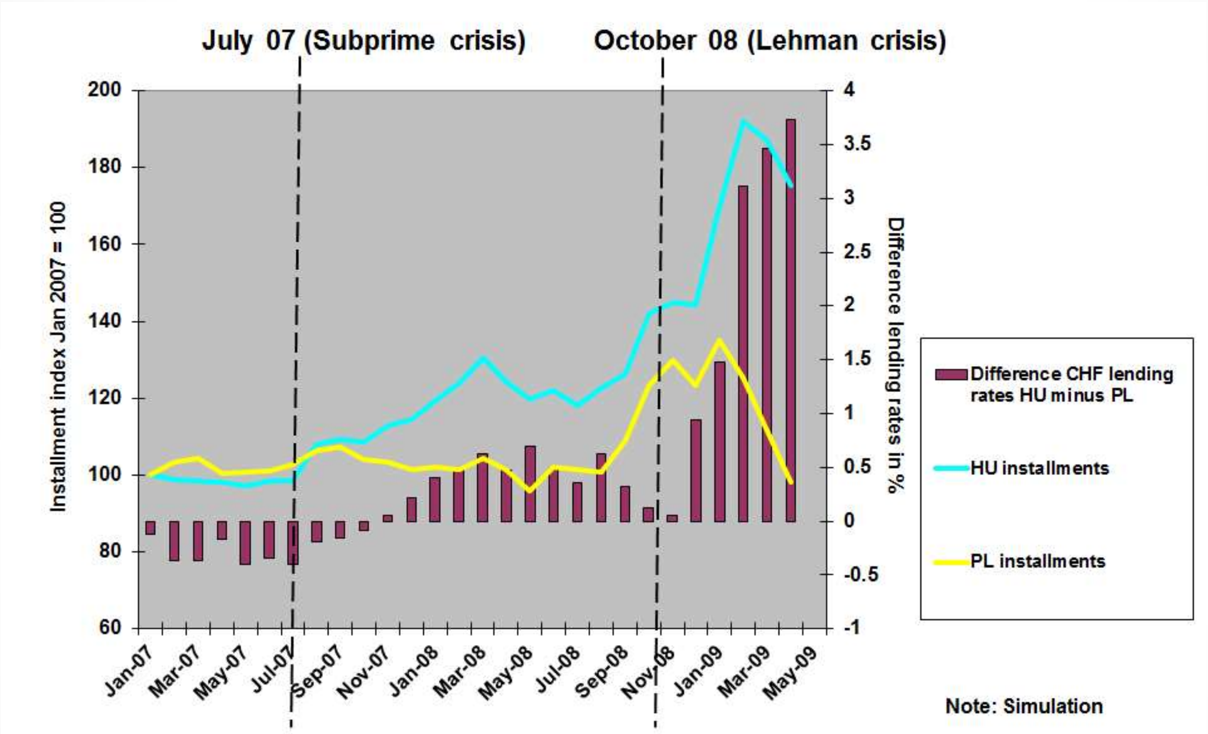


Poland NPL Housing Loans



Source: NBP, MNB, Finpolconsult.

Portfolio Performance
Cash Flow Motive



Payment pass-through of interest rate shock depends on type of product

- **Poland index tracker vs. Hungary reviewable-rate**

and amortization.

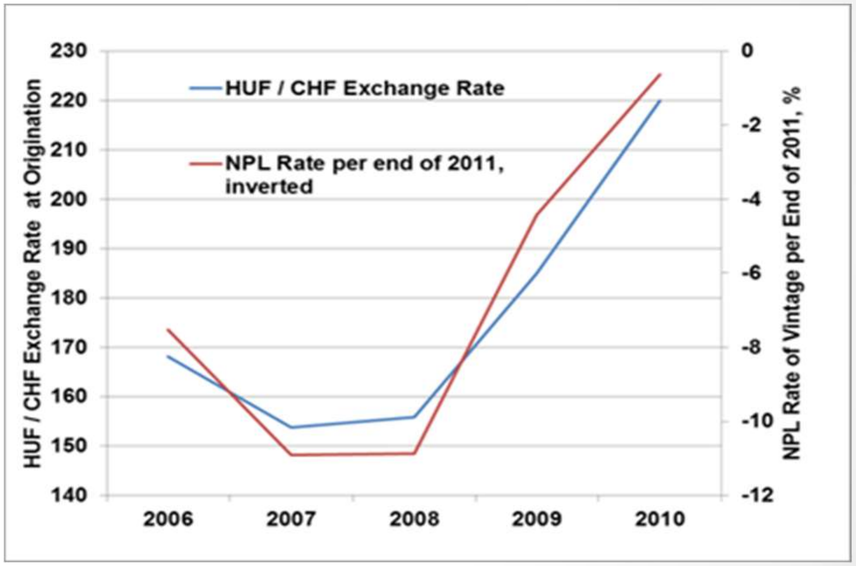
Source: NBP, MNB, Finpolconsult computations for World Bank.

Portfolio Performance
Negative Equity-Related NPL

- **Default motive: negative equity**
  - HU(56% of FX loans over 90% LTV, Central Bank),
  - Poland 2011/2: 32% of CHF loans over 100% LTV, Central Bank; some 300,000 loans according to the Polish FSA,
  - Serbia ('close to 100%' for CHF, 10-15% for EUR; interviews)
  - Romania: EUR devaluation 30% 2013/2008, 2007/8 vintages with high levels of negative equity.
- **Does negative equity matter?**
  - No: default penalty (residual debt), loss of primary residence, stigma
  - Yes: U.S., UK experiences.

  - Hungary – default rates increasing with CHF rate (stagnating prices)

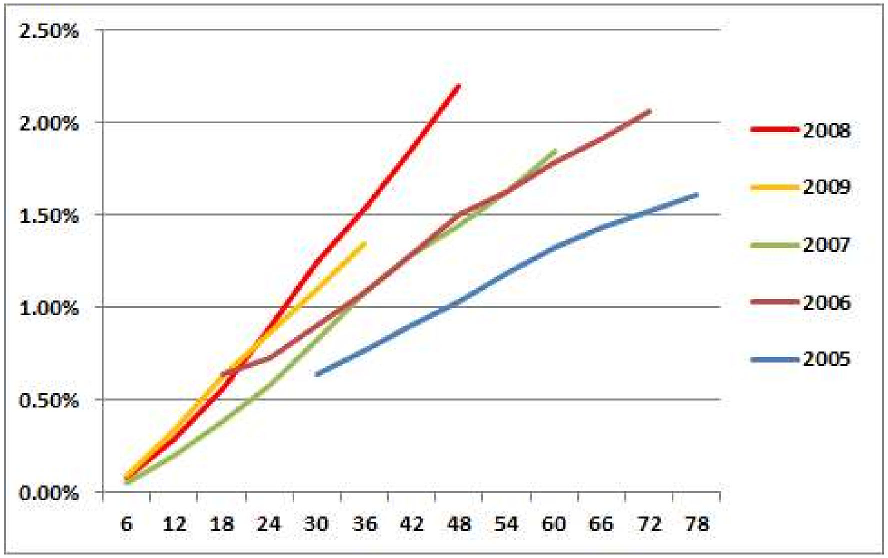
Hungarian NPL ratios by loan vintage, Dec 11



Source: MNB, NBP, Finpolconsult.

Portfolio Performance
Negative Equity-Related NPL

Poland NPL ratios by loan vintage, months after origination



- **Poland: vintage analysis**
  - **Low default rates of 2005 vintage – low house prices, low CHF funding shr;**
  - **Moderate default rates of 2006/7 vintage – moderate house prices and moderate CHF funding;**
  - **High default rates of 2008/9 vintages - high house prices and high CHF funding share.**
- **Similar: Romania**

Source: NBP, Finpolconsult.

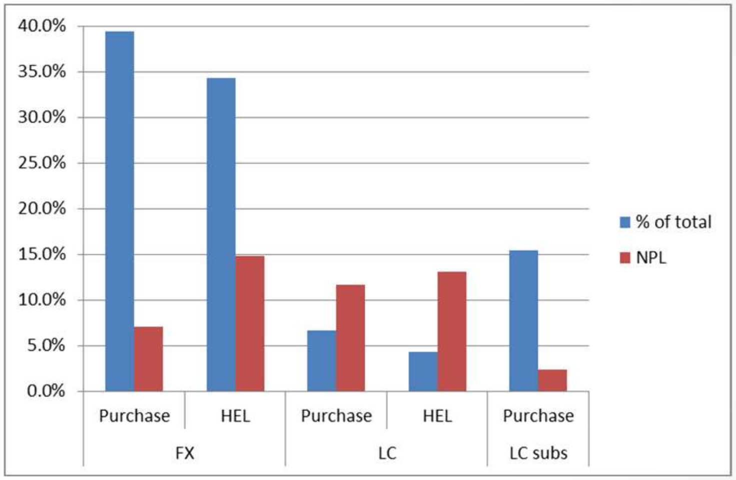
Portfolio Performance
Risk Layering

- **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



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

Broader Mortgage Market Crisis Responses

	United States	European Union
Central bank policies	Fed bailout of lenders, Very few prepayments.	ECB/BoE bailout passed to consumers through ARMs.
Fiscal policies	FHA replaced subprime. Restructuring programs HAMP/HARP.	ECB credit easing & national bank recaps. Isolated restr pgms.
Banking Legislation	Dodd-Frank Consumer Fin Prot Bureau	Banking Union European FDIC
Consumer protection legislation	Simplified information. Qualified residential mortgage. ARM product regulations. Prepayment penalty constraints.	ESIS and APRC mandatory. Wide national discretion on material consumer protection (non-conforming, FX loans, ARMs) and foreclosure.
Mortgage securities legislation	MBS skin in the game. Covered bond law ? GSE reform ?	Some CRD tightening on covered bonds, ECB standardization failed.

Source: Finpolconsult.

Regulation Responses
EU CARRP and Region

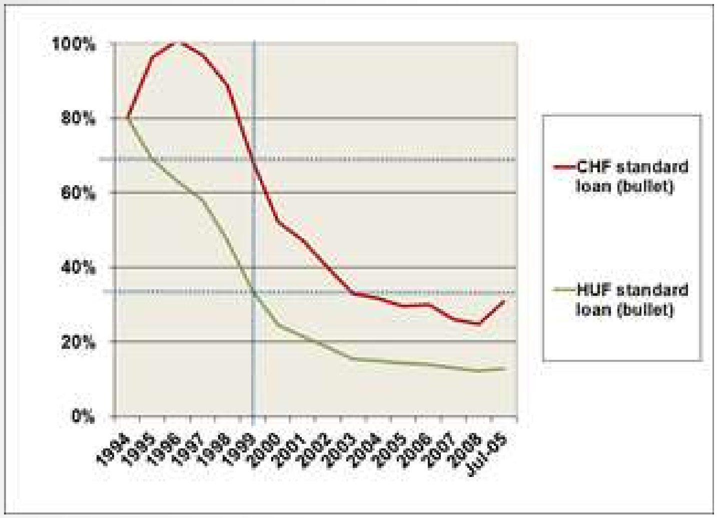
- Focus on transparency

- Some material protection impact, highlights
  - Heightened transparency on variable rates, FX,
  - Tighter underwriting standards (yet no hard limits),
  - Some delegations to Commission (APRC, ESIS, valuation, underwriting rules).

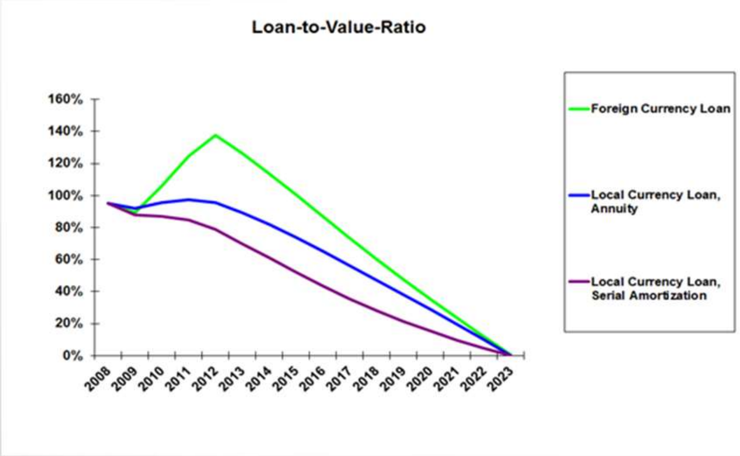
- Recent product design intervention in the region
  - Ex-post product design changes (Serbia, Hungary).
  - Large room for discretion remains even with Directive.

Regional Regulations - LTV Tests

Current LTV Ratios, historic FX and LC Products



FX LTV (Hungary) vs. LC LTV Profiles



- Sources: Finpolconsult computations

- <u>Underwriting</u> LTV limits are the standard
  - Regulations driven by availability of LC credit (high in Croatia, Serbia), crisis experience (low in Hungary),
  - 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 imposed procyclically, i.e. deepen recession →Romania Prima Casa (low-income) with 95% LTV.

- Alternative = address <u>current</u> LTV risk
  - Faster FX amortization, e.g. serial instead annuity →invest affordability gain, Poland 25 yrs,
  - Negative amortization limits and / or FX caps→insurance premium,
  - Planned negative amortization products, e.g. PLAM→payment increases with inflation only.

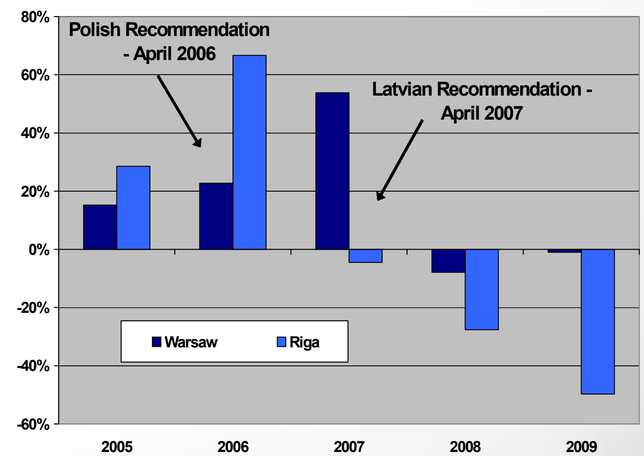
Regional Regulations - PTI Tests

- Threshold calibration is tough
  - FX interest rates are systematically below PTI limits, → back-end default risk,
  - Radical income stress (Hungary) pushes households into LC lending→ front-end default risk,

  Also, widely differing national PTI levels for LC lending. 50% not rare.
- Stress calibration
  - Cumulation of FX and interest rate shock ?
    - 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,
  - Latvia implementation highly procyclical.

Poland Income Differential PLN and FX Loans

Apartment price inflation in Warsaw and Riga, regulatory intervention points



Sources: NBP, Arco Real Estate, REAS, Finpolconsult computations

Regional Regulations – FX vs. LC

- Conversion/prepayment rules
  - Exist in many jurisdictions (no prepayment fees (CARRP?), conversion at going FX rate),
  - Generates latent FX duration risk (if LC alternative for borrower),
  - Lender decides about LC rate after conversion. Safety valve?

- Goodhart's Law':
  (FX) regulations produce new sources of risk → risky LC lending !
  - Personal loans > LTV limits,
  - Interest-only phases,
  - Introductory rates,
  - Lack of credibility and evasion
    (Serbia: lender must offer LC first, even if LC rate is 15%).

Regional LC Development

Successful, but Risky

Czech Interest- Buydown Program

Interest Rate Buy-Down Program in the Czech Republic

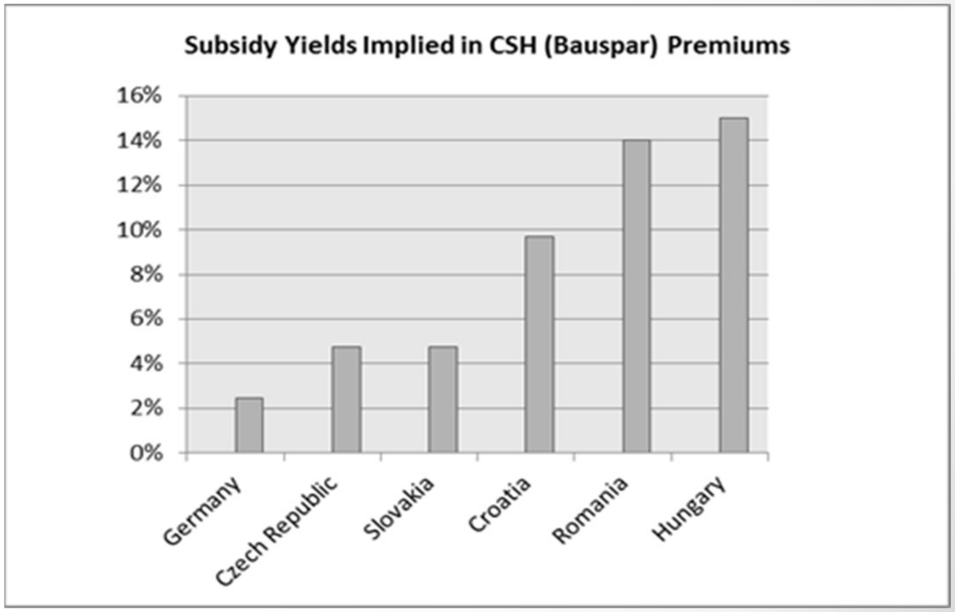
In % p.a.	1995	1996	1997	1998	1999	2000	2001	2002	2003
Market rate	n.a.	11.4	12.9	14.2	10.3	8.8	7.9	6.8	5.5
Rate buy-down	n.a.	4.0	4.0	4.0	4.0	4.0	2.0	1.0	0.0
Ex-post rate	n.a.	7.4	8.9	10.2	6.3	4.8	5.9	5.8	5.5

- **Interest rate buy-down program**
  - **Subsidy formula: s(t) = r(t-1)-r norm, r = market rate, r norm = 7%**
  - **Subsidy cap: max (s(t)) = 4%, upward rounding of s(t) to higher integer**

Source: Finpolconsult.

Regional LC Development
Mixed Experiences with 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**
  - **Targeted to LC lending** (major driver in Czech rep and Slovakia), ex Croatia.
- **Critique**
  - **Still insufficiently integrated** (esp. Croatia, Romania), e.g.LTV limits.
  - **Cumulative with mortgage insurance** (Romania)
  - **Faulty subsidy design, irregularities** (Croatia).
  - **Partly excessive fiscal cost, causing jojo effect of sudden reduction** (CzechR, Austria).



Source: national CSH laws, Finpolconsult.

EUR Lending Regulations

‘The Euro is not a foreign currency’

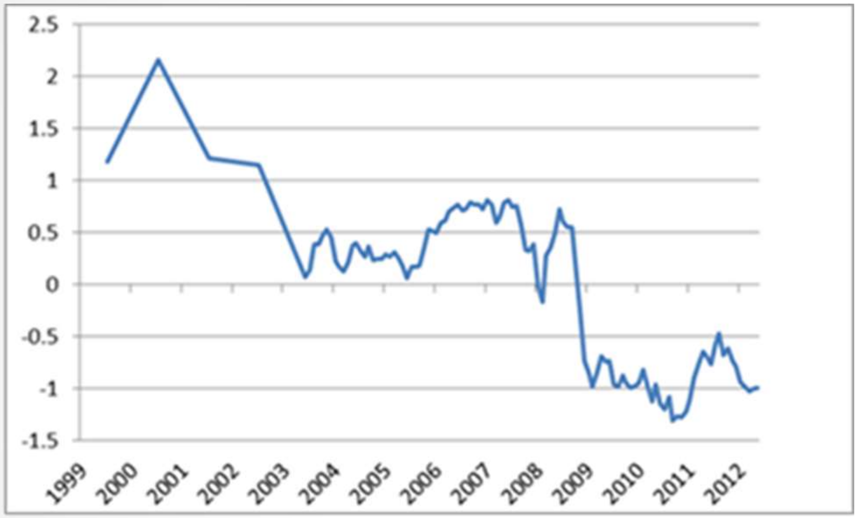
European Commission

Index-linked EUR Mortgages
Great danger for CEE banks/central banks

- **Crisis experiences**
  - Interbank indices lack liquidity →Libor = !, Euribor = ? !
  - Indexation may increase rate volatility vs. reviewable-rate alternative,
  - Market may tilt against FRM (Spain, Italy, Greece, almost: Denmark),
  - ARM caps are practiced only where FRM already exists (France),
  - Reviewable rate products with unsolved consumer protection issues (Ireland, Hungary).
- **CARRP issues**
  - No mandatory downside risk protection e.g. caps (Denmark + 5%),
  - 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 indices,
  - Volatile government bond rates vs. 'stable' interbank rates (but no liquidity), e.g. Hungary,
  - Lifetime spread fixing often required (Serbia, Romania, but not Hungary, 3 yrs roll-over).

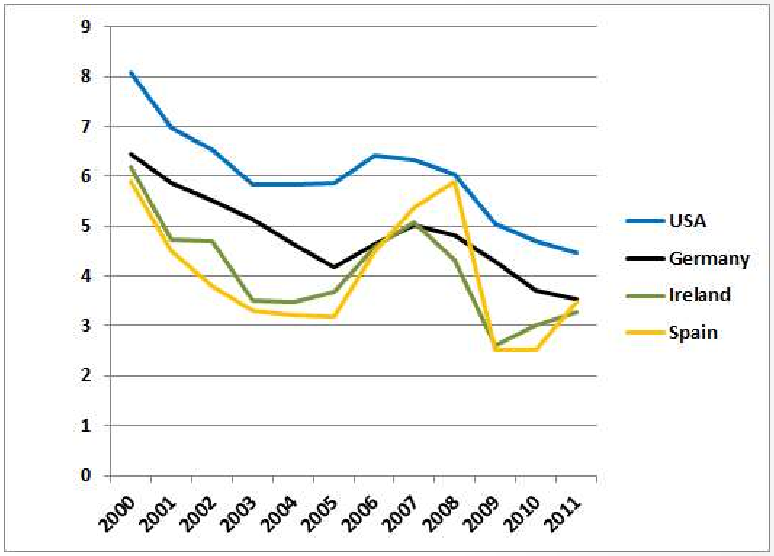
Spanish/Irish Experiences with Index Trackers are Devastating

Euribor minus Long-term Deposit Rates



Source: Bank of Spain, EMF Hypostat, Finpolconsult computations.

Representative Mortgage Rates, Europe/USA



Systematically loss-making interest rate levels for lenders → essentially ECB funded.

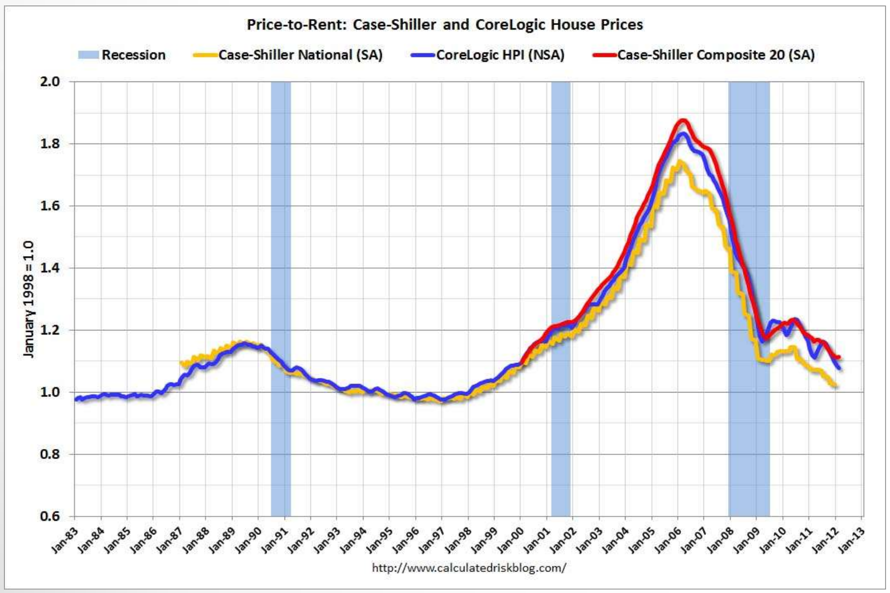
Irish banks have offered customers 10% lower principal for prepaying into reviewable rate (insufficient), almost no demand. → value some 20/30% below par→lender insolvency.

Market Monitoring & Valuation

Market Monitoring

- Improving, but still very rarely national hedonic house price indices (except Turkey, started 2011), Czech Republic,
- Urban rent survey systems absent (all cases).

US house price to rent ratio



Valuation Methods

- Rental 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.

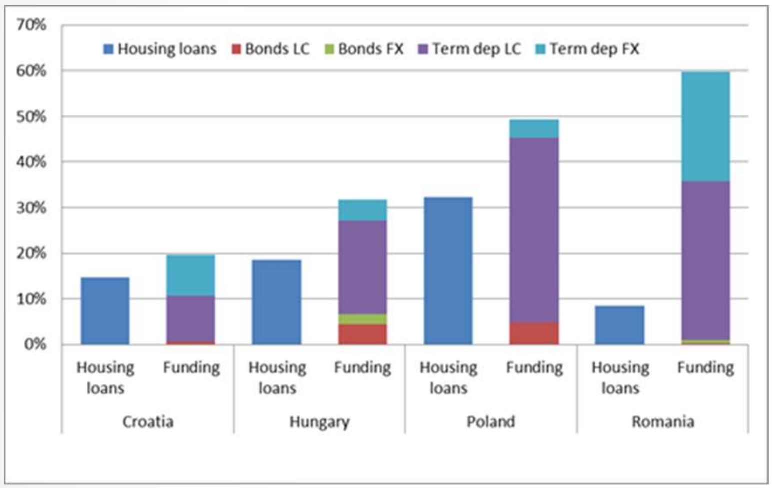
- Source: Calculated Risk

Foreclosure / Consumer Insolvency Legislation

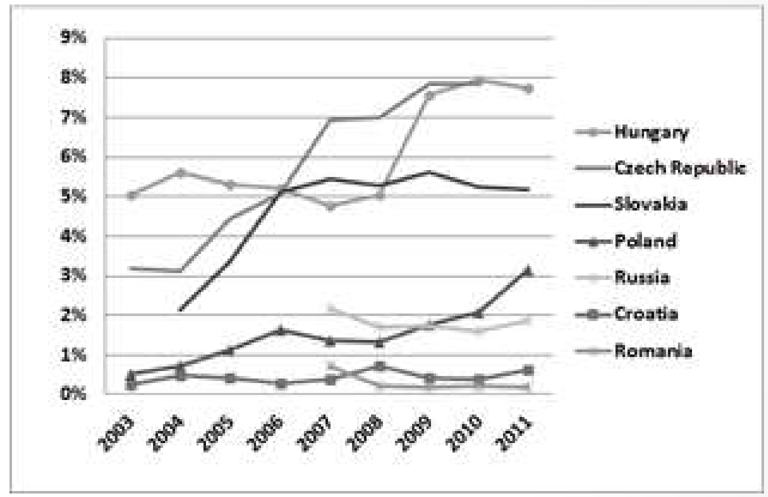
- **Foreclosure interventions**
  - Elevated caseloads: where consumer insolvency rules are absent or restrictive, with the risk of high residual debt remaining with households, gov tends to intervene.
    Cases: Hungary foreclosure limits, Ireland de-facto moratorium, exception Spain.
  - Low caseloads: 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.

Secondary Market Trends
Still 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%):

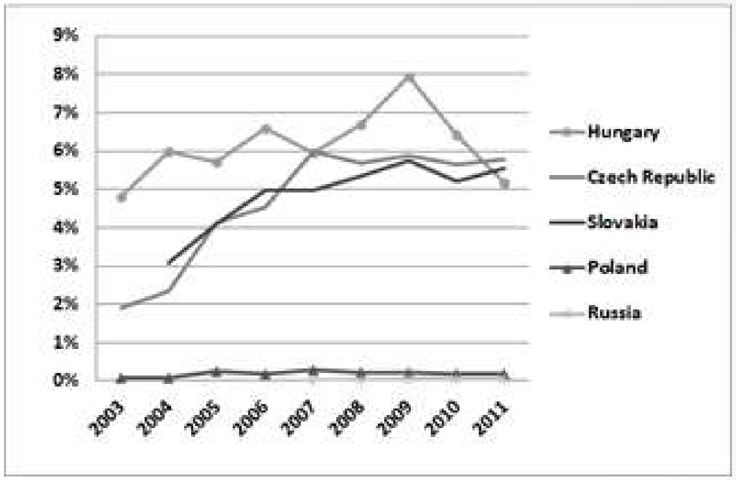
- FX deposit shortage
- How long-term are term deposits? Exception contract savings (2-5 years).
- How many core deposits are there in the region?

Source: central banks, statistical offices, Finpolconsult.

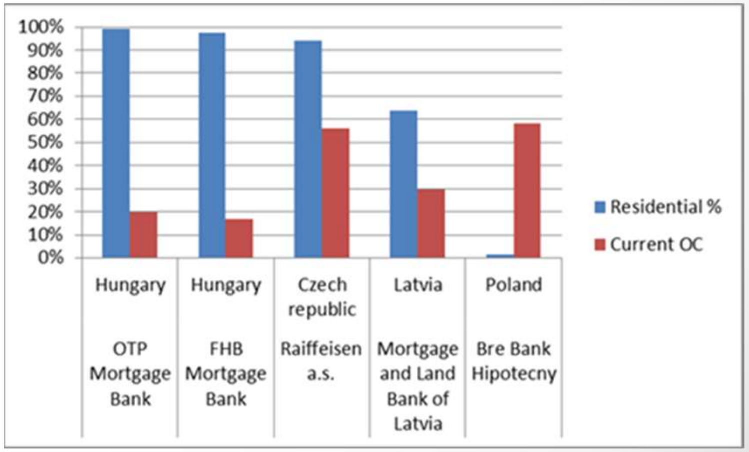
Secondary Market Trends
Covered Bond Programs

- 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

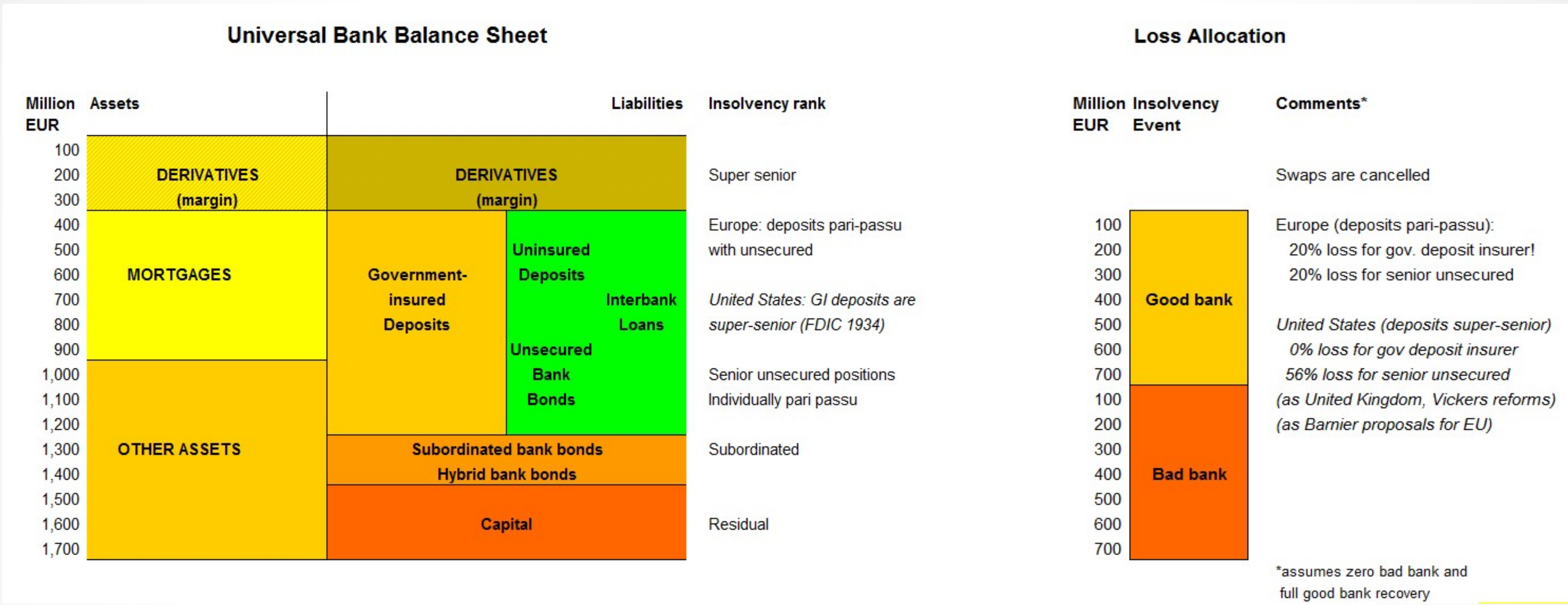


Source: FitchRatings, Finpolconsult.

Bank Funding Regulations
LDR is a Potentially Dangerous Tool

- **Bank funding regulations**
  - **Initial discrimination against bonds through loan-to-deposit ratio (LDR).**
  - **FX version foreign funding adequacy ratio (FFAR, Hungary)**
  - **NSFR <u>not sufficient</u> 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**

Bank Recovery & Resolution Reform
Loss Allocation in the Universal Bank



- **Resolution practice (outside Scandinavia):**
  - Until June 2012: mostly bail-out, e.g. Landesbanken, HRE, RBS, Dexia, Anglo Irish etc.
  - Spain June 2012 – Subordinated Liability Exercises →first systematic mandatory,
  - Cyprus March 2013 – Senior unsecured debt bail-in.→first systematic mandatory.
- **EU Resolution and Restructuring Directive**
  - Deposits are super-senior/senior unsecured bail-inable, Good Bank approach,
  - EU State Aid rules Aug 13 anticipate RRD for subordinated liabilities.

Source: Finpolconsult.

Bank Recovery & Resolution Reform with Covered Bonds Outstanding

- 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.
- Two good banks? Has not worked in German practice→acceleration.
- Overcollateralization exempt from bail-in? Spain?

Source: Finpolconsult.

Rating Agency Methodology Changes that Affect CEE

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 requirements,
- Tight swap counterparty rating and margin definitions, only asymmetric swaps.

Source: Sabine Winkler, Credit Suisse

Conclusion

- First mortgage debt crisis only 10/15 years after market inception is too early:
  - Wrong instruments, currencies,
  - Too much cross-border liquidity,
  - Unfair competition esp by foreign banks.

- Capital market policy – either up or out!
  - UP – develop LC institutions/savings, LC MRS market, LC regulation bias (Czech Rep)
  - Out – access to the EUR, real or virtual (currency board).

Both issues should be addressed in Vienna II dialogue (EBRD).

- Local housing policy requires more than retail finance. Rental sector = corporate housing finance.