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Comments on Holló & Papp (2007)

Assessing Household Credit Risk: Evidence from a Household Survey, MNB Occasional Paper # 70

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* … The opinions expressed are the authors' personal views

Holló & Papp (2007)

- **Research Question**
  - individual forces driving HU household (HH) credit risk?
  - Sustainability of credit growth and ability of HH to meet obligations?
  - Financial stability: indebtedness? banks shock-absorbing capacity?
- **Method**
  - Micro approach based on Jan 2007 questionnaire survey/2006 data
  - financial margin, logit regression & neural nets to model HH credit risk
- **Results (1)**
  - Risk factors: disposable income, income share of monthly debt servicing costs, # of dependents, employment status of HH head
  - Worsened by # of dependents, low job, low income, LDC region
  - Systemic issue: high share of debt concentrated on risky HH, mitigated by high share of mortgage loans

Holló & Papp (2007)

- **Results (2)**
  - Due to FX share, loan portfolio quality more sensitive to FX & CHF i-rate movements than to HUF yield rise
  - (Un)employment shocks matter
  - Shock-absorbing capacity of HU banks is o.k. under LGD assumptions Banks´ shock-absorbing capacity is sensitive to mortgage LGD
    - 10% mortgage LGD assumed in „normal times“
    - 30% LGD assumed under stress scenario
    - If LGD < 30% => shock-absorbing capacity of HU banks is o.k. (8% min capital adequacy met)
- **Limitations**
  - Non-contagion b/n real & financial shocks
  - Portfolio homogeneity assumption
  - Sensitivity to income and consumption data uncertainty

Holló & Papp (2007)

- **Claims**
  - Neither the stock (non performing loans) nor the flow (loan loss provisions) of losses can proxy accurately the risks on the aggregate, as they suffer from the substantial role of portfolio cleaning (p 7)

    Implications to bank´s ratings?

    to stress tests (e.g. Heřmánek, Hlaváček & Jakubí, 2007)?

    combination of micro & macro models?
  - Substantial fraction of loans granted to potentially risky households (which is unfavourable from a financial stability view; p 22)

    Does this suggest that banks´ credit scoring models don´t work?

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- **Income according to survey**
  - Shadow Economy (10% vs. 25-30%, Schneider & Este, 2000)?
  - Sensitivity of results to mode of income calculation?

  => Cross-check of income distribution in sample of indebted HHs?
- **PD and LGD**
  - P(one-month income < expenditures + debt service) => default?

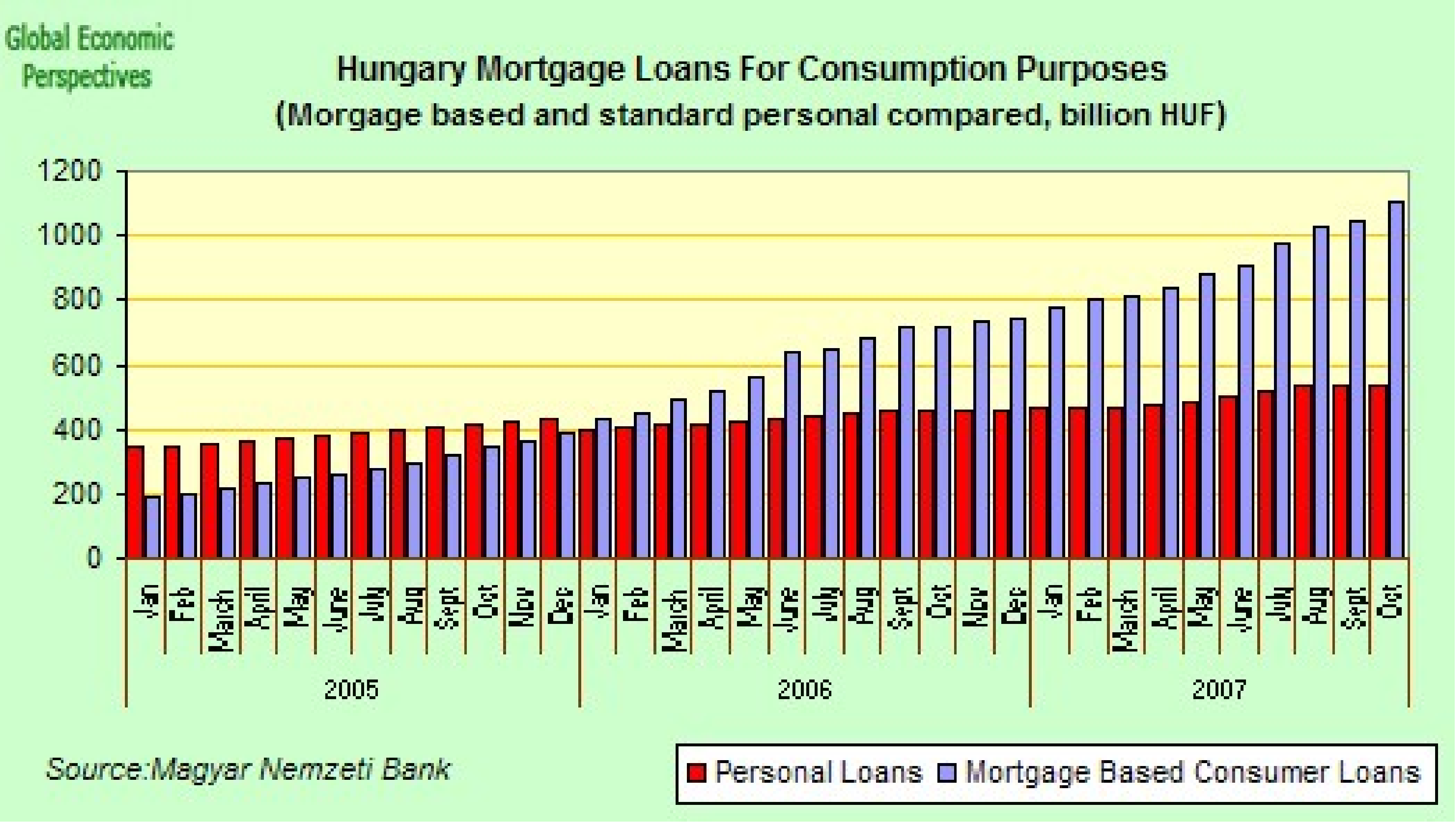
  => adjust for closeness to „negative income reserve“
  - assumption of fixed assets & liabilities; should „negative income reserve“ be related to average savings? To type of loan (mortgage)?
  - should „debt servicing cost“ be adjusted for FX-loans (p 11)?
  - „underestimation“ of PD in „non-default category“? Power tests?

    test on sample of real credit defaults (e.g. from BISZ Rt credit bureau)

    map (cross-check) with PD-distribution of banks´ retail portfolio

    correlation b/n PD and LGD in stress/non-stress periods?

Update



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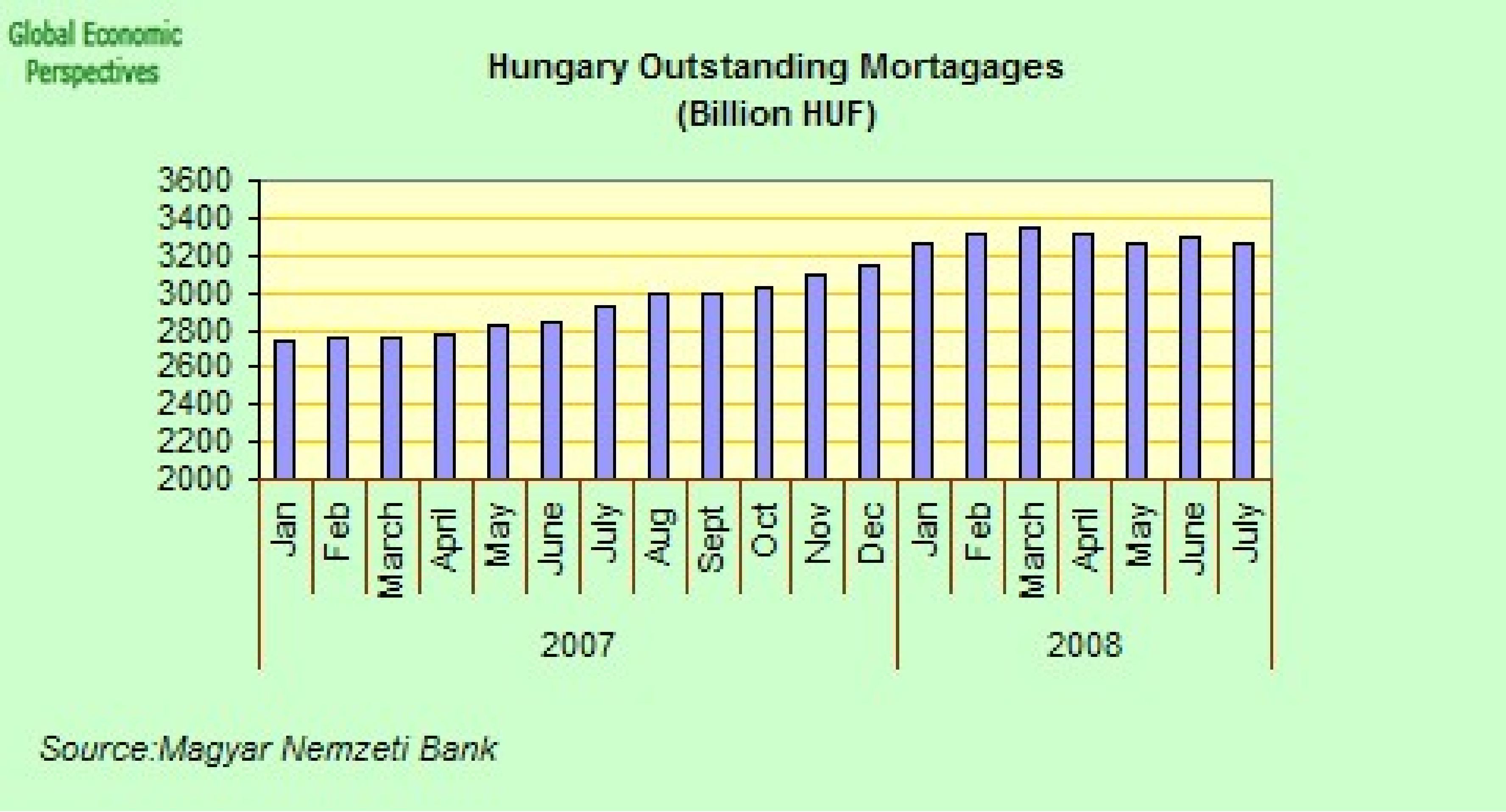

Source: http://hungaryeconomywatch.blogspot.com/2008/08/hungary-household-lending-growth-slows.html

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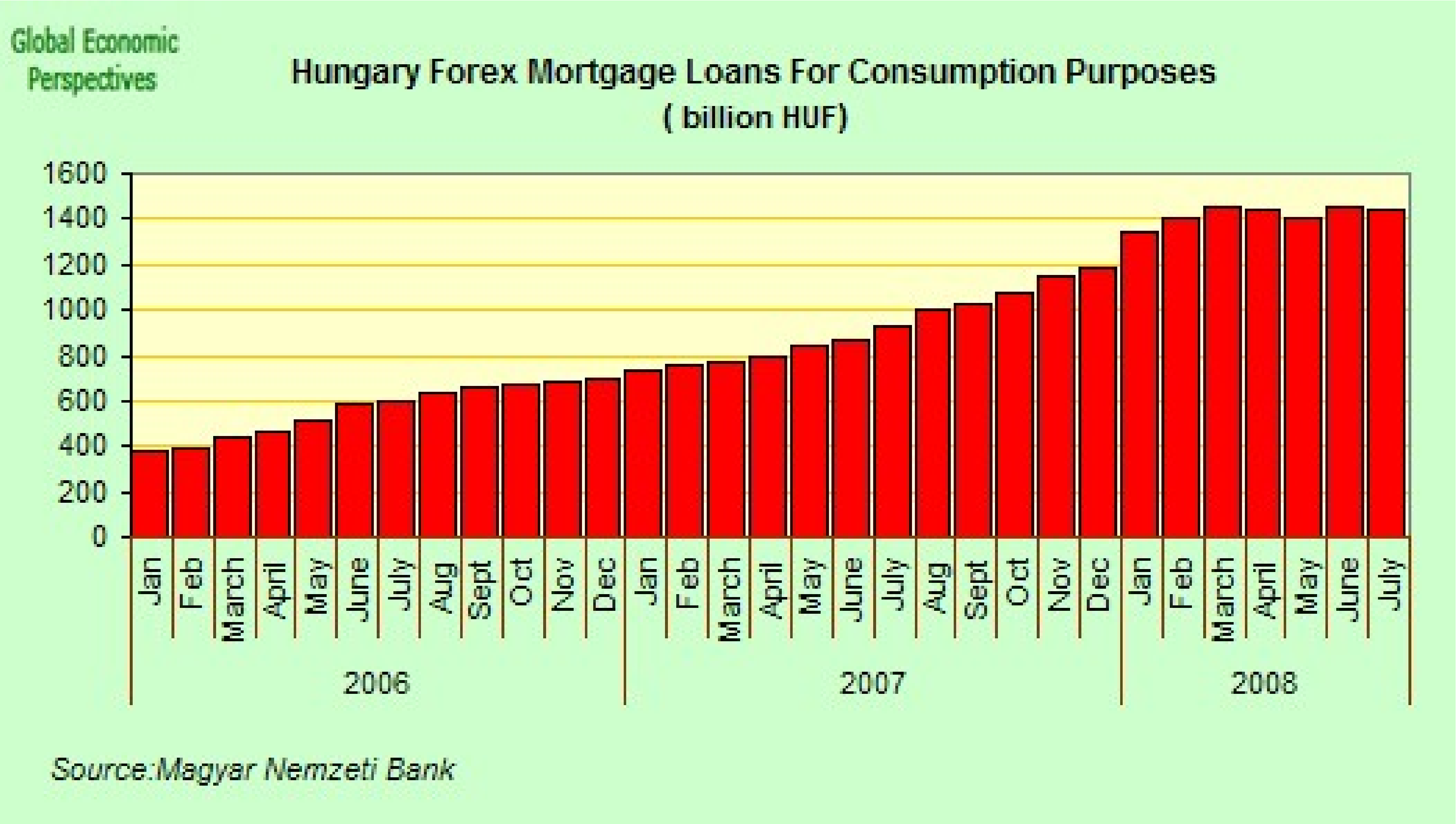

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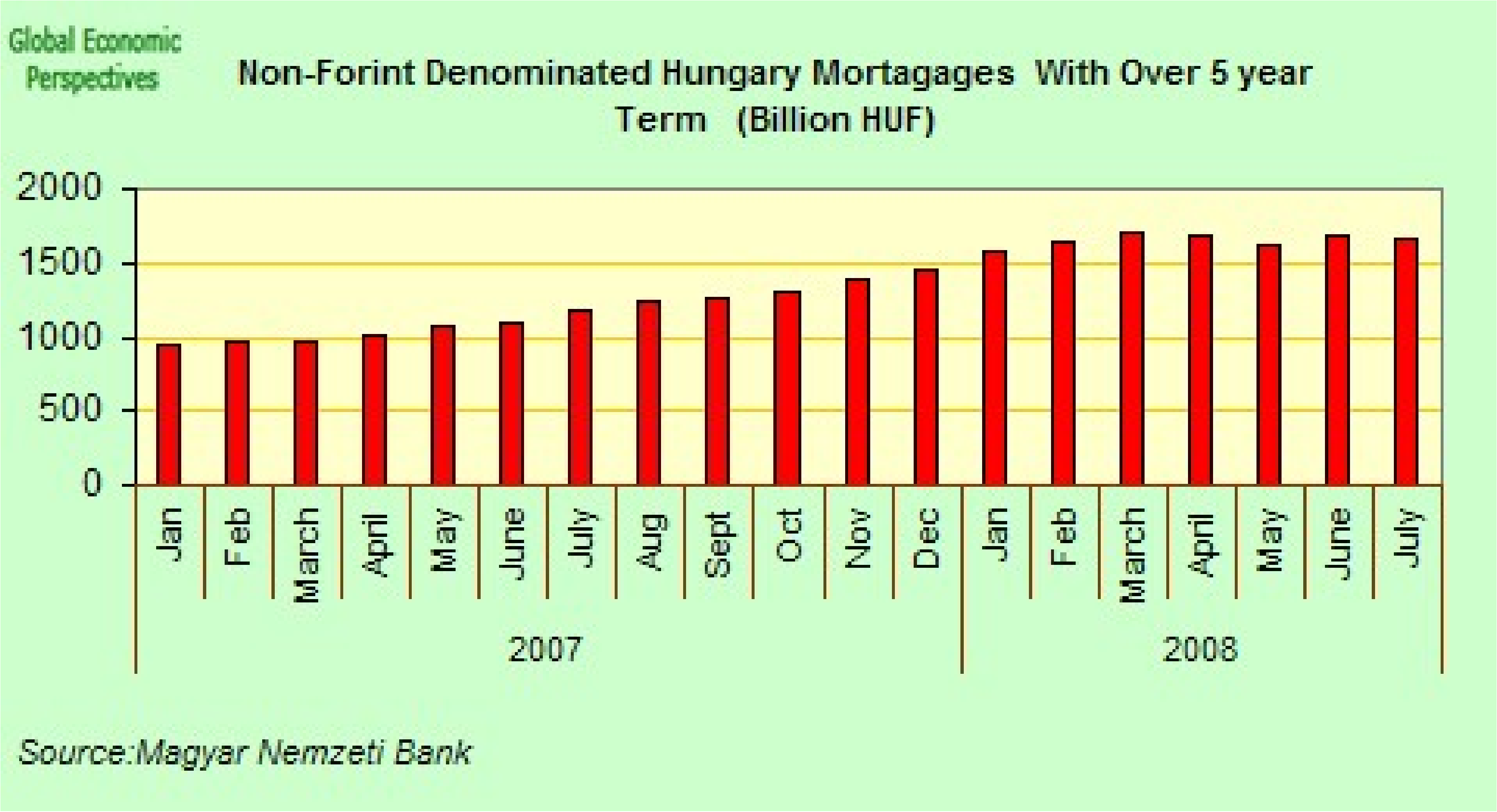
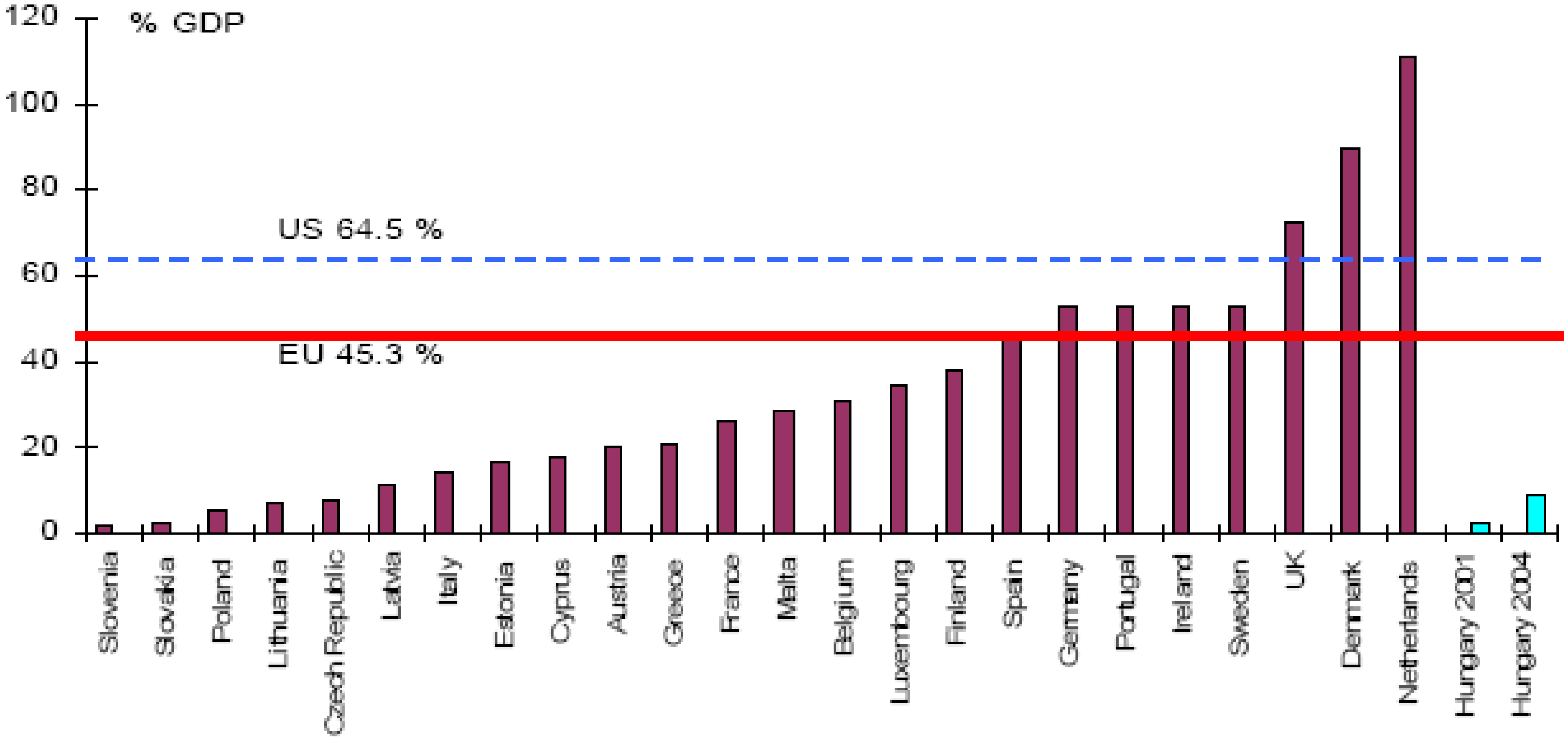


Source: http://hungaryeconomywatch.blogspot.com/2008/08/hungary-household-lending-growth-slows.html

Housing loans in comparison
(1991-2003)



Source: Rózsavölgyi and Kovács (2005)

Hungary—2008 Article IV Consultation Discussions Concluding Statement, June 10, 2008 (1)

- Financial system risks have increased over the past year, reflecting both the global financial market turbulence and continued rapid credit growth. With global financial conditions still unsettled, the magnitude and timing of any additional spillover effects on Hungary are uncertain.
- *Credit risk.* Banks have eased lending standards for households, including by lengthening maturities, raising loan-to-value ratios, and introducing new products with higher risk profiles (such as yen-based loans).
- *Liquidity risk.* Robust credit growth has led to a rise in loan-to-deposit ratios and a decline in liquid asset ratios. The decline in global risk appetite has increased banks' external funding costs and shortened maturities. While Hungarian banks have no direct exposure to the U.S. subprime market, some of their foreign parent banks do, which creates a possible channel of contagion to Hungary.

Source: IMF (2008) http://www.imf.org/external/np/ms/2008/061008.htm

Hungary—2008 Article IV Consultation Discussions Concluding Statement, June 10, 2008

Policy measures to improve banks' risk management are crucial.

- **Regarding credit risk, the priorities are to establish a credit registry for households and to strengthen stress testing in this area, including of households' foreign currency exposures.**
- **A mandatory credit registry would not only improve banks' credit risk management but also enhance consumer protection by discouraging the build-up of excessive debt. T**
- **The bottom-up stress testing exercise being planned by the central bank and the Hungarian Financial Supervisory Authority (HFSA) needs to be implemented as soon as possible. If the HFSA judges that banks are not adequately capitalized, it should not hesitate to use its supervisory tools to require increases in capital.**

Source: IMF (2008) http://www2.pm.gov.hu/web/home.nsf/(PortalArticles)/646792B3F9989184C125746400307817

Hungary—2008 Article IV Consultation Discussions Concluding Statement, June 10, 2008

- Regarding liquidity risk, the priority is to expedite the HFSA's review of banks' liquidity management practices. This would strengthen the HFSA's capacity to supervise liquidity management. The HFSA should develop and publish explicit recommendations on banks' liquidity management asap. In the mean-time, the HFSA needs to ensure that banks have effective contingency arrangements.
- The review and testing of financial safety nets should be accelerated. Although the HFSA has the necessary supervisory tools, the introduction of a formal system of early remedial action could be considered. Domestic crisis management arrangements between the central bank, the HFSA, and the Ministry of Finance have been established and tested, and should be continuously enhanced. Given Hungary's important cross-border linkages, both to parent banks in western Europe and to subsidiary banks in south-eastern Europe, effective communication and collaboration with financial authorities in other countries are essential.

Source: IMF (2008) http://www2.pm.gov.hu/web/home.nsf/(PortalArticles)/646792B3F9989184C125746400307817

References

Breuss, Fritz / Fink, Gerhard / Haiss, Peter (2004): How well prepared are the New Member States for the European Monetary Union?, Journal of Policy Modelling 26(7): 769-791.

Eller, Markus / Haiss, Peter / Steiner, Katharina (2006): Foreign Direct Investment in the financial sector and economic growth in Central and Eastern Europe: The crucial role of the efficiency channel, Emerging Markets Review 7(4): 300-319.

Heřmánek, Jaroslav / Hlaváček, Michal / Jakubí, Petr (2007): Credit Risk, Credit Growth Models and Stress Testing, CNB Economic Research Bulletin 5(1) Aug. 2007, http://www.cnb.cz/en/research/research_publications/erb/download/ERB_No1_2007.pdf.

Hilbers, Paul / Hoffmaister, Alexander / Banerji, Angana / Shi, Hayan (2008): House Price Developments in Europe: A Comparison, IMF WP 08/211, http://www.imf.org/external/pubs/ft/wp/2008/wp08211.pdf.

IMF (2008): Hungary – 2008 Article IV Consultation Discussions, http://www.imf.org/external/country/HUN/index.htm

Matuszyk, Anna / Thomas, Lyn (2008): The Evolution of Credit Bureaus in European Countries, Journal of Financial Transformation 23, Article 20, http://www.capco.com/sites/default/files/file/Journal/Journal%20Vol%2023/Journal_23_article_20.pdf.

OeNB/FMA (2004): Rating Models and Validation, http://www.oenb.at/en/presse_pub/period_pub/finanzmarkt/barev/barev.jsp#tcm:16-10319

Rainer, Wolfgang / Haiss, Peter (2008): "Do Foreign Banks Raise the Risk of Foreign Currency Lending in Central and Eastern Europe? A Survey" paper presented at the 6th INFINITI Conference on International Finance, Trinity College Dublin, 9-10 June 2008

Rózsavölgyi, Réka / Kóvacs, Viktória (2005): Housing Subsidies in Hungary: Curse or Blessing? ECFIN Country Focus 2(18): 1-6, http://ec.europa.eu/economy_finance/publications/publication1361_en.pdf

Schneider, Friedrich / Enste, Donomik (2000): Shadow Economies around the World: Size, Causes, and Consequences, IMF working Paper 00/26, http://www.imf.org/external/pubs/ft/wp/2000/wp0026.pdf

Ziegler, Andrea / Haiss, Peter (2007): The Volume Channel: Do Foreign Banks Grant More Loans (Too Fast), Proceedings of the International Finance Symposium 2007 „Foreign Capital in the Finance Industry" (Uluslararasi Finans Sempozyumu 2007, „Finans Sektöründe Yabanci Sermaye"), Marmara University, Istanbul: 259-274, http://bsy.marmara.edu.tr

Thank you for your attention

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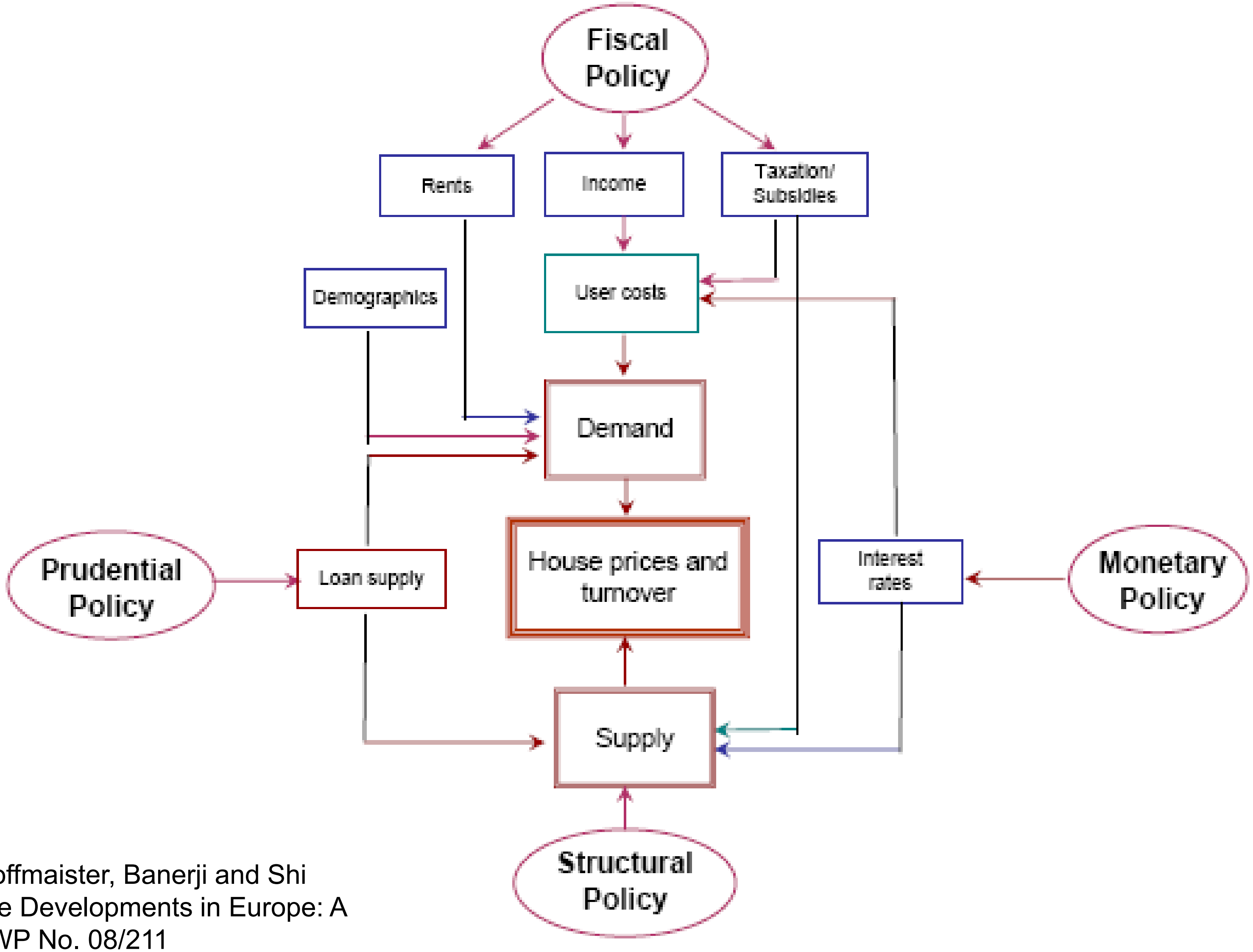
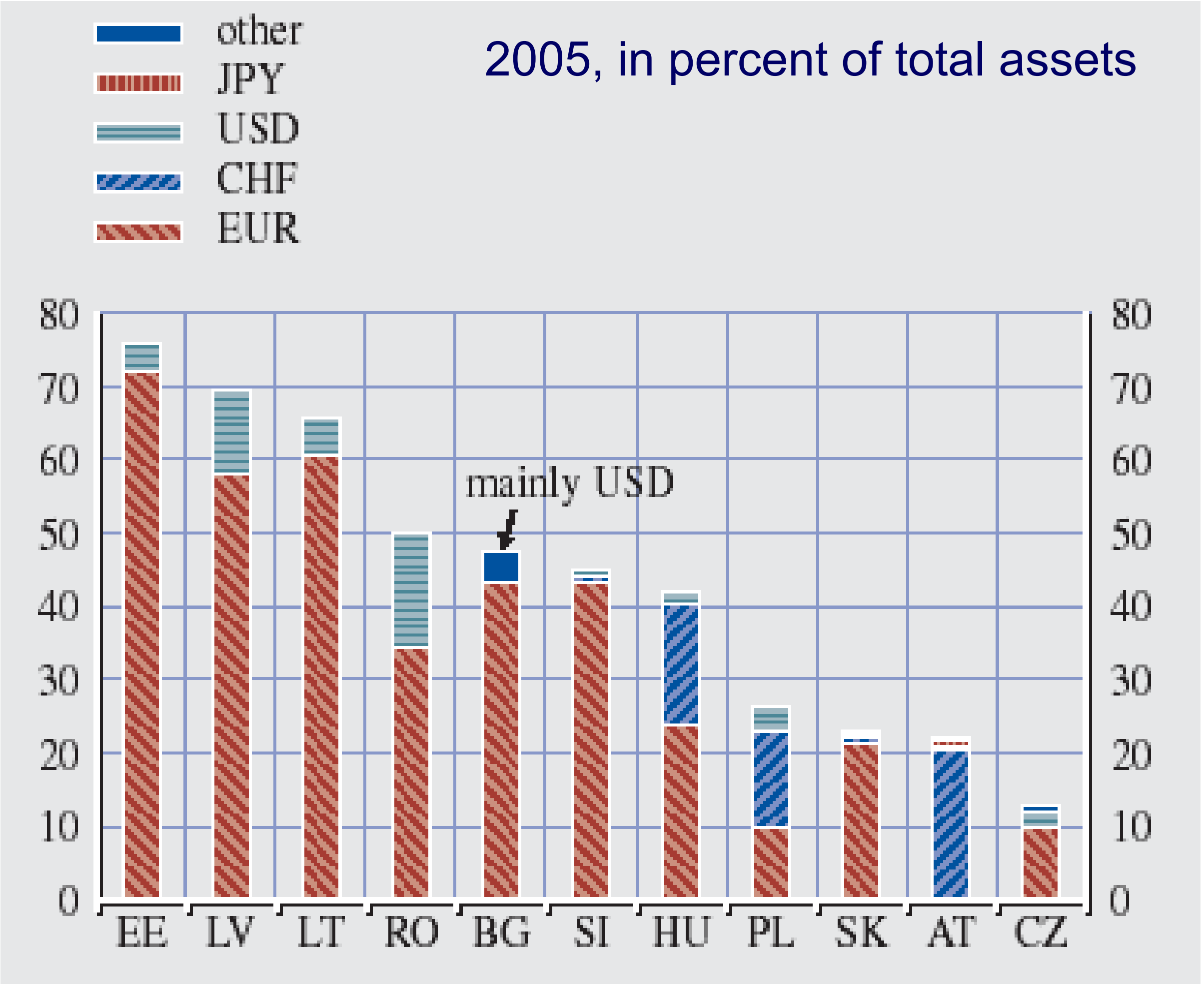
Backup

Factors influencing house prices and turnover



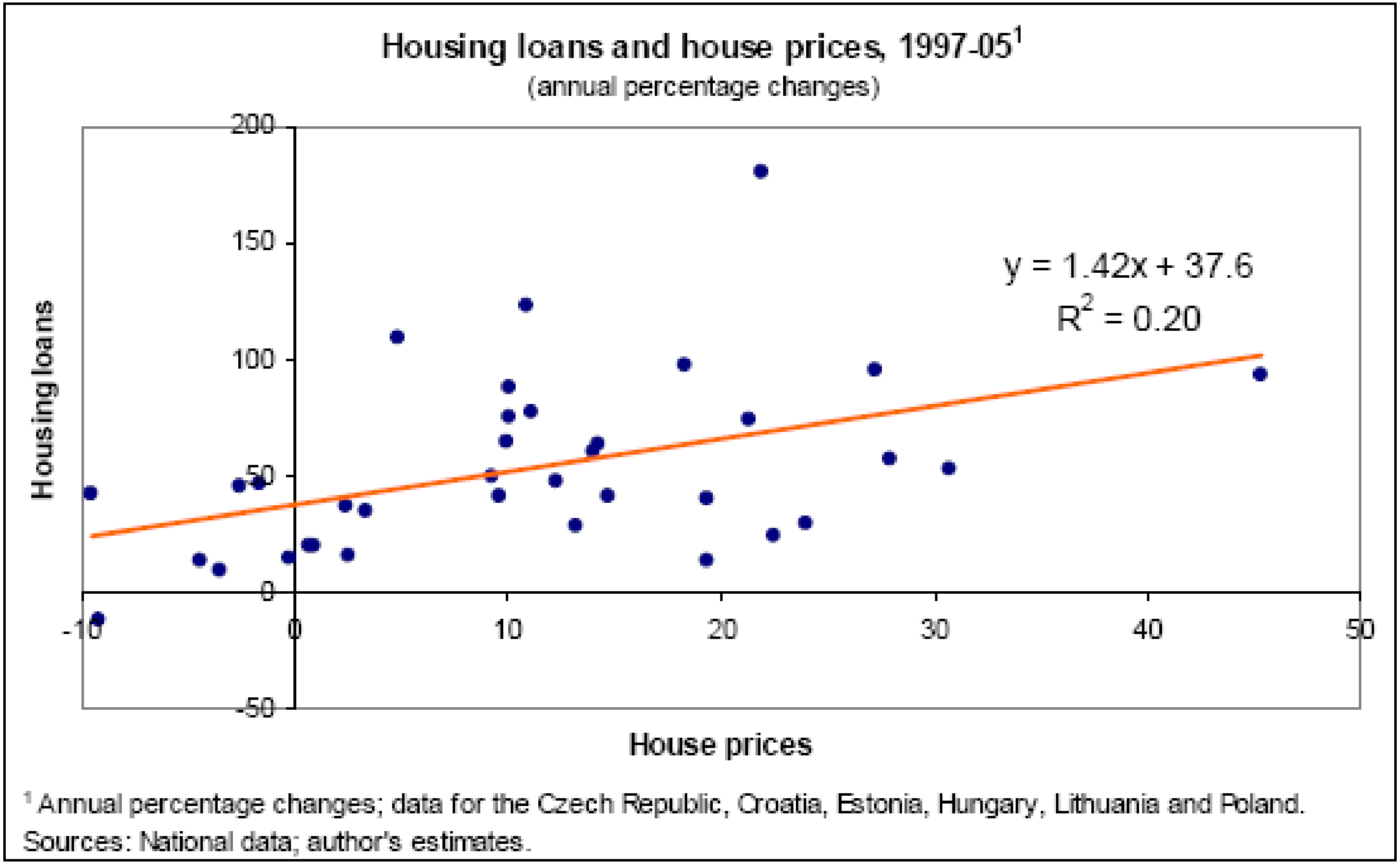
Source: Hilbers, Hoffmaister, Banerji and Shi (2008): House Price Developments in Europe: A Comparison, IMF WP No. 08/211

Currency distribution of FX loans to private customers



Source: ECB (2006) : EU Banking Sector Stability, Frankfurt

House prices & loans
- strongly correlated



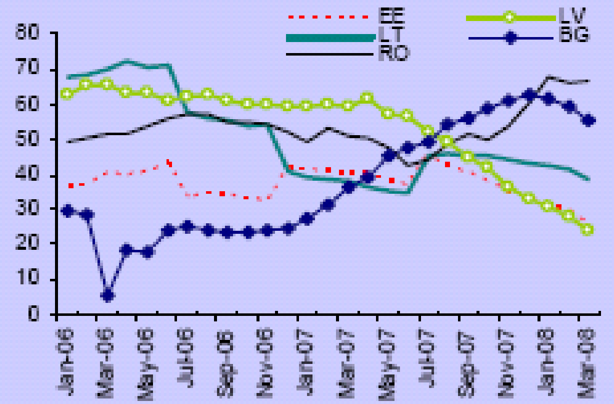
Source: Mihaljed, Dubravko (2006) Rapid Growth of Bank Credit in CEE: The Role of Housing Markets and Foreign Banks, 12th Dubrovnik Conference.

Impact of global financial crisis on NMS - moderate so far

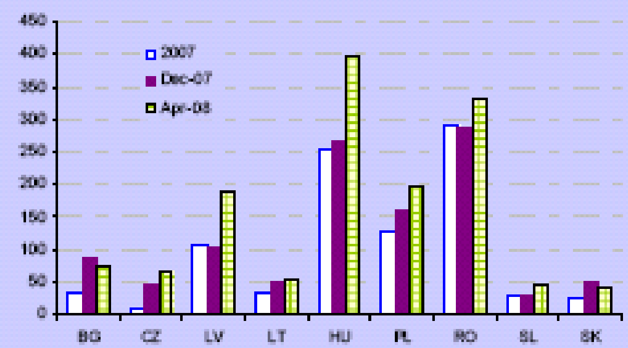
Direct spillovers to the financial systems of the EU10 have been limited so far

- **Slowing credit growth in some EU10 countries**
  - No substantial losses related to mortgage lending or complex derivatives in mature markets
  - Some tightening of credit standards
  - Impact differentiated: depending on the degree of funding of domestic credit trough borrowing
- **Reappraisal of risk in emerging markets**
  - Increases in bond spreads
  - Delayed issuance of foreign-currency denominated bonds until May
- **Negative impact on FX has been limited to Leu and Forint**
- **Effects are likely to be more tangible and differentiated over the medium term as**
  - Output growth in the Eurozone slows
  - Investors' reassessment shifts more permanently regarding countries with rapid credit growth, oversized current account deficits/high external debt

Credit to private sector growth (in percent,y-o-y)



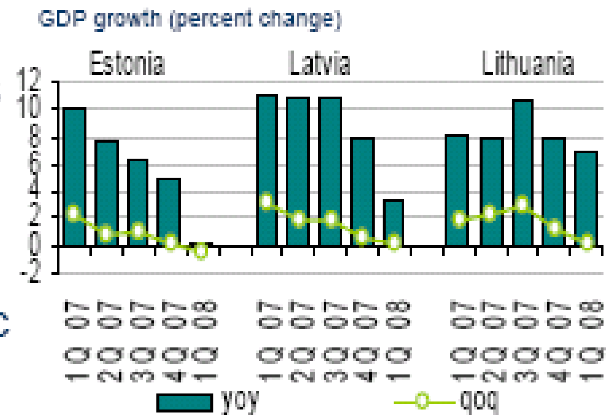
Spreads on 10-year Government Bonds Relative to German Bunds (in basis points)

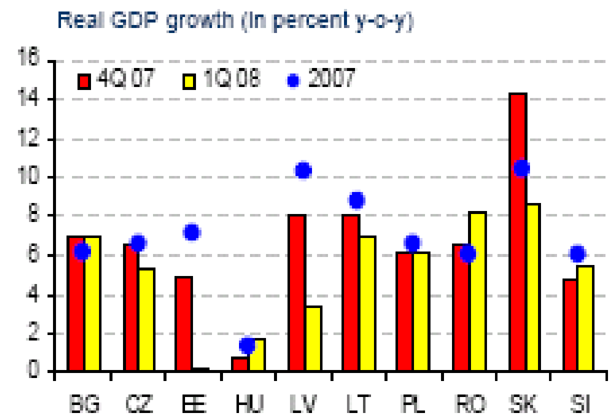


Source: Skrok, Emilia (2008): EU10 Regular Economic Report, Worldbank, June 2008
http://siteresources.worldbank.org/INTECA/Resources/EU10RER_MainReport.pdf

Output is growing at a slower pace
- in NMS countries thus far this year

- A sharp slowdown in growth is underway in Baltic States
- Economic expansion among the other countries has remained robust this year, but there are signs of weakness
  In Q1 growth
  - expanded strongly in SK, CZ, SI, but eased as compared to 2007
  - was broadly unchanged in BG and PL
  - picked up strongly in RO (to 8.2% yoy) and modestly in HU
- Q1's slow down results from weaker expansion in domestic demand, combined with smaller increases in exports
- This year's developments follow strong real GDP growth in the EU10 countries last year
  - In 2007, SK, CZ, PL, SL recorded their most rapid expansion since 2000
  - Growth slowed in EE, LV, RO and, much more in HU
- Growth will slow substantially in the Baltic countries
- Prospects are more mixed for the other countries, with growth projected to
  - remain little changed in BG and PL,
  - pick up in HU and RO
  - slow in CZ, SK, SI





Source: Skrok, Emilia (2008): EU10 Regular Economic Report, Worldbank, June 2008
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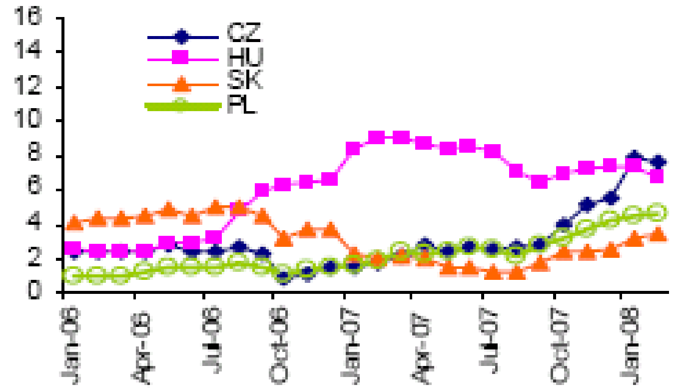
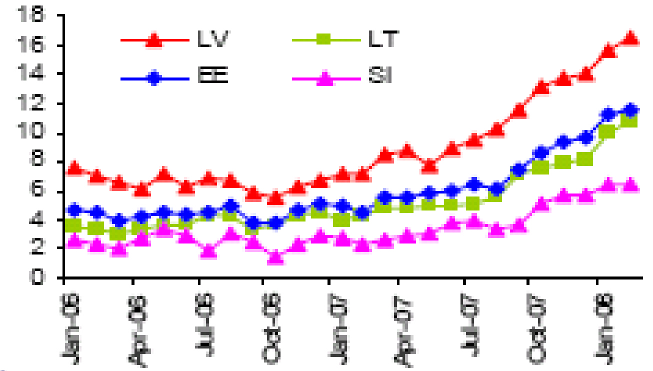
Inflation is on the rise
- temporarily?

- **Inflation has risen substantially across the region in recent quarters, to a good degree on the back of rising food and energy prices**
  - Exceeding 17% in LV, 11% BG, EE, LT
  - Only in HU has somewhat eased
- **Food and energy inflation spills into other CPI components** (transport, catering services)
- **Macroeconomic condition strongly influence inflation risk** (reflected in core inflation pick up)
  - Strong currency performance has cushioned inflation is some countries (CZ, PL, SK,)
  - Real interest rate stayed almost unchanged
  - Inflation expectations are rising
  - Strong wage growth (fairly broad based), caused by LM tightening, highlights the risk of potential cost-push inflationary pressure

- **Inflation is likely to remain elevated through most of 2008 before beginning to ease moderately.**
  - Latest rise in oil prices may not yet have been reflected in CPI
  - Planned hikes in regulated prices (e.g. gas)
  - Processed food prices may remain elevated
  - Wage pressures

HICP (percent, y-o-y, Jan-2006 – Ap-2008)





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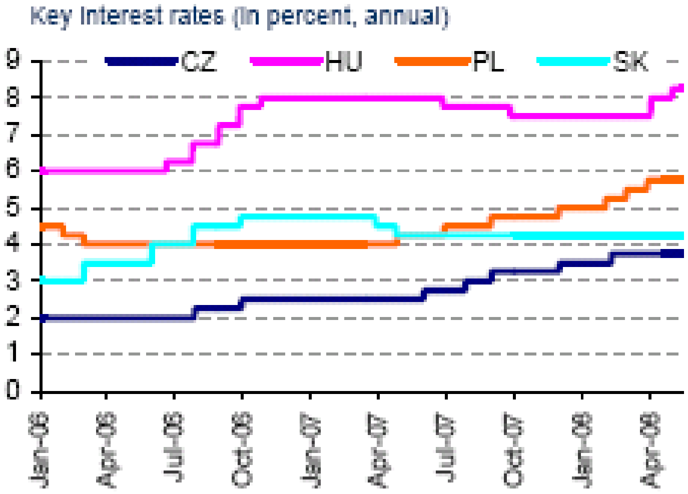
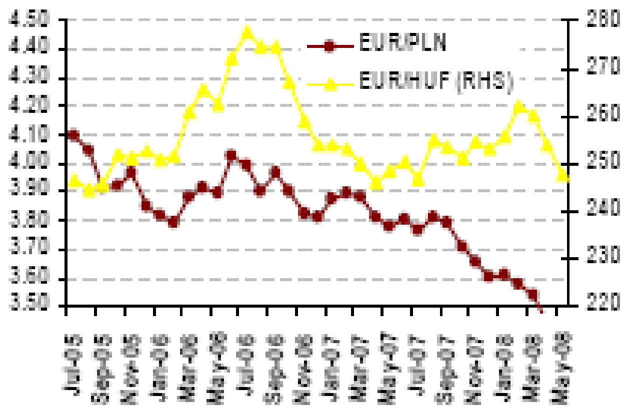
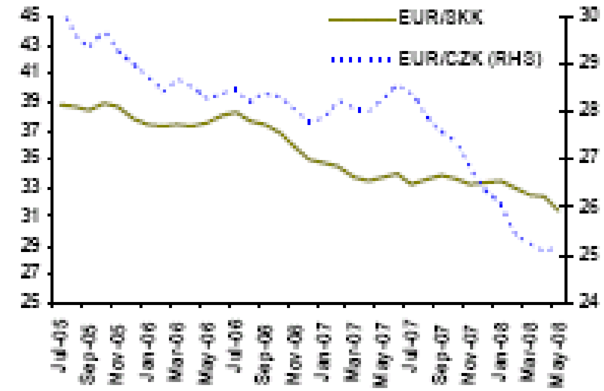
Monetary Policy in tightening phase

- Central banks in the region have taken a tightening stance
- The market and financial system are delivering the tightening.
  - Interbank rates have risen
  - Tighter monetary conditions via the strong currency







- The central banks' dilemma:
  - Central banks are (or may be soon) caught between a weakening economy and excessive inflation
  - ECB, Hungary, Baltics

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