



Development through Financial Integration? Lessons from Emerging Europe

Presentation based on the 2009 *Transition Report*

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The transition region is in deep crisis ...

- Average output decline of about -6 percent in 2009 – worse than any other region
- Double-digit declines in 5 countries (Baltic countries; Ukraine, Armenia).
- Crisis is not over: rising non-performing loans; continuing credit crunch
- Recovery expected for 2010, but likely to be slow (3¼ percent average; Q4/Q4 lower for most countries, according to most recent EBRD forecasts)



... but is transition itself in crisis?

- How have market-oriented institutions and policy frameworks performed during the crisis?
- Are the development paradigms pursued by transition economies still attractive? Do they need to be modified after the crisis?
 - One such paradigm: financial integration. Critical particularly for the European transition region
- Is the transition *process* in crisis? Will the crisis lead to a backlash against reforms?



Long answer: the 2009 EBRD *Transition Report*

- Chapters 1 and 2: Performance in the crisis
 - What caused the sharp output declines? What explains cross-country differences in capital outflows and cumulative output losses? Why was there no regional BoP and banking crisis?
- Chapters 3 and 4: Growth strategies of transition countries in light of the crisis
 - Capital inflows and financial integration
 - Commodities-driven growth
- Chapters 5 and 6: The crisis and the future of transition
 - Status of transition and remaining “transition gaps”
 - The impact of the crisis on market-oriented reforms



This presentation: re-examines the role of financial integration in light of the crisis

- The international community has been promoting financial integration and development in the transition region for almost 2 decades.
- This crisis is perceived to have been transmitted through financial channels, and aggravated by pre-crisis credit booms, private external debt and FX exposures.
- Have we done more harm than good?



Outline

1. Financial integration and the European transition model: introduction
2. Did financial integration have any tangible benefits?
3. What role did financial integration play in the transmission of the crisis?
4. Did financial integration generate macro-financial vulnerabilities?
5. Policy implications



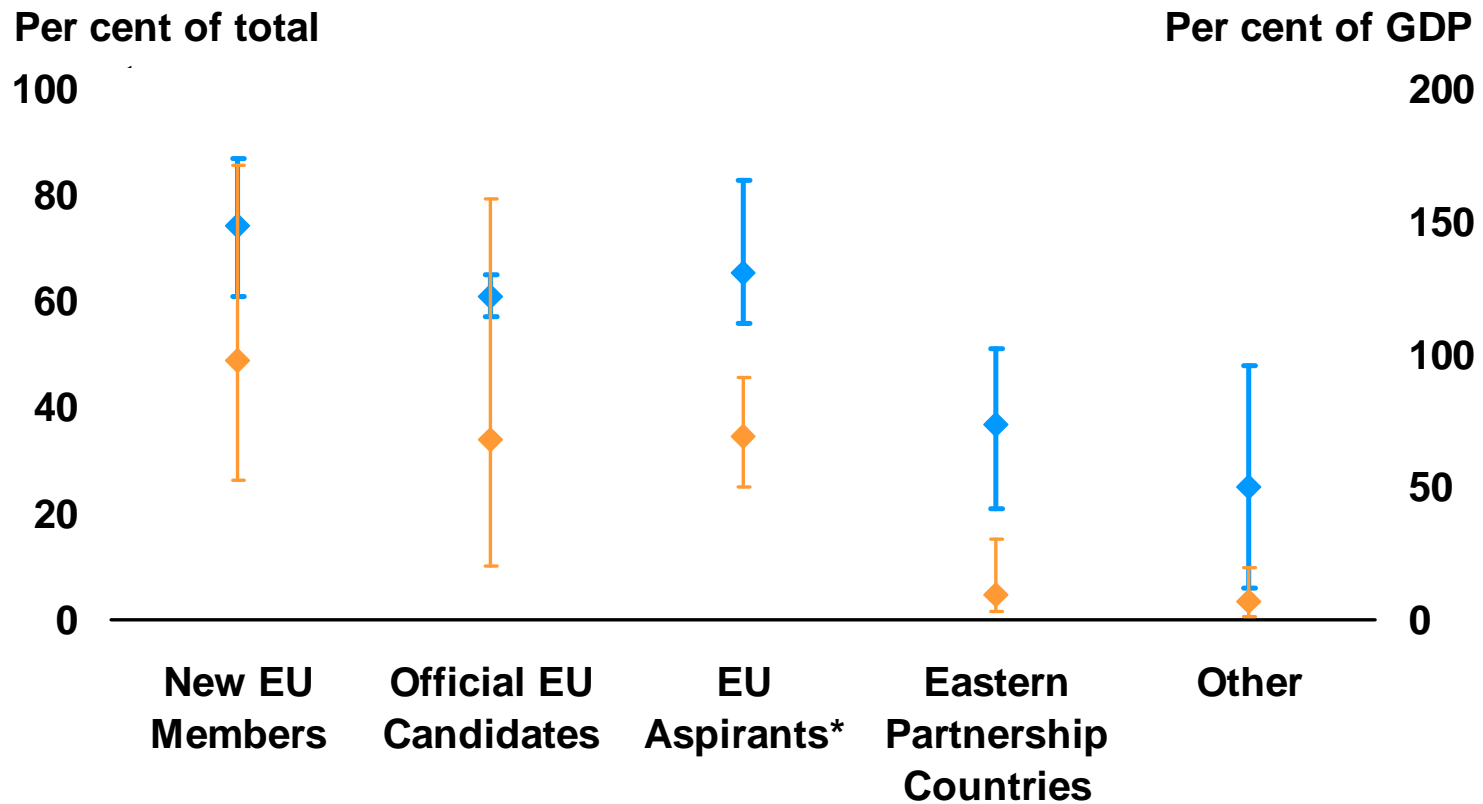
The three pillars of the European transition and convergence model

- Political, legal-regulatory integration with EU
- Trade integration (both opening, and specifically with the EU)
- Financial integration
 - Growing external assets and liabilities (but primarily liabilities: via FDI and debt inflows)
 - Growing role of EU banking groups



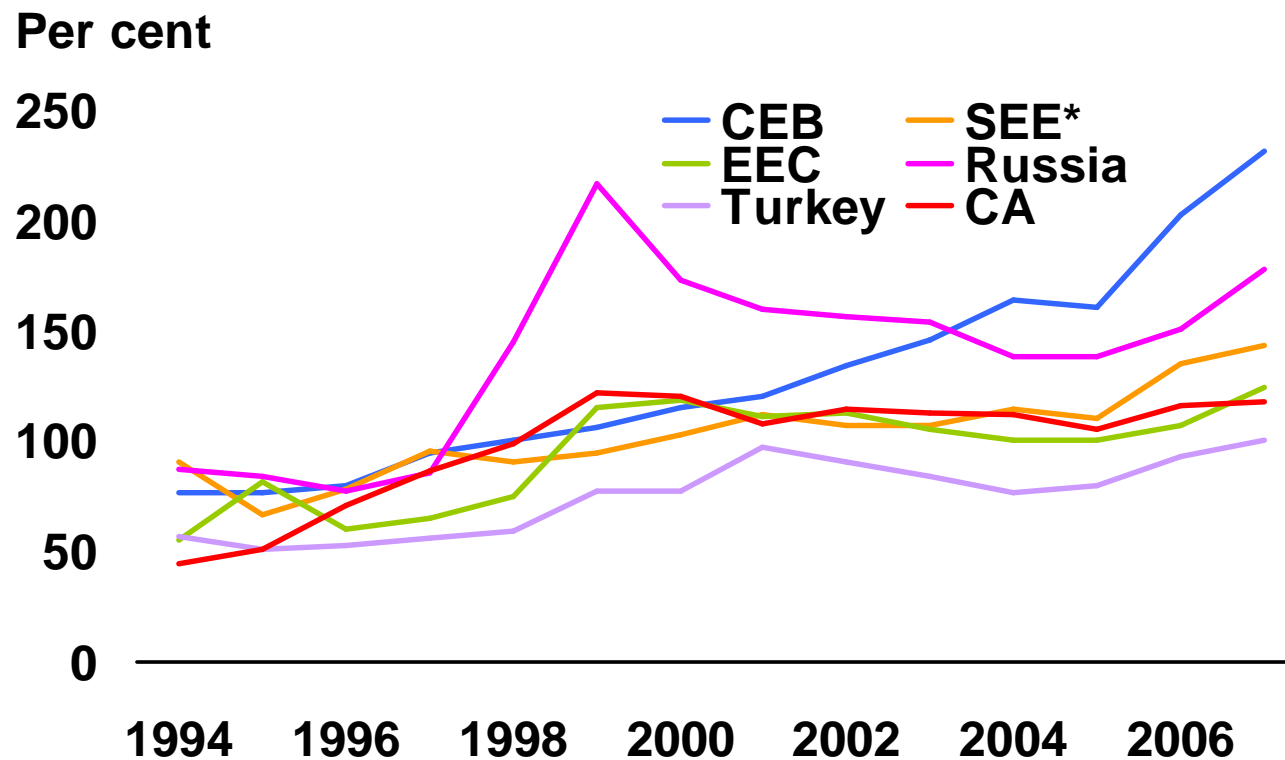
Political, trade, and financial integration have gone hand in hand

◆ Exports to the EU (left axis) ◆ Assets of EU banking groups (right axis)



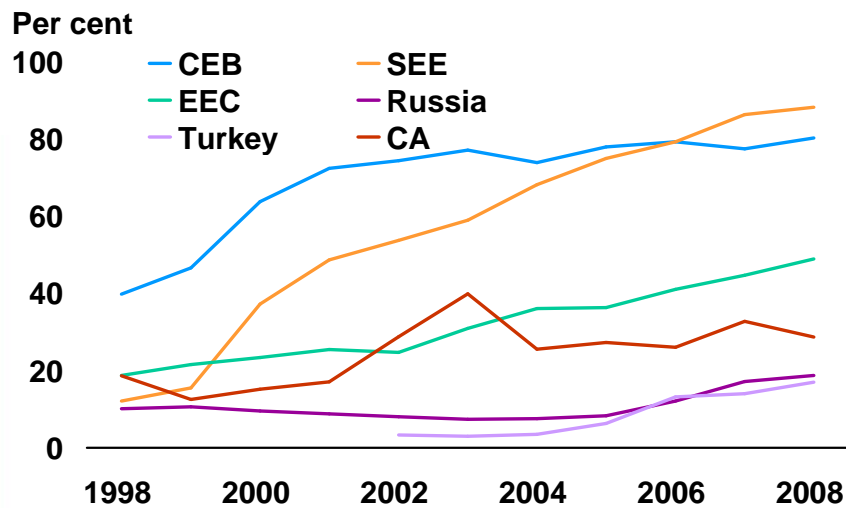
Financial integration has been rapid, with a boom period from 2004 onwards

External assets and liabilities as a share of GDP

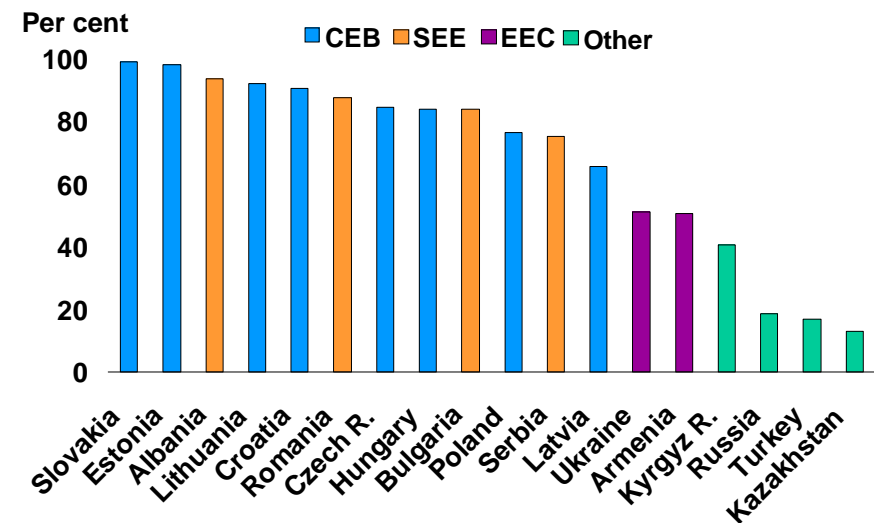


In CEB and SEE, financial integration has been led by foreign banking groups

Foreign bank asset share, 1998-2008



Foreign bank asset share, end-2008



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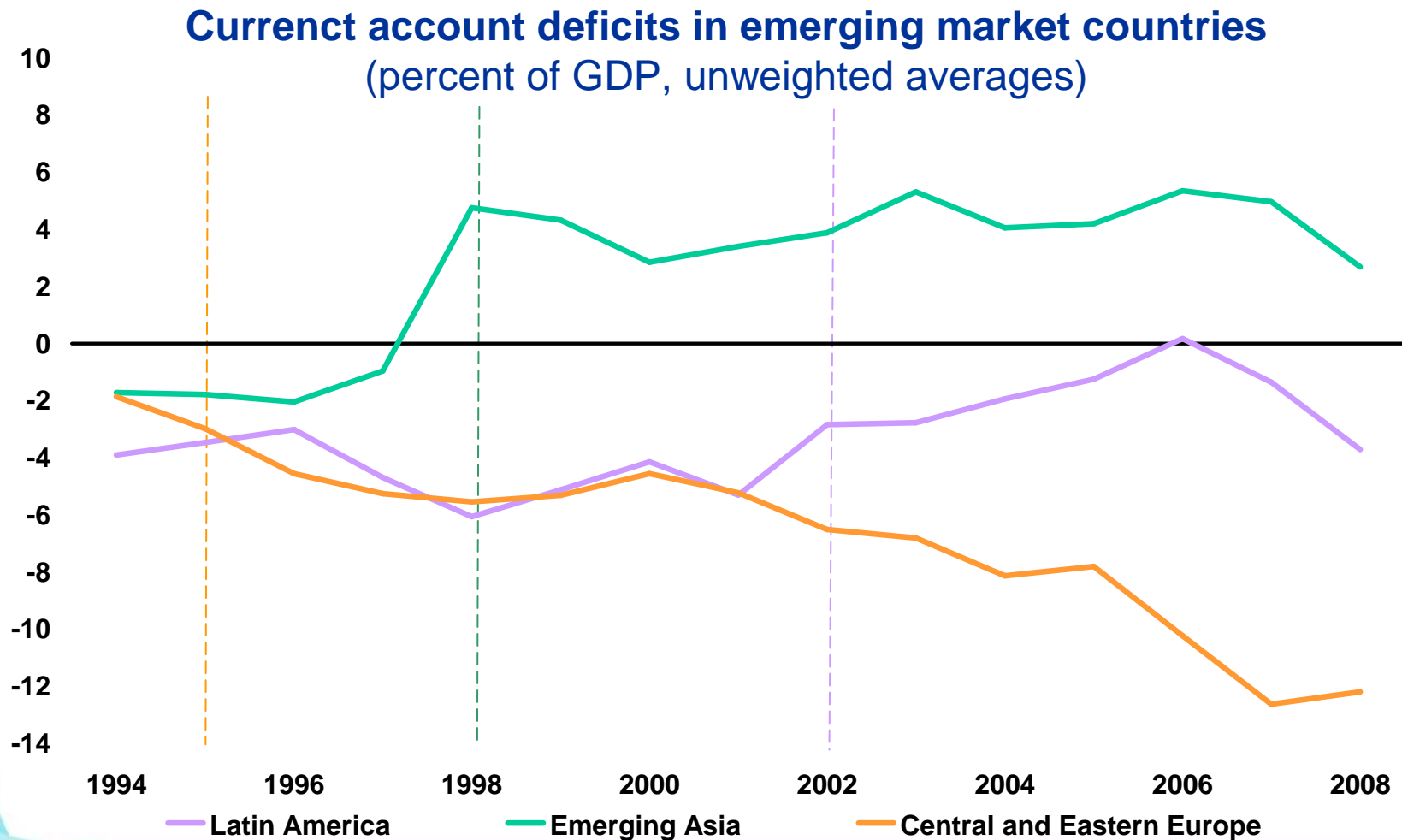


The ultimate objective of financial integration: economic growth

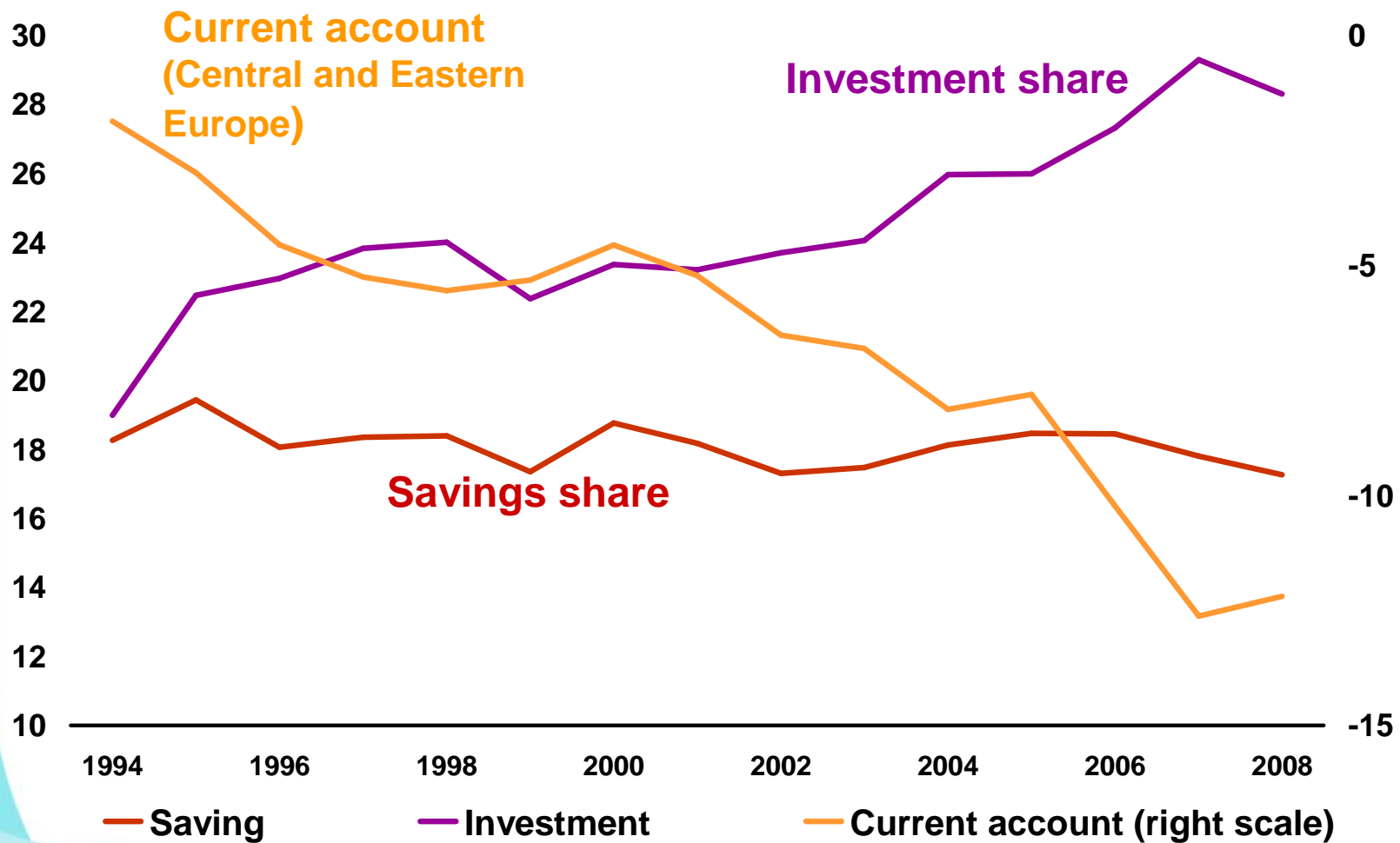
- Loosen domestic savings constraints to allow more investment
- Financial development
 - Access to credit allows individuals to access entrepreneurial and educational opportunities,
 - Reduced macroeconomic volatility encourages investment
- Transfer of skills, technology, and institutions (corporate governance) via FDI



Growth in transition has been associated with capital imports—unlike other regions



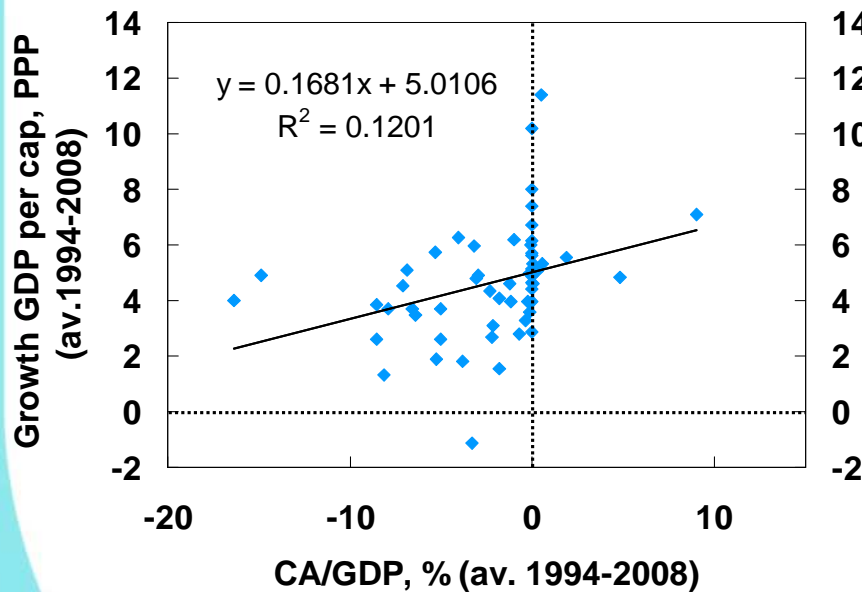
Rising current account deficits have reflected mainly higher investment



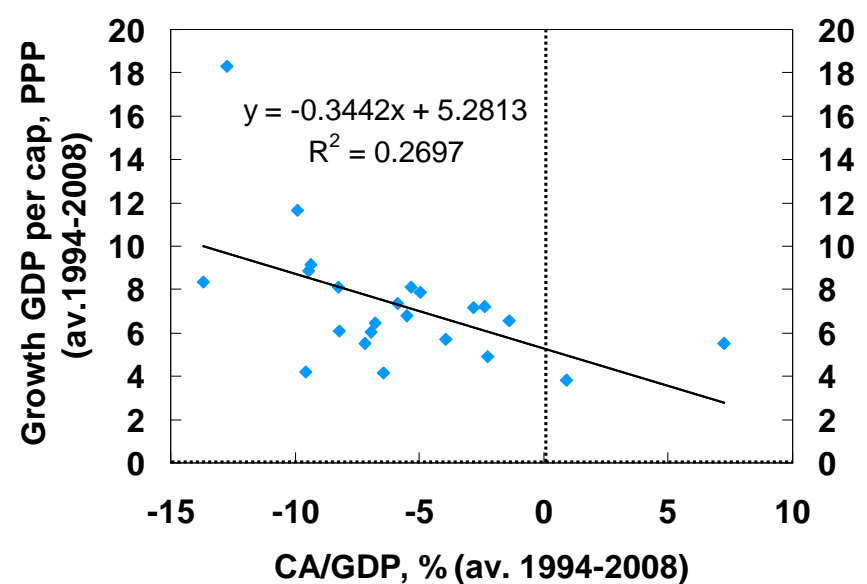
In non-transition developing countries, CA *surpluses* are correlated with higher growth

... but not in the European transition region.

Non-transition sample



Transition sample



Did capital inflows and financial integration *cause* higher growth in transition countries?

Two approaches

- Growth regressions: standard; but not completely convincing to establish causality
 - Standard set of controls: initial GDP per capita, life expectancy, initial trade policy, fiscal balance to GDP ratio, institutional measures
- Sector approach (Rajan-Zingales): more convincing as a way to rule out reverse causality
 - Key idea: if FI has benefits, it should make sectors with high dependence on external finance grow faster
 - Controls for full set of industry and country dummies



Effect of financial integration on growth: Macro growth regression approach

Dependent variable: average growth in country GDP, 1994-2008

Variable	Cross-country regression			Panel regression (GMM)		
	FI measure			FI measure		
	CA	GFI	Banks	CA	GFI	Banks
Growth effect of financial integration (non-CESE+)	0.231 (0.00)	-0.008 (0.067)	0.001 (0.955)	0.121 (0.44)	0.001 (0.822)	0.010 (0.572)
Differential growth effect in CESE+ countries	-0.379 (0.00)	0.006 (0.279)	0.017 (0.347)	-0.544 (0.078)	0.029 (0.008)	0.028 (0.243)
<i>Memorandum:</i> total growth effect in CESE+ countries	-0.147 (0.003)	-0.002 (0.826)	0.018 (0.259)	-0.422 (0.11)	0.031 (0.025)	0.039 (0.019)
Observations	55	54	50	213	209	194
Number of countries ⁵	55	54	50	56	55	51



Effect of financial integration on growth: Rajan-Zingales approach

Dependent variable: average growth in sector output, 1998-2005

	Financial integration (FI) measure						
	CA	Δ FDI	Δ D	GFI	FDI	D	Banks
Growth effect of financial integration interacted with external dependence (non-CESE+ countries)	0.377 (0.20)	0.126 (0.73)	0.21 (0.34)	0.013 (0.27)	-0.01 (0.89)	0.008 (0.75)	0.008 (0.90)
Differential growth effect in CESE+ countries	-1.047 (0.01)	1.269 (0.02)	-0.511 (0.29)	0.044 (0)	0.152 (0.01)	0.113 (0.01)	0.072 (0.19)
<i>Memorandum Items:</i>							
Total growth effect of financial integration interacted with external dependence (CESE+)	-0.669 (0.03)	1.394 (0.01)	-0.301 (0.47)	0.057 (0.01)	0.141 (0.04)	0.121 (0.03)	0.08 (0.01)
Difference in sectoral growth rates in CESE+ countries between 25th and 75th percentiles of FI and external dependence	1.613	1.364	-0.481	1.363	0.730	2.146	1.412
Observations	1,041	1,041	1,041	1,041	1,041	1,041	1,041
Number of countries	26	26	26	26	26	26	26



Results: robust evidence backing growth effects of FI in transition economies

- Find growth effects in both approaches, and across several proxies for financial integration
- Size of growth effect is respectable
 - 1 percent of GDP in capital inflows raised average annual growth by 0.15-0.4 percentage points per year
 - 10 percentage point higher asset share of foreign banks raised average growth by 0.2-0.4 percentage point per year
 - Output in manufacturing firms with average financial dependence grew faster by about 1.5 percentage points per year in high capital inflow countries (75 percentile) than in low capital inflow countries (25 percentile)
- No such effects found in non-transition sample



Why is the transition region different?

Hypotheses:

- Higher level of financial development
- Better institutions (or EU commitment) effect
- Threshold effects in financial integration

Test these ideas by adding additional interaction terms to the Rajan-Zingales model; find some support only for threshold effects with respect to foreign bank ownership.



Conclusion (1): Financial integration had tangible growth benefits in the EBRD region

- Supported by both standard growth regressions and Rajan-Zingales sector approach
- The latter excludes the boom period after 2005
- Holds for several measure of inflows and/or financial integration
- Magnitude is economically significant



Outline

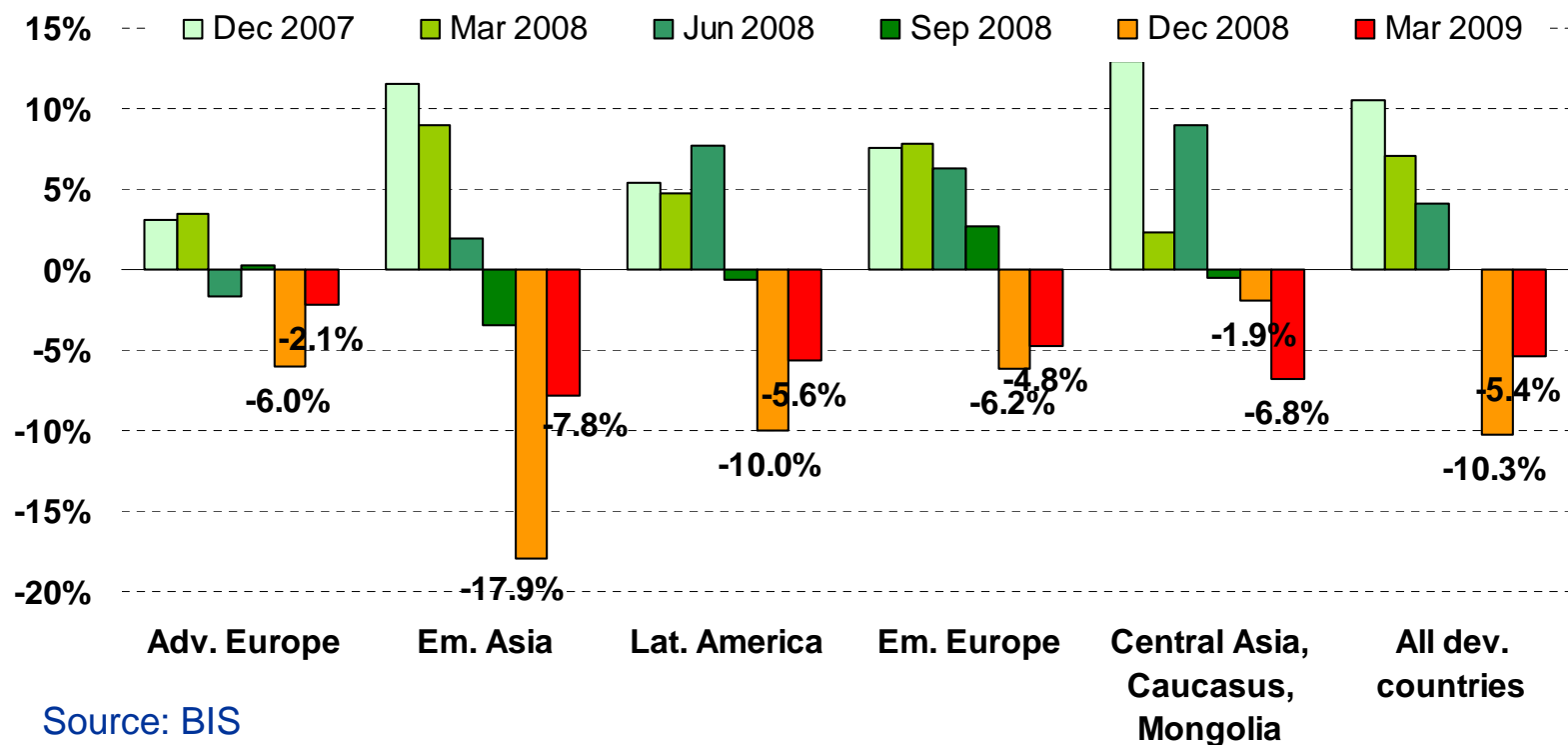
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Financial integration was one of the conduits of the international crisis

But shock was comparatively mild in the transition region

Change in external positions of BIS reporting banks (% of previous quarter)



Source: BIS



Statistical analysis suggests that foreign bank presence attenuated the outflow

- Robust effect
 - Controls for credit ratings and other pre-crisis fundamentals
 - True for both transition sample and broader developing country sample
 - True for both initial shock (Q4 2008 outflows) and Q4 and Q1 2009 combined
- Higher foreign bank share of 10 percentage points of assets attenuated Q4 lending outflow by 1.4 percentage points*

*average outflow in transition region was about 6 percent in Q4 2008.



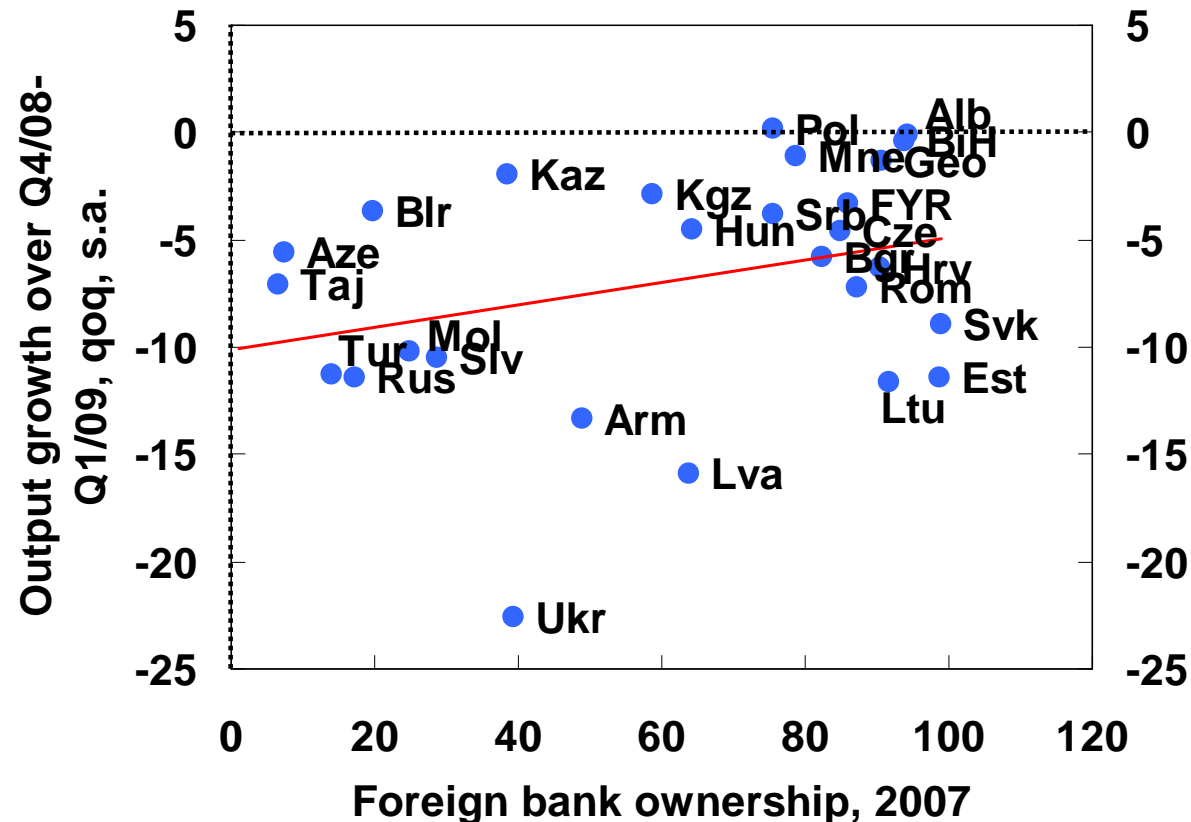
Bank ownership and capital outflows in Q4 2008: regression results

Dependent variable: percent change in cross-border bank asset stocks

Variable	Broad sample		Transition countries
Foreign Bank Ownership	0.14 (0.01)	0.03 (0.63)	0.14 (0.05)
Foreign Bank Ownership *transition dummy		0.13 (0.04)	
Country credit rating	-1.5 (0.04)	-1.2 (0.09)	-1.9 (0.16)
GDP per capita PPP, log	-6.8 (0.08)	-6.2 (0.09)	-15.6 (0.06)
Number of countries	64	64	25
R-squared	0.20	0.26	0.38

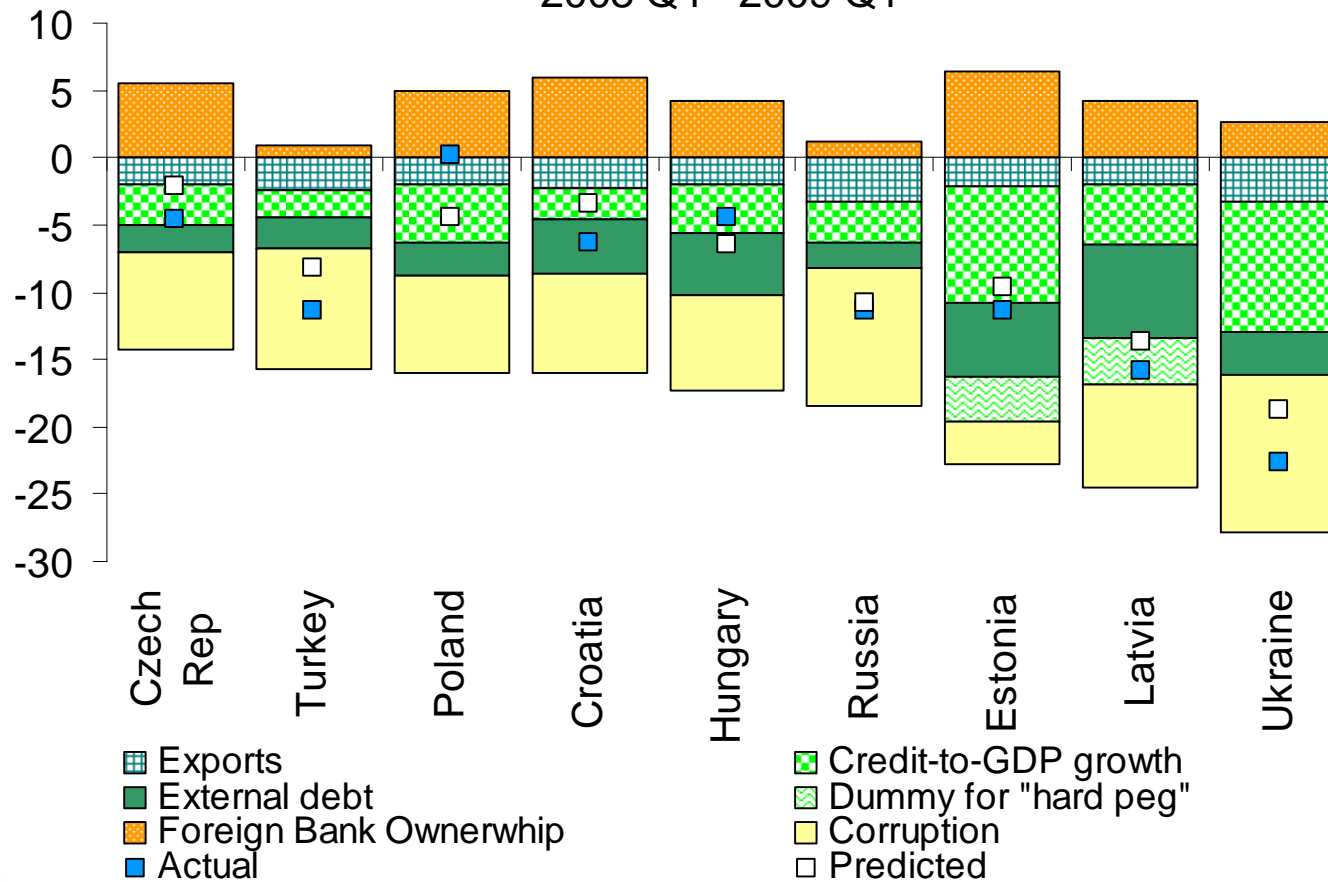


Foreign bank presence is associated with better output performance during the crisis



But external debt and the size of pre-crisis credit booms made crisis worse

Actual and predicted cumulative output declines
2008 Q4 - 2009 Q1



Conclusion (2): Financial integration had a mixed *direct* role in the crisis

1. Provided a conduit for financial shocks;
(obvious: in financial autarky, no contagion)
2. Some aspects of financial integration made the crisis worse: credit booms, external debt
3. However, foreign bank presence mitigated the output decline
 - Interpretation: foreign banks *buffered* the financing shock because of commitments to subsidiaries.



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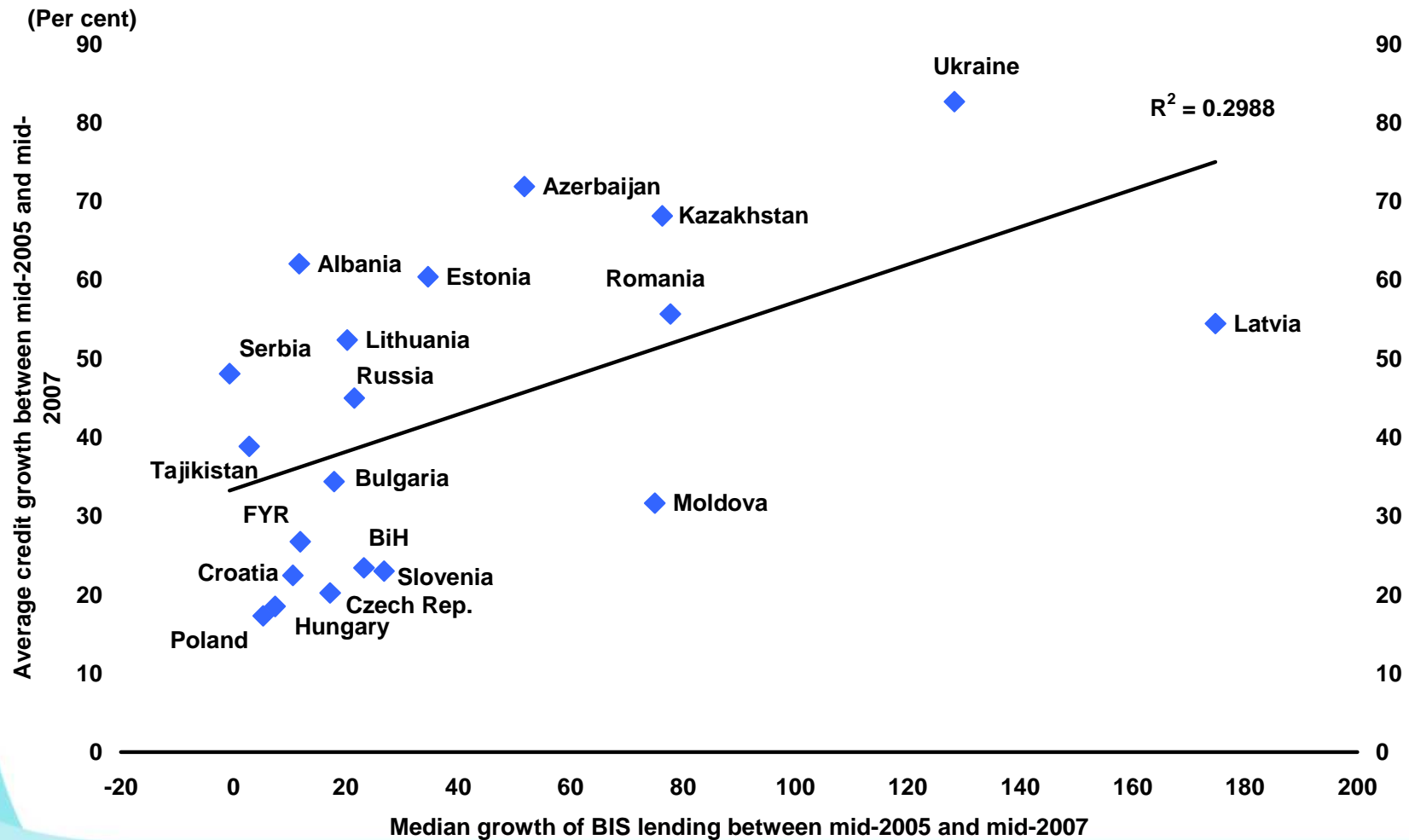


Did financial integration cause macro-financial vulnerabilities? Approach

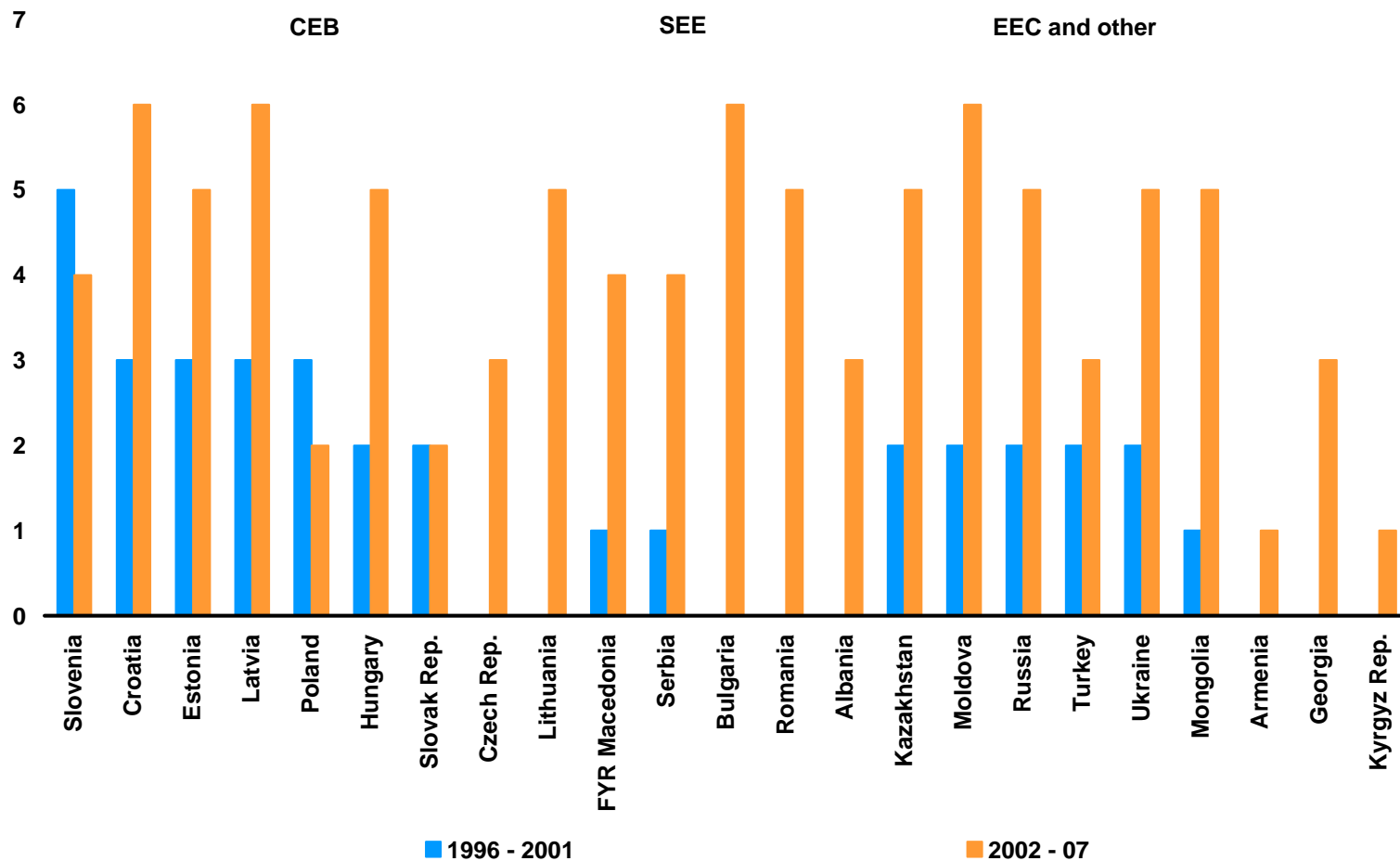
- Did financial integration contribute to external debt and credit growth? Of course!
- But not a useful question for policy purposes. We cannot conclude: “less credit is better.”
- Better questions:
 - did financial integration contribute to *excessive* credit growth, or *excessive* private debt?
 - did financial integration bias the currency denomination of lending toward FX?



Capital inflows strongly correlated with (booming) credit growth during 2005-08



Number of credit boom years (= year with credit growth > 2 p.p. of GDP)



Did financial integration contribute to (excessive) credit booms?

	1996-2001		2002-07	
	External Assets + Liabilities	Foreign bank share	External Assets + Liabilities	Foreign bank share
<i>Relative frequency of credit boom years (%)¹</i>				
Initial levels of financial integration				
below median	10.9	10.1	29.0	36.2
at or above median	13.8	14.5	39.1	31.9
Change in financial integration				
below median	10.9	14.5	26.1	34.1
at or above median	13.8	10.1	42.0	34.1
<i>Cross country-correlations with number of credit boom years</i>				
Initial levels	-0.03	0.08	0.04	0.01
Change	0.14	0.09	0.52	-0.10



Alternative: Did financial integration contribute to excessive *firm level* debt?

- The meaning of excessive: > 40% of assets.
- Justification: threshold beyond which extra debt does not seem to raise productivity (Coricelli et al, 2009)
- Approach: run firm-level probit regression for 6400 firms from 8 CEB+SEE countries, Russia, and Ukraine.
- Probability of being above threshold regressed on firm controls, FI measure, FD measure (credit/GDP) and interaction term

(Work in progress by Isabelle Roland, based on Coricelli et al)



Did financial integration contribute to excessive firm level debt? Results

Effects depend on (1) structure of FI; (2) level of FD

- Higher external debt raises probability of excess firm debt – but only if credit/GDP > 0.4
- In contrast, FDI *lowers* probability of excess debt at higher levels of FD.
- Mixed evidence on role of foreign banks.
 - Based on asset share, effects indistinguishable from that of FD; but joint effect (interaction) raises probability of excess firm debt.
 - Based on number share, raises probability of excess debt at lower levels of FD, but lowers it for credit/GDP > 0.27



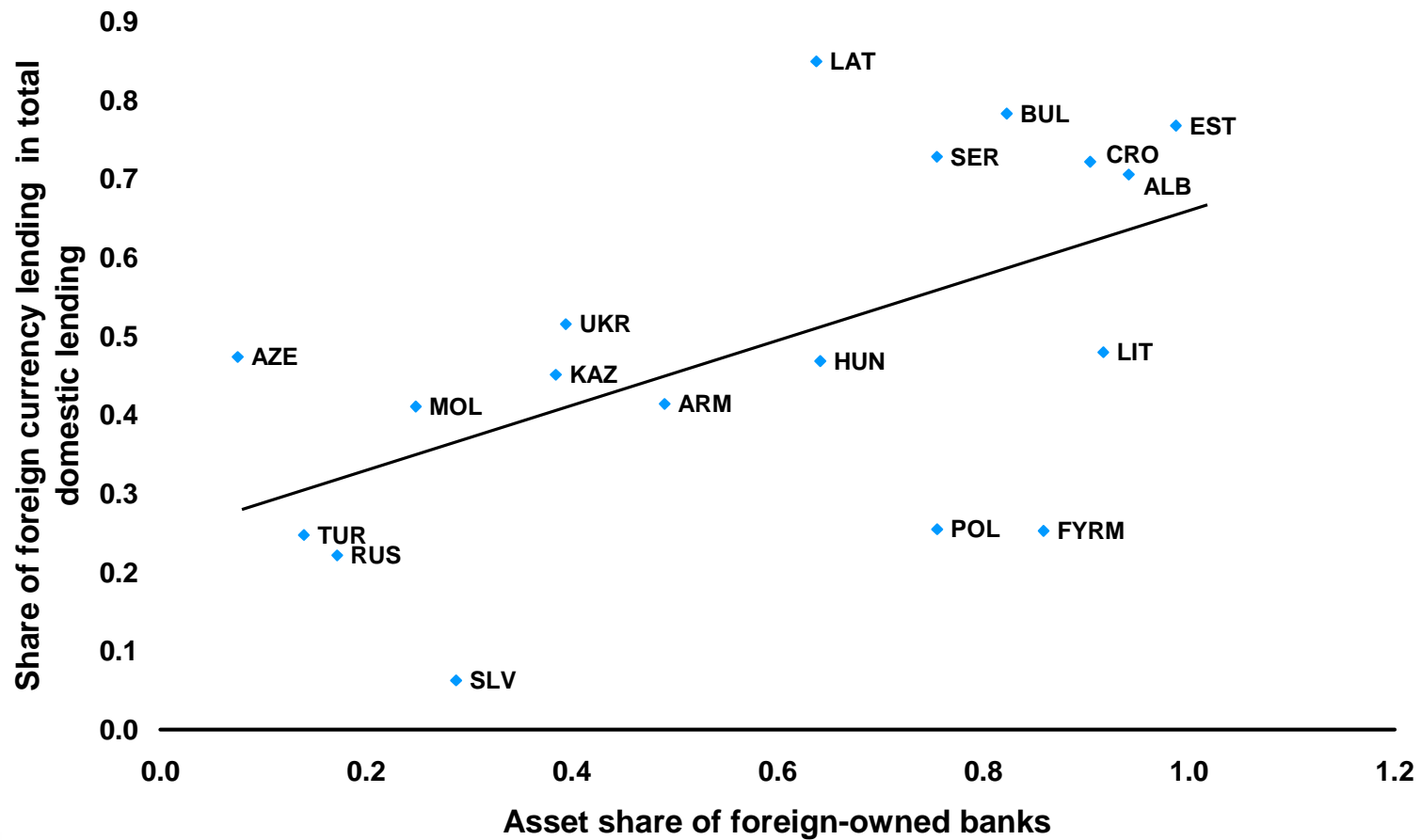
Did financial integration lead to higher share of FX lending? Background

- Standard causes of “liability dollarization”:
 1. Low monetary policy credibility and/or high inflation volatility;
 2. Moral hazard associated with pegged regimes (implicit guarantees)
- Did foreign financing make it worse in the transition region? (Calvo et al., 2007; Luca and Petrova, 2008; Rosenberg and Tirpak, 2008; Brown et al., 2009)
 - If foreign financing is in FX (either through parent bank or wholesale market), and banks want to avoid mismatch, they will want to push FX lending.



Foreign bank presence is correlated with a higher share of lending in FX

(but so is L/D ratio, and various other measures of foreign financing)



Did financial integration lead to higher share of FX lending? Approaches

1. Extend firm level regressions by Brown, Ongena and Yesin, 2009, based on BEEPS data for 2002-05
 - LHS variable is currency denomination of last loan
 - Firm level controls (e.g. whether firm is exporter); standard macro + institutional controls (inflation volatility, exchange rate volatility ...); add FI variables
2. Test robustness of results using macro data for same period (panel regression, GMM)
 - LHS variable is FX share of bank lending
3. Macro regression over longer (2000-2008) period (panel regression, GMM)



Firm level results (probit; 2002-05) (coefficient estimates; p-values in parentheses)

Variable	Firm regression, 2002-05		
	Financial integration (FI) measure		
	GFI	BIS	L/D
Inflation volatility	0.035 (0.010)	0.026 (0.049)	0.012 (0.418)
Governance	-0.321 (0.000)	-0.228 (0.001)	-0.209 (0.004)
Hard peg	0.013 (0.786)	0.001 (0.972)	0.075 (0.280)
FI measure	0.060 (0.360)	0.000 (0.540)	-0.185 (0.057)
Foreign banks	0.003 (0.000)	0.001 (0.001)	0.001 (0.166)
Observations	1574	1452	1541
Number of countries	21	19	19



Macro level results (quarterly data; 2002-05) (coefficient estimates; p-values in parentheses)

Variable	Quarterly dataset, 2002-05		
	Financial integration (FI) measure		
	GFI	BIS	L/D
Inflation volatility	5.986 (0.308)	5.499 (0.363)	11.040 (0.009)
Governance	-15.800 (0.010)	-13.780 (0.030)	-17.070 (0.010)
Hard peg	32.220 (0.001)	33.300 (0.002)	23.350 (0.000)
FI measure	4.625 (0.628)	0.068 (0.047)	12.940 (0.390)
Foreign banks	0.122 (0.243)	0.067 (0.473)	0.131 (0.321)
Observations	223	212	196
Number of countries	21	20	20



Macro level results (annual data; 2000-08) (coefficient estimates; p-values in parentheses)

Variable	Annual dataset, 2000-08		
	Financial integration (FI) measure		
	GFI	BIS	L/D
Inflation volatility	-1.823 (0.204)	-4.648 (0.072)	-1.510 (0.270)
Governance	-20.070 (0.006)	-17.070 (0.020)	-22.120 (0.001)
Hard peg	23.020 (0.021)	24.040 (0.018)	19.500 (0.057)
FI measure	2.564 (0.821)	0.016 (0.088)	3.048 (0.842)
Foreign banks	-0.049 (0.775)	0.024 (0.888)	-0.095 (0.587)
Observations	74	74	59
Number of countries	15	15	15



Did financial integration lead to higher share of FX lending? Results

- Most robust predictor of high FX lending share: weak institutions
- Firm level regressions also point to role of inflation volatility; foreign banks
- Macro regressions also point to role of hard pegs; BIS debt inflows
 - Evidence that financial integration – either presence of foreign banks, or cross-border debt flows – had an effect on FX mismatch over and above standard causes



Conclusion (3): Did financial integration generate macro-financial vulnerabilities?

Yes, but ...

- Mainly through debt, not FDI
- Changes/inflows seem to cause problems, not so much higher levels of integration/stocks
- Effects may differ depending on levels of financial development
- Results not conclusive on role of foreign banks
 - Contributed to vulnerabilities as conduits of credit and foreign financing, but effects over and above that role?
 - Firm-level evidence on contribution to FX lending – but not robust in macro regressions.



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Lessons on financial integration: general policy implications

- Embrace
 - This is the only region in the world where financial integration has mostly worked the way it was supposed to
- Better manage the risks and unintended consequences
 - Take away the froth: lending standards; macro-prudential instruments
 - Reduce FX liabilities



How to deal with FX liability problem

- **Improve macroeconomic frameworks and institutions**
 - Floating exchange rate + inflation targeting unless constrained by Euro adoption; fiscal-structural reforms
 - Good not just in low credibility countries
- **Develop local currency bond markets: from both sides**
 - Funding: liquidity; legal framework for issuance
 - Demand: institutional investors
- **Regulation (in more advanced countries)**
 - Disclosure requirements
 - Reserve/provisioning requirements?
 - Higher creditworthiness standards for FX borrowers?
 - Limits on open FX positions of *firms and households*?



A framework for country-specific strategies to address FX mismatches

	In ERM2; or hard peg in anticipation of Euro?	
	No	Yes
Macro and institutional credibility meets minimum standards	<ul style="list-style-type: none"> • Further reform macro institutions (including monetary policy frameworks); build track record; • Further develop local currency markets • Develop regulation; <p style="text-align: right;">2</p>	<ul style="list-style-type: none"> • Develop regulation • Fiscal consolidation <p style="text-align: right;">1</p>
Macro and institutional credibility weak	<ul style="list-style-type: none"> • Reform macro institutions; build track record; • Country insurance. <p style="text-align: right;">3</p>	



A joint IFI – national governments initiative to address the FX problem in emerging Europe?

1. Develop a common understanding on regulatory best practices to mitigate FX exposures
2. Identify “Group 2” countries (ok macro credibility, but undeveloped LC markets and regulation) in which authorities are planning a strong policy response to dollarisation
3. In these countries, improve macro frameworks, develop local currency market institutions, and implement regulation in a coordinated fashion
4. Potential EBRD contribution: market institutions (as in Russia, Mosprime); LC funding to give a push to liquidity and create benchmarks; LC lending to develop demand side of market (NBFIs)

