

Global European banks and dollar (co-)dependence: how housing markets became internationally synchronized

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Discussion by
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Quick review

- How house price dynamics and co-movements relate to the structure of global banking systems and the US dollar funding
- The paper builds on
 - ▶ Hoffmann and Stewen (2019) looking at the link between net capital inflows and house prices in the US
 - ▶ Landier et al (2017) proposing a methodological setup to study house price co-movements in the US and its relation with the banking market geographic integration
- Contributions
 - ▶ Bring in the international dimension
 - ▶ Give an explicit role to the US dollar global funding
 - ▶ Account for the topography of global banking

Quick review

Steps

1. Propose a measure for dollar dependence/co-dependence
2. Construct a measure of house price synchronisation across countries
3. Provide evidence that US funding conditions are associated with cross-country house price *dynamics* and US dollar dependence
4. Run panel regression models to quantify the role of the dependence/co-dependence measures on international house price *co-movements*

Discussion

Four groups of comments

- # 1 Related to steps 1 and 2: dollar dependence definitions and house price synchronisation
- # 2 Related to step 3: evidence on the relation between US financial conditions, dollar dependence and house price co-movements
- # 3 Related to step 4: Empirical approach
- # 4 Other comments

Comments # 1

Dollar dependence measure

$$DD_t^i = \sum_{b \in \mathbf{B}_i} \omega_t^{b,i} \lambda_t^b$$

- i : country
- b : banking system
- $\omega_t^{b,i} = \frac{L^{b,i}}{L^i}$: proportion of country i liabilities vis-à-vis banking system b in its total cross-border liabilities
- $\lambda_t^b = \frac{L^{b,USD}}{\sum_b L^{b,USD}}$: fraction of global USD denominated bank borrowing by banking system b

Comments # 1

Dollar dependence measure

- λ_t^b is different across different banking systems, but **constant** across countries the banking system is lending to. Realistic assumption? Role for gravity factors, exchange rate regimes, etc
- Would $\omega_t^{b,i}$ exclude intragroup or back to home lending? What about the international non cross-border dimension?
- No role for the scale of international balance sheets
- Measure confined to bank-related international linkages based on BIS reporter countries. Representativeness? Role for other items, portfolio debt?

Comments # 2

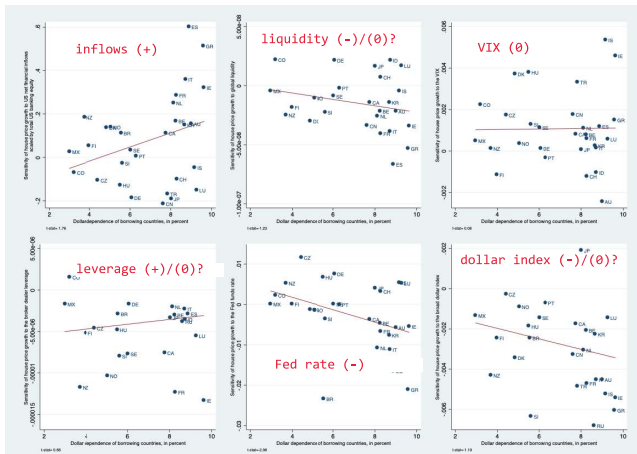
House price synchronisation measure

Measure used: *product of the rates of house price growth over four quarters ahead for a country pair*

- Not obvious why the product of growth rates is the most relevant measure. Imposes contemporaneous synchronisation
 - ▶ Why not co-movement of house price cycles, concordance index McDermott and Scott (2000) or similar?
- General comment to price-based measures: hard to disentangle the economic relevance when volumes are not explicitly accounted for

Comments # 3

US financial conditions, dollar dependence and house price co-movements



- No strong evidence from bilateral correlations

Comments # 3

US financial conditions, dollar dependence and house price co-movements

House price growth and US dollar funding conditions

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	House price growth							
DD_{t-1}^j	0.001 [0.752]	0.001 [0.743]	0.002 [1.268]	0.002 [0.629]	0.001 [0.296]	0.001 [0.274]	0.001 [0.627]	0.001 [0.185]
$DD_{t-1}^j \times \text{Capflow/equity}_t$	0.015* [1.972]	0.016* [1.872]	0.016* [1.882]	0.016* [1.861]				
$DD_{t-1}^j \times \text{Capflow/dollar assets}_t$					0.243** [2.494]	0.256** [2.357]	0.253** [2.332]	0.255** [2.329]
$DD_{t-1}^j \times \text{Federal funds rate}_t$		0.00007 [0.211]	0.00001 [0.023]	-0.00003 [-0.096]		0.00009 [0.261]	0.00004 [0.104]	-0.00001 [-0.039]
$DD_{t-1}^j \times \text{Broker-dealer leverage}_t$			-0.00000 [-1.039]	-0.00000 [-1.222]			-0.00000 [-0.678]	-0.00000 [-0.883]
$DD_{t-1}^j \times \text{Vix}_t$				-0.00002 [-0.307]				-0.00003 [-0.394]
country _i FE	yes	yes	yes	yes	yes	yes	yes	yes
year-quarter FE	yes	yes	yes	yes	yes	yes	yes	yes
year-quarter clustering	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1,264	1,264	1,264	1,264	1,264	1,264	1,264	1,264
R ²	0.386	0.386	0.386	0.386	0.387	0.387	0.387	0.388

- Weak links confirmed by regression analysis, exception is net capital inflows
- Dollar dependence not relevant for house price growth rates

Comments # 4

Empirical approach for house price co-movement

House price growth synchronization and dollar co-dependence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent variable	House price growth synchronization								
	s = 1			s = 2			s = 3		
CoHI _{t-s}	-0.000001 [-1.2]	-0.000001 [-1.287]	-0.000000 [-0.477]	-0.000000 [-1.459]	-0.000001 [-1.514]	-0.000000 [-0.764]	-0.000001* [-1.65]	-0.000001 [-1.574]	-0.000001 [-0.924]
CoDD _{t-s}	0.00004*** [2.919]	0.00003 [1.62]	0.00003 [1.349]	0.00004*** [2.898]	0.00003* [1.748]	0.00003 [1.475]	0.00004*** [2.79]	0.00004* [1.787]	0.00003 [1.524]
Bilateral trade integration _t			0.001 [0.829]			0.001 [0.816]			0.001 [0.872]
countrypair _{ij} FE	yes	yes	yes	yes	yes	yes	yes	yes	yes
country _i -year-quarter FE		yes	yes		yes	yes		yes	yes
country _j -year-quarter FE		yes	yes		yes	yes		yes	yes
countrypair _{ij} clustering	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	28,084	27,970	22,675	27,808	27,696	22,471	27,532	27,422	22,267
R ²	0.239	0.524	0.574	0.24	0.524	0.575	0.239	0.525	0.575

Comments # 4

Empirical approach for house price co-movement

- Unexpected result: common exposure to lending banking system not relevant for house price co-movement. Intuition?
- Key assumption: orthogonality between banking system specific supply shocks, borrowing country specific shocks, global factor and US refinancing conditions. Satisfied?

Other comments

- It would be interesting to know more about the relative importance of λ_t^b and $\omega_t^{b,i}$. Is it geography or currency the main contributor to co-movements?
- Link between credit growth and house prices not fully addressed in the paper. What about other factors such as aggregate demand, financial or housing sector regulation, bank exposures to mortgage markets?
- Rationale for using aggregate net capital inflows not clear. Why not looking into the subcomponents as well? e.g. exclude FDI
- Why is broad dollar index a trade-weighted ER index instead of a financially or currency weighted index? ([Lane and Shambaugh 2010](#))

Conclusion

- Very nice paper and interesting idea using BIS data
- International funding dimension and its impact on house prices is a relevant question to ask
- Room for improvement on the economic relevance of these links, transmission mechanisms, policy implications, etc