



BANK FOR INTERNATIONAL SETTLEMENTS

What drives housing price dynamics: cross-country evidence

By

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Housing finance and house price dynamics

- Main question:
 - Do the institutional characteristics of housing finance have an impact on house price dynamics?
- Why do we care?
 - **Macro stability:** Housing market affects the budget constraint of households and aggregate demand
 - **Financial stability:** Banks are intimately involved in origination and holding of mortgages



Housing finance and house price dynamics

- **Methodology:** Exploit cross-country institutional diversity in a common empirical framework:
 - Explain house price dynamics by reference to a VAR (common specification)
 - Relate different dynamic patterns to aspects of the financing structures



The VAR (1970 – 2003)

Variables:

- Real GDP growth
- Inflation
- Short rate
- Term spread
- Bank credit
- House prices

Countries:

- BE, DK, FI , FR , DE , IE ,
IT , NL , NO , ES , SW ,
CH , GB
- CA , US
- AU , JP



SVAR framework

- Assumptions on the endogenous linkages among those variables (whether row variables respond to innovations in column variables)

	GDP	Credit	HP	IR	Spread	Inflation
GDP	--	No	No	No	No	No
Credit	Yes	--	Yes	Yes	Yes	No
HP	Yes	Yes	--	Yes	Yes	Yes
IR	Yes	No	No	--	No	Yes
Spread	Yes	No	No	Yes	--	No
Inflation	Yes	No	Yes	No	No	--



Summary of results across all countries

- Variance decomposition of housing price movements (5 years)

GDP	Bank credit	Housing prices	Short rate	Term spread	Inflation
7.6	11.4	7.4	10.8	9.8	53.0



Housing financing structures

- Contract characteristics:
 - Fixed vs floating rate, maturity, refinancing, equity extraction
- Market:
 - Securitisation
- Prudential:
 - Loan-to-value , valuation of property



Three groups of countries

- **“Conservative”**: Dominance of fixed rate mortgages, no equity extraction, low LTV
- **“Aggressive Fixed”**: Dominance of fixed rate mortgages (five years or more), market valuations used, high LTV, equity extraction possible
- **“Aggressive Float”**: Dominance of floating rate mortgages, market valuations used, high LTV, equity extraction possible

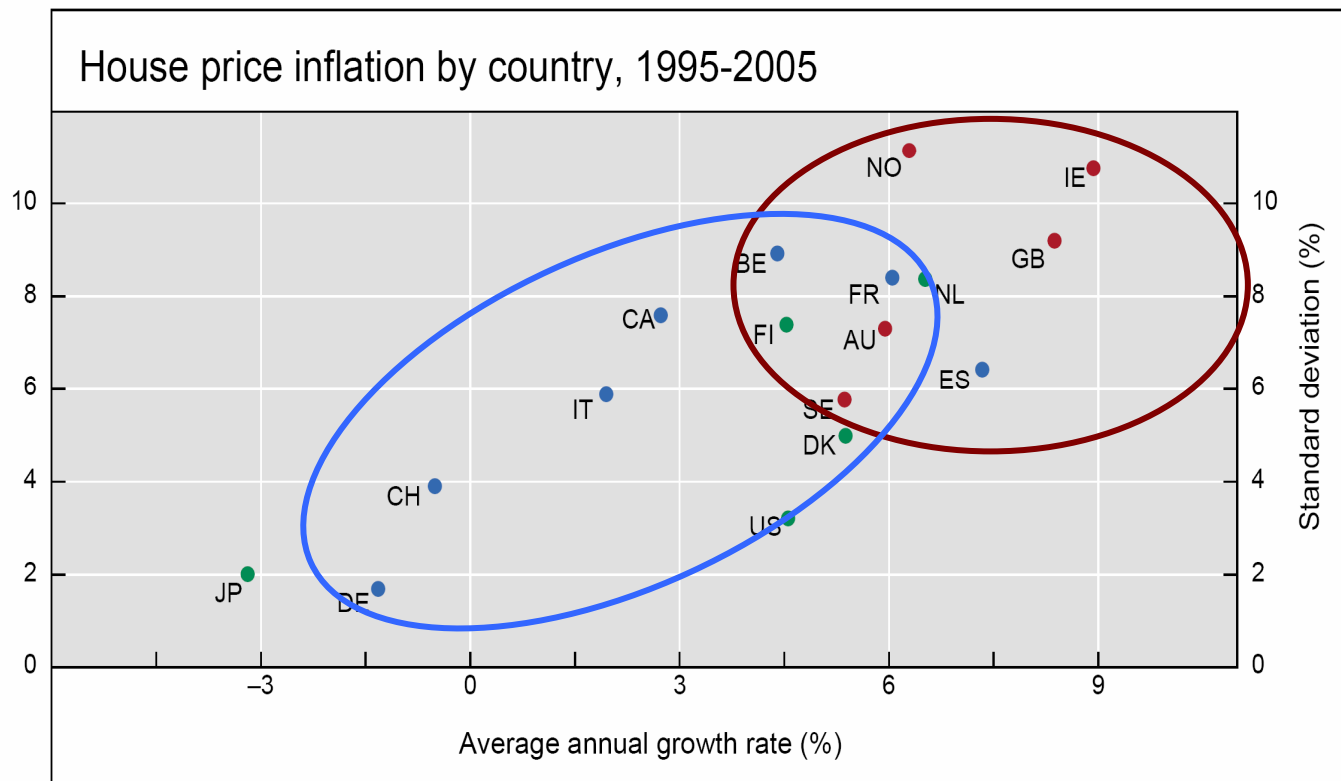


Three groups of countries

		Mortgage rate	MEW	Maximum LTV	Valuation method
Group 1	BE, CA, FR, DE, IT, ES, CH	Mostly Fixed	No	Low	Mixed
Group 2	DK, FI, JP, NL, US	Mostly Fixed	Yes	Medium	Mixed
Group 3	AU, IE, NO, SE, UK	Variable	Yes	Very high	Market value



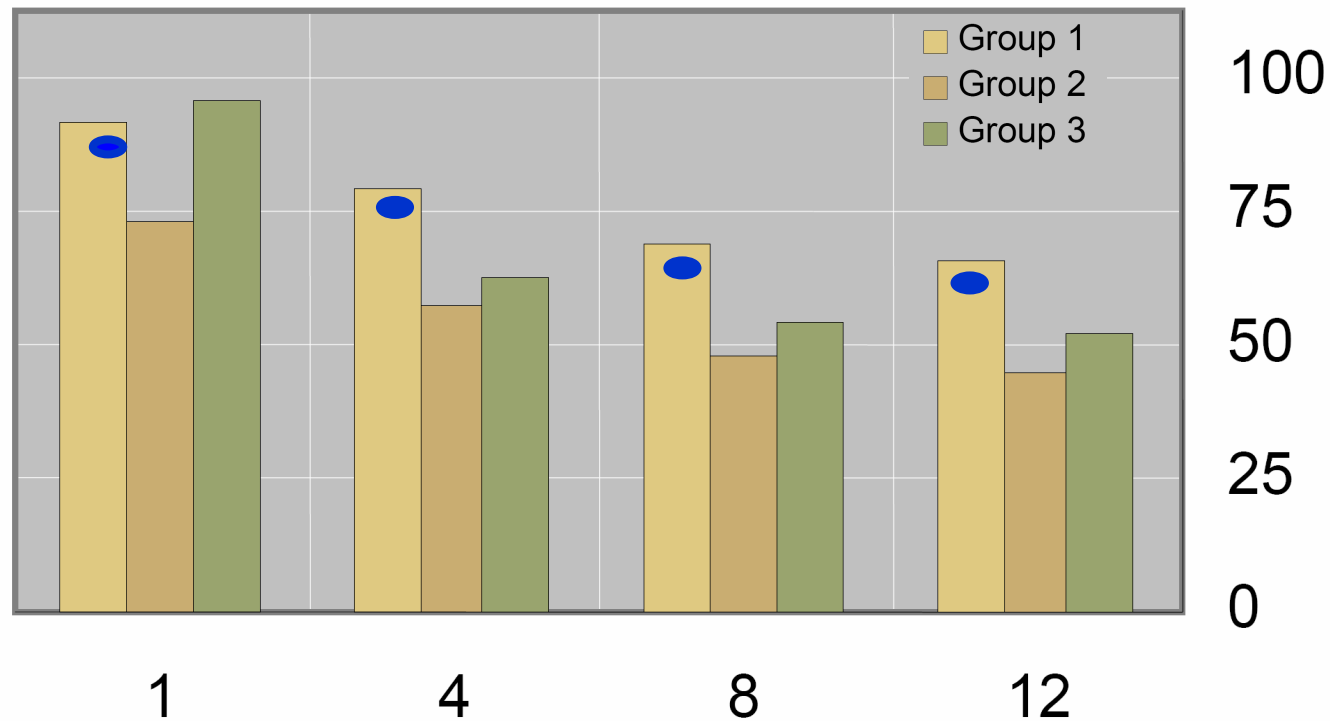
Recent house price growth strongest in Group 3





Inflation impact strongest in Group 1

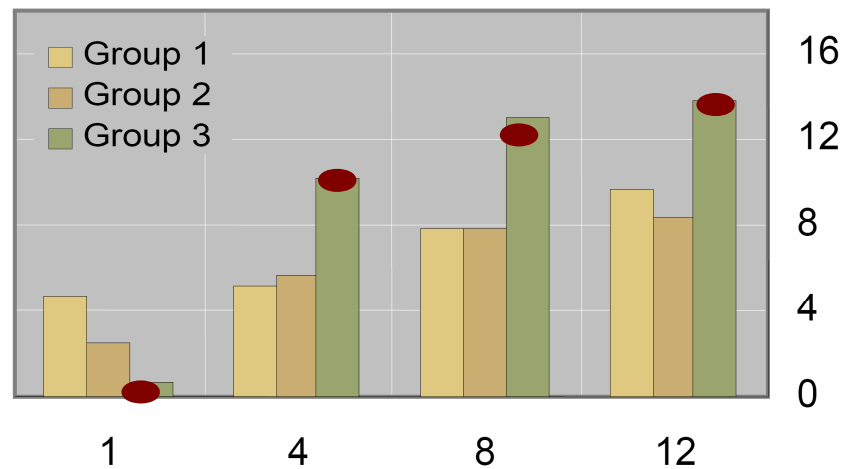
Inflation to housing prices



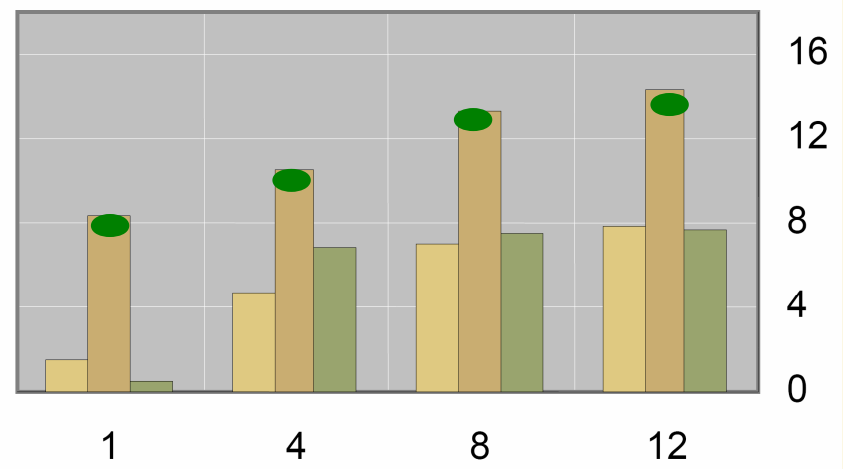


Term structure effects

Short-term rates to housing prices

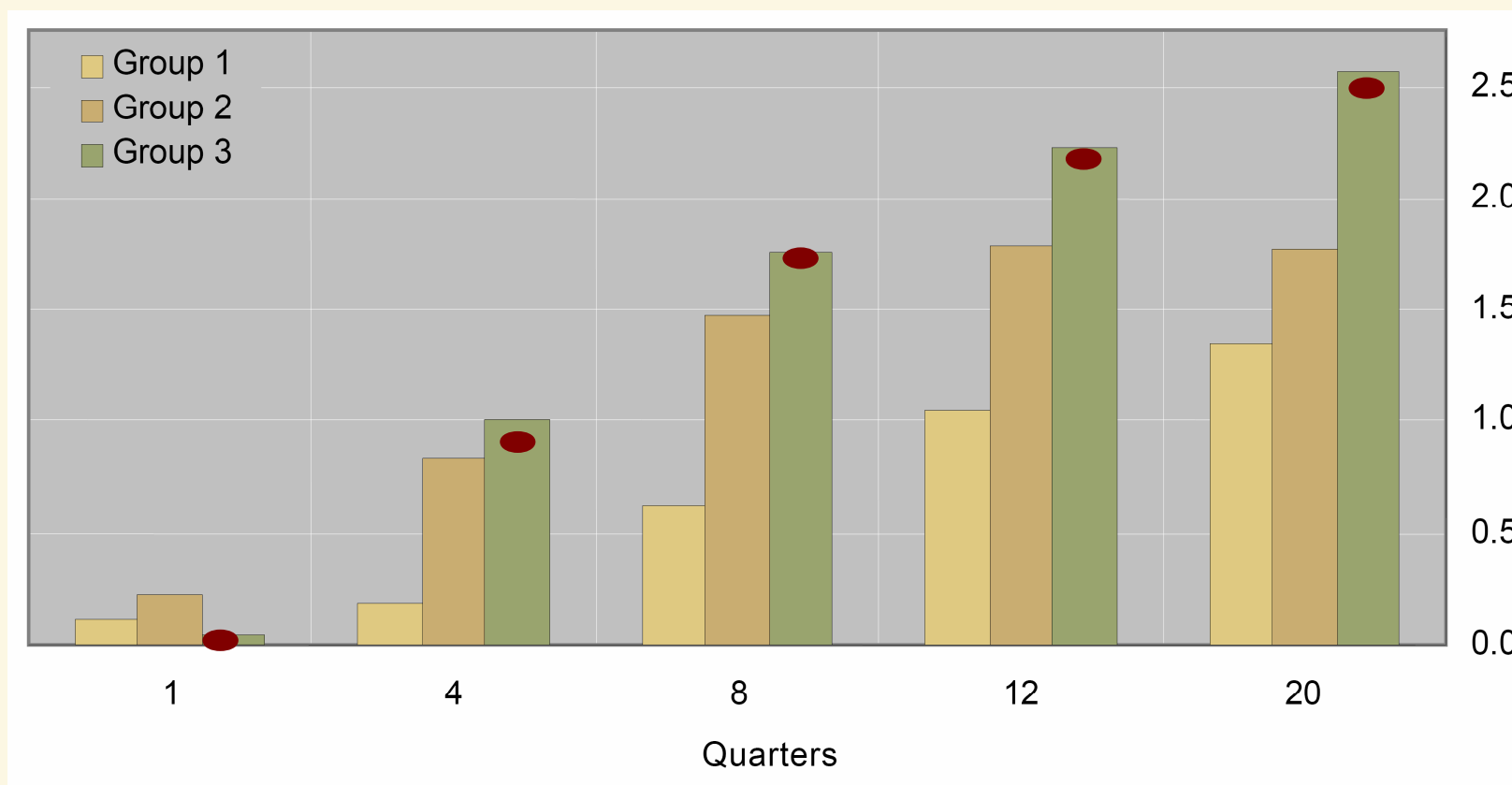


Interest rate spread to housing prices





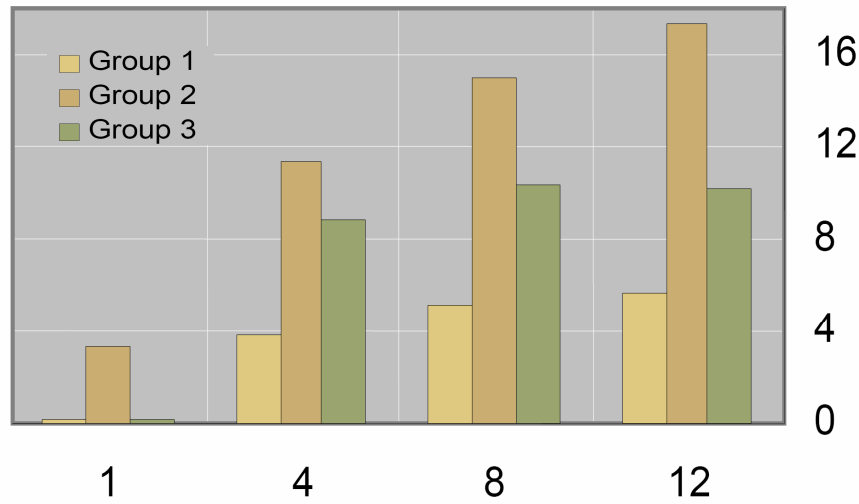
Impulse response to a change in short rate



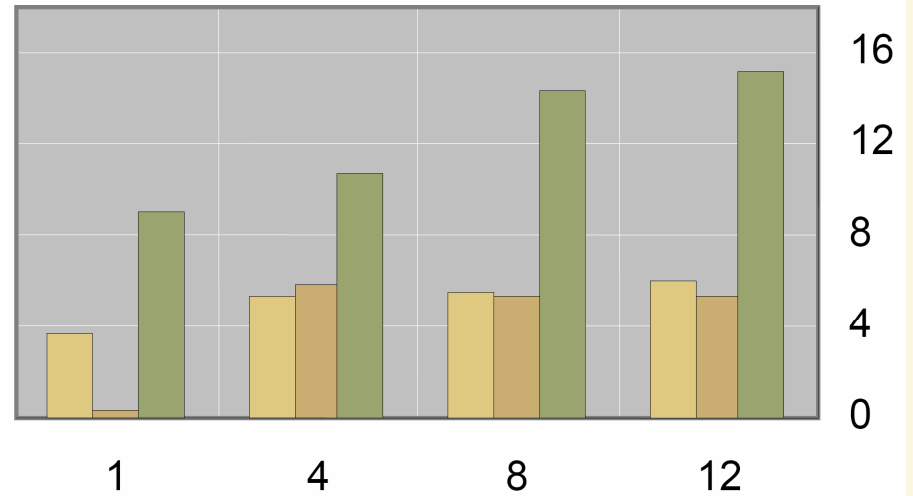


Two-way interaction with bank credit

Private sector credit to housing prices



Housing prices to private sector credit





Summary

- House prices depend on inflation, the yield curve and bank credit, but national differences in the mortgage markets also matter
- House prices are more sensitive to short-term rates when floating rate mortgage is prevalent
- The feedback effect from house prices to bank credit is the strongest in those countries with more aggressive lending practices