

1. IMF'S LATEST HOUSING MARKET ASSESSMENTS

- Housing Sector Developments in Australia and New Zealand (Regional Economic Outlook: Asia and Pacific): "The housing market in both Australia and New Zealand appears to reflect moderate overvaluation. Valuation ratios such as price to income are now above historical norms. While some of that is expected given low interest rates (allowing higher debt to be serviceable), other fundamental factors such as income per capita, interest rates, and working-age population suggest moderate overvaluation (...)", according to the IMF's latest <u>Regional Economic Outlook: Asia and Pacific</u>.
- Luxembourg (<u>Article IV</u>): "On the housing market and in light of ever rising housing prices, the authorities should explore the effectiveness of recent measures in containing risk and whether further macro-prudential measures such as limits to loan-to-value ratios in addition to those already taken in 2013 would be appropriate", says IMF's latest report.
- Malaysia (<u>Article IV</u>): "House prices are still growing but prices of high-end properties in Kuala Lumpur have declined slightly. Given the slowdown in loan growth and in housing, no further measures are recommended", according to the IMF's latest report on Malaysia.
- United Kingdom (Concluding Statement): "Macroprudential policy will need to tighten later this year if housing and mortgage markets remain buoyant. Housing and mortgage markets decelerated somewhat between mid-2014 and mid-2015 following macroprudential tightening. More recently, however, house price growth rose to more than three times income growth, and the share of new mortgages at high loan-to-income (LTI) ratios is again rising", says the IMF's 2016 Article IV Consultation Concluding Statement of the Mission.

2. CONFERENCE SUMMARY—HOUSING: MICRODATA, MACRO PROBLEMS

*This summary was prepared by Philippe Bracke (Bank of England).

On May 4-5, the Bank of England hosted the conference **Housing: Microdata, macro problems** (program here) in London, organised by Philippe Bracke (Bank of England), Jonathan Halket (Cemmap and Essex) and Lars Neshiem (Cemmap, UCL, and IFS). The conference was co-sponsored by the Bank of England, CeMMAp and the Brevan Howard Centre for Financial Analysis; it also benefitted from a Transformative Research Grant by the UK Economic and Social Research Council.

First day

Alex Brazier, director of Financial Stability at the Bank of England, gave the opening remarks. His speech stressed the importance of academic research and, in particular, micro data analysis to inform policy decisions.

Morris Davis (Rutgers Business School) started the academic presentations by talking about his research with Erwan Quintin (Wisconsin Business School) on **Default when Current House Values are Uncertain**. People's evaluation of their own house lags aggregate price trends as measured by the Case-Shiller indices. The authors construct a model based on this empirical finding to replicate aggregate default numbers in the US. The discussant *Colin Caines* (University of British Columbia) highlighted the need for having more data on who defaulted in 2007-2009 and recommended the insertion of an unemployment shock in the model.

Allen Head (Queen's University) presented **Default, Mortgage Standards and Housing Liquidity**, a joint work with Hongfei Sun (Queen's University), and Chenggang Zhou (University of Waterloo). Their quantitative model with directed housing search and mortgages, replicates the empirical association between debt level and asking price/time to sell, highlighted by the previous literature. Households' decision to sell may be triggered by either a relocation shock or a financial-distress shock. In his <u>discussion</u>, *Erwan Quintin* suggested a greater emphasis on what search models one can add (persistence/propagation of shocks) on top of standard non-search setups.

Aaron Hedlund (University of Missouri) presented **Failure to Launch: Housing, Debt Overhang, and the Inflation Option During the Great Recession**, where he sets up a general equilibrium model to evaluate the effects of an inflation increase (assuming policy makers are able to make this happen). The model predicts three effects: (1) inflation reduces the burden of debtors (standard Fisher effect); however, (2) the Fisher effect is offset by banks tightening credit to avoid a loss in profits; (3) the housing market becomes more liquid because of less indebted homeowners. The discussant *Wei Cui* (UCL) focused on the role of nominal rigidities in mortgage markets and the broader debate on the effects of monetary policy on housing markets. *Kurt Mitman* (Stockholm University) presented <u>Consumption and House Prices in the Great Recession</u>, joint with Greg Kaplan (Princeton) and Gianluca Violante (NYU). Their quantitative model allows for three kinds of shocks: credit conditions, productivity, and beliefs in future house price movements. They find that beliefs in future house price movements are the most important driver of house prices booms and busts. This is consistent with other recent papers which (a) stress the need to incorporate nonstandard house price expectations in quantitative models, and (b) admit that the credit channel is perhaps less important than we used to think. The <u>discussant Ralph Luetticke</u> (University of Bonn) suggested that the authors explore a bit more the differences in boom-bust amplitude between US states to say something more about the role of the different shocks.

Ethan Ilzetsky (LSE) presented **Interest Rates, Debt and Intertemporal Allocation: Evidence from Notched Mortgage Contracts in the UK**, co-authored with Michael Best (Stanford), James Cloyne (Bank of England) and Henrik Kleven (LSE). This paper exploits a feature of the UK housing market whereby salient LTV thresholds (such as 90%) are associated with discrete jumps in the interest rate paid (which applies to the entire loan). The authors can estimate the elasticity of intertemporal substitution by looking at how many people decide to stop below the threshold as compared with a counterfactual "smooth" LTV distribution. The <u>discussant</u> *Ben Etheridge* (Essex University) asked for more information on the dynamics in the data, in particular on the remortgaging, and equity extraction patterns.

Mariassunta Giannetti (Stockholm School of Economics) presented her work with Giovanni Favara (FED Board) Forced Asset Sales and the Concentration of Outstanding Debt: Evidence from the Mortgage Market, which addresses the question of why banks do not renegotiate more with their mortgage borrowers, since defaults are so costly. This paper shows that banks are more willing to renegotiate when they hold a higher fraction of total mortgages in a given area, i.e. when they can internalize the default externality. The discussant David Miles (Bank of England) focused on the different definitions of concentration in the mortgage market, and whether these are based on flows of new loans or the stock of outstanding mortgages.

Jonathan Halket presented his joint work with Lars Neshiem and Florian Oswald (Sciences Po) <u>The Housing</u> <u>Stock, Housing Prices, and User Costs: The Roles of Location, Structure and Unobserved Quality</u> on why some properties are more likely to end up in the rental market or the owner-occupied market. Motivated by data from the English Housing Survey, where properties are less likely to be owner occupied if they are smaller and closer to the city centre, the authors construct a selection model with observable and unobservable housing features which they bring to London properties and interpret the results through a user-cost framework.

Second day

Anthony De Fusco (Northwestern) kicked off the second day with his presentation **Homeowner Borrowing and Housing Collateral: New Evidence from Expiring Price Controls** in which he empirically disentangles the two mechanisms behind the observed relation between house prices and household indebtedness: wealth effect and collateral effect. He exploits a rule in Montgomery Country (Maryland) where people who bought houses at an affordable discounted price cannot resell their property at full market value before a certain date; up to that date, banks can only lend against the discounted price. The identification stems from the jump in collateral value at this pre-established date, and the absence of a corresponding jump in lifetime wealth. The discussant *Orazio Attanasio* (UCL) suggested that future iterations of this paper on this line of research should include a theoretical model of the mechanisms at work.

Jose Fillat (Federal Reserve Bank of Boston) presented **Portfolio Choice with House Value Misperception**, joint work with Stefano Corradin (ECB) and Carles Vergara-Alert (IESE). Similar to Morris Davis's presentation on day one, the first part of this paper collects evidence on the differences between households' reported house values and actual house price indices. This evidence is used in a model of portfolio allocation with slow information acquisition; the predictions of the model are then compared with data from the Panel Study of Income Dynamics (PSID) in the US. The discussant *Eric Smith* (Essex University) pointed out that it is difficult to exactly define misperception in a market with frictions, where one could come up with several reasons for the observed discrepancy between valuation and actual prices on top of the mechanism highlighted in the paper.

Silvana Tenreyro (London School of Economics) presented her joint work with Philippe Bracke **History Dependence in the Housing Market: Facts and Explanations**. Using all residential transactions in England and Wales in the last twenty years, this paper shows that the aggregate house price level at the time a house was purchased influence its price and selling probability today. The authors disentangle the two main mechanisms (loss aversion and down-payment effect) by separating properties bought with cash from other properties, and using information on loan-to-value ratios for the latter group. The discussant *Andreas Fuster* (Federal Reserve Bank of New York) suggested to dig more into the mortgage data (for instance, by distinguishing between firsttime buyers and other purchasers) and to use more local house price indices rather than aggregate ones.

Kyle Mangum (Georgia State University) presented **Speculative Fever: Investor Contagion in the Housing Bubble**, joint work with Patrick Bayer, and James Roberts (both at Duke University). The paper uses detailed micro data on housing transactions (including names of buyers and sellers) to check whether people living close to housing investors or investment properties are more likely to become investors themselves. The authors find evidence of the contagion mechanism that underpins many theories of bubble formation. The discussant *Florian Oswald* (Sciences Po) highlighted some of the difficulties of identifying investors in the data using names associated with multiple transactions.

Tomasz Piskorski (Columbia University) presented his joint paper with Sumit Agarwal (NUS Business School), Gene Amromin (Federal Reserve Bank of Chicago), Souphala Chomsisengphet (Office of the Comptroller of the Currency), Amit Seru (Chicago Booth) and Vincent Yao (Georgia State University) on **Mortgage Refinancing, Consumer Spending, and Competition: Evidence from the Home Affordable Refinancing Program** (HARP). The first part of the presentation contained analysis of the participation rate to HARP and its effect on durable consumption. The second part investigated why the participation rate was lower than expected and how competitive frictions in the banking market may have pushed down the overall benefits of the program. The discussant *Joao Cocco* (London Business School) focused on the convoluted political process that led to HARP and its many subsequent modifications, and on how the authors could incorporate this background information into their analysis.

Chamma Yoon (Baruch College) presented **Residential Construction Lags and the Real-Options Channel of Housing Supply**, joint with Hyunseung Oh (Vanderbilt). While many studies focus on the extensive margin of housing supply (housing starts), this paper concentrates on the intensive margin (how fast houses are completed). The data show an increase in construction lags during the housing bust and the authors build a real option model to match the facts. The discussant *Yoannis Yoannides* (Tufts University) commended the paper's focus on a poorly understood cyclical property of housing supply and suggested to derive analytical solutions from the model, which at the moment is solved computationally.

To sum up

The conference included the perfect mix of sophisticated quantitative models, great micro data, and fascinating insights from behavioural economics (expectations and misperceptions were frequently mentioned). Housing research is alive and thriving. Hopefully the next months and years will see a similar flow of new research ideas and papers, some of which helped, perhaps, by the discussions that took place in these couple of days in London.

- Upcoming Conferences: Homes uP Single-Family Homes Under Pressure? (<u>Centre for European</u> <u>Economic Research</u>) | The Future of Rural Communities: Implications for Housing (<u>Federal Reserve Board</u>)
- Cross country: Habitat III: Zero Draft of the New Urban Agenda (Habitat III) | Housing for Inclusive Cities: the economic impact of high housing costs (Global Cities Alliance) | World Bank Group Support for Housing Finance (World Bank) | Das House Kapital: The evolution of housing wealth (Vox) | Report on residential real estate and financial stability in the EU (European Systemic Risk Board) | Asian Cities Research (Savills) | Market Insights & Updates (European Mortgage Federation) | Housing Policies in Hong Kong, China and the People's Republic of China (SSRN) | Prime Global Cities Index Q1 2016 (Knight Frank) | Barclays launches first 100% mortgages since crisis (Financial Times) | Prime prices moderate but Vancouver continues to buck the trend (Knight Frank) | Macroprudential policy: Implementation and effectiveness (Brookings) | What is Different About Urbanization in Rich and Poor Countries? Cities in Brazil, China, India and the United States (NBER) | International Evidence on the Use and Effectiveness of Macroprudential Policies (Federal Reserve Bank of New York) | Breaking Ground: Chinese Investment in U.S. Real Estate (Asia Society) | Asia Pacific Property Digest 1Q 2016 (JLL) | Household debt and house prices (Mainly Macro) |
- Australia: Australia's rising household debt: should we worry? (<u>HSBC</u>) | NAB Residential Property Survey: Q1 2016 (<u>National Australia Bank</u>) | Australian state of Victoria squeezes foreign homebuyers (<u>Financial Times</u>) | The value of approvals for Chinese investment in Australian property doubles (<u>Knight</u> <u>Frank</u>) | Ciobo hoses Chinese impact on property prices (<u>MacroBusiness</u>) |
- Austria: Geneva sees prime sales strengthen in 2016 (Knight Frank) |
- Belgium: Reasonable yields for investors in Belgian property, but high transaction costs (<u>Global Property</u> <u>Guide</u>) |
- Brazil: Rental housing and the urban poor: understanding the growth and production of rental housing in Brazilian favelas (International Journal of Urban Sustainable Development) |
- Canada: House prices up 1.2% in April (<u>National Bank</u>) | Temporary Housing Stocks Rise as Residents Flee Alberta Wildfire (<u>Bloomberg</u>) | British Columbia Requires Seller Consent for Property Flipping (<u>Bloomberg</u>) | Housing starts are expected to slow in 2016 and in 2017 (<u>CMHC</u>) | Why It Is Foolish To Bet On An Epic Canadian Housing Meltdown (<u>Seeking Alpha</u>) |
- China: How to Build a Real Estate Index for an Emerging Market: the Case of Beijing (<u>University of</u> <u>Cambridge</u>) | China housing survey "Positive sentiment spreads beyond tier 1 cities" (<u>UBS</u>) | The Jump in China's Housing Starts Could Be a Huge Head Fake (<u>Bloomberg</u>) |

- Denmark: IMF Urges Action as Negative Rates Infect Danish Property Market (<u>Bloomberg</u>) |
- **Egypt:** Egypt Tries to Fix Its Housing Shortage (<u>Wall Street Journal</u>) |
- Germany: The housing market, household portfolios and the German consumer (European Central Bank)
 | German property prices to rise by up to 4 pct in 2016-experts (<u>Reuters</u>) |
- Hong Kong: Residential leasing (Savills) | Withdraw property cooling measures at the right time (Savills)
 | Goldman Cuts Hong Kong Property Seeing 20% Drop in Home Prices (Bloomberg) | So Long, Fat Expat
 Packages. Fewer Bankers in Hong Kong Get Them Now (Bloomberg) | Challenge-driven design for public
 housing: The case of Hong Kong (ScienceDirect) |
- Hungary: Hungarian housing market not overheated despite price surge (<u>Reuters</u>) |
- India: India Realty Report FY 2016 (<u>PropTiger</u>) | Realty Decoded Q4 FY'16 (<u>PropTiger</u>) | The reasons behind Mumbai's ever increasing, unaffordable home prices (<u>Quartz</u>) |
- Ireland: The Daft.ie Rental Report (<u>Daft.ie</u>) |
- Italy: Italy's house prices are still falling, but at a slower pace (<u>Global Property Guide</u>) |
- Korea: Housing Policy in the Republic of Korea (Asian Development Bank) |
- Latvia: Latvia's house prices are rising (<u>Global Property Guide</u>) |
- Malaysia: Factors Influencing the Housing Price: Developers' Perspective (<u>International Journal of</u> <u>Social</u>) |
- Malta: Surging property prices in Malta (<u>Global Property Guide</u>) |
- Mexico: Situación Inmobiliaria México (BBVA) |
- New Zealand: Box A: Initial impact of adjusted LVR restrictions (<u>Reserve Bank of New Zealand</u>) | RBNZ `Seriously Looking' at More Policies to Curb Housing Boom (<u>Bloomberg</u>) |
- Singapore: Singapore Home Sales Fall as Mortgage Curbs Cool Housing Demand (<u>Bloomberg</u>) |
- South Africa: FNB Property Barometer (First National Bank) |
- Spain: El intenso arranque del año del mercado inmobiliario se modera (BBVA) |

- Turkey: Danger Signs in the World's Top Housing Market (<u>Bloomberg</u>) |
- United Arab Emirates: Dubai/Abu Dhabi Residential Property Price Indices: March 2016 Results (<u>Reidin</u>) |
- United Kingdom: London's property woes are getting worse (the Economist) | Chancellor: UK housing crisis isn't supply problem (Reuters) | London Residential Market Outlook for Summer 2016 (Cluttons) | Property boom pushes Reuben brothers to top of rich list (Financial Times) | Greenbelt housing plans raise fears but fail to lower demand (Financial Times) | Who Wants Affordable Housing in their Backyard? An Equilibrium Analysis of Low Income Property Development (NBER) | Housing policy is hitting savers, says NIESR (Financial Times) | St Ives outlines blueprint to keep housing affordable (Financial Times) | Boris Johnson's Most Important Legacy May Be a Particular New Housing Style (Citylab) | UK prime country house sales pick up ahead of stamp duty change (Knight Frank) | Buy-to-let stamp duty rates cause 'distortion' in property market (Financial Times) | UK Residential Development Land (Savills) | Policy Response Starter Homes (Savills) | Prime Country Residential Markets (Savills) |

United States:

Working Paper: Who Wants Affordable Housing in their Backyard? An Equilibrium Analysis of Low Income Property Development (<u>NBER</u>) | Who Bears the Cost of Recessions? The Role of House Prices and Household Debt (<u>NBER</u>) | Contagious Real Estate Cycle: Case of the US Subprime Related Crisis (<u>International Real Estate Review</u>) |

Other Analysis: Regulation: 24.3 Percent of the Average New Home Price (NAHB) | Mortgage Rules Are Hurting Affordable Rentals. Here's What We Can Do (Redfin) | How to Make City Housing More Affordable (Wall Street Journal) | Housing's Role in the Slow Recovery (Federal Reserve Bank of Philadelphia) | The Role of Parental Financial Assistance in the Transition to Homeownership by Young Adults (FannieMae) | O1 2016 Cash Homebuyers Bought at an Average Discount of 23 Percent Nationwide, But Paid a Premium in 9 Percent of Markets (RealtyTrac) | Home Value Forecast: U.S. Home Prices Increase 9.02% as We Enter the Home Buying Season (Pro Teck) | Homeownership Among Asians (National Association of Realtors) | The dividing line between haves and have-nots in home ownership: Education, not student debt (Brookings) | Technology Is Changing How We Buy and Sell Homes (FannieMae) | Why Does Affordable Housing Need Saving? (JCHS) | Not All Booms Are Created Equal: Home Prices vs. Fundamentals (BBVA) | Q1 2016 Market Report: Tight Inventory, Rapid Price Growth Represent Real Headwinds for The Market's Core (Zillow) | Home Purchase Sentiment Index Increases to 83.7 in April (Fannie Mae) | Household Formation among Young Adults (Federal Reserve Bank of San Francisco) | Housing Production, Filtering and Displacement: Untangling the Relationships (University of California, Berkely) | Hints of Increased Hardship in America's Oil-Producing Counties (Federal Reserve Bank of New York) | Prepared Remarks of Melvin L. Watt Director of FHFA at 2016 Federal Home Loan Bank Directors' Conference (FHFA)

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