

## Research Assessment Exercise 2020

### Impact Case Study

University: City University of Hong Kong |  
Unit of Assessment (UoA): 21-Economics and Finance

Title of case study: Macroeconomic Aspects of the Housing Market and some Policy Implications |

#### (1) Summary of the impact

Complementary to the traditional studies of the housing market from a microeconomic approach, this project studies the macroeconomic aspects of the housing market and related policy implications. They include how the micro-level informational friction in the housing market could have macroeconomic consequences, and how we should read commonly used metrics such as the price-rent ratio, and the turnover rate of the housing market. The project sheds light on the design of macro-prudential policies for financial stability. |

#### (2) Underpinning research

Conventionally, the studies of housing market employ partial equilibrium analysis, which tends to take some prices as given to focus on other phenomena in the housing market. However, the "bubble burst" experience of Japan, the Asian Financial Crisis (AFC) and the recent Global Financial Crisis (GFC) all point to the direction that it is indeed essential to understand the endogenous movement of house prices and how these movements interact with other macroeconomic and financial variables. Thus, many authors instead adopt a general equilibrium approach, as reviewed by Leung and Ng (2018).

This project contributes to the literature in the following ways. First, Leung and Ng (2018) carefully examine some "stylized facts" of the housing market and find that many of them have indeed changed after the GFC. Since many theoretical models are constructed to mimic those stylized facts, the "change of facts" may also demand a "change of theories." Second, regarding the housing market, we carefully examine what questions have been addressed and what is still unsettled. Leung (2017), Leung and Chen (2017) provide some brief reviews. Leung and Ng (2018) identify several active research areas related to the housing market, including the interactions between the housing market and (a) the bankruptcy or foreclosure cases, (b) the beliefs about the future movements of the housing market (which are not directly observable), (c) the urban development, and (d) the human capital formation. Third, we study how the informational friction at the micro-level can have aggregate implications. For instance, in Leung and Tse (2017), we consider both buyers and sellers in the housing market are subject to some informational frictions, and how the entry of "investors" or "speculators" could change the market dynamics. We find that with plausible parameter values, we can have multiple equilibriums. In other words, slight changes in economic fundamentals, or a change in "beliefs, could lead to a large swing in the equilibrium house price and trading volume. We also find that the extent of the participation of investors or speculators is sensitive to the interest rate in a non-linear manner: over some range of interest rate, their participation, and the equilibrium price is almost invariant to the change of interest rate. However, over some other range of interest rate, the market participation of the speculators, as well as the equilibrium prices and trading volumes, are very sensitive to slight change in the interest rate. It implies that central bankers who attempt

to "fine-tune" the interest rate to achieve the financial stability need to operate cautiously. Huang et al. (2018) adopt a similar framework and find that it is indeed vital to treat the rent-price ratio and the turnover rate, which are often used as indicators for housing market mispricing, as jointly determined in the equilibrium, and they provide empirical evidence that overlooking such co-determination relationship would lead to significant bias in our measurement of both variables." |

### (3) References to the research

- i. Huang, D., C. K. Y. Leung and C. Y. Tse, 2018, What account for the differences in rent-price ratio and turnover rate? A search-and-matching approach, *Journal of Real Estate Finance and Economics*, (Oct.) 57(3), 431-475.
- ii. Leung, C. K. Y., 2017, Special issue on housing and financial stability: an introduction, *Pacific Economic Review*, 22, 273-275.
- iii. Leung, C. K. Y. and N. K. Chen, 2017, A special issue on housing, credit markets, and the marcoeconomy: an introduction, *Taiwan Economic Review*, 45 (1), 1-3.
- iv. Leung, C. K. Y. and J. C. Y. Ng, 2018, *Macro Aspects of Housing*, circulated as working paper #340, Globalization and Monetary Policy Institute, Federal Reserve Bank of Dallas; now under review.
- v. Leung, Charles Ka Yui and Chung-Yi Tse, 2017, Flipping in the housing market, *Journal of Economic Dynamics and Control*, 76, 232-263. |

### (4) Details of the impact

|We have participated in the organization of the Asian Real Estate Society Meeting, especially in the 2017 AsRES-AREUEA meeting being held at Taichung.

We also edited two special issues related to the macroeconomic aspects of housing, one in *Taiwan Economic Review* and one in *Pacific Economic Review*. Both issues were published in 2017.

We organized a workshop with the Hong Kong Institute of Monetary Research (HKIMR) on housing and financial stability, in August 2016. Among many excellent speakers, Professor Richard Green from USC, who has served as a senior advisor of the Department of Housing and Urban Development (HUD) of the Federal Government of the United States, presented one of the keynote speeches. His and other sessions drew participants from not only academia but also different central bank representatives, practitioners from financial intermediations and real estate firms. |

### (5) Sources to corroborate the impact

- i. |The AsRES meeting has been mentioned in the Taichung city document.
- ii. Special issue on Housing Credit Market Macroeconomy has been published and available on web.
- iii. [Special issue on housing and financial stability](#) has been published and available on web.
- iv. <https://onlinelibrary.wiley.com/journal/14680106>
- v. Program of Conference on Real Estate and Financial Stability