List of Working Papers and Publications (as of January 29, 2015)

508 "Overview of Real Estate Law in the United States and China," Katherine A. Pancak, Proceedings of the International Conference on Residential Housing Policy, Shenzhen China, 2013. This study compares China's evolving real estate law with the United States' established real estate law. While most land in the United States is privately owned, traditionally land in China has been publicly owned by government or agricultural collectives. A 1988 amendment to the P.R.C. Constitution provided for the recognition of private land use rights. Unlike the United States, private land use rights in China are limited in duration to 70 years for residential property and 40-50 years for commercial, industrial, and other types of property. Other real estate differences are explored, including transfer processes, government limitations, expropriation (eminent domain) procedures and compensation, and sources of government revenue.

507 "The Impact of REIT Withholding Taxes on REIT Investors and Managers," Katherine A. Pancak, Douglas Shackelford, and Margot Howard, working paper 2014. Exploiting a 2004 reduction in a unique capital gains withholding tax for foreign investors in U.S. REITs, we explored both the responsiveness of real estate investors to changes in their own taxes and the responsiveness of real estate managers to changes in their investors' taxes. We found that both foreign investors and REIT managers responded to the tax change. This is consistent with taxes both restricting the flow of foreign capital into U.S. REITs and affecting the management of their properties. To our knowledge, it is the first paper documenting that U.S. managers change their U.S. operations in response to the tax positions of foreign investors. This work should spur further study of the interplay between real estate and income taxes, the role of taxes on foreign portfolio investment, and the role of taxes on real managerial choices. It also should aid policymakers who are considering further relaxing the discriminatory tax treatment for foreign investors in U.S. real estate.

506 "Variation in the Relationship between Local House Prices and Rents," Katherine A. Pancak, working paper 2014. The price-rent ratio is commonly used as an indicator of housing value. New big data sources remove previous technical limitations on ratio construction and use, providing sub-metro-level information on a monthly basis at the town, neighborhood and zip code levels. This study explores the new data and uses it to explain the significant variation in price-rent ratios found across local markets. Results indicate that local variation in price-rent ratios is correlated with local property tax rates, household income, and age. This work should encourage further study on cross-market ratio analysis, as well as the development of sub-metro-level indices to more effectively determine when a specific local market may be under- or over-priced.

505 "Interpolating Residential Land Prices and Airport Infrastructure Impacts: An Application Using Local Polynomial Regressions," Jeffrey P. Cohen, Cletus C. Coughlin, and John M. Clapp, working paper 2014. Airports facilitate many economic activities and likely affect the value of many resources, including land. Using residential home sales in Denver during 2003-2010, we use an innovative approach – Local Polynomial Regressions – to separate the value of land from the value of structures. Next, for the years in which a property was not sold, we interpolate land values for each property in our sample in each year. To assess the accuracy of our interpolations, we perform a within-sample forecasting exercise and determine that the Normalized Root Mean Squared Error is approximately 0.4%. Finally, we estimate the impacts of changes in airport infrastructure improvements on land values. We find that airfields, terminals, parking, and intermodal transportation lead to higher land values in the short-run, while "other" airport infrastructure lead to lower land values. We find similar results with a longer-run perspective in terms of the signs and significance of each of these airport capital stock variables.

504 "REAL ESTATE SECTOR MORE RESPONSIVE TO ECONOMY-WIDE OR HOUSING MARKET CONDITIONS? Giaccotto, C., Bates, L. J., Santerre, R. *Journal of Real Estate Finance and Economics*, Under review - advanced. Date Submitted: May 22, 2014.

503 "The Demand for Municipal Infrastructure Projects: Some Evidence from Connecticut Towns and Cities;" Santerre, R., Bates, L. J.; *Public Finance Review.* Accepted: February 5, 2014.

502 "Functional Regression: An Application to Housing Valuation. John P. Harding and Tao Chen (University of Waterloo). Working paper 2014. Under Review. *Journal of Applied Econometrics.* Hedonic models are widely used to make quality adjustments when estimating price changes for various products in calculating inflation indices such as the Consumer Price Index. In housing, hedonic models and repeat sales indices are commonly used to investigate house price changes, the effects of nearby amenities and negative externalities and related housing policy issues. Almost all such models assume the underlying shadow prices for product characteristics are constant. Functional regression relaxes that assumption and enables us to estimate attribute prices as functions of time. We apply functional regression to estimate the full path of changes in housing attribute prices between 1985 and 2011 in Chicago, IL. We confirm earlier evidence of time-varying coefficients for two key house characteristics and further show that the changes are well represented by low order polynomial functions.

501 "Homeowner-Entrepreneurs, Housing Capital Gains, and Self-Employment," John Harding and Stuart S. Rosenthal (Syracuse University). Working paper 2014. Revise and Resubmit. ***Journal of Urban Economics.*** Using individual-level data from the 1985-2011 American Housing Survey panel, this paper confirms that housing capital gains encourage transitions into self-employment. Additional findings suggest that this occurs at least in part because homeownership provides an accessible source of *potential* financing that serves as a form of insurance for aspiring homeowner-entrepreneurs. The link between homeownership and self-employment is also stronger for older homeowners who are wealthier and typically have more latitude to take on discretionary mortgage debt to finance an investment. Overall, our results provide support for arguments in previous studies that personal wealth and access to credit are important drivers of self-employment. Our findings also provide a new justification for longstanding government support for homeownership: homeownership encourages self-employment.

500 "Liquidity and Corporate Governance: Evidence from Family Firms," working paper 2014. Liang Fu, Ran Lu-Andrews, and Yin Yu. We investigate the link between liquidity (i.e. corporate liquidity and stock liquidity) and corporate governance in the context of family firms. Focusing on S&P 500 firms, we find that family firms are more conservative in their investment decisions by hoarding more corporate liquid assets (as measured by accounting balance sheet liquidity ratios) than their peer nonfamily firms. These family firms also exhibit higher level of stock liquidity and lower liquidity risk as measured by turnover, LM12 proposed by Liu (2006), and PS-Gamma proposed by Pastor and Stambaugh (2003) than nonfamily firms. Our results are consistent with the motivation that organizations (i.e. family firms in our study) with better quality of corporate governance are associated with higher level of corporate liquidity and stock liquidity, and lower level of liquidity risk. We show reassuring evidence that there is a positive relation between liquidity and corporate governance. These main findings provide further proof that family firms experience less severe agency conflicts between managers and shareholders.

499 "The Profitability Premium in Real Estate Investment Trusts," working paper 2014. John L. Glascock and Ran Lu-Andrews. In this study, we examine, within the confines of valuation theory, the cross-sectional return predictability for one specific industry: real estate investment trusts (REITs). Inspired by Novy-Marx (2013), we propose gross profit, as measured by total revenue net of total expenses scaled by total assets, to be a predictive factor for REIT cross-sectional returns. We find that REIT firms with high profitability have higher returns than those with low profitability. We also find that gross profit remains significant even after we control for size, book-to-market and momentum.

498 "Retail Agglomeration and Competition Externalities: Evidence from U.S. Multiline Department Stores," John M. Clapp, S. L. Ross, T. Zhou. Journal TBD. In Preparation; Not Yet Submitted. Expected Date of Submission: October 2014.

497 "Real Estate Assets, Markets and Investor Information," John L. Glascock. ***International Journal of Managerial Finance.*** **Accepted February 1, 2014.**

496 "International Direct Real Estate Risk Premiums in a Multi-factor Estimation Model," John L. Glascock, David Ho, and Kwame Addae-Dapaah. ***Journal of Real Estate Finance and Economics.*** **Revision Submitted: May 10, 2014. Acceptance on May 29, 2014.**

495 "Effects of Land Allocation and Utilization on the Affordability for Poor and Middle Class Clientele in the USA," John L. Glascock. ***China Land Sciences,*** **Vol. 27, No. 9, 2013 (September). Accepted late summer 2013.**

494 "Do Laws Influence the Cost of Real Estate Brokerage Service Laws? A State Fixed Effects Approach," Katherine Pancak, John M. Clapp, A. Nanda. Journal TBD. In Preparation; Not Yet Submitted.

493 "The Price Behavior of REITs surrounding Extreme Market-related Events," John L. Glacock and Ran-Lu Andrews. Under Review. Date Submitted: April 4, 2014. We examine REIT behavior around extreme market price occurrences. In general, we find that REITs that have higher liquidity and are larger in size tend to impound information more quickly and reverse more speedily after an extreme event. Also, we find that Equity REITs have stronger liquidity effects and Mortgage REITs have more size effects. Exante beta is also useful in explaining price behavior. For example, pre-betas are significantly positively related to turnover ratios; while pre-event betas are negatively associated with quoted bid-ask spreads. This implies a high-beta, high-liquidity relation among REIT stocks. We also show that large REIT stocks have high pre-event betas. Overall, the most dominant effects are liquidity and size in explaining price movements around extreme market events for REITs.

492 "Locations of New Anchor Stores within Metropolitan Areas," J. M. Clapp and T. Zhou, ***Regional Science and Urban Economics.*** **Under Review – advanced. Revise and Resubmit, 60. Date Submitted: December 2013.**

491 "An Examination of Macroeconomic Effects on the Liquidity of REITs," John Glascock and Ran Lu-Andrews, ***Journal of Real Estate Finance and Economics.*** **Published online: March 16, 2013.** In this research, we investigate the effects of changes in and levels of selected macroeconomic variables on the liquidity of Real Estate Investment Trust (REIT) stocks.

We study in particular REIT market trading liquidity and REIT funding liquidity. We use debt service coverage ratios, loan-to-value ratios and the number of loans on commercial commitments as proxies for the funding liquidity of REITs. We use Amihud Illiquidity measurement and Turnover Ratio measurement to estimate REIT market trading liquidity. Our results are fourfold: one, funding liquidity is influenced by changes in macroeconomic factors; two, macroeconomic effects are different across phases of the business cycle; three, funding liquidity is significantly positively related to REIT market liquidity (this is supportive of Brunnermeier and Petersen's Review of Financial Studies, 22:2201-2238 (2009) findings); and four, these effects vary across economic regimes. A key outcome of this work is that increases in debt to equity reduce market liquidity for REIT stocks.

490 "The Impact of Principal Forgiveness and Loan Modification," Harding, J.P.; Rosenthal, S.S.; Li, J. ***American Economic Review*****. In Preparation; Not Yet Submitted.**

489 "Homeowner-Entrepreneurs, Housing Capital Gains, and Self-Employment," Harding, J.P.; Rosenthal, S.S.; ***Review of Economics and Statistics*****. In Preparation, Not Yet Submitted. Expected Date of Submission: October 31, 2013.**

488 "Changing Tastes: Estimating Changing Attribute Prices in Hedonic and Repeat Sales Models" John P. Harding and Tao Chen (University of Waterloo). Working paper 2014. ***Journal of Real Estate Finance and Economics*****.** Repeat sales indices are commonly used to estimate the trend in house prices. Two assumptions are made when estimating these indices: 1) that the house characteristics are unchanged between observed sales and 2) that the underlying shadow prices for those attributes are constant or change proportionally. The second assumption is the focus of this paper. First, using data from the American Housing Survey, we show that certain attribute prices in Chicago changed disproportionately between 1985 and 2011. These results confirm earlier reports of changing tastes and attribute prices. We show that such changes can be approximated with a low order polynomial functional form. When attribute prices change, the standard repeat sales estimate of price changes is a complex weighted geometric average of individual house price changes. Because the weights change with the mix of transactions observed in a given time period, the resulting price index reflects both price changes for specific houses and changes in the mix of transactions and can give misleading signals about house price changes. We find that a simple extension of the standard repeat sales methodology can be used to test for and estimate changes in characteristic prices attributable to changing tastes. Our results are of interest to all users of repeat sales indices, but especially those portfolio investors interested in using an index to estimate current values of homes securing loans in their portfolio to help manage delinquencies and defaults.

487 "Liquidity, Price Behavior and Market-Related Events," John L. Glascock with Ran Lu-Andrews. Under review at ***Review of Quantitative Finance and Accounting.*** **Submitted February 12, 2014.** In this research, we investigate price behavior of stock market portfolios sorted by liquidity and/or size surrounding market-related events. Three liquidity measures are used (Amihud illiquidity measure, turnover and adjusted ILLIQ). Amihud illiquidity measure is the ratio between the absolute value of the daily stock return and the daily dollar trading volume. Turnover is measured by the ratio between the daily trading volume and the shares outstanding. Adjusted ILLIQ is based on Amihud illiquidity measure, considering the non-trading effect on stock liquidity. We also sort the portfolios by size (measured by market capitalization). The outcomes suggest that large, liquid stocks react in a stronger manner to market-related shocks—they also experience a faster reversal following the shocks than do illiquid and small stocks. Our hypothesis is that large liquid stocks are more market related (with betas closer to or larger than one) while small illiquid firms tend to not be strongly market related (betas of less than one). The findings support this view. Additionally, we find that small illiquid stocks have more idiosyncratic risk (as measured by the variance of the error term) than large liquid stocks. Overall, the results suggest that size and liquidity seem to identify the market relatedness of firms.