The May 2019 programs of the Hoyt Fellows and Weimer School were very nicely organized by Keven Lindemann (SNL Financial) for the Hoyt Fellows, and by Brent Ambrose (Pennsylvania State University), for the Weimer School Fellows.

May 2019 Hoyt Fellows Program

This year’s theme was “This Cycle Gets More and More Interesting” and was broken into four topics. The first topic was Debt Capital is All the Rage and featured the following presentations: "Tracking Debt Capital," with Hoyt Fellow Bob White (Real Capital Analytics) and "Does CLO Rhyme with CDO? How an Overleveraged Corporate America Might Hit a Rough Patch, and What Happens to Real Estate as a Result," with Hoyt Fellow Hans Nordby.

The second topic was Going Off Pitch featuring: "Variance in US Land Regulation and Impacts on Housing Supply and Affordability: Results from a National Survey," with Hoyt Fellows Paige Mueller (Eigen10 Advisors LLC) and Norm Miller (University of San Diego) and "Opportunity Zones: What it Means and Where’s the investment Going?" with Hoyt Fellows Bob White (Real Capital Analytics) and Doug Prickett (Strongside Financial Group).

The third topic focused on Nearing End of Cycle Topic and featured a presentation by Jeff Fisher (Homer Hoyt Institute) on "Risk Adjusted Performance Attribution: It’s Time to Start Paying Attention Again."

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The fourth topic was **Structural Change** featuring the following presentation by invited guest speaker, **Andrea Chegut**, "Technology: What the Advent of New Technology Means for CRE." A lively discussion and debate ensued on the impacts of technology on CRE. The session wrapped up with an open group discussion on "What Do We Mean by "Big Data?"

At its annual meeting, The Hoyt Fellows welcomed new member **Doug McCoy** (Indiana University) *(pictured to the left)*. Doug is the Al and Shary Oak Director of Real Estate as well as Director of the Center for Real Estate Studies at the Kelly School of Business at Indiana University. In addition, he is a Senior Lecturer of Finance at the University.

*May 2019 Hoyt Fellows Meeting (Cont.)*

The fourth topic was **Structural Change** featuring the following presentation by invited guest speaker, **Andrea Chegut**, "Technology: What the Advent of New Technology Means for CRE." A lively discussion and debate ensued on the impacts of technology on CRE. The session wrapped up with an open group discussion on "What Do We Mean by "Big Data?"

The session was well attended by over 40 participants and focused on the topic of "New Data and Tools in Real Estate Research." Following an introduction by the chair of May's session, **Brent Ambrose**, Friday's portion of the session featured the following presentations and speakers: "The Odd One Out: Asset Uniqueness and Price Precision," (Thies Lindenthal, University of Cambridge); "The Value of Design: A Geometric-Geospatial Approach to Asset Pricing, (Andrea Chegut, MIT); "Innovations for Rapid Evaluation of Development Feasibility for Multi-Family Housing," (Paul Waddell, University of California, Berkeley); "Integration of Funding and Market Liquidity in Real Estate: International Evidence," (Dorinth van Dijk, De Nederlandsche Bank N.V.); "Information Value of Property Descriptions: A Machine Learning Approach," (Lily Shen, Clemson University).

Saturday's topic was **Discrimination in Real Estate Markets** and featured the following presentations and speakers: "Consumer Lending Discrimination in the FinTech Era," (Nancy E. Wallace, University of California, Berkeley); "Preferential Treatment in Financial Contracts: Does Borrower and Broker Race Affect Mortgage Prices?" (James Conklin, University of Georgia); "Do Minorities Pay More for Mortgages?" (Neil Bhutta, Board of Governors of the Federal Reserve System), and "The Long Run Effects of de jure Discrimination in the Credit Market: How Redlining Increased Crime," (John Anders, Texas A&M University). The session wrapped up with a brainstorming session for all attendees.
The 2019 January session featured a full class of six Weimer School Fellows, two postdoctoral Honorees and a new Halbert C. Smith Honorary Fellow!

Fellows and their presentations from Friday include: "The Housing Price Premium Associated with Charter Schools," (William Hardin, Florida International University); "Cross-Sectional Variation in Title Insurance Rents," (Michael Eriksen, University of Cincinnati); and "Housing Supply and Affordability," (Raven Molloy, Board of Governors of the Federal Reserve System). The final presenter of the day on Friday was the 2019 Halbert C. Smith Honorary Fellow, Jack Guttentag, with his presentation on "Role of Real Estate in Retirement."

Saturday’s portion of the session featured the following Fellows and their presentations: Jacob Sagi (UNC at Chapel Hill) with "Monetary Policy & Commercial Real Estate Price Dynamics;" Marc Francke (University of Amsterdam) with "The Impact of the Time to Close on Residential Transaction Prices;" and Vicki Been (New York University) with "Does the Fair Housing Act Require Anti-Displacement Measures in Gentrifying Minority Neighborhoods."

Sunday featured the Postdoctoral Honorees and their presentations. Eva Steiner (Cornell University) was first with "Quantitative Easing and Financial Institution Growth and Risk-Taking," followed by Thies Lindenthal (University of Cambridge) with his presentation entitled "Observing the Seemingly Unobservable: Unique Assets, Quality Uncertainty and Noisy Prices."

Summaries of presentations from those who provided them can be found on page 4-6.
Dr. Jack Guttentag is a Professor Emeritus of Finance (formerly Jacob Safra Professor of International Banking) from The Wharton School at the University of Pennsylvania. Prior to that, Jack was Chief of the Domestic Research Division of the Federal Reserve Bank of New York. His long and productive career includes a position on the senior staff of the National Bureau of Economic Research, as well as position as managing editor for both The Journal of Finance and the Housing Finance Review. Jack founded GHR Systems, Inc. in 1985. This company developed a nationwide electronic network that lenders used to deliver complex mortgagee information quickly to loan-officer employees, mortgage brokers and consumers using the internet. We are honored to welcome Jack as our 2019 Halbert C. Smith Honorary Fellow!

Presentation Summaries from January and May Sessions

"Integration of Funding and Market Liquidity in Real Estate: International Evidence"
Dorinth van Dijk
(De Nederlandsche Bank N.V.)
Presented at May 2019 WS Session

We document strong co-movement in market liquidity across different regional markets within the same asset class and country. For this purpose we estimate a liquidity metric based on the difference of reservation prices between buyers and sellers for different markets. We examine the co-movement in market liquidity for commercial real estate markets in the US, UK, and The Netherlands, as well as for residential real estate in the UK and The Netherlands. We find that changes in market liquidity tend to co-move stronger than asset returns in most markets. Additionally, the results suggest that reservation prices of buyers and sellers tend to lie closer to each other in residential real estate compared to commercial real estate. This reflects that there are many owner-occupiers active in the residential market, which implies that buyers are simultaneously sellers. We further provide robust international evidence that changes in funding liquidity (i.e. the tightness of credit standards) are major drivers of strong co-movements in market liquidity.

"Does CLO Rhyme with CDO?"
Hans Nordby
(2007 Hoyt Fellow)
Presented at May 2019 Hoyt Fellows Mtg.

Commercial real estate capitalization rates are subject to capital flows and investor sentiment, both of which drive risk premia. The current economic environment is similar to the pre-2008 period in that we have seen an expansion in structured fixed income products such as collateralized loan obligations (CLOs) and leveraged loans with much looser lending covenants than those loans made from 2010 to 2014, in the wake of the last recession. This paper builds on previous literature that shows commercial real estate capitalization rates are driven by capital flows and the broader debt market, and we posit outcomes for an adverse shock to capital flows.
School quality and housing have been shown to be related in much of the existing literature. However, even such a broad statement is open to debate. This is due to methodology, data, classification of variables, small sample sizes, jurisdictional issues, type of school investigated, demographics, school quality signal and the complexity of residential price modeling. There are some very good studies while the question continues to arise as to how school quality is signaled to the market and what measures are related to school quality. Our research addresses some of these issues, but also has similar limitations. The focus is on charter schools.

Jeff Fisher discussed a proposed methodology to extend traditional Brinson attribution analysis to incorporate adjustment for differences in risk between a manager’s portfolio or fund and a benchmark. Risk-adjusted performance attribution can give us a quite different interpretation of which sectors contributed to better or worse performance relative to the benchmark. Traditional attribution analysis could result in a manager appearing to have done well in a sector where the higher return relative to the benchmark was just due to investing in riskier properties or allocating more of the portfolio to a riskier sector and vice versa. The risk adjustment requires adjusting each of the sectors in both the manager’s and the benchmark portfolio to have the same level of risk. The presentation illustrated several theoretically correct ways of doing the risk adjustment including the use of regular beta and so called Fama beta that does not require the assumption that the manager has a well-diversified portfolio. The risk adjusted attribution analysis was demonstrated using actual but masked fund data compared to the NCREIF Open End Diversified Core (ODCE) benchmark data.

Jeff Fisher (Homer Hoyt Institute)

"Risk Adjusted Performance Attribution: It's Time to Start Paying Attention Again."

We test whether quantitative easing (QE) influences financial institution growth and risk-taking by studying Agency Mortgage REITs (MREITs) which almost exclusively hold Agency MBS. Their investment focus and lack of credit risk exposure allow us to examine whether QE influences the investment opportunities and financing choices of these institutions. We document that the Federal Reserve’s QE-related purchases of Agency MBS lead to a significant contraction in Agency MREITs, an increase in leverage, and concurrent reduction in liquidity and interest rate risk exposure, consistent with QE-induced portfolio rebalancing and a limited net effect on financial risk taking of these institutions.

Eva Steiner (Cornell University)

"Quantitative Easing and Financial Institution Growth and Risk-Taking"

School quality and housing have been shown to be related in much of the existing literature. However, even such a broad statement is open to debate. This is due to methodology, data, classification of variables, small sample sizes, jurisdictional issues, type of school investigated, demographics, school quality signal and the complexity of residential price modeling. There are some very good studies while the question continues to arise as to how school quality is signaled to the market and what measures are related to school quality. Our research addresses some of these issues, but also has similar limitations. The focus is on charter schools.

William G. Hardin (Florida International University)

"The Housing Price Premium Associated with Charter Schools"

Presented at May 2019 Hoyt Fellows Mtg.

"Consumer Lending Discrimination in the FinTech Era"

Nancy Wallace (University of California, Berkeley)

"Consumer Lending Discrimination in the FinTech Era" (Continued on page 6.)

Discrimination in lending can occur either in face-to-face decisions or in algorithmic scoring. We provide a workable interpretation of the courts’ legitimate-business-necessity defense of statistical discrimination. We then estimate the extent of racial/ethnic discrimination in the largest consumerlending market using an identification afforded by the pricing of mortgage credit risk by Fannie Mae and Freddie Mac. We find that lenders charge Latin/African-American borrowers 7.9 and 3.6 basis points more for purchase and refinance mortgages respectively, costing them $765M in aggregate per year in extra interest. FinTech algorithms also discriminate, but 40% less than face-to-face lenders. (Continued on page 6.)
These results are consistent with both FinTech and non-FinTech lenders extracting monopoly rents in weaker competitive environments or profiling borrowers on low-shopping behavior. Such strategic pricing is not illegal per se, but under the law, it cannot result in discrimination. The lower levels of price discrimination by algorithms suggest that removing face-to-face interactions can reduce discrimination. Further silver linings emerge in the FinTech era: (1) Discrimination is declining; algorithmic lending may have increased competition or encouraged more shopping with the ease of platform applications. (2) We find that 0.74-1.3 million minority applications were rejected between 2009 and 2015 due to discrimination; however, FinTechs do not discriminate in loan approval.

"Preferential Treatment in Financial Contracts: Does Borrower and Broker Race Affect Mortgage Prices?"

James Conklin
(University of Georgia)
Presented at May 2019 Weimer School Session

We test for preferential treatment in financial contracts using mortgage data that allows us to observe the race and ethnicity of both parties to the contract. We find that minorities pay over 7 percent ($400) more in fees than similarly qualified whites when obtaining a loan through a white broker. The premium is even larger (10 percent) when the broker is also a minority. We show that the results are consistent with statistical discrimination. We also examine recent policy changes regarding broker compensation rules that may reduce these price disparities, but may also limit access to credit for minorities.

"Cross-Sectional Variation in Title Insurance Rents"

Michael Eriksen
(University of Cincinnati)
Presented at January 2019 Weimer School Session

Borrowers of federally related mortgage loans are required to purchase insurance to indemnify lenders in case of title deficiencies. $14.5 billion were paid to title insurers as premiums in 2017 and those insurers incurred $502 million (3.5%) in claims. In this paper, we use a novel data series of closing costs of 927,763 loans originated in 2017 and 2018 to investigate variation in title insurance premiums across and within states. Significant variation exists across states in the regulation of title insurance premiums, where they are unregulated in 8 states, but set directly by regulators (i.e., promulgated) in 3 states (Texas, Florida, and New Mexico). Premiums were estimated to be 36% higher in promulgated than unregulated states after controlling for the purchase price, loan amounts, and state-aggregate losses incurred by title insurers in the previous year. There was no evidence that premiums were higher in states with less market concentration of title insurers.

Colleagues in the News

Steve Bourassa (2012 Weimer Fellow) and Martin Hoesli (2011 Weimer Fellow) won the RICS best paper award at the 24th annual Asian Real Estate Society conference in Shenzhen (China) in July of 2019. The title of the paper is "Heterogeneous Households and Market Segmentation in a Hedonic Framework". The paper is co-authored with Martijn Dröes (University of Amsterdam).

John Clapp (WS Faculty Member) has changed his status at the University of Connecticut to Emeritus Professor. He now has affiliations with two other organizations: he is a 2019-2020 Lincoln Institute Fellow and has a Fellowship for 2019-2020 with the Real Estate Research Institute.

Don Epley (1993 Weimer School Fellow) was awarded the 2018 Service Award given by the Appraisal Journal, which is published by the Appraisal Institute, Chicago. He is a member of the Academic Review Board.
The January 2020 session of the Weimer School will be held at our North Palm Beach, Florida campus on Friday, January 17 through Sunday, January 19, 2020. Email invitations will be sent in November of 2019. The 2020 Class of Weimer School Fellow candidates will present and discuss their research Friday and Saturday of the sessions. The 2020 candidates are: Leah Brooks (The George Washington University), Jeff Cohen (University of Connecticut), Stephen Billings (University of Colorado), Georgette Phillips (Lehigh University), Jiro Yoshida (The Pennsylvania State University), Gabriel Ahfeldt (London School of Economics) and Roland Füss (University of St. Gallen). The 2020 Halbert C. Smith Honorary Fellow is Yannis Ioannides (Tufts University). The 2020 Postdoctoral Honorees will present on Sunday, January 19th. They are: Leah Platt Boustan (UCLA), Alex van de Minne (MIT) and Maisy Wong (University of Pennsylvania).

We hope you will be able to join us!

Homer Hoyt Institute (HHI) Events and Awards

2019 AREUEA Breakfast
HHI sponsored its annual breakfast on Saturday, January 5, 2019 for invited guests at the 54th annual AREUEA-ASSA conference. This year's conference was held January 4-6 at the Hilton Atlanta Hotel in Atlanta, GA. The breakfast was attended by about 20 people.

AREUEA Dissertation Awards
The Homer Hoyt Institute (HHI) provides AREUEA dissertation awards annually in honor of Dr. Maury Seldin. Recipients are chosen by an AREUEA committee and announced at the AREUEA Presidential luncheon. The recipients of the 2019 award are: Darren Aiello (Brigham Young University), Daniel Garcia (Board of Governors of the Federal Reserve System) and Sophia (Sonia) Gilbukh (Baruch University).

ARES Awards
The "Best" paper on innovative thinking, better known as the "Thinking Out of the Box" award was presented at the April 2019 ARES meetings. The 2019 winning paper was entitled "Toxic Assets: How the Housing Market Responds to Environmental Information Shocks," by Jeremy G. Moulton (UNC at Chapel Hill); Nicholas J. Sanders (Cornell University); and Scott A. Wentland (Bureau of Economic Analysis). The best paper published in the Journal of Real Estate Research in 2019 was awarded to Xun Bian (Longwood University) Zhengu Lin (Florida International University), and Yingchun Liu (University of North Texas) for their paper entitled "Bargaining, Mortgage Financing and Housing Prices."

Asian Real Estate Society (AsRES) Awards
The "Best Paper" award sponsored by The HHI was presented at the annual AsRES International Conference Conference held on July 7-10, 2019, in Shenzhen, China. The winning paper was "Human Capital Externalities or Consumption Spillovers? The Effect of High-skill Human Capital across Low-skill Labor Markets" by Shimeng Liu and Xi Yang of Jinang University, Guangzhou, China.
Homer Hoyt Institute
2020 Winter - Spring Calendar of Events

JANUARY 2020
Homer Hoyt Institute
January Weimer School Session
January 17-20, 2020
Hoyt Center
760 US Highway 1, Ste. 300
North Palm Beach, FL

MAY 2020
Homer Hoyt Institute
Hoyt Fellows Meeting &
May Weimer School Session
May 14-16, 2020
Hoyt Center
North Palm Beach, FL
Thursday, May 14th (Hoyt Fellows Session)
Friday, May 15th - Saturday, May 16th
(Weimer School session)