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AWI This Week

Monday, 10.11.14

Departmental Seminar

17.15-18.45

AWI 00.010

Ingo Fiedler, University of Hamburg

"Measuring Skill in Games: The Critical Repetition
Frequency (CRF) and its Application to Poker"

Wednesday, 12.11.14

Internal Seminar

12.15-13.15

AWI 00.010

Shaun Bond, University of Cincinnati

"Commercial Real Estate Market Property Level
Capital Expenditures: An Options Analysis"

Wednesday, 12.11.14

Macro & Econometrics Seminar

17.00-18.00

AWI **00.005**

Jonas Dovern

"Does Joint Modelling of the World Economy Pay off?
Evaluating Multivariate Forecasts from a Bayesian GVAR"
(joint with Martin Feldkircher und Florian Huber)

Departmental Seminar

Ingo Fiedler

"Measuring Skill in Games: The Critical Repetition Frequency (CRF) and its Application to Poker"

In most countries, the regulation of gaming is based on whether the predominance for the outcome of the game lies in skill or chance. While this distinction is simple for pure games of chance and pure games of skill, it is a complex and yet unsettled question in mixed games like poker. Dreef et al. (2003) made the important contribution that skill in games has to be measured relatively, that is, relative to the skill of other players. Over infinite repetitions of a game, the outcome of each player reflects his skill relative to his opponents. Over a shorter run his outcome is influenced by his relative skill (his expected value) as well as by chance events (the standard deviation of his results). The central question is: Is relative skill or the chance dominating the outcome of a game? In this talk, it will be argued that the answer to this question is different for every player and depends on the number of repetitions of a game. The Critical Repetition Frequency (CRF) defines the number of repetitions at which a player can expect (with 95% confidence) his outcome to be dominated by his relative skill rather than chance events. This concept is applied to the game of poker by analyzing a sample of 51,761 poker players and their results. It is argued that over the cohort of players, the outcome of the median player is equivalent to his expected value (just as if the game was repeated very often). His expected value is denominated in big blinds per 100 hands, that is, relatively to the stakes played for. Using his standard deviation also denominated in big blinds per hour, his CRF is computed to be 767 hands. That means that after 767 hands the median player can be 95% sure, that his results are more influenced by his lacking skill (he is a losing player) than by chance events. Playing more than 767 hands thus makes poker a game of skill for the median player.

Internal Seminar

Shaun Bond

"Commercial Real Estate Market Property Level Capital Expenditures: An Options Analysis"

Option pricing theory predicts that capital improvement expenditures are positively linked with high or increasing market lease rates. Ceteris paribus, when the market lease rate is high, or when there is an expectation of higher lease rates in the future, owners are encouraged to increase investment to capture a larger profit. In contrast, when the market lease rate is low, or when there is an expectation of lower lease rates in the future, owners are encouraged to defer capital improvements, causing a skewness in the cash flows. However, not all capital improvement decisions are made on this basis. Some capital expenditures are defensive investments, made when the market lease rate is low, or when there is an expectation of lower lease rates in the future. Defensive investments can, in theory, improve cash flow, reduce vacancies, reduce leasing and repair costs, and preserve building value. Still, defensive investments can be shared growth options, easily replicated by others with minimal effort. Consequently, it is possible for any routine cost reductions or any economic

rent associated with defensive investments to be dissipated over time, or at least so the theory goes. We test these predications using property-level data during the period from 2003 to 2012. The evidence supports the conjecture that capital improvements lead to higher incomes. The evidence does not, however, provide support for the conjecture that capital expenditures are fully capitalized into market values. In point of fact, the evidence argues just the opposite. Nonetheless, despite this result, the same data provide evidence that investors are fully, or more than fully, compensated in terms of overall total return on investment for the differing expenditures. We also find evidence suggesting that defensive capital investments may actually perform better than capital investments made in boom times (i.e., when market leaserate are high or increasing). The latter runs counter to theory and intuition.

*with James D. Shilling and Charles H. Wurtzebach

New Publications

Schwieren, Christiane and Voss, Andreas: *The Dynamics of Motivated Perception: Effects of Control and Status on the Perception of Ambivalent Stimuli* accepted in *Cognition and Emotion*.

New Working Papers

Christina Davis, Andreas Fuchs, and Kristina Johnson: *State Control and the Effects of Foreign Relations on Bilateral Trade*, AWI Discussion Paper Series No 576, November 2014.

**Editorial deadline for issue 26/2014 of the newsletter:
Wednesday, November 12, 2014, 12 o'clock
newsletter@awi.uni-heidelberg.de**

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