

General Information and Program

Experimental Finance 2012



September 3 – 5

University of Luxembourg Faculty of Law, Economics and Finance Luxembourg School of Finance

CONFERENCE VENUE

Abbaye de Neumünster

Address: 28, rue Münster L-2160 Luxembourg

Tél.: (+352) 26 20 52 1







Fonds National de la Recherche Luxembourg

Program (short)

Monday, September 3, 2012 (Abbaye de Neumünster – Chapelle)			
1330-1350	Registration/welcome reception at Abbaye de Neumünster		
1350-1400	Welcoming address and administrative information		
1400-1600	Session 1:		
Sascha Fullbrunn	Radboud University Nijmegen	Discussant Rene Levinsky	An Experimental Consideration Of Strong Ambiguity In Call Markets And Double Auction Markets (authors: Sascha Füllbrunn, Holger Rau, and Utz Weitzel)
Matthias Stefan	University of Innsbruck	Discussant Arie E. Gozluklu	Markets can Eliminate Behavioral Biases! Experimental Evidence on the Impact of Risk, Ambiguity, Experience Sampling and Skewness on Asset Prices (authors: Matthias Stefan, Jürgen Huber, and Michael Kirchler)
Rene Levinsky	Max Planck Institute Jena	Discussant Stefan Palan	Gains From Trade And Prices In An Electronic Call Auction With Insider Trading { An Experimental Analysis (authors: Tobias Brunner, Rene Levinsky)
Stefan Palan	University of Graz	Discussant Sascha Fullbrunn	A Good Beginning Makes A Good Market: The Effect Of Different Market Opening Structures On Market Quality (authors: Gernot Hinterleitner, Philipp Hornung, Ulrike Leopold-Wildburger, Roland Mestel, Stefan Palan)
1600-1630	Coffee break		
1630-1800	Session 2:		
Daniel Kleinlercher	University Of Innsbruck	Discussant Tommy Gärling	Bonuses For Investment Managers Inflate Prices Of Assets (Authors: Jürgen Huber, Michael Kirchler, And Daniel Kleinlercher)
Elena Pikulina	Tilburg University	Discussant Daniel Kleinlercher	Bonus Schemes And Trading Activity (Authors: Elena Pikulina, Luc Renneboog, Jenke Ter Horst, Philippe Tobler)
Oege Dijk	Gothenburg University	Discussant Elena Pikulina	Tournament Incentives, Social Competition And Portfolio Choice (Authors: Oege Dijk , Martin Holmén, Michael Kirchler)
1800-1815	Coffee break		
1815-1915	Session 3:		
Tommy Gärling	University of Goethenborg	Discussant Oege Dijk	Near-Sighted Versus Far-Sighted Stock Portfolio Construction (authors: Tommy Gärling, Maria Andersson, Martin Hedesström, and Anders Biel)
Kristoffer Wigestrand Eriksen	University of Stavanger	Discussant Caroline Bonn	No Guts, No Glory: Excessive Risk-Taking in Tournaments (authors: Kristoffer Wigestrand Eriksen & Ola Kvaløy)
1915-2045	Dinner: Brasserie de Abbaye de Neumünster		

Monday, September 3, 2012 (Abbaye de Neumünster – Chapelle)

Tuesday, Septem	ber 4, 2012 (Abbaye de Neu	ımünster – Chapelle)	
0830-0900	Registration/Coffee		
0900-1100	Session 4:		
Terrance Odean	University of California, Berkeley	Discussant Charles Schnitzlein	Bubbling with Excitement: An Experiment (authors: Shengle Lin, Terrance Odean, Eduardo B. Andrade)
Charles Schnitzlein	University of Central Florida, Orlando,	Discussant Jürgen Huber	Market Efficiency When Informed Traders Have Independent Information (authors: Charles R. Schnitzlein, James M. Steeley, and Patricia Chelley-Steeley)
Arie E. Gozluklu	University of Warwick	Discussant Terrance Odean	<i>Pre-Trade Transparency and Informed Trading: An Experimental Approach to Hidden Liquidity (author: Arie E. Gozluklu)</i>
Michael Kirchler	University of Innsbruck	Discussant Charles Noussair	Trader Inflow and Price Bubbles in Experimental Asset Markets (authors: Caroline Bonn, Jürgen Huber, and Michael Kirchler)
1100-1130	Coffee break		
1130-1230	Keynote 1:		
Peter Bossaerts	California Institute of Technology:	Chair Rajnish Mehra - LSF	Experiments to decipher the neurobiology behind financial decision making
1230-1400	Lunch: Brasserie Neumünster		
1400-1530	Session 5:		
Torsten Walther	Ludwig-Maximilians-Universit ät München	Discussant Marta Serra-Garcia	Financial Literacy, Dual Process Theory and Investment Behavior (authors: Markus Glaser)
Matteo Ploner	University of Trento	Discussant Torsten Walther	Keep It or Sell It? An Experimental Investigation of the Disposition Effect (author: Matteo Ploner)
Marta Serra-Garcia	University of Munich	Discussant Matteo Ploner	Complexity and Narrow Bracketing in Credit Choice (authors: Kenan Kalayc, Marta Serra-Garcia)
1530-1600	Coffee break		
1600-1700	Session 6:		
Martin Summer	Oesterr.Nationalbank, Economic Studies Division	Discussant Jason Shachat	Endogenous Leverage and Asset Pricing in Double Auctions (authors: Thomas Breuer, Hans-Joachim Vollbrecht, Martin Summer)
Jason Shachat	WISE Xiamen University	Discussant Martin Summer	The Hayek hypothesis and long run competitive equilibrium: an experimental
1700-1730	Coffee break		אינטאקענוטא (עענווטוט אנטאט אוענווען, בווכווגעעוו בוועווען

1730-1830	Session 7:		
Mark Van Boening	University of Mississippi	Discussant	Excess Bids and Price Dynamics in Some Experiments with Long-Lived Assets (author:
		Tibor Neugebauer	Mark Van Boening)
Tibor Neugebauer	University of Luxembourg	Discussant	An experimental comparison of security markets: call-auction vs. double-auction auction
		Mark Van Boening	(authors: Reinhard Selten, Tibor Neugebauer)
1830-1900	Walk to restaurant		
1900-2030	Dinner: Brasserie Aubergine		

Wednesday, September 5, 2012 (Abbaye de Neumünster – Chapelle)			
0830-0900	Registration/Coffee		
0900-1100	Session 8:		
Stefan Trautmann	Tilburg University	Discussant Carsten Schmidt	Contagious Bank Runs (authors: Martin Brown, Stefan Trautmann, Razvan Vlahu)
Carsten Schmidt	University of Mannheim	Discussant Iván Barreda Tarrazona	Double or nothing (authors: Charles Noussair, Carsten Schmidt)
Stefan Zeisberger	University of Zurich & CalTech	Discussant Stefan Trautmann	The importance of the overall probability of a loss in repeated investment decision making (author: Stefan Zeisberger)
Iván Barreda	University of Castellon	Discussant	The demand for structured products: an experimental approach (authors: Juan Carlos
Tarrazona		Stefan Zeisberger	Matallín Sáez, Adriana Gabriela Breaban, Iván Barreda Tarrazona, Mª Rosario Balaguer)
1100-1130	Coffee break		
1130-1230	Keynote 2:		
Charles Noussair	Tilburg University	Chair	Bubbles and Crashes in Experimental Asset Markets: Fundamental and Emotional
		Tibor Neugebauer - LSF	Processes
1230-1400	Lunch: Brasserie Neumünster		
1400-1430	Workshop:		
Peter Bossaerts	California Institute of Technology		Flex-E-Markets : Software
1500	Farewell		

Organization of Presentation Sessions

Chair

The last presenter in each session will act as session chair. Please note that there will be 20 minutes scheduled for presentation and 10 minutes are left for both the discussant (max. 5 minutes) and general discussion (5 minutes). We encourage you to stick to the time schedule to treat each presenter equally.

Discussant

Each presenter will serve as discussant for another paper as well. We encourage discussants to prepare a short presentation with comments and questions on the paper of at maximum 5 minutes (no simple summary). It is the duty of the discussant to acquire the paper he/she has to discuss directly from the presenter. Attached to your confirmation mail, you can find a list of presenters with the corresponding e-mail addresses.

General Information

Conference Venue, Accommodation, and Local Organization

The conference will be held at the Abbaye de Neumünster.

Originally the Abbaye de Neumüster was a Benedictine abbey. The abbey in Grund has been built in 1606, however, was rebuilt in 1688 after a fire and was extended in 1720. It served as a police station after the French revolution and as a prison before becoming a barracks for the Prussians after Napoleon's defeat in 1815. In 1867 it again became a state prison. During World War II, the Nazis used the Abbaye to imprison political resisters to their occupation of Luxembourg. Since 1997, it has been the home of the European Institute of Cultural Routes. The Abbaye de Neumünster was opened to the public in May 2004 as a meeting place and a cultural centre (www.ccrn.lu). It hosts concerts, exhibitions, and conferences.

Address:

Centre Culturel de Rencontre – Abbaye de Neumünster 28, rue Münster L-2160 Luxembourg Telephone: +352/ 26.20.52.1 Fax: +352/ 26.20.19.80 https://plus.google.com/115878037616738570310/about?gl=DE& hl=de-DE#115878037616738570310/about E-mail: contact@ccrn.lu URL: ccrn.lu



How to get there

By Foot. At the plateau "Saint Esprit", find the elevator leading to the downtown district "Grund". Having Arrived at the level of "Grund", leave the tunnel and cross the small river bridge ahead, then turn left into the rue Münster. The Abbaye de Neumünster is located at the end of this street.

By Car. We recommend to leave the car in the Saint-Esprit parking and come by foot, since the elevator to "Grund" can be accessed from there.

By Train. Having arrived at the main station Luxembourg-Gare , find the bus terminal in front of the station at the right hand side. A shuttle to Grund (line 23 "Stadgronn-Bréck") departures every 30 minutes; hh:15 and hh:45. Leave the bus at the terminal station "Stadgronn-Bréck", cross the small river bridge, then turn left into the rue Münster. The Abbaye de Neumünster is located at the end of the street.

By Plane. Having arrived at the Findel Airport , take the bus to the main station Luxembourg-Gare (line 9 or 16). Then follow the directions above "By Train".

Accommodation at the twin hotel Parc Belle-Vue/Parc Plaza

Address: Hotel Parc Belle-Vue 5 avenue Marie-Thérèse L - 2132 LUXEMBOURG Tel. : +352 45 61 411 Fax : +352 45 61 41 222 reception.bellevue@goeres-group.com

Hotel Parc Plaza 5 avenue Marie-Thérèse L - 2132 LUXEMBOURG Tel. : +352 45 61 411 Fax : +352 45 61 41 222 reception.plaza@goeres-group.com

The Host

The Luxembourg School of Finance (LSF) is the Department for Finance at the Faculty of Law, Economics and Finance of the University of Luxembourg. The LSF's mission is to offer education programs and conduct academic research in finance at the highest level. It strives to attract outstanding individuals as students and faculty, and to create an environment of excellence.

The research of the LSF covers a wide range of areas, from pure academic research to private-public partnerships in finance. LSF research aims at developing research programs based on bilateral and well-balanced partnerships, especially with the financial center of Luxembourg.

This is for general information only. If interested, you are indeed very welcome to visit the Luxembourg School of Finance! However, no conference activities are planned at the premisses of the LSF. In case of doubts or problems do not hesitate to call Tibor Neugebauer or Martine Zenner. The location of the LSF: 4, Rue Albert Borschette, 1321 Luxembourg <u>http://g.co/maps/62jfb</u> (google maps)



Tibor Neugebauer

University of Luxembourg <u>Tibor.Neugebauer@uni.lu</u> Tel. +352 4666 44 6285 Cel. +352 621 300 521 **Martine Zenner** University of Luxembourg <u>Martine.Zenner@uni.lu</u> Tel. +352 4666 44 6335 Fax. +352 4666 44 6835 Tim Carle University of Luxembourg <u>Tim.Carle@uni.lu</u> Tel. +352 4666 44 6354

We wish you a good trip to Luxembourg and are looking forward to having a stimulating conference. **Registration, Wireless Connection, Dinners**

The conference fee of 150 Euros (100 Euros for students) covers the coffee breaks, lunches and dinners.

Participants will find a name tag and a receipt of payment of the conference fee with the welcome folderat the registration desk. The registration desk will be open on Monday (from 13.30), Tuesday andWednesday (from 8.30). Information on the local wireless internet connection follows:CCRN HotspotUser: freePassword: sekpeking

Dinners

The dinner on Monday (and the daily lunch) takes place at the Brasserie Neumünster, that is, on the groundfloor of the conference venue. The dinner on Tuesday is at the Brasserie Aubergine, located in the city centre. Please make your menu choice by August 30.

Dinner 1 at Brasserie Neumünster	Address:
	28, rue Münster
	L-2160 Luxembourg
	tel.: +352 26 20 52 981
	URL: http://www.brasserieleneumunster.lu/
Entrée	Italian Carpaccio Beef
Main Course (to be chosen by August 30)	A: Salmon Filet with Lobster Sauce
	B: Guinea Fowl Supreme with Mushrooms
Dessert	Frozen nougat with red fruits

	 Cod back with crunchy brandade
Main Course (to be chosen by August 30)	 Tagliatelle Beef with accompagnements Duck breast à l'abricot with Nice legumes
	 Summer Gourmand Salad – melone, ham, smoked salmon, warm goat cheese, scampis Italian Carpaccio Beef
Entrée (to be chosen by August 30)	1. Salmon Triology (grilled, smoked, tartar)
	URL: http://www.aubergine.lu/
	Tél : 26-20-20-24
	1 avenue Pescatore (12 rue des Bains)
Dinner 2 at Brasserie Aubergine	Address:

We thank the following partner for the generous support of this conference:

Fonds National de la Recherche Luxembourg

For more information on the conference check our homepage:

http://wwwde.uni.lu/luxembourg_school_of_finance/news_events/experimental_finance_luxembourg_ 3_5_september_2012

Program (long) with Abstracts

Monday, Septem	ber 3, 2012 (Abbaye de Neumünster – Chapelle)
1330-1350	Registration/welcome reception at Abbaye de Neumünster
1350-1400	Welcoming address and administrative information
1400-1600	Session 1:
Sascha Fullbrunn Radboud University Nijmegen	An Experimental Consideration Of Strong Ambiguity In Call Markets And Double Auction Markets (authors: Sascha Füllbrunn, Holger Rau, and Utz Weitzel)
, .,	Several individual choice experiments show that decision makers prefer taking gambles with known-risk probabilities over equivalent gambles with ambiguous probabilities. Thus, subject's willingness to pay for risky assets tends to be higher than for equivalent ambiguous assets. When it comes to markets, however, subject's decisions are no longer separated from others and may be reevaluated by market feedback. But is market feedback sufficient to overcome the ambiguity effect? Or do prices reflect ambiguity aversion? To evaluate this question, we conduct laboratory experiments where subjects simultaneously trade risky and ambiguous assets, using an offline version of the source method for Ellsberg-like uncertainties from Abdellaoui et al. (AER, 2011). While recent experimental results from Sarin and Weber (MS, 1993) and Bossaerts et al. (RFS, 2010) suggest that aversion to ambiguity does not vanish in markets, we find no systematic difference between risky and ambiguous assets in terms of prices and bids, volume or portfolio decision. In contrast to other market studies, we consider strong ambiguity (rather than weak) in both double auction markets and call markets. The same source method in a Becker-DeGroot-Marschak treatment, however, confirms ambiguity aversion on the individual level.
Matthias Stefan University of Innsbruck	Markets can Eliminate Behavioral Biases! Experimental Evidence on the Impact of Risk, Ambiguity, Experience Sampling and Skewness on Asset Prices (authors: Matthias Stefan, Jürgen Huber, and Michael Kirchler) This is the first study to explore skewness, ambiguity, risk and experience sampling in a single-period laboratory asset market environment. Subjects trade assets with different skewness and with different degrees of risk/ambiguity of fundamentals. When trading starts with assets modeled under risk or ambiguity subjects are prone to the same biases (overweighting of low, underweighting of high probabilities) as in individual decision experiments. However, within few minutes of trading most of these biases start to disappear and prices reflect fundamentals quite accurately. Thus, single-period markets seem suitable to prevent mispricing arising from well-documented weighting biases in individual decisions. Moreover, markets in which fundamentals are "learned" by experience sampling show very efficient prices already from the beginning.
Rene Levinsky Max Planck Institute Jena	Gains From Trade And Prices In An Electronic Call Auction With Insider Trading { An Experimental Analysis (authors: Tobias Brunner, Rene Levinsky)
	The present study contributes to the ongoing debate on possible costs and benefits caused by insider trading in financial markets. In particular, we run three series of electronic call auctions in the laboratory where we change the probability of informed trading as a treatment variable. Overall, we find that the subjects in our experiment realise about half of the possible gains from trade. Comparing this share with Pouget (2007) who reports an efficiency of about 30% in an experiment similar to ours, we find our experimental markets to perform reasonably well. Interestingly, the realised gains from trade increase when there is a high probability of insider trading. Analysing the Bayesian Nash equilibria of the call auction we show that informational efficiency (which is inversely proportional to the

average distance between the call auction price and the true value) increases in the probability of insider trading. This hypothesis is not confirmed in our experiment, the ability of call auction prices to reflect the true value does not improve with a high probability of insider trading. In general, the call auction prices are significantly higher than the true value of the asset.

Stefan Palan University of Graz

A Good Beginning Makes A Good Market: The Effect Of Different Market Opening Structures On Market Quality (authors: Gernot Hinterleitner, Philipp Hornung, Ulrike Leopold-Wildburger, Roland Mestel, Stefan Palan)

This paper deals with the market structure at the opening of the trading day and its influence on subsequent trading. We compare a single continuous double auction and two complement markets with different call auction designs as opening mechanisms in a unified experimental framework. The call auctions differ with respect to their levels of transparency. We find that a call auction not only improves market quality at the beginning of the trading day when com-pared to the stand alone continuous double auction, but also causes positive spillover effects on subsequent trading. Concerning the design of the opening call auction, we find no significant differences between the transparent and nontransparent specification with respect to opening prices and liquidity. In the course of subsequent continuous trading, however, market quality is slightly higher after a nontransparent call auction.

1600-1630 Coffee break

Session 2:

Daniel Kleinlercher University Of Innsbruck

1630-1800

Bonuses For Investment Managers Inflate Prices Of Assets (Authors: Jürgen Huber, Michael Kirchler, And Daniel Kleinlercher)

Whenever bubbles in financial, real estate or commodities markets burst, negative spillovers to the real economy occur. The meltdown of the subprime mortgage market in the United States, which unleashed a major financial crisis, is the latest example. In this context, the G20, various academics, regulators and politicians have identified bonus payment systems of financial professionals as one reason for the development of the financial crisis. In this paper, we investigate the impact of four alternative incentive structures on price formation and risk taking. Experimental subjects act as portfolio managers (agents) by managing a portfolio of two tradeable assets and cash for their fictive clients (principals). Subjects are paid according to one of the following incentive structures: BONUS (fixed wage with bonus payments for good performance), CAP (fixed wage with limited bonus payments for good performance), LINEAR (wage is linearly related to performance) and PENALTY (fixed wage with penalty for bad performance). We find excessive risk taking and massive overpricing of the risky asset when subjects acting as investment managers are incentivized with bonus incentives. Subjects trade at inflated prices and take on more risk than is optimal for investors. When paid according to penalty incentives, subjects act conservative with the result of moderate underpricing of the risky asset. We conclude that making financial professionals partly accountable for their losses would align their goals better with the goals of their investors.

Elena Pikulina Tilburg University Bonus Schemes And Trading Activity (Authors: Elena Pikulina, Luc Renneboog, Jenke Ter Horst, Philippe Tobler)

Although the role of compensation packages in aligning the interests of managers with those of shareholders is widely studied, there is little research available on how different bonus schemes affect traders' propensity to trade and which bonus schemes improve traders' performance. In an experimental setting, we study the effects of these two bonus schemes on traders' behavior: a linear bonus scheme, which always pays a fixed share of profit, and a threshold bonus scheme, under which a share of profit paid as bonus

increases in the total profit earned by a trader if specific performance targets are met. The participants to our experiment have traded shares in an experimental stock market on the basis of fundamental and technical information (evolution of the market index, past share price evolution, realized earnings, and analysts' earnings forecasts). We find that they trade more intensely under the threshold bonus scheme than under the linear bonus one. Furthermore, trading intensity significantly decreases when the bonus scheme's thresholds are reached under the threshold bonus scheme. While trading intensity is higher under the threshold scheme, the participants' performance under this scheme is worse than under the linear bonus scheme as a consequence of worse investment decisions but of not transaction costs. Oege Dijk Tournament Incentives, Social Competition And Portfolio Choice (Authors: Oege Dijk, Gothenburg Martin Holmén, Michael Kirchler) University Convex and in particular tournament incentive schemes have been criticized for inducing excessive risk-taking among investment managers. Another feature of tournament incentives is that they induce a particular kind of risk-taking: when below the inflection point it becomes optimal to invest in positively skewed idiosyncratic assets, whereas above the inflection point a negatively skewed portfolio that correlates with the market would be optimal. We test these propositions with a lab experiment where investment managers choose portfolios from among correlated, idiosyncratic, and positively, negatively or zero skewed assets. We show that convex incentives indeed lead to a preference for positively skewed idiosyncratic portfolios when lagging in performance, and negatively skewed correlated portfolios when leading. However the effect persists even with linear incentives, provided that a current ranking of relative performance is displayed to investment managers. We conclude that competitive social preferences alone are enough to induce biases in portfolio selection.

1800-1815 Coffee break

Session 3:

1815-1915

Tommy Gärling University of Goethenborg Near-Sighted Versus Far-Sighted Stock Portfolio Construction (authors: Tommy Gärling, Maria Andersson, Martin Hedesström, and Anders Biel)

Stock investors are generally awarded bonuses conditionally on their investments producing better short-term returns than some benchmark, and it has been shown that they prefer short term bonuses to long-term bonuses. In two experiments we investigate whether stock investors therefore would invest in stocks with better short-term development (and earning a higher short-term bonus) than in stocks with a better long-term development (and earning a higher total bonus). In Experiment 1 40 undergraduates role-played being stock investors facing the task of constructing a portfolio by only purchasing a short- term stock, a long-term stock or a combination of the stocks. Forecasts of the stocks' value development in four years were presented, either without any information about uncertainty or with such information (best - worst outcomes). Annual bonus payouts were varied such that they either were the same for both stocks or higher for the long-term stock than for the short-term stock. It is found that when there is no uncertainty, the choice of the long-term stock increases with the bonus. When there is uncertainty, choosing both stocks are more frequent and the bonus has no effect. In Experiment 2 employing another 48 role-playing undergraduates, an effect of bonus is observed when there is uncertainty. It is also shown that choices of the long-term stock increases with information about how many other investors who choose the stock.

Kristoffer Wigestrand Eriksen University of Stavanger	No Guts, No Glory: Excessive Risk-Taking in Tournaments (authors: Kristoffer Wigestrand Eriksen & Ola Kvaløy)
	We study risk-taking behavior in a tournament in which the optimal strategy is to take no risk. In a laboratory experiment subjects were randomly matched into groups of four and could choose how much experimental currency units (ECU) to invest in the following lottery: With probability 4/5 subjects lost the amount ECU invested. With probability 1/5 subjects won x times the amount invested (with x=4 and x=10, respectively). The one with the highest amount of ECU after the lottery draw received a monetary prize while the others received nothing. With more than one subject on top, the winner was chosen by drawing lots. The game was played 15 rounds. Since four subjects were competing, and there was only 1/5 chance of winning in the lottery, the optimal strategy was to invest zero each round. However, less than 10% of the subjects invested zero in the first rounds. This increased their risk-taking during the 15 rounds. We also find strong peer group effects. In particular, the group winner's decision in round t-1 had a strong and significant effect on the other group-members' risk- taking in round t.
1915-2045	Dinner: Brasserie de Abbaye de Neumünster

0830-0900	Registration/Coffee
0900-1100	Session 4:
Terrance Odean University of California, Berkeley	Bubbling with Excitement: An Experiment (authors: Shengle Lin, Terrance Odean, Eduardo B. Andrade)
	In an experimental setting, we study the role of emotions in markets. Our experimental market is modeled on those of Smith, Suchanek, and Williams (1988) and Caginalp, Porter, and Smith (2001). Participants play part in a laboratory market where they can trade a risky asset over a computer network. Prior to the market simulation, they watch short videos that are exciting and upbeat—chase scenes; neutral—segments from a historical documentary; fearful—scenes from a horror movie; or sad—scenes from a drama. Larger asset pricing bubbles develop in experimental markets run subsequent to the exciting videos relative to the other three conditions. The differences in the magnitude and amplitude of the bubbles are both economic and statistically significant.
Charles Schnitzlein University of Central Florida, Orlando	Market Efficiency When Informed Traders Have Independent Information (authors: Charles R. Schnitzlein, James M. Steeley, and Patricia Chelley-Steeley)
	We study information aggregation in an experimental market in which there are multiple pieces of information that combine additively to determine intrinsic value. We vary the relationship between signals. When signals are all bullish or all bearish, market prices never reach intrinsic value. When information is in conflict, ending prices are typically within the range of signals but the midpoint of the spread at the close is often on the wrong side of the unconditional expectation. We show both under reaction and overreaction can arise in a unified framework due to strategic behavior that is consistent with a model of limit order trading.

Tuesday, September 4, 2012 (Abbaye de Neumünster – Chapelle)

Arie E. Gozluklu University of Warwick	Pre-Trade Transparency and Informed Trading: An Experimental Approach to Hidden Liquidity (author: Arie E. Gozluklu)
	This paper proposes an experimental study to analyze trading in opaque limit order books and to test the role of information asymmetries on hidden liquidity submission. Previous literature attributes hidden liquidity either to large liquidity traders or informed trading. We design an asset market experiment in light of recent theory treating private information in isolation. Hence we analyze the implications of reducing pre-trade transparency in two different informational settings. We find that both private information and liquidity concerns play an important role in hidden liquidity provision. However, we do not find major differences between transparent and opaque markets across various market quality indicators. Differences in traders' characteristics partly explain the heterogeneity in hidden liquidity supply. Our results suggest that even though some informed traders opt for undisclosed orders, the current trend towards darker trading venues cannot be explained only on informational grounds.
Michael Kirchler University of Innsbruck	Trader Inflow and Price Bubbles in Experimental Asset Markets (authors: Caroline Bonn, Jürgen Huber, and Michael Kirchler)
	We investigate the impact of trader inflow and heterogeneous information on bubble formation in experimental asset markets. To model heterogeneous information, the traded asset has two equally likely buyback prices. Half of the traders receive information solely about buyback price A, while the other half is only informed about buyback price B. In a 2x2 design we vary "trader inflow" ("yes" or "no") and cash-asset-value ratio ("constant" or "increasing"). We find (i) strong price increases when new traders enter the market with cash only. (ii) We do not observe price rallies in any other treatment. This indicates that the reported effect is not driven by excess cash but by new traders. (iii) In markets with new traders entering with cash over time, we find strong upward adaption of beliefs about the fundamental value of the asset. Importantly, we do not find a speculation motive as subjects' beliefs about future market prices do not exceed current prices. This clearly points towards traders buying overpriced assets on the basis of biased beliefs about fundamentals rather than holding a speculation motive. (iv) Additional treatments show, that in markets with new traders entering with cash over time, bubbles can be eliminated effectively by providing a subset of traders with information on both possible buyback values.
1100-1130	Coffee break
1130-1230	Keynote 1:
Peter Bossaerts California Institute of Technology	Experiments to decipher the neurobiology behind financial decision making
	With three examples, the talk will clarify the means and goals of decision neuroscience, and the relevance for financial economics. The first example concerns encoding of risk in the human brain. The second one involves learning to hedge. And the third example focuses on strategic uncertainty.
1230-1400	Lunch: Brasserie Neumünster
1400-1530	Session 5:
Torsten Walther Ludwig-Maximilians -Universität München	Financial Literacy, Dual Process Theory and Investment Behavior (authors: Markus Glaser)
	Besides the common finding that individuals' financial literacy is positively related to good investment decisions, e.g., stock market participation (van Rooij et al., 2007) and

diversification (Guiso and Jappelli, 2008), there is also evidence that in some situations even investors with presumably high financial literacy do not make use of their knowledge when building their own portfolio and are driven by behavioral factors comparable to lay investors (see, e.g., Doran et al., 2010; Müller and Weber, 2010). Taking the existing literature together it remains unclear when and under which circumstances financial literacy can prevent individuals from making common investment mistakes. There seem to exist personal characteristics and/or situations which inhibit investors from adequately applying their knowledge. In this study, an innovative experimental design is used in order to examine this research question. Based on the idea that an individual's tendency to decide unconsciously and intuitively could be a key to solve these questions, hypotheses are developed and tested by linking dual-process theories from psychology with capital market decisions. To the best of our knowledge, we are the first to establish this link. Dual-process theories (for reviews see, e.g., Evans, 2008) embrace the idea that decisions can be driven by both intuitive and cognitive processes. One of the processes can be characterized as fast, automatic and non conscious (System 1), and the other as slow, controlled and conscious (System 2) (Stanovich and West, 2000). Dual process theories have been studied and applied in many different fields, e.g., reasoning and social cognition. Kahneman and Frederick (2002, 2005) link dual process theory to decision-making and show that heuristics and biases 2 are associated with System 1. The dominance of one system or the other depends on characteristics of both the task (e.g., level of stress and time pressure) and the individual (e.g., statistical thinking abilities, cognitive impulsiveness). Following Kahneman (2011), it is assumed that the predominance of one of the two systems is quite a stable characteristic of an individual. We hypothesize that investor's financial literacy might be overruled if System 1 is predominant. An unexpected bad performance of one's stock portfolio can cause stress due to personal involvement. From a psychological point of view, it has been shown that stressed subjects do not analyze situations in-depth (Dorner and Pfeifer, 1993) and tend to focus on the most central information only (Easterbrook, 1959). Sweeny (2008) argues that negative events or experiences can make the processes of responding guicker and more automatic. Therefore, we hypothesize that investors in a stress situation tend to decide more unconsciously and intuitively (System 1) and are therefore more prone to biases and heuristics (cf. Kahneman and Frederick, 2002, 2005). Consequently, the decisions will be based less on analytical thinking and on (financial) literacy, respectively. Data collection took place at a computer laboratory at Ludwig-Maximilians-Universität (LMU) Munich. Participants were confronted with a typical investment decision. They had the opportunity to invest their money into a risky asset (i.e., into the stock market) and/or a risk- free asset. After having seen the historical stock market performance of one year, participants were asked to allocate their initial amount of money between the risky and the risk-free asset. After that, subjects experienced day by day (both graphically and numerically) the development of the stock market and their resulting portfolio value over the next year. At all times, subjects had the opportunity to "stop the time", and to adjust their allocation. In fact, 3 they could sell and buy assets at the current market price whenever and as often as they wanted to. This experimental design seems appropriate to address the research questions mentioned above. The way of experiencing the portfolio performance is innovative and enables an in-depth analysis of the behavior in up- and downswing markets. Participant's prevalence of System 1 and System 2 thinking styles is measured by the Rational-Experiential Inventory of Epstein et al. (1996) consisting of two subscales, Need for Cognition and Faith in Intuition. Our results confirm the hypothesized interaction effects. After including a set of standard control variables, we show that the positive effect of financial literacy on good investment decisions (as measured by risk-adjusted performance, turnover, among other things) is diminished by a high prevalence of System 1. In addition, we show that this effect is more pronounced in highly volatile and downswing markets.

Matteo Ploner University of Trento	Keep It or Sell It? An Experimental Investigation of the Disposition Effect (author: Matteo Ploner) The term disposition effect identifies a well-known asymmetry in investors' behavior: investors seem to display a greater propensity to sell a stock when its price goes up than when it goes down. We document the emergence of the disposition effect in an experimental setting in which individuals choose over a series of prospects. In our setting, the disposition effect seems to be driven by the increase in risk propensity of those who experienced a loss in a former risky event. This finding is in line with predictions made by Prospect Theory. Furthermore, we show that the disposition effect is likely to be affected by emotions: when individuals are given the opportunity to plan their investment strategy in advance, they suffer of less disposition effect than when they choose in the course of events.
Marta Serra-Garcia University of Munich	Complexity and Narrow Bracketing in Credit Choice (authors: Kenan Kalayc, Marta Serra-Garcia)
	We examine experimentally the eff ect of complexity on individual decision making. We focus on credit choices, as they have been widely criticized for their complexity in recent years. In a first study, we find that complexity in benefits leads to random mistakes, while complexity in costs leads to a specific mistake: choosing a high-benefit loan, with very costly repayment schemes. In a second study, we show that individuals still (mistakenly) choose the high benefit loan, even if cheaper and simple loans are available. This suggests that, when costs are complex, individuals bracket narrowly, focus on benefits and ignore costs, while they do not when benefits are complex. Hence, our results show that complexity and narrow bracketing may be deeply intertwined: complexity that makes narrow bracketing cognitively easier is likely to lead to myopic choices, such as choosing complex and expensive loans, despite the presence of simple and cheaper loans.
1530-1600	Coffee break
1600-1700	Session 6:
Martin Summer Oesterreichische Nationalbank, Economic Studies Division	Endogenous Leverage and Asset Pricing in Double Auctions (authors: Thomas Breuer, Hans-Joachim Vollbrecht, Martin Summer)
	We study the trading of real assets financed by collateralized debt instruments in an agent based model of a continuous double auction. This approach provides a complementary perspective on recent advances in the general equilibrium theory of endogenous leverage by studying a model that simultaneously describes dynamic and equilibrium properties of the market. Rather than taking prices as parametric there is an explicit price formation process which can be simulated or studied empirically. This is important because the economics of leverage is key to the understanding of financial crisis. We find that simulated double auctions converge to stable final states close to the theoretical equilibrium state. Consistent with equilibrium theory, real assets are traded at a price above fundamental value in the double auction. The equilibrium level of leverage also emerges in the simulations of the double auction.
Jason Shachat WISE Xiamen University	The Hayek hypothesis and long run competitive equilibrium: an experimental investigation (authors: Jason Shachat, Zhenxuan Zhang) We report on an experiment investigating whether the Hayak Hypothesis (Smith, 1982) extends to the long run setting. We consider two environments; one with a common production technology having a U-shaped long run average cost curve and a single competitive equilibrium, and another with a common constant returns to scale technology

having a constant long run average cost curve and multiple competitive equilibria. While there is convergence in both environments to the long run equilibrium, it takes longer and is less robust than usually observed in the short run setting. We show that price formation is adaptive and quickly converges to realized short run equilibrium, but long run investment decisions exhibit very limited rationality. We present and estimate an investment choice model that shows that only minimal rationality, coupled with repeated decisions, is enough to achieve high long run allocative efficiency when markets use continuous double auctions.

1700-1730 Coffee break

Session 7:

1730-1830

Mark Van Boening University of Mississippi *Excess Bids and Price Dynamics in Some Experiments with Long-Lived Assets (author: Mark Van Boening)*

An "excess bids" phenomenon relating bid/ask activity to price formation in experimental asset markets was first documented in Smith, Suchanek and Williams (SSW, 1988). SSW use this empirical regularity to distinguish between rationality in the sense of Muth (expectations sustained by outcomes that in turn support some theory) and rationality in the sense of Nash (expectations sustained by outcomes). They report that lagged excess bids - the numerical difference between the number of bids to buy and the number of asks to sell – is a reasonably reliable predictor of mean price changes in 'bubble and crash' markets. They infer that this is consistent with rationality in the sense of Nash, but inconsistent with rationality in the sense of Muth. Much of the subsequent (and extensive) experimental research on long-lived asset markets has focused on trying to analyze behavior through the lens of Muthian rationality: under what circumstances can researchers consistently observe endogenous price patterns that are consistent with those predicted by (risk-adjusted) changes in fundamentals value? bid/ask auctions), ancillary markets (e.g., futures markets), presentations or explanations of information (e.g., subject instructions), etc. A recent example is the "thar she blows" and "thar she bursts" exchange in the American Economic Review. Generally speaking, This has included institutional rules (e.g., double versus sealed little if any consideration has been directed towards understanding or measuring Nash- type rationality. Alternatively, researchers have often focused on why subjects don't think or act like economists, instead of focusing on why subjects think and act like they do. Some recent research has moved in this direction, but the field is largely nascent. This paper analyzes the excess-bids phenomenon in both double auction and sealed bid/ask auction markets. (The initial markets considered here have declining fundamental value.) There are two primary findings thus far. First, the excess bids phenomenon is observed regardless of whether or not prices are consistent with fundamental value. That is, even when prices generally track fundamental value, excess bids still have explanatory power. This suggests an underlying (Nash-type) behavioral element persists even though bubble-measure (Muth-type) analysis implies that endogenous expectation formation is not present. Second, comparison across the institutions indicates that the appropriate empirical measure is 'value-augmented' excess bids. For example, in a sealed bid market with a bubble and crash, a simple count of excess bids has no explanatory power when applied to price changes. This might indicate that the excess bids phenomenon disappears without the dynamic interaction of the double auction. But a value-weighted measure, where both the amount of bids/asks and the associated quantity (e.g., 3 shares bid at \$5 each v. 3 shares bid at \$0.01 each) are incorporated, does have explanatory power when applied to price changes. A similar measure, recomputed for double auction markets, has similar explanatory power as SSW's excess bids. Collectively, these two findings suggest that additional research is needed to

	understand subjects' behavior both from the context Muth and from the context of Nash. This (ongoing) research hopes to contribute to that discussion.
Tibor Neugebauer University of Luxembourg	An experimental comparison of security markets: call-auction vs. double-auction auction (authors: Reinhard Selten, Tibor Neugebauer)
	The paper presents an original experimental market design with multiple multi period lived securities where production decisions by human managers are responsible for the cashflows from firms to shareholders. In these conditions of cash-flow uncertainty, two empirically relevant market-institutions, the call-auction and double-auction are examined. Our data indicate higher risks of mispricing, lower levels of liquidity and trading volume, higher levels of leverage and higher frequencies of bankruptcy in the call-auction than in the double-auction. We also look at behavioral pattern to find that leveraging, momentum trading, and higher trading frequency do not lead to above-average returns in either market institution.
1830-1900	Walk to restaurant
1900-2030	Dinner: Brasserie Aubergine

Wednesday, September 5, 2012 (Abbaye de Neumünster – Chapelle)

0830-0900	Registration/Coffee			
0900-1100	Session 8:			
Stefan Trautmann Tilburg University	Contagious Bank Runs (authors: Martin Brown, Stefan Trautmann, Razvan Vlahu)			
	The recent financial crisis made it clear that we need a better understanding of the nature of systemic risk. Contagion, which refers to the situation in which the collapse of one financial institution leads to the default of other financial institutions, is an important type of systemic risk. A growing literature in banking examines different channels through which contagion may occur, such as common asset exposure, domino effects through the payments system or interbank markets, or changes in expectations. Unlike the theoretical investigations, the empirical literature has focused on looking for evidence of contagion via direct linkages between banks (i.e., the mutual claims financial institutions have on each other) and surprisingly, it suggested that domino effects through the interbank market were unlikely (Upper 2007). Contagion stemming from changes in expectations and coordination failure of depositors (Diamond and Dybvig, 1983) has so far received little empirical attention. Yet, current market developments in Europe suggest that contagion among depositors and providers of wholesale funds might be an important source of systemic risk. Contagious bank runs might be triggered by the occurrence of one bank run which alters the beliefs of depositors concerning the liquidity or solvency of other banks. This effect will be particularly strong when the fundamentals of the two banks are interrelated either due to common asset exposure or due to common shocks affecting their balance sheets. It difficult to empirically disentangle contagion as a cause of correlated deposit withdrawals across banks from other potential explanations: correlated liquidity shocks across households; correlated performance shocks across banks; common exposure to asset shocks. To our knowledge there is only one paper to date which provides evidence for contagion among the customers of a given bank rather than across different banks. We study whether a bank-run at one bank may lead to a bank-run at			

	another bank. We test whether bank runs may be contagious when (a) financial institutions share the same economic fundamentals, and (b) the financial institutions are independent with respect to their asset exposures. To overcome identification problems in empirical data, we use experimental methods. Experiments have successfully been used to examine the impact of information sharing and long-term banking relationships on borrower and lender behavior. Similarly, to study the causes of depositor and currency runs, theoretical accounts have been tested in controlled laboratory settings with clear identification of causal effects. Our main findings are as follows. • We find that bank runs are contagious in the presence of economic linkages between banks' balance sheets. Coordination failure of depositors at one bank is less likely to lead to a coordination failure at another bank in absence of economic linkages. • Contagion is driven by depositors' beliefs about whether other depositors at their bank may withdraw upon receiving information regarding the run to another bank. Moreover, the beliefs about what other depositors will do are affected by the severity of the run to the other bank (i.e., the number of withdrawals reported by the other bank).
Carsten Schmidt University of	Double or nothing (authors: Charles Noussair, Carsten Schmidt)
Mannnenn	We report the results of a field experiment conducted in a cocktail bar in Mannheim, Germany. Patrons in the bar have a 50% chance of receiving a 50% reduction in their bar tab. If they receive the reduction, they can opt to bet "double or nothing", a 50% chance of having their bill completely voided or paying the original amount. We study the demographic correlates of safe and risky decisions. We find that smokers are more risk tolerant, groups consuming more than two alcoholic drinks per person are more risk tolerant, there is more risk aversion for larger bill amounts, groups are more likely to make risk averse decisions than individuals, and female groups are more risk averse than male groups.
Stefan Zeisberger University of Zurich	The importance of the overall probability of a loss in repeated investment decision making (author: Stefan Zeisberger)
	We hypothesize that investors are not only averse to losses (as is well documented in the literature) but in addition are averse to risky assets' overall loss probability. We test our hypothesis in a series of experiments in which subjects can invest in risky assets. Subjects invest significantly less in a risky asset if it possesses a high overall probability of a loss, even if the asset is otherwise relatively attractive where attractiveness is measured in various ways. Our results are virtually independent of investors' preferences (including their degree of loss aversion) and suggest that investors forego (virtually risk-free) return opportunities.
Iván Barreda Tarrazona University of Castellon	The demand for structured products: an experimental approach (authors: Juan Carlos Matallín Sáez, Adriana Gabriela Breaban, Iván Barreda Tarrazona, Mª Rosario Balaguer)
	Guaranteed investment funds showed an important growth in the mutual fund industry. We analyze this type of fund's demand using the experimental methodology. Different types of structured guaranteed funds, with certain combinations of secured and additional benefits, are sequentially offered to university students who act as investors. Subjects also have the alternative possibility to buy bonds. Our results show that information available to investors, and particularly the order in which it is presented, generates significant biases in their decision making which can have both positive and negative consequences on their financial behavior. In fact, when the investment alternatives are made easier to compare, "too good to be true" investment offers get more easily spotted, whereas "guaranteed"

investment products showing a positive evolution result overvalued in comparison to bonds.

1100-1130 Coffee break

1130-1230 Keynote 2:

Charles Noussair Tilburg University Bubbles and Crashes in Experimental Asset Markets: Fundamental and Emotional Processes

This presentation summarizes the results from four recent experimental studies on long-lived asset markets. Each of the studies illustrates a different dimension of the bubble and crash phenomenon in experimental markets. The first study considers a model in which there are three types of agent, fundamental value traders, speculators, and momentum traders. The predictions of the model are tested and successfully predict price patterns in an experiment in which the experimenter intervenes in the market to purchase or issue new shares. The second study considers the role of changes in cash available for trade on market bubbles and crashes. The results show that the timing of changes in cash is crucial in determining the dynamic pattern of prices. The third study considers the role of the time path of fundamental value in the incidence of market bubbles and shows that the price discovery process is more difficult for some trajectories than others. Higher cognitive relfection test scores on the part of traders are associated with closer adherence to fundamental values, and greater risk aversion scores lead to lower prices. The final study introduces facereading software to experimental finance. Subjects' facial expressions are monitored as they participate in a bubble and crash, and their expressions are categorized based on how strongly they reflect six basic emotions: fear, happiness, sadness, anger, disgust and surprise. Happiness and sadness correlate strongly with changes in financial position and the level of fear predicts an individual's decision to sell the asset.

1230-1400Lunch: Brasserie Neumünster1400-1430Workshop:Peter BossaertsFlex-E-Markets : Software

Presentation of a web-based software on-demand service that allows user to design and manage in-house markets. Farewell

1500

California Institute of Technology

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