Jahrestagung

DGF 2021

universität innsbruck

27th Annual Meeting of the

German Finance Association (DGF)

University of Innsbruck

September 30 - October 02, 2021

DGF Deutsche Gesellschaft für Finanzwirtschaft
German Finance Association

CONFERENCE SCHEDULE 2021

Day 1 — Thursday, 30th September 2021

09:00am – 05:00pm	Doctoral Tutorial
04:00pm – 08:00pm	Reception

Day 2 — Thursday, 1st October 2021

07:45am – 04:00pm	Reception
08:15am – 08:30am	Opening Speeches
08:45am – 10:15am	Session A

Session A

A1	A2	A3	A4	A5	A6
Asset Pricing: Empirical	Corporate Finance: Theoretical	Liquidity	Market Microstructure	International Finance	ESG
HS1	HS3	HS2	SR1	SR2	SR3

10:15am – 10:45am	Coffee break
10:45am – 12:15am	Session B

Session B

B1	B2	B3	B4	B5	B6
Asset Pricing: Factor Models	Corporate Governance	Derivatives	Financial Econometrics	Financial Intermediation	Climate Risk
HS1	SR2	HS3	SR1	HS2	SR3

12:15pm – 02:00pm	Lunch Break and Poster Session
02:00pm – 03:30am	Session C

Session C

C1	C2	C3	C4	C5	C6
Asset Pricing: Information	Corporate Governance	Fixed Income	Behavioral Finance: Household	Financial Crises	Financial Analysts
HS1	SR1	HS2	HS3	SR2	SR3

03:30pm – 04:00pm	Coffee Break
04:00pm – 05:30pm	Keynote Speech
05:30pm – 06:00pm	Museum Visit
06:30pm – 07:30pm	DGF Annual Meeting
from 07:30pm	Conference Dinner

Day 3 — Saturday, 2nd October 2021

09:00am – 10:30am	Session D

Session D

D1	D2	D3	D4	D5	D6
Asset Pricing: Factors	Corporate Finance: Empirical	Stress Tests	Behavioral Finance: Social	Digital Finance	Covid-19 and Financial Markets
HS1	HS3	SR1	HS2	SR2	SR3

10:30am – 11:00am	Coffee break
11:00am – 12:30pm	Session E

Session E

E1	E2	E3	E4	E5	E6
Asset Pricing: Momentum	Regulation	Index	Behavioral Finance: Asset Pricing	Risk Management	Portfolio Management
HS1	HS2	SR1	HS3	SR2	SR3

from 12:30pm	Lunch

Ladies and Gentlemen,

We welcome you to the 27th Annual Meeting of the German Finance Association (DGF). The conference aims to bring together researchers and practitioners to discuss the latest theoretical and empirical research from all areas of finance, banking and insurance. We are especially glad to welcome our keynote speaker Campbell R. Harvey, Professor at the Fuqua School of Business, Duke University.

Organizing this year's conference was a particular challenge due to the Covid pandemic. Since the personal interaction is especially valuable, we intend to hold the conference on-site and therefore took care to impose safety regulations such as "3G" (vaccinated – recovered – tested), contact tracing and free testing facilities. Furthermore, we kindly ask all participants to observe general hygiene measures. Despite all these regulations, we wish you an enjoyable time in Innsbruck!

This conference would not have been possible without the help and support of numerous institutions and people. Amongst others, we would like to thank the University of Innsbruck, the DGF, our sponsors and partners for their support.

Yours sincerely,
Jochen Lawrenz
and the entire DGF 2021
Organizing Committee

CONTENTS

INFORMATION

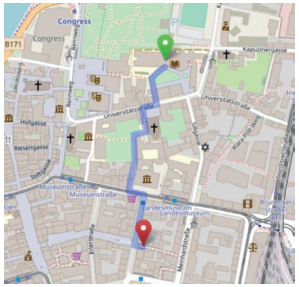
Covid Regulations & Testing

Corona regulations at the University of Innsbruck

- "3-G rule": Currently, a 3-G certificate (tested - vaccinated - recovered, in each case according to the official requirements) is required.
- Minimum distance and masks / mouth-nose protection: The obligation to wear masks on the premises of the University of Innsbruck, especially in common areas, remains in force. A normal mouth-nose protection (e.g. operation mask) is sufficient.
- The minimum distance to be kept at the University of Innsbruck is currently 1 meter.

During the conference we will offer free Covid19 Antigen Tests

- Free Covid-19 Antigen Tests will be available at:



Source: Openstreetmap

Wirtschaftskammer Tirol (WKO)
Wilhelm-Greil-Straße 7
6020 Innsbruck
Austria

General Information

Conference Venue
University of Innsbruck
Campus SoWi
Universitätsstraße 15
6020 Innsbruck

Get-together
Café Katzung
Herzog-Friedrich-Straße 16
6020 Innsbruck

Coffee Break
Coffee is available in front of the Aula.

Lunch
Lunch will be served at the Mensa. There are several different menus to choose from. You will receive a voucher at the registration.

Conference Dinner
Congress Innsbruck
Orangerie
Rennweg 3
6020 Innsbruck

Parking
InnenSTADT Garage Innsbruck
Kaiserjägerstraße 1
6020 Innsbruck

Internet
Free WiFi Access available

Airport
Innsbruck has its own airport (IATA: INN). However, it was announced that there will be renovation works going on in autumn 2021 which means that the airport will be closed. The nearest airports are then Munich (MUC) or Salzburg (SZG). From there you may take the train.

Train
If you arrive at Innsbruck by train, we recommend using public transport to get to the conference venue. Bus line R gets you from the central station to the venue (the stop is called "Polizeidirektion"). However, it is also possible to walk from the central station to the venue (750 meters, about 10-minute walk).
A single ticket for public transport costs 2.70 EUR. You can buy the tickets at a vending machine. You may find them at nearly every station. Or buy your tickets via the "IVB Tickets'"-App.

Contact
dgf2021@uibk.ac.at

INFORMATION

Sightseeing in and around Innsbruck

■ Golden Roof (Goldene Dachl)

■ Imperial Palace (Kaiserliche Hofburg)

■ Court Church (Hofkirche)

■ Imperial Gardens (Hofgarten)

■ Nordkette

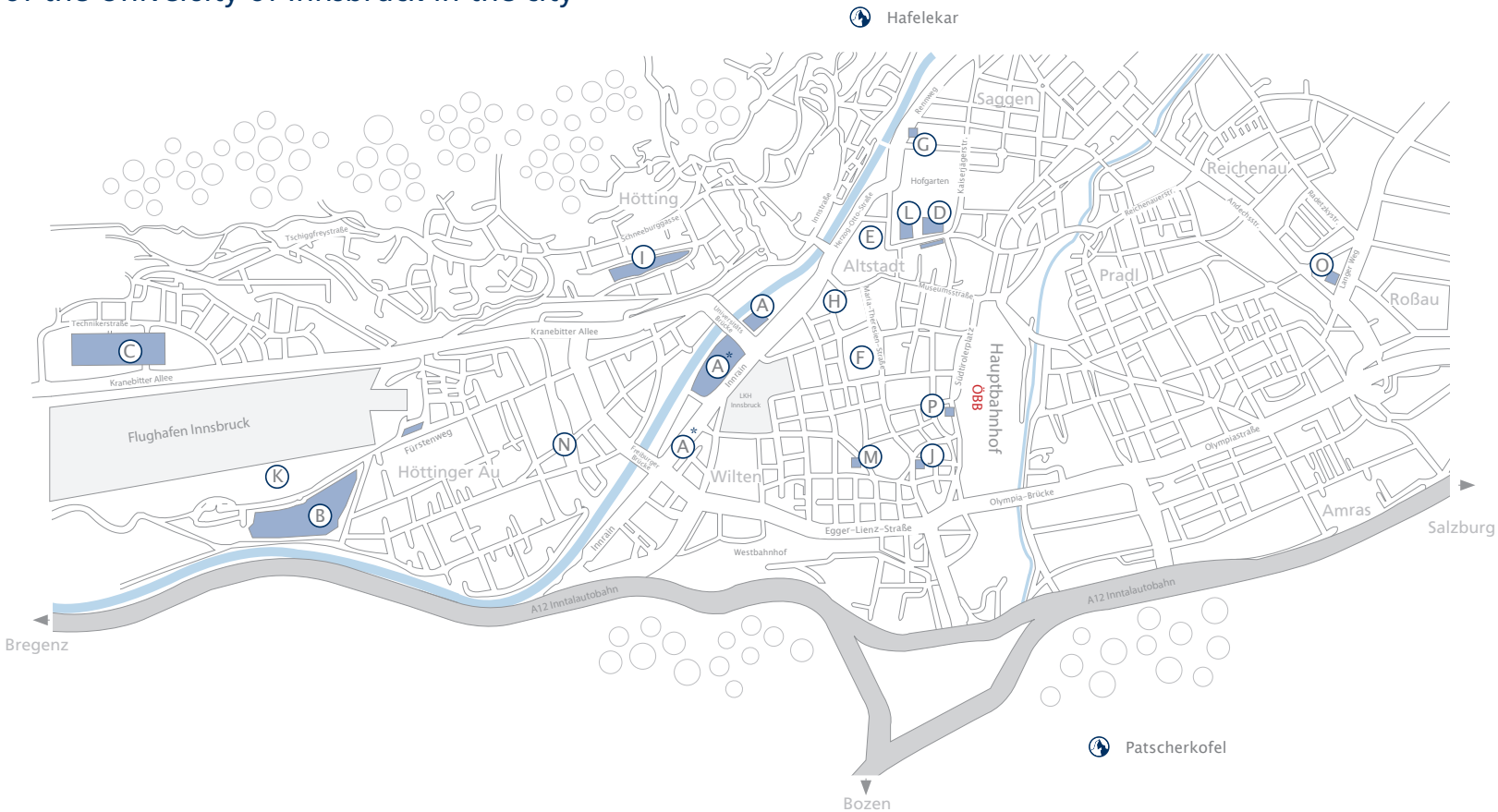
■ Town Square (Marktplatz)

INNS' BRUCK

Innsbruck Tourist Office
Burggraben 3
6020 Innsbruck
Austria

MAPS

Locations of the University of Innsbruck in the city



Ⓐ **Campus Innrain**

Innrain
Josef-Hirn-Straße
Herzog-Siegmund-Ufer

Fakultät für Bildungswissenschaften
Fakultät für Chemie und Pharmazie
Fakultät für Geo- und Atmosphärenwissenschaften
Fakultät für LehrerInnenbildung
Fakultät für Psychologie und Sportwissenschaft
Philologisch-Kulturwissenschaftliche Fakultät
Philosophisch-Historische Fakultät
Rechtswissenschaftliche Fakultät

* Medizinische Universität Innsbruck

Ⓑ **Campus Sports**

Fürstenweg

Fakultät für Psychologie und Sportwissenschaft
Universitäts-Sportinstitut Innsbruck (USI)

Ⓒ **Campus Technik**

Technikerstraße

Fakultät für Architektur
Fakultät für Technische Wissenschaften
Fakultät für Biologie
Fakultät für Mathematik, Informatik und Physik

Ⓓ **Campus Universitätsstraße**

Universitätsstraße
Karl-Rahner-Platz

Fakultät für Betriebswirtschaft
Fakultät für Soziale und Politische Wissenschaften
Fakultät für Volkswirtschaft und Statistik
Katholisch-Theologische Fakultät

Ⓔ **Claudiana**
Herzog-Friedrich-Straße 3

Ⓕ **Fakultät für Bildungswissenschaften**
frühere Hauptpost, Maximilianstraße 2

Ⓖ **Forschungsinstitut für Biomedizinische Alternsforschung**
Rennweg 10

Ⓗ **Forschungsschwerpunkt Digital Science Center (DiSC)**
Innrain 9–15

Ⓘ **Institut für Botanik**
Sternwartestraße 15

Ⓙ **Institut für Erziehungswissenschaften**
Liebeneggstraße 8

Ⓚ **Institut für LehrerInnenbildung und Schulforschung**
Fürstenweg 176

Ⓛ **Institut für Musikwissenschaft**
Haus der Musik, Universitätsstraße 1

Ⓜ **Institut für Psychosoziale Intervention und Kommunikationsforschung**
Schöpfstraße 3

Ⓝ **Michael-Popp-Forschungsinstitut für die Entwicklung neuer pflanzlicher Wirkstoffe**
Mitterweg 24

Ⓞ **Zentrum für Alte Kulturen**
Langer Weg 11

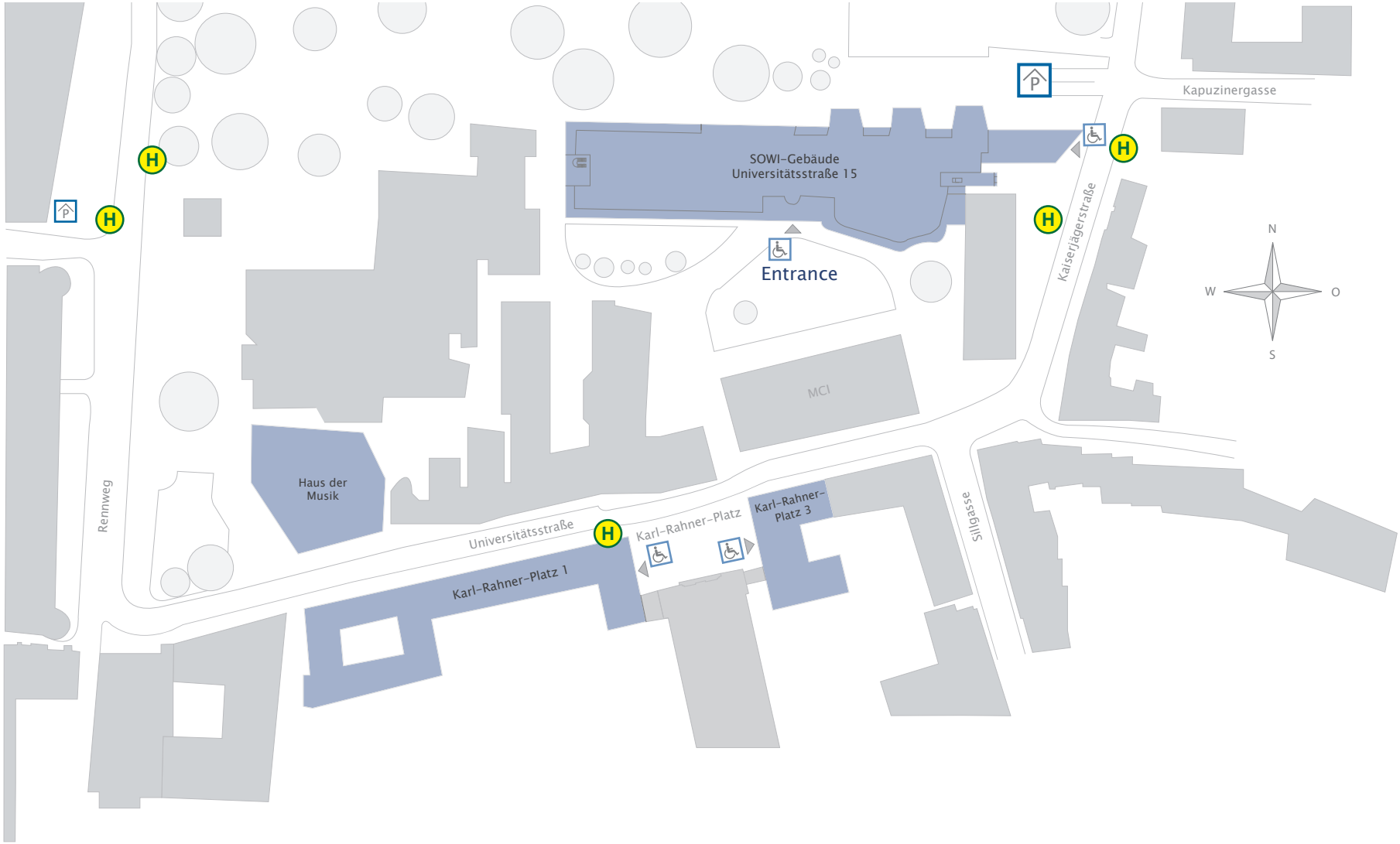
Ⓟ **Archiv für Baukunst**
Lois-Welzenbacher-Platz 1

Alpengarten Patscherkofel
Patscherkofel

Victor-Franz-Hess-Hütte
Hafelekar

MAPS

Campus Universitätsstraße / SoWi



MAPS

SoWi Ground floor

Lift/ elevator

Erste-Hilfe Raum/ first aid room

defibrillato r/ defibrillato r

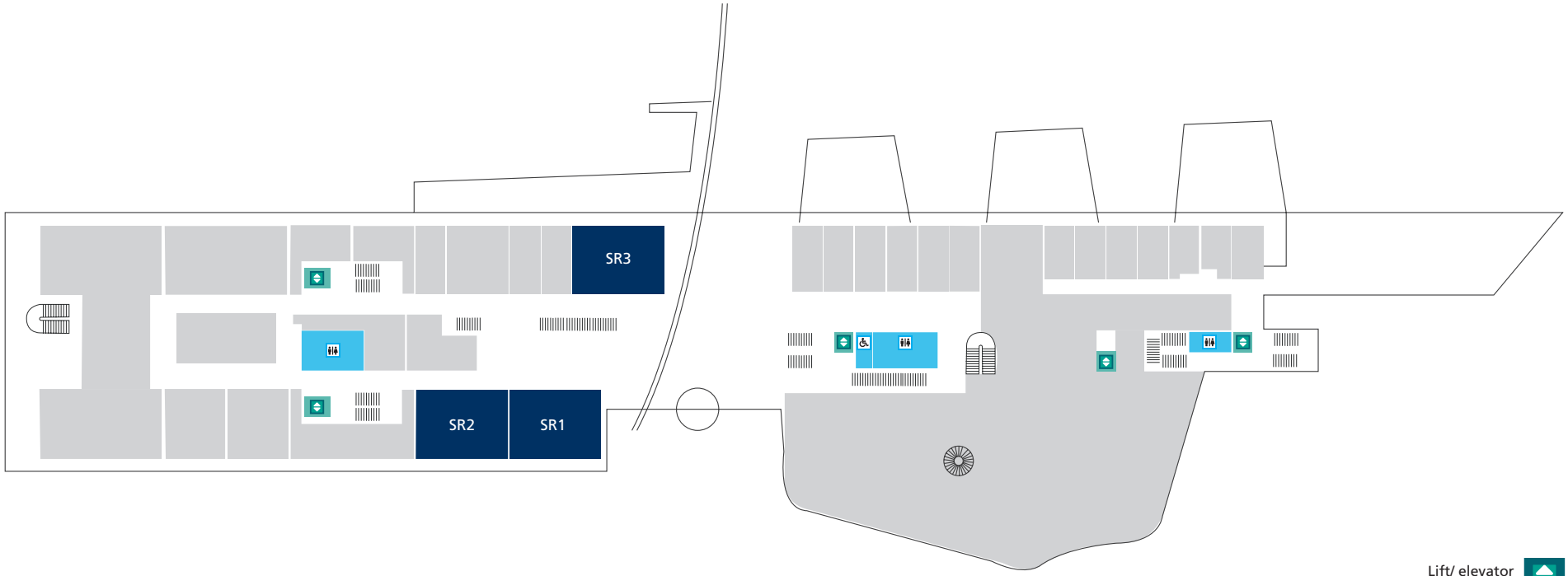
WC/ rest roo m

Barrierefreies WC/ wheelchair accessible rest room

Photographs and/or films can be produced during this event. By participating in the event, you acknowledge that photographs and video materials on which you are depicted are used for press coverage and ar e published in various (social) media, publications and on websites of the University of Innsbruck. For further information on data privac y, please refer to the data privacy declaration at www.uibk.ac.at/datenschut z.

MAPS

SoWi 1st floor



Lift/ elevator

Erste-Hilfe Raum/ first aid room

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WC/ rest roo m

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PROGRAM OVERVIEW

Keynote

Professor Campbell R. Harvey: "Tortured Data"

Friday, October 1st, 2021, 3:15pm-4:15pm
SoWi Aula

Campbell R. Harvey is Professor of Finance at the Fuqua School of Business, Duke University and a Research Associate of the National Bureau of Economic Research in Cambridge, Massachusetts. He served as President of the American Finance Association in 2016.

Harvey is Partner and Senior Advisor to Research Affiliates, LLC, who oversees more than $200 billion in client investments. Harvey also serves as the Investment Strategy Advisor to the Man Group plc, the world's largest, publicly listed, global hedge fund provider.

Harvey edited The Journal of Finance - the leading scientific journal in his field and one of the premier journals in the economic profession from 2006-2012.

Poster Session

Applying GARCH-MIDAS models to a volatility trading strategy

Michael Dampf[2], Jeremy Leymarie[1], Andrii Mudrak2
[1]EDHEC Business School, France; [2]University of Vienna, Austria

The goal of this paper is to identify whether GARCH-MIDAS (GM) models are better suited to estimate the S&P500 volatility risk premium (VRP) for a VIX trading strategy than conventional and VIX futures term structure implied VRP models. We use the model-estimated VRP as a decision making indicator in a long/short VIX trading strategy and compare the models based on the out of sample Sharpe ratio. Then, we extend our strategy to Double Asymmetric GARCH MIDAS models (DAGM) to adjust for the volatility asymmetry. Our results show that DAGM models that use the term structure of SPX options as a MIDAS component yield a higher Sharpe ratio than conventional and VIX futures term structure implied VRP models.

Big bath accounting in managerial tone following CEO turnovers

Wolfgang Breuer, Marcos Andres Follonier, Andreas Knetsch
RWTH Aachen University, Germany

Prior work has documented that incoming CEOs make accounting decisions which reduce reported firm performance. It is however unclear what motivates this so-called "big bath" behavior. It might serve to give a more accurate representation of actual firm performance or might be motivated opportunistically. Investigating the textual tone in earnings press releases in the years surrounding CEO turnovers, we find that incoming CEOs use negative tone to an extent that cannot be explained by current firm performance or proxies for expected future performance. Moreover, this phenomenon of "big bath rhetoric" is exclusive to "forced" CEO turnovers, where incoming CEOs have greater incentives and more opportunity to bias the perception about firm performance downwards. These results document opportunistic accounting behavior consistent with the hypothesis that incoming CEOs strategically try to bias the perception of market participants about their firm's situation downwards.

Information processing in the option market around earnings and macroeconomic announcements

Jelena Eberbach, Marliese Uhrig-Homburg, Xiaoxiao Yu
Karlsruhe Institute of Technology, Germany

We empirically analyze attention allocation of informed option traders around firm-specific and economy-wide news announcements. Using high-frequency trade data to measure informed trading, we find that when earnings announcements coincide with macro releases, sophisticated option investors process private information more effectively compared to earnings-announcement days without macro releases. This enhances the predictive power of option trading on underlying stock returns. The impact of macro releases on the predictive power of option trading is especially pronounced if the option market effective bid-ask spread is low or absolute earnings surprise is high. This indicates that informed traders prefer liquid option markets and valuable information to benefit from their private information.

The effect of ambiguity on price formation and trading behavior in financial markets

Wenhui Li, Peter Ockenfels, Christian Wilde
Goethe University Frankfurt, Germany

This paper sets up an experimental asset market in the laboratory to investigate the effects of ambiguity on price formation and trading behavior in financial markets. The obtained trading data is used to analyze the effect of ambiguity on various market outcomes (the price level, volatility, trading activity, market liquidity, and the degree of speculative trading) and to test the quality of popular empirical market-based measures for the degree of ambiguity. We find that ambiguity decreases market prices and trading activity; ambiguity leads to lower market liquidity through wider bid-ask spreads; and ambiguity leads to less speculative trading. We find that popular market-based measures of ambiguity used in the empirical literature do not seem to correctly capture the true degree of ambiguity.

Banking market structure and trade shocks

Vahid Saadi[1], Mohammad Izadi[2]
[1]IE Business School, IE University; [2]Goethe University Frankfurt

We study how the structure of the local banking market, that is bank specialization and bank concentration, affect credit and labor market responses to an import shock to local economies. We find that during the surge in U.S. imports from China from 1998 to 2006, small business loans (SBL) decline in counties that face a larger import shock. We show that bank geographical specialization positively affects banks' SBL origination in response to the import shock, while we do not find a significant heterogeneity with respect to bank concentration. Consistent with these results, we show that while employment and wages decline in counties hit by the import shock, higher bank specialization attenuates these negative labor outcomes, whereas bank concentration does not seem to have such attenuation effects.

Geographic proximity in short selling

Xiaolin Huo[1], Xin Liu[1], Vesa Pursiainen[2]
[1]Renmin university of China; [2]University of St. Gallen

Geographic proximity is associated with significantly higher returns from short selling in the UK. Short trades by funds with offices near the target firm headquarters are followed by significantly larger negative abnormal returns. The effect of geographic proximity is stronger for stocks that are smaller, more volatile, and less actively covered be sellside analysts. Short trades are also correlated geographically, with geographically proximate institutions more likely to short the same stocks. Geographically closer short trades predict more negative earnings surprises. Covering of short positions by more geographically proximate funds is followed by more positive abnormal stock returns.

Doctoral Tutorial

The German Finance Association will again be holding a workshop for advanced doctoral students alongside the conference at the University of Innsbruck. This one-day event on Thursday, September 30, 2021, offers doctoral students the opportunity to present their research and to discuss its content and methodology with leading representatives of the field.

The participating faculty members are (subject to change):

- Dr. Ralf Elsas (LMU München)
- Dr. Joachim Grammig (Universität Tübingen)
- Dr. Stefan Ruenzi (Universität Mannheim)
- Dr. Christian Schlag (Universität Frankfurt)
- Dr. Erik Theissen (Universität Mannheim)

The Sparkassen-Finanzgruppe (Wissenschaftsförderung der Sparkassen-Finanzgruppe e. V.) donates a best PhD student paper Award worth €1,000. The prize is awarded for the best presentation during the PhD workshop. The award will be presented during the main conference.

This year's participants are:

Macro Finance Model with Realistic Crises Dynamics
Goutham Gopalakrishna *(Ecole Polytechnique Federale de Lausanne SFI)*

Credit supply externalities of a secondary loan market
Kathrin Hackenberg *(KU Eichstätt-Ingolstadt)*

Sea Level Rise and Portfolio Choice
Emirhan Ilhan *(Frankfurt School of Finance & Management)*

Banks' Next Top Model
Elizaveta Sizova *(KU Leuven)*

Follow-thy-neighbor? Spillovers of asset purchases within the real sector
Talina Sondershaus *(Halle Institute for Economic Research IWH)*

Spillover effects of cum-ex and cum-cum trading with single stock futures
Valerie Laturnus *(Goethe-Universität Frankfurt)*

The Markets in Financial Instruments Directive and sensitivity of investors'portfolio allocation to analyst recommendations
Huiting Xu *(Frankfurt School of Finance & Management)*

Dollar Dominance in FX Trading
Fabricius Somogyi *(University of St. Gallen, Switzerland)*

ABSTRACTS

Day 2 Friday, 1st October 2021

Session A1 – Asset Pricing: Empirical HS1

Risk sharing within and outside the firm: the disparate effects of employment protection on expected stock returns

Robert Mahlstedt[1,3,4], Rüdiger Weber[2,5]
[1]WU Vienna, Austria; [2]University of Copenhagen; [3]IZA; [4]DFI; [5]VGSF

We study the effect of wrongful-discharge laws (WDL) on firm-level risk sharing and stock returns. Consistent with rational, risk-based pricing, the effect on returns is linked to how firms and workers share systematic risk via the distinct channels of employment and wage flexibility. We find disparate effects depending on the degree to which the respective law addresses problems arising from incomplete contracts. In states where WDLs prohibit employers from holding up employees by firing them, workers accept more variable compensation such that they bear more firm risk and expected returns are lower. Vaguer legislation applying exclusively to discharges in retaliation for following public policy only makes employment more sticky such that workers bear less firm risk and expected returns are higher.

Housing Yields

Stefano Colonnello[1,2], Roberto Marfè[3,4], Qizhou Xiong[5]
[1]Ca' Foscari University of Venice, Italy; [2]Halle Institute for Economic Research, Germany; [3]University of Turin, Italy; [4]Collegio Carlo Alberto, Italy; [5]University of Oxford, United Kingdom

This paper investigates heterogeneity in residential property yields using rental and sale listings from the largest German internet real estate platform. Equipped with property-level rent-to-price ratios obtained via matching properties for sale and for rent, we show that they strongly co-move with local factors, such as population age structure, industry structure, housing supply rigidities, and the liquidity and size of the housing market. Regional differences are particularly pronounced between globally relevant cities and other areas. However, a large fraction of the variation of rent-to-price ratios can be explained neither by local factors nor by an extensive array of property-specific observable features, pointing to the crucial role of idiosyncratic factors and within-city aggregation economies.

Growth Expectations out of WACC

Petri Jylhä, Michael Ungeheuer *(Aalto Univertsity, Finland)*

We reconcile the empirically flat relation between historical betas and stock returns (flat security market line) with the common usage of the CAPM based on historical betas in valuation. Analysts bias cash flow growth expectations upwards for high-beta firms, so that the value-reducing effect of higher historical systematic risk cancels out and buy/sell-recommendations remain unrelated to beta. The association between beta and growth overestimation is driven by estimates conventionally used in the industry (e.g., Bloomberg betas), suggesting that analysts adjust growth expectations to offset beta's valuation effects, instead of exhibiting a coincidentally higher overoptimism for higher-beta firms.

Session A2 – Corporate Finance: Theoretical — HS3

Callable or convertible debt? The role of debt overhang and covenants

Christian Riis Flor[1], Kirstine Boye Petersen[2], Alexander Schandlbauer[1]
[1]University of Southern Denmark; [2]Danmarks Nationalbank

We analyze what role debt overhang and covenants have in affecting a manager's choice between issuing callable or convertible debt. Callable bonds provide a higher coupon to bondholders in exchange for a firm's repurchase option of its claim, whereas convertible bonds offer bondholders the option to exchange debt to equity. Using a dynamic capital structure theory model with investment choice, we show that firms which are more exposed to debt overhang issue callable rather than convertible bonds. However, convertible bonds are preferred if the firm has more debt. Furthermore, if bonds have covenants attached, callable bonds are more likely to be issued. Our empirical findings support the theory.

Leverage and Risk-Taking

Tobias Berg[1], Florian Heider[2]
[1]Frankfurt School of Finance and Management gGmbH, Germany; [2]European Central Bank

Contrary to the prediction of static models, risk-taking is non-monotonic in leverage in dynamic models. If lenders rationally anticipate risk-shifting of high-leverage firms, then equity-holders bear the cost of risk-shifting via higher debt interest rates. The higher cost of risk-shifting makes equity holders avert risk at medium levels of leverage. Averting risk today preserves the option to issue safe, i.e., cheap, debt tomorrow. The same friction responsible for risk-taking of high-leverage firms leads medium-leverage firms to avert risk. Our model is able to reconcile contradictory empirical results on the relation between risk and leverage, predicts that firms with medium leverage are subject to investment distortions, and helps explain the low leverage puzzle.

The tax shield increases the interest rate

Marcel Fischer[1], Bjarne Astrup Jensen[2]
[1]University of Konstanz and Copenhagen Business School, Germany; [2]Copenhagen Business School

We study the general equilibrium implications of the corporate tax shield in a growth economy that taxes household income and firm profits and redistributes tax revenues. Our model predicts that in general equilibrium the tax shield's reduction of the corporate after-tax borrowing rate is counteracted (but not fully eliminated) by an increase in the pre-tax rate.

Session A3 – Liquidity — HS2

Expected Bond Liquidity

Michael Reichenbacher[1], Philipp Schuster2, Marliese Uhrig-Homburg[1]
[1]Karlsruhe Institute of Technology, Germany; [2]University of Stuttgart, Germany

We introduce an approach to forecast individual bond liquidity and apply it to the U.S. corporate bond market. Our model combines three dynamic prediction models to get the most accurate estimate for future bond liquidity. We compare the new prediction methodology with the literature's current approach to use a bond's liquidity of today as the best estimate for its liquidity tomorrow. Our approach generates significantly lower forecasting errors and is much better able to capture the premium for expected liquidity in bond yields. We provide evidence that investors in corporate bond funds actively anticipate liquidity deterioration in underperforming funds and sell their shares in advance to secure a first-mover advantage.

Customer liquidity provision in corporate bond markets: electronic trading versus dealer intermediation

Brian Mattmann *(University of Basel, Switzerland)*

We investigate electronic trading among customers under normal market conditions and during the Covid-19 crisis using a unique data sample of U.S. corporate bond transactions from UBS Bond Port. We show that electronic customer-to-customer (C-to-C) trading is beneficial in terms of costs for orders up to $ 1 million. Contrary to expectations, at the onset of the Covid-19 crisis the costs for liquidity takers selling bonds electronically inverted, resulting in negative aggressor markups. Whereas electronic liquidity provision by dealers is primarily concentrated to normal market conditions, electronic C-to-C trading becomes more important in stressed markets. Literature underestimates the effect of inverting markups during the Covid-19 crisis and thus undervalues electronic C-to-C trading as a viable liquidity pool in stressed markets.

The effect of credit, liquidity and rollover risk on bondholder wealth in mergers and acquisitions

Rainer Jankowitsch, Florian Pauer *(Vienna University of Economics and Business, Austria)*

We analyze M&A announcements and focus on the potential impact of these deals on bond prices in the US corporate bond market. In particular, we investigate the effect of changes in credit, liquidity and rollover risk. This is important, as especially target firms are often small with rather illiquid bonds and show maturity concentrations. M&A transactions can significantly change the debt maturity structure and liquidity risk of these bonds. We find the size of the average announcement return of target bonds is 40 bp and increases by around 50% for target firms with a low debt dispersion and illiquid bonds. We find only small negative returns for acquirer bonds, which can be explained by the difference in size.

Session A4 – Market Microstructure SR1

The case of fleeting orders and flickering quotes

Markus Ulze[1], Johannes Stadler[1,2], Andreas W. Rathgeber[1]
[1]University of Augsburg, Germany; [2]Bank Julius Bär & Co. AG, Switzerland

The literature controversially discusses the ambiguous motives and driving forces behind fleeting orders and flickering quotes. In particular, manipulative and dysfunctional characteristics are feared. We show with an ultra-low latency derivative data set that none of these properties have to be dreaded. Fleeting orders are associated with liquid market environments. The prices of fast flickering order books improve by 3.90% before trades. The results of our Cox proportional hazard rate, logistic, and linear regressions reveal that flickering quotes are likely due to beneficial price discovery processes and inventories of HFTs offered at a discount to other participants.

Dollar dominance in FX trading

Fabricius Somogyi *(University of St. Gallen, Switzerland)*

This paper argues that the US dollar dominates global FX trading volume because market participants strategically avoid to trade currency pairs where their expected price impact is large. To demonstrate this, I exploit a unique institutional feature of the FX market. Many currency pairs that do not include the dollar are frequently exchanged by using the US dollar as an intermediate "vehicle" currency. From my model, I derive a sufficient statistic for dollar dominance that can predict which non-dollar currency pairs are more likely to trade indirectly via the US dollar. I empirically test these conditions using a comprehensive FX trade data set and find them to be satisfied for two-thirds of non-dollar currency pairs. To establish causality, I show that dollar dominance increases by 25% after a quasi-exogenous spike in the liquidity of dollar currency pairs on days with scheduled US monetary policy announcements.

High-frequency tweeting and market making after hours

Stefan Scharnowski *(University of Mannheim, Germany)*

This paper analyzes differences between the regular and extended trading sessions in the high-frequency reaction of equity markets to potential news. Using presidential tweets as market-stirring events, I find that generally volatility increases and liquidity deteriorates within less than a second after a tweet. Compared to the regular trading session, the reduction in market quality is stronger and faster during the extended trading hours, when liquidity is lower and designated market maker participation is optional.

Session A5 – International Finance SR2

Stock returns in global value chains: The role of upstreamness and downstreamness

Nicole Branger[1], René Marian Flacke[1], Paul Meyerhof[1], Steffen Windmüller[2]
[1]University of Muenster, Germany; [2]Technical University of Munich

This paper studies how upstreamness and downstreamness affect stock returns in global value chains. Up- and downstreamness measure the average distance from final consumption and primary inputs, respectively, and are computed from world input-output tables. We show that downstreamness is a key driver of expected returns around the globe, whereas upstreamness is not. Firms that are farthest away from primary inputs earn approximately 5% higher returns per year than firms that are closest. The effect is found within and across countries and suggests that investors perceive supplier dependence in global value chains as an important source of risk.

Vulnerable Funding

Helena Chuliá[1], Ignacio Garrón[2], Jorge Uribe[3]
[1]Universitat de Barcelona; [2]Universitat de Barcelona; [3]Universitat Oberta de Catalunya

We study the international propagation of financial conditions from the United States to global financial markets. The impact is highly heterogeneous alongside the quantiles of the distribution of the two major funding sources, credit and equity. It is greater on the lower quantiles, which means that analogous to vulnerable growth episodes, examined by the past literature, there exist as well vulnerable funding periods of a global scale, originated from financial weakness in the US. Our estimates differentiate between first and second moment shocks to financial conditions. While credit growth largely responds to first moment shocks of US financial conditions four quarters after

their occurrence, stock markets react more sensitively and rapidly to second moment shocks, which can be theoretically associated with a portfolio channel underlying the shocks spread. We argue that the heterogeneous impact across countries is explained by the financial market size and the strength of the financial connectedness with the US.

Foreign bias in institutional portfolio allocation: The role of social trust

Wolfgang Drobetz[1], Marwin Mönkemeyer[1], Ignacio Requejo[2], Henning Schröder[1]
[1]University of Hamburg, Germany; [2]University of Salamanca, Spain

We study the effects of social trust on international asset allocation. Using a comprehensive international sample of institutionally managed portfolios from 86 countries, we show that institutional investors from high-trust countries are less prone to foreign bias and exhibit superior cross-country diversification. The results suggest that the informal institution of social trust and formal institutions are substitutes in international portfolio decisions. Using events of exogenous variation in information asymmetry, we find support for an information-based explanation. Our findings have additional implications at the firm-level. Most importantly, we observe a lower cost of equity for firms with more trusting investors.

Session A6 – ESG SR3

Rewriting history II: the (un)predictable past of ESG ratings

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The explosion in ESG research has led to a strong reliance on ESG rating providers. We document widespread changes to the historical ratings of Refinitiv ESG, formerly ASSET4, a key rater. Across two downloads in 2018 and 2020, we document large rewritings in ESG ratings, which are systematic and related to past performance. The retroactive rating changes have implications for researchers and investment professionals. Depending on whether the original or rewritten data are used, rankings and classifications of firms into ESG quantiles change. We demonstrate that these changes affect tests that relate ESG ratings to returns. We further show that the data rewriting is an ongoing rather than a one-off phenomenon.

Climate change regulatory risks and bank lending

Isabella Mueller, Eleonora Sfrappini *(Halle Institute for Economic Research (IWH), Germany)*

We investigate how banks adjust their credit supply depending on firms' exposure to regulatory risks related to climate change. Exploiting the Paris Agreement as a shock

to the likelihood of future regulation related to climate change, we identify large heterogeneity in credit reallocation depending on whether the borrower stands to gain or to lose from future regulation as well as the region in which the borrower is located. We find that banks increase lending to US firms with a negative exposure to regulatory risks. In contrast, banks increase credit supply to European firms that appear to benefit from future regulation. Considering the role of banks' own exposure to regulatory risks, which stems from their portfolio structure and borrowers' exposure, we find that negatively exposed banks increase their credit supply to negatively exposed European firms, whereas for US firms there is no differential effect of banks' own exposure.

Financing sustainable entrepreneurship: ESG measurement, valuation and performance in token offerings

Paul P. Momtaz[1,2,] Sasan Mansouri[1]
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Sustainable Entrepreneurship (SE) targets profitability and sustainability goals. A major research gap concerns SE's economic attractiveness for entrepreneurs and investors. The question is ambiguous because sustainability orientation creates costly constraints, while startups cannot fully appropriate the rents from their positive externalities. We propose a machine-learning approach to measure Environment, Society, and Governance (ESG) properties from text data, and relate these properties to startup valuation and performance. First, startups with salient ESG goals achieve higher valuations, suggesting that sustainability orientation is financially attractive for the entrepreneur. Second, long-term investor returns are lower than in conventional startups, reflecting investors' willingness-to-pay for sustainability-related, non-financial returns. Third, consistent with the notion that sustainability orientation creates costly constraints, we find that valuation and performance effects are weaker in startups with high degrees of technological, network, and governance formalization.

B

Session B1 – Asset Pricing: Factor Models HS1

A skeptical appraisal of robust asset pricing tests

Tim A. Kroencke[1], Julian Thimme[2]
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We analyze the size and power of a large number of "robust" asset pricing tests, investigating the hypothesis that the price of risk of a candidate factor is equal to zero. Different from earlier studies, our bootstrap approach puts all tests on an equal footing and focuses on sample sizes comparable to standard applications in asset pricing research. Thus, our paper provides guidance for researchers about which method to use. We find that the classic Fama-MacBeth/Shanken approach does not over-reject useless factors and provides a reasonable balance between size and power. In contrast, some of the "robust" methods suffer from poor power in realistic sample sizes, especially in situations where the asset pricing model is mildly misspecified.

Factor models with drifting prices

Alessandro Melone[1], Carlo Favero[2,3,] Andrea Tamoni[4]
[1]Vienna Graduate School of Finance, Austria; [2]Bocconi University; [3]CEPR; [4]Rutgers Business School

We propose a simple extension of the classical linear factor model where the deviations of a portfolio price from its permanent component emerge as a predictor for portfolio returns. Intuitively, when asset prices are above their trend, next period expected returns are lower. We discuss price deviations and return predictability within a simple model of diagnostic expectations. Furthermore, the price deviations are transitory if the factor model is able to track the buy-and-hold asset portfolio. Hence, the price deviations are useful to compare and select factor models. We conclude by studying the implications of our model for conditional asset pricing.

Stock-oil comovement: fundamentals or financialization?

Alessandro Melone[2], Otto Randl[1], Leopold Sogner[3], Josef Zechner[1]
[1]WU Vienna University of Economics and Business, Austria; [2]Vienna Graduate School of Finance (VGSF); [3]Institute for Advances Studies

We investigate the sources of time-variation in the stock-oil correlation over the period 1983-2019. We first derive a novel oil futures return news decomposition following Campbell and Shiller (1988) and Campbell (1991). Then, for both stock and oil, we split unexpected returns into cash flow news (which can be related to asset-specific fundamentals) and discount rate news (which can be driven by shocks to investors holding both assets) using a vector autoregressive (VAR) model. We find that about 79% of the time-varying correlation is related to the comovement of cash flow news

between the two assets. This result is robust to different specifications of the VAR model used to decompose returns. We provide supportive evidence that underlying changes in the structure of the real economy, such as the increased oil production in the U.S., are key drivers for the changing stock-oil comovement beyond the financialization of commodities.

Session B2 – Corporate Governance SR2

Shareholder governance and debt maturity structure

Paul Voss *(University of Bonn, Germany)*

This paper studies how a company's debt maturity structure shapes shareholder governance. A large shareholder's exit signals adverse information via the public share price, resulting in an informational spillover to a firm's creditors. While long-term creditors' claims are fixed, short-term creditors can react quickly. By demanding higher credit spreads after an exit, short-term creditors amplify the effectiveness of exit to discipline management. However, short-term debt also reduces large shareholders' exit profits, potentially rendering the threat of exit empty and the share price uninformative. In the absence of short-term debt, the possibility to exit reduces large shareholders' incentives to engage in voice. By contrast, short-term debt can give rise to a complementarity of exit and voice. From a governance perspective, the optimal maturity structure features a mix of short-term and long-term debt. The model delivers novel empirical predictions.

Consequences of data errors for the validity of the E-index as a proxy for corporate governance

Larissa M. Karthaus, Markus Schmid, Felix von Meyerinck (*University of St. Gallen, Switzerland)*

The E-index is the most widely used proxy for corporate governance in empirical research. We show that ISS data contain a significant number of both systematic and random data errors. We use alternative databases to manually check deviations across databases and to construct a corrected E-index. We then revisit analyses conducted in three well-known and widely-cited studies using the E-index and compare results from using either ISS or corrected data to construct the E-index. Results show that data errors in ISS result in a significantly overestimated negative association between firm value and the E-index and lead to incorrect conclusions with respect to the relationship between governance and different measures of operating performance as well as analysts' earnings forecasts. In summary, our results show that data quality is an important issue when measuring corporate governance.

Corporate divestitures and value creation in acquisition –centered restructuring programs

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Divestitures often accompany acquisitions, representing on average 33% of the acquisition value. Relying on a global sample, we provide support for the efficient restructuring view of acquisition–related divestitures. On average, acquisition–related divestitures are associated with an increase of 2% in the total value creation around focal acquisitions. The value contribution of divestitures is higher in large acquisitions, and in countries with low employee protection. Examining returns for divestitures only, we find that those around acquisitions are not transactions with weak bargaining positions. Overall, the value contribution of divestitures varies with the synergistic potential of the acquisition–centered restructuring program.

Session B3 – Derivatives HS3

Demand-supply imbalance risk and long-term swap spreads

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We develop a model in which long-term swap spreads are determined by preferred habitat investors' demand for swaps, constrained intermediaries' supply of swaps, and compensation for the risk that spreads temporarily widen due to future shocks to demand or supply. Empirically, we identify these separate demand and supply factors, and assess their respective contributions to the level of swap spreads and the returns on swap spread trades.

Quantile risk premiums

Felix Brinkmann[1], Julian Dörries[2], Olaf Korn[2,3]
[1]Deutsche Bundesbank; [2]University of Goettingen, Germany; [3]Centre for Financial Research (CFR), Cologne

This paper studies quantile-based moment premiums. The quantile-based approach delivers robust and flexible alternatives to premiums for variance, skewness and kurtosis risk and enhances our understanding of the pricing of risks in derivatives markets. To quantify these premiums, the paper introduces a new class of synthetic derivatives contracts: quantile swaps. Such contracts mimic quantile-based moment measures from robust statistics. An empirical study of index options detects two distinct premiums for dispersion and asymmetry, but no premium for steepness. The premium for dispersion can be explained by traditional moment risk premiums, whereas the asymmetry premium is a novel premium that our approach is able to

detect. This finding contrasts markedly with results obtained with traditional moment swaps, and warns us to interpret moment premiums cautiously.

The shape of the pricing kernel and expected option returns

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A growing literature analyzes the cross-section of single stock option returns, virtually always under the (implicit or explicit) assumption of a monotonically decreasing pricing kernel. Using option returns, we non-parametrically provide significant and robust evidence that the pricing kernel as a function of single stock returns is indeed U-shaped. This shape of the pricing kernel has strong implications for the impact of volatility on expected options returns. For example, we show both theoretically and empirically that higher volatility can increase or decrease expected call option returns, depending on moneyness. Furthermore, on the basis of a U-shaped pricing kernel, we shed new light on some recent findings from the literature on expected option returns, such as anomalies related to ex-ante option return skewness and to lottery characteristics of the underlying stock.

Session B4 – Financial Econometrics — SR1

Diverging roads: Theory-based vs. machine learning-implied stock risk premia

Joachim Grammig[1,4], Constantin Hanenberg[1], Christian Schlag[2,3], Jantje Sönksen[1]
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We assess financial theory-based and machine learning methods to quantify stock risk premia and investigate the potential of hybrid strategies by comparing the quality of the respective excess return forecasts. In the low signal-to-noise environment of a one-month investment horizon, we recommend to rely on a theory-based strategy that exploits the information in current option prices, especially if the risk premium estimate is to be updated at a high frequency. At the one-year horizon, a random forest can improve on the theory-based method. In an effort to connect the opposing philosophies, we identify the use of a random forest to account for the approximation errors of the theory-based approach towards measuring stock risk premia as a promising hybrid strategy. It combines the advantages of two diverging roads in the finance world.

Efficient estimation of bid-ask spreads from transaction prices

Emanuele Guidotti, Tim Kroencke *(University of Neuchâtel, Switzerland)*

We propose a novel estimation procedure of bid-ask spreads from transaction prices. Our estimator is unbiased in the presence of low liquidity and is efficient in the sense that it comes with the lowest variance among alternative estimators. We illustrate the performance of our efficient estimator in a comprehensive simulation experiment and with empirical data. Our results show that previous research has considerably underestimated transaction costs.

Score-driven asset pricing: Predicting time-varying risk premia based on cross-sectional model performance

Dennis Umlandt *(University of Trier, Germany)*

This paper proposes a new parametric approach for estimating linear factor pricing models with time-varying risk premia. In contrast to most established methods, the framework presented abstains from specifying a time series model with external predictor variables. Instead, time-varying risk prices and exposures follow an observation-driven updating scheme that reduces the one-step-ahead prediction error from a cross-sectional factor model at the current observation. This agnostic approach is particularly useful in situations where predictors are unknown or of uncertain quality. Updating schemes for elliptically distributed returns are derived and propose cross-sectional regression errors as driving sequence for the parameter dynamics. Estimation and inference are performed by likelihood maximization. A simulation study confirms that the novel method is capable of filtering and predicting substantial risk price movements. The empirical performance is illustrated by an application to a macrofinance model of currency carry trades.

Session B5 – Financial Intermediation — HS2

Deposit competition and the securitization boom

Huyen Nguyen[1], Danny McGowan[2]
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We provide novel evidence that regulatory-induced deposit market competition provoked banks to enter the securitization market. Exploiting the state-specific removal of interstate bank branching across U.S states between 1994 and 2006 as an exogenous source of bank deposit competition, we document four key results. First, the removal of interstate branching restrictions leads to an intensification of deposit market competition. Second, this rise in the cost of deposits increases the probability that a bank operates an `originate-to-distribute' model by 6%. Third, the securitization effect holds across bank asset classes but is most pronounced for mortgages. Finally,

the results are strongest among small and single state banks owing to their limited branch networks and reliance on deposit funding. The findings highlight a hitherto neglected supply-side explanation for the rapid expansion in securitization before the financial crisis and speak to the debate about banking competition policy.

How mortgages fuels corporate lending: It's not magic, it's covered bonds

Jin Cao[2], Ragnar E. Juelsrud[2], Talina Sondershaus[1]
[1]Halle Institute for Economic Research (IWH), Germany; [2]Norges Bank, Norway

We use administrative and supervisory data at the bank-, loan- and firm-level to investigate the impact of covered bond issuances on bank lending and real economic outcomes. We show that the introduction of covered bonds leads to a rebalancing of bank portfolios from mortgages to corporate loans. We provide a theoretical framework for analyzing the impact of covered bonds on bank portfolio allocation, and highlight two opposing forces: On the one hand, covered bonds encourage banks to issue more mortgage loans due to lower funding costs. On the other hand, covered bonds enhance the liquidity of existing mortgages allowing banks to substitute mortgages with riskier corporate lending for higher yields. If initial bank liquidity is sufficiently low, the latter mechanism dominates. We provide empirical support for this by showing that the observed portfolio reallocation is driven by low-liquid banks. Increased corporate lending leads to more favorable outcomes at the firm-level.

Mind the income gap - partial hedging of interest rate risk within banks' business model

Daniel Platte, Fabian Wening *(University of Muenster, Germany)*

We implement a recently established approach to investigate interest rate risk of banks with extensive engagement in maturity transformation. Therefore, we contribute to the emerging literature contradicting modern banking theory's view on interest rate risk as inevitable consequence of banks' maturity mismatch. We find evidence for an alignment of banks' interest income and expense sensitivities which might indicate an implied interest rate risk hedge by their business model. Banks with lower expense sensitivities show significantly higher loan maturities and higher loan proportions in their balance sheets. However, we also confirm a remaining exposure to changing market rates. Our results shed light on an implicit hedging mechanism within the traditional business model of banks, its (in)completeness, and consequences for adequate regulation.

Session B6 – Climate Risk SR3

Hurricane risk and asset prices

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We examine hurricane exposure as a systematic risk factor. Our theoretical basis is a consumption-based asset pricing model with heterogeneous agents subject to uninsurable idiosyncratic shocks. The latter provides a necessary and a sufficient condition for a hurricane risk premium. We find empirical evidence for both in the period 1995–2020, which is characterized by a substantially elevated hurricane activity. The effect is highly significant and large: a zero-investment portfolio of stocks with negative minus positive hurricane risk sensitivity earned an average excess return of at least 5.83% p.a. The effect withstands a comprehensive set of asset pricing and robustness tests.

Climate Default Swap - Disentangling the exposure to transition risk through CDS

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The substantial economic transformation required to mitigate and adapt to climate change will lower the value of certain businesses as well as some firms' assets in the not-too-distant future. Firms will need to transition to a less carbon-intensive business model, but may do so at different times and at different speeds, incurring different costs and risks in the process. We propose and implement a novel market-based measure of exposure to transition risk (transition risk factor) and examine how this risk affects firms' creditworthiness. We discipline the exercise by using Credit Default Swap (CDS) spreads to capture differential exposure to transition risk across economic sectors. We show that the transition risk factor is a relevant determinant of CDS spreads and provide evidence of the relationship between the differential exposure to transition risk and firms' cost of default protection. This effect is particularly pronounced during deteriorating credit market movements. However, effects vary substantially across industries, reflecting the fact that transition risk impacts firms' valuation differently depending on their sector. Our findings also suggest that investors seek greater protection against transition risks in the short– to medium-term, indicating an expectation of a swift transformation of the entire economic structure.

Asset diversification versus climate action

Christoph Hambel[1], Holger Kraft[1], Frederick van der Ploeg[2]
[1]Goethe-Universität Frankfurt, Germany; [2]University of Oxford

Asset pricing and climate policy are analyzed in a global economy where consumption goods are produced by both a green and a carbon-intensive sector. We allow for endogenous growth and three types of damages from global warming. It is shown that, initially, the desire to diversify assets complements the attempt to mitigate economic damages from climate change. In the longer run, however, a trade-off between diversification and climate action emerges. We derive the optimal carbon price, the equilibrium risk-free rate, and risk premia. Climate disasters, which are more likely to occur sooner as temperature rises, significantly increase risk premia.

Session C1 – Asset Pricing: Information — HS1

Decomposing duration premia: High-frequency evidence from news announcements

Heiner Beckmeyer, Paul Meyerhof *(University of Muenster, Germany)*

We identify the impact of economic risks on the equity term structure using high-frequency responses of duration-sorted portfolios to scheduled macroeconomic news announcements. Duration premia decrease monotonically on non-announcement days, but are upward-sloping and exhibit significant curvature on announcement days. We consider separately economic, monetary policy, and inflation news releases to identify the underlying risks governing duration premia. The response to interest rate surprises increases monotonically through the term structure, while information about the future path of interest rates primarily affects intermediate-duration stocks. We find evidence of a risk-based explanation by conditioning on ex-ante sensitivity to the news. Economic news impacts long-term premia the most, while the impact of inflation news is generally muted.

Asset pricing with slanted news

Marcel Müller, Marliese Uhrig-Homburg *(Karlsruhe Institute of Technologie, Germany)*

We argue that media slant constitutes a source of ambiguity and show that the uncertainty stemming from slanted news is priced in the cross section of US stocks. Our identification of slanted news stocks is based on a combination of a news proxy using Wikipedia page view data and mutual fund managers' aggregated portfolio positions. We find that slanted news stocks earn a premium of roughly 1% in announcement months over their unslanted peers, which peaks on the announcement day itself. Our results further show that the premium is compensating for the exposure to a slanted news mimicking factor.

Squeezing shorts through social news platforms

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At the end of January 2021, a group of stocks listed on US stock exchanges experienced sudden surges in their stock prices, which - coupled with high short interest – led to brief short squeeze episodes. We argue that these short squeezes were the result of coordinated trading by investors, who discussed their trading strategies on social news platforms. In addition, option markets played a central role in these events. Using hand-collected data we provide the first rigorous academic study of these short-squeezes and show that they significantly impeded market quality not only of the stocks at issue but also of their competitors. This evidence calls for tighter monitoring of social news platforms and a better understanding of the interlinkages between these platforms, derivatives markets and equity markets.

Session C2 – Corporate Governance 2 — SR1

The Voting Premium

Doron Levit[2,4], Nadya Malenko[3,4,5], Ernst Maug[1,4]
[1]University of Mannheim, Germany; [2]University of Washington; [3]University of Michigan; [4]ECGI; [5]CEPR

This paper develops a theory of blockholder governance and the voting premium. A blockholder and dispersed shareholders first trade in a competitive market and then vote at a shareholder meeting. A positive voting premium emerges only if the blockholder is not the median voter, since he is then willing to pay a higher price to move the median voter in his preferred direction. Hence, the voting premium does not emerge from exercising control, but from influencing who exercises control. Empirical measures of the voting premium generally do not reflect the economic value of voting rights to the blockholder, and the voting premium is unrelated to measures of voting power, such as the probability of being pivotal. A negative voting premium can emerge in situations when dispersed shareholders could free-ride on the blockholder's trades.

Mutual fund dual holdings and shareholder-creditor conflicts

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We study the impacts of mutual fund families on corporate governance when they simultaneously hold bonds and stocks from the same firm. We present evidence that such dual holdings prevent debt overhang problems, allowing firms to increase valuable investments and refinance by issuing bonds with lower yields and fewer restrictive covenants. The effect is stronger for firms that would otherwise face financial constraints. We mitigate potential endogeneity concerns by exploiting plausibly exogenous variations in dual ownership from cross-family fund mergers. Overall, our results suggest that fund families internalize the shareholder-creditor agency conflicts of their portfolio companies, highlighting the benefits of such institutional ownership.

Institutional investors and carbon emissions: Evidence from the US EPA's semi-scientific reporting mandate

Santanu Kundu, Stefan Ruenzi *(University of Mannheim, Germany)*

Using a novel identification strategy exploiting the difference between the mandated

reported emissions and the scientific emissions of the same firm at the same point in time, we find that institutional investors increase their holdings in firms with higher scientific carbon emissions. The increase in ownership is driven by institutions located in climate conscious states. Further, the increase in ownership is more pronounced for firms that have greater capability to become green and in firms where investors can have a 'voice'. Additionally, firms that experience increase in ownership from climate change conscious investors reduce their emissions in the longer run.

Session C3 – Fixed Income HS2

Do credit markets respond to macroeconomic shocks? The case for reverse causality

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[1]Nova School of Business and Economics, Portugal; [2]Tillburg University, Netherlands; [3]Rady School of Management, University of California San Diego

We identify the response of corporate bond credit spreads to three exogenous macroeconomic shocks: oil supply, investment-specific technology, and government spending. The response is large, significant, and close to a mirror image of the response of macroeconomic activity. The counter-cyclicality of credit spreads is mostly driven by time-varying credit risk premia, which translates into significant predictability in corporate bond returns. Standard proxies for equity risk premia exhibit similar responses, providing external validity to this argument. As causal evidence linking large, infrequent macro-shocks to credit risk premia is scarce and recent work mostly focuses on the real effects of credit market fluctuations, our findings contribute to understanding the joint dynamics of credit markets and the macroeconomy.

Pricing the Bund term structure with linear regressions-without an observable short rate

Christian Speck *(Deutsche Bundesbank, Germany)*

Affine models of the term structure of yield are important tools to analyze fixed income markets and monetary policy. Estimators of Adrian, Crump and Mönch (2013) and Diez de Los Rios (2015) replace computationally expensive nonlinear search procedures by a set of simple linear regressions. However, these estimators require an observable short rate which is not available at a one-month maturity for many datasets including German Bunds. This paper introduces new regression-based Difference Estimators that require no observable short rate but are determined from long-term yields only. My new estimators replicate results of the traditional estimators for the US Treasury although my approaches omit the available short rate. For German Bund data since 1980, I show that a term structure model with a restricted risk premium delivers the best decomposition of Bund yields into term risk premium and expected short rates for long forecast horizons.

Size-adapted bond liquidity measures and their asset pricing implications

Michael Reichenbacher[2], Philipp Schuster[1]
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We develop new liquidity measures for bond markets. Existing measures suffer from the combination of two effects. First, transaction costs in OTC markets strongly depend on trade size. Second, many bonds trade only scarcely with strongly differing trading volumes. Therefore, changes in average transaction costs often indicate changing trade sizes rather than changing liquidity. We combine full-sample information for the size-cost relation with individual transaction data to eliminate such measurement problems. Exploiting their higher measurement precision, our size-adapted measures uncover the joint pricing of liquidity level and liquidity risk in the cross-section of U.S. corporate bonds.

Session C4 – Behavioral Finance: Household HS3

Waiting for the gain to come: How variance and skewness shape retail investors' selling behavior

Sabine Bernard[1], Martin Weber[2], Benjamin Loos[3]
[1]Leibniz Institute for Financial Research SAFE; [2]University of Mannheim and CEPR; [3]Technical University of Munich

We demonstrate that investors' selling behavior is strongly affected by an asset's past year variance and skewness. Using private investor trading data, we show that investors have opposed selling behaviors in high-variance-high-skewness (HVHS) and low-variance-low-skewness (LVLS) stocks: Investors are 41 (54) percent more (less) likely to sell a HVHS asset trading at a gain (loss) relative to a LVLS asset trading at a gain (loss). This translates into a high disposition effect for HVHS and an almost insignificant disposition effect for LVLS assets. Our result hold for stock and fund investments and can be linked to the concept of realization utility.

Interest rates, bounded rationality, and complexity: demand and supply of retail financial products

Marc Chesney[2], Felix Fattinger[1], Jonathan Krakow[2]
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This paper studies the market for yield enhancement products (YEPs). We document a substantial increase in volumes, followed by a striking rise in product complexity. This

pattern is paralleled by sharply falling and plateauing interest rates. We experimentally show that, while decreasing interest rates increase individuals' willingness to bear risk, it is their risk misestimation that creates demand for more complex products. By analyzing 4,460 issued YEPs, we find that (i) issuer margins are increasing in product complexity, (ii) average investment returns are negative, (iii) product complexity is driven by supply competition while catering to investors' bias in perceiving dependencies.

If you build it, they won't come - Evidence from the introduction of fee-only advice in a large field experiment

Steffen Meyer, Charline Uhr *(University of Southern Denmark & Danish Finance Institute, Denmark)*

We use a field study of a German online brokerage that introduced fee-only advice alongside their commission-based advice. Except for the pricing, the financial advisory services in both models remain unchanged. The clients who start financial advice need to choose between the models. Only one-fifth of the clients decide in favor of fee-only advice. Even among clients having a cost advantage from choosing fee-only advice, only 27% choose fee-only advice. This is surprising because clients forego substantial monetary gains from still choosing commissions. Leading explanations for our results are mental ability and loss aversion preventing clients from choosing fee-only advice.

Session C5 – Financial Crises — SR2

Optimal timing of policy interventions in banking crises

Paul Mayer[1], Philipp Johann König[2], David Pothier[3]
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We consider a dynamic model in which a policy authority (PA) is confronted with a troubled bank and has to decide whether to liquidate it or wait for information about the bank's financial condition. Delaying liquidation increases the chance that information arrives that reveals the bank's true solvency state, but gives uninsured creditors the opportunity to dilute insured depositors' claims by withdrawing maturing debt before the PA intervenes. The optimal intervention date trades off these dilution costs with the benefits of making a more efficient liquidation decision following the arrival of information. Providing liquidity support prevents costly asset fire sales and buys the PA time to wait for information, but comes at the cost of increasing the PA's liabilities in case the bank is revealed to be insolvent.

A macro-finance model with realistic crisis dynamics

Goutham Gopalakrishna *(Ecole Polytechnique Federale de Lausanne (SFI), Switzerland)*

What causes deep recessions and slow recovery? I revisit this question and develop a macro-finance asset pricing model that quantitatively matches the salient empirical features of crises such as a large drop in the output, a high risk premium, reduced financial intermediation, and a long duration of economic distress. The model features leveraged intermediaries subjected to both capital and productivity shocks, facing a regime-dependent exit rate. I show that the model without time varying productivity and exit suffers from a tension between the amplification and the persistence of financial crises. Features that generate high financial amplification also induce faster recovery, at odds with the data. I show that my model resolves this tension and generates realistic crises dynamics.

Recapitalization, bailout, and long-run welfare in a dynamic model of banking

Andrea Modena
University of Bonn, Germany

We study the dynamic trade-off between the short-run costs and the long-run benefits of bank bailouts. In the model, banks leverage, thanks to their cost advantage at monitoring firms, but maintain capital buffers to avoid costly equity issuance. Individual recapitalization is sub-optimal because banks do not internalize the externalities of their aggregate capitalization on their leverage capacity and firms' investments. Systematic bailouts can improve the allocation efficiency in bad states, in which banks' leverage is persistently constrained and investments are low. Bailouts accelerate the economy's recovery, thereby reducing endogenous risk in the long run.

Session C6 – Financial Analysts — SR3

Professional vs. Non-Professional Analysts: Evidence from the Cross-Section of Stocks

Timo Schäfer *(Goethe University Frankfurt, Germany)*

In this paper, I study the aggregate information production of professional and non-professional analysts and its implications for investors. Using data from the online investment platform Seeking Alpha, I document distinct differences in coverage by non-professional analysts and professional analysts. Cross-sectional differences in opinions of these two types of analysts increase in a stock's past risk-adjusted performance but decrease with market-based measures of disagreement and uncertainty. These differences in opinions matter for investors as only consensus estimates from non-professional but not from professional analysts generate significant factor-adjusted portfolio returns.

Non-professional analysts are significantly better at predicting a stock's future out- than underperformance while investment-related information in reports becomes stale after their release. High non-professional analyst coverage, low institutional ownership, or agreement with recommendations of professional analysts do not explain this performance result.

The role of stock indices in analyst career outcomes

Stefan Pohl[1,2], Vesa Pursiainen[3]
[1]University of Zurich, Switzerland; [2]Swiss Finance Institute, Switzerland; [3]University of St. Gallen

Random changes in firms' stock index membership affect sell-side analysts' career outcomes. We study the role of firms' movements between Russell 1000 and 2000 indices that cause discontinuous changes in institutional ownership around the index threshold and hence in the importance of analysts covering these stocks. Firms moving from the bottom of Russell 1000 to the top of Russell 2000 significantly increase an analyst's likelihood to move to a higher-status broker. This beneficial outcome for the analyst is reflected in analyst recommendations. For firms that are just above the index threshold (i.e., that might move to Russell 2000 if their share price decreases slightly), analyst recommendations are significantly more negative in April, the time of defining the index weights that determine index membership.

How Firms strategically disclose Information through selected Channels

Anthony E. Haake, Bertram Steininger, Wolfgang Breuer *(RWTH Aachen University, Germany)*

This paper examines firms' information disclosure through different channels and corresponding investor reactions. By drawing from a theory about e-communication, we predict that conference calls induce less processing costs to investors than press releases. Hence, disclosing through it increases the stock price impact and we find that firms distribute positive information through conference calls and negative information through press releases to investors. Firms that use a positive tone in conference calls increase the stock market reaction sixfold compared to press releases. When firms distribute information, the tone and readability of their calls improve while these characteristics of press releases deteriorate. A portfolio – that holds the firms that distribute the most information – yields significant abnormal returns (equal to 5 % p.a.).

Day 3: Saturday, 2nd October 2021

Session D1 – Asset Pricing: Factors HS1

On the redundancy of the value factor

Manuel Ammann, Tobias Hemauer, Simon Straumann
University of St. Gallen, Switzerland

This study proposes an explanation for the value factor's association with the investment factor, being the reason for its redundancy: adverse discount rate and profitability shocks prompt firms to reduce their investment and investors to reduce their valuations. We confirm that the predicted negative relation between investment and book-to-market explains the factors' comovement. Consistent with our theory, this relation is only driven by stocks whose book-to-market changes are due to market value changes. Moreover, we identify the return premium of stocks that experienced discount rate shocks as the value premium's source. However, the investment factor fails to price this premium since it, contrary to its rationale, primarily captures the covariation of stocks that experienced profitability rather than discount rate shocks.

Variance risk premiums in the cross-section: idiosyncratic variance risk matters!

Niklas Trappe[1,2,3]
[1]University of Goettingen; [2]Macquarie University; [3]RoZetta Institute

In this paper, I analyse individual variance risk premiums using a large data set of options on 5,640 different stocks. I find evidence for negative average variance risk premiums on different aggregation levels with a large cross-sectional dispersion. Further, I show that individual variance risk premiums are mainly driven by idiosyncratic variance risk and have a negative correlation with the scaled vol-of-vol of a firm. Finally, an analysis of the effect of firm characteristics on individual variance risk premiums shows that the effect may vary depending on whether the scaled idiosyncratic vol-of-vol is high or low. The systematic vol-of-vol, however, does not seem to affect the relationship between firm characteristics and individual variance risk premiums.

The pricing of continuous and discontinuous factor risks

Tobias Hemauer, Mathis Mörke
University of St. Gallen, Switzerland

This study considers a continuous-time version of the Fama-French (2015) five-factor model, explicitly allowing stocks' exposures on the factors' continuous, jump, and overnight movements to be different. Our results show that stocks' continuous, jump, and overnight betas with respect to a given factor can be very different and are only weakly related. We find strong evidence for a positive pricing of continuous market exposure and a negative pricing of overnight market exposure. Moreover, exposures to the size, value, profitability, and investment factors' continuous risks are mostly negatively priced while exposures to their overnight risks are positively priced, suggesting that these factors' return premia are compensation for exposure to the factors' overnight risks. Jump exposures are in general not significantly priced.

Session D2 – Corporate Finance: Empirical HS3

Post-merger restructuring of the labor force

Britta Gehrke[4], Ernst Maug[2], Stefan Obernberger[1], Christoph Schneider[3]
[1]Erasmus University Rotterdam; [2]University of Mannheim; [3]University of Muenster; [4]University of Rostock

We study the restructuring of the labor force after mergers and acquisitions. Overall restructuring is large. Net employment of targets declines by more than half within two years after acquisitions relative to a matched sample, and is concentrated in targets that close all establishments. There is a substantial increase in employee turnover, which is larger if the merging partners have a more similar workforce. Acquirers have a better-educated, better-paid, and more qualified workforce than targets. Newly-hired workers are much younger and less expensive. Firms become more hierarchical if they grow and if they become more diversified. Mergers create internal labor markets, which are more active if firms have more managerial capacities. However, most hiring is external, especially for managers. We interpret our findings within a framework in which acquirers seek growth options from targets and provide managerial capabilities to organize production more efficiently.

Online reputation and debt capacity

François Derrien[1], Alexandre Garel[2], Arthur Petit-Romec[3], Jean-Philippe Weisskopf[4]
[1]HEC Paris, France; [2]Audencia Business School, France; [3]SKEMA Business School, France; [4]Ecole hôtelière de Lausanne, Switzerland

This paper explores the effects of online customer ratings on financial policy. Using a large sample of Parisian restaurants, we find a positive and economically significant relation between customer ratings and bank debt. We use the locally exogenous variations in customer ratings resulting from the rounding of scores in regression discontinuity tests to establish causality. Customer ratings have more impact on debt when information asymmetry is higher. They affect financial policy through a reduction in cash flow risk and greater resilience to demand shocks. Restaurants with good ratings use their extra debt to invest in tangible assets.

Entrepreneur debt aversion and financing decisions: Evidence from COVID-19 support programs

Mikael Paaso[1], Vesa Pursiainen[2], Sami Torstila[3]
[1]Erasmus University, Netherlands, The; [2]University of St. Gallen; [3]Aalto University

An entrepreneur's negative attitude towards debt – debt aversion – affects the financing decisions of the businesses they run. Controlling for a range of observable traits, firms run by highly debt-averse entrepreneurs are about nine percentage points less likely to use debt. The same entrepreneurs are also almost 25% less likely to take up government-guaranteed debt during the COVID-19 crisis. These firms show less interest in COVID-19 support policies if they perceive them to involve debt, based on experiments randomizing the framing and labeling of otherwise nearly identical, hypothetical COVID-19 support policies as debt or grants.

Session D3 – Stress Tests — SR1

Time inconsistency in stress test design

Markus Parlasca *(WU (Vienna University of Economics and Business), Austria)*

We show that central banks face a time inconsistency problem when publishing bank stress test results. Before a stress test, they want to appear tough as the threat of letting banks fail the stress test incentivizes prudent behaviour. After the stress test, they want to act soft by releasing only partial information in order to reassure financial markets about bank health. We characterize an institutional design solution to this commitment problem: a social planner sets the framework within which the central bank communicates. We find that a hurdle rate framework, where all banks are judged to pass or fail relative to a common threshold, is optimal in many settings as it generates intermediate levels of both incentives and reassurance. With a hurdle rate framework, stress tests become an informational contagion channel. Thus, informational contagion can be a feature of a socially optimal institutional design when a time inconsistency problem exists.

Correlation scenarios and correlation stress testing

Natalie Packham[1], Fabian Woebbeking[2]
[1]Berlin School of Economics and Law, Germany; [2]Goethe University Frankfurt, Germany

We develop a general approach for stress testing correlations in stock and credit portfolios. Using Bayesian variable selection methods, we build a sparse factor structure, linking individual names or stocks with country and industry factors. We specify a parametric form of the correlation matrix, where correlations of stock returns are represented as a function of country and industry factors. Regular calibration yields a distribution of economically meaningful stress scenarios on the factors, which can then be translated into stressed correlations. The method also lends itself as a reverse tress testing framework: using e.g. the Mahalanobis distance on the joint risk factor distribution, allows to infer worst-case correlation scenarios. We give examples of stress tests on a large portfolio of European and North American stocks.

Orthogonal reverse stress scenarios for portfolio risk measurement and management

Philipp Aigner, Sebastian Schlütter *(Mainz University of Applied Sciences, Germany)*

Banks and insurance companies employ sophisticated methods to measure their portfolio-wide risks in terms of an economic or regulatory capital. Reverse stress tests can be used to communicate the model outcomes to decision makers and stakeholders, allowing them to challenge the model and to take informed decisions. In this sense, a single stress scenario is of limited use since it does not allow to evaluate how diversification effects alter as a result of portfolio changes. This paper suggests a new concept to define multiple reverse stress scenarios whose outcomes can be aggregated towards the current portfolio's risk measurement. The scenarios allow for evaluating portfolio changes in accordance with the original risk measurement with respect to first and second order derivatives. Our numerical examples demonstrate that risk evaluations based on our scenarios are better in line with the original risk measurement than those of concurrent methods such as principal component analysis.

Session D4 – Behavioral Finance: Social — HS2

The effect of social comparison on debt taking: experimental evidence

Melanie Koch[1], Antonia Grohmann[2]
[1]Oesterreichische Nationalbank; [2]Aarhus University BSS

A number of studies show that there is a link between social comparison and high levels of household debt. However, the exact mechanisms behind this link are not yet well understood. In this paper, we disentangle two mechanisms by performing a lab experiment designed to study the effects of social image concerns and peer information on consumption choices financed through debt taking. We find that having to announce one's consumption decision publicly makes people less likely to take debt, but more likely to leave money on the table. Being informed about other participants' choices leads to conformity between participants.

Inflation and individual investors' behavior: Evidence from the German hyperinflation

Fabio Braggion[1], Felix von Meyerinck[2], Nic Schaub[3]
[1]Tilburg University; [2]University of St. Gallen; [3]WHU - Otto Beisheim School of Management

In this study, we analyze how individual investors respond to inflation. We introduce a unique dataset containing information on local inflation and security portfolios of more than 2,000 private clients of a German bank between 1920 and 1924, covering the famous German hyperinflation. We find that investors buy less (sell more) stocks when facing higher local inflation. This effect is more pronounced for less sophisticated investors. We also document a positive relation between local inflation and forgone returns following stock sales. Our findings are consistent with individual investors suffering from money illusion.

Back to the roots: ancestral origin and mutual fund manager portfolio choice

Manuel Ammann[1], Alexander Cochardt[1], Simon Straumann[2], Florian Weigert[3]
[1]University of St. Gallen, Switzerland; [2]WHU – Otto Beisheim School of Management; [3]University of Neuchâtel

We exploit variation in the ancestries of U.S. equity mutual fund managers and show that ancestry affects portfolio decisions. Controlling for fund firm location, we find that funds overweight stocks from their managers' ancestral home countries in their non-U.S. portfolio by 132 bps or 20.34% compared with their peers. Similarly, funds overweight industries that are comparatively large in their manager's ancestral home countries. The documented ancestral biases are pervasive across fund styles and across different manager ancestries. The effect is more pronounced for funds that are less resource-constrained and for managers whose connection to their ancestral home country is more recent. Stocks linked to managers' ancestry do not outperform stocks in the same countries and industries but held by managers of other ancestry, confirming that ancestry-linked investments are not informed.

Session D5 – Digital Finance — SR2

"Let me get back to you" - A machine learning approach to measuring non-answers

Andreas Barth, Sasan Mansouri, Fabian Woebbeking *(Goethe University Frankfurt, Germany)*

It is relatively easy for us humans to detect when a question we asked has not been answered -- we teach this skill to a computer. Using a supervised machine learning framework on a large training set of questions and answers, we identify 1,364 trigrams that signal non-answers. We show that this glossary has economic relevance by applying it to contemporaneous stock market reactions after earnings conference calls. Our findings suggest that obstructing the flow of information leads to significantly lower cumulative abnormal stock returns and higher implied volatility.

Our metric is designed to be of general applicability for Q&A situations, and hence, is capable of identifying non-answers outside the contextual domain of financial earnings conference calls.

Design and performance of cryptocurrencies

Fabian Eska[2], Yanghua Shi[1], Erik Theissen[1], Marliese Uhrig-Homburg[2]
[1]University of Mannheim, Germany; [2]Karlsruhe Institute of Technology

The broad variety of cryptocurrencies is associated with very different designs. In this paper, we introduce an unique, hand-collected data set of cryptocurrency design features which we use to analyze the relative valuation of 79 cryptocurrencies. Controlling for age which is a crucial driver of market capitalization due to network effects, our approach identifies that transaction-fee-driven reward structures and, more notably, a lack of innovation, measured as whether the cryptocurrency is a spin-off from an existing network, significantly lessens market capitalization. The prospect for regulatory acceptance is a positive valuation driver. Furthermore, we identify Bitcoin-like combinations of design features as being favorable towards the accumulation of a remarkable market capitalization of the respective cryptocurrency.

On the externalities of tech firms

Valeriya Dinger, Grundke Peter, Kai Rohde *(University of Osnabrueck, Germany)*

The political debate about the potential risks stemming from the size and market influence of digitally-oriented tech companies has intensified in recent years resulting in calls to split large tech companies in order to limit their market power and the degree of externalities these firms can exert over other areas of the economy. We applying market-based systemic risk measures originally designed for financial firms to measure the externalities of tech firms included in the S&P 500 index. Our results show that tech firms in general are characterized by a high and rising level of externality. These are particularly high when their computation is based on filtered equity returns. Doing this, the effect of exposure to systematic risk factors is eliminated. This indicates that tech firms exert strong externalities through direct interactions (e.g., direct business relationships) with other firms. In particular, this is true for the well-known GAFAs and platform firms.

Session D6 – Covid-19 and Financial Markets — SR3

On the importance of fiscal space: Evidence from short sellers during the COVID-19 pandemic

Stefan Greppmair[1], Stephan Jank[1], Esad Smajlbegovic[2]
[1]Deutsche Bundesbank; [2]Erasmus University Rotterdam

Using the exogenous shock of the COVID-19 pandemic, we study how informed market participants evaluate fiscal space. Short-selling activity shifted upon the onset of the pandemic towards companies with low financial flexibility only in countries with limited fiscal space. Among these companies, short sellers targeted especially those that generate their revenue mainly in the domestic market. These short sellers entered their positions before the market crash, generating thereby a significant abnormal return. These findings support the notion that short sellers bet on the inability of governments with budgetary constraints to provide sufficient stimulus to their economy in times of crises.

Locked-in at home: female analysts' attention at work during the COVID-19 pandemic

Mengqiao Du *(University of Mannheim, Germany)*

This paper explores the shock of school closures caused by the COVID-19 pandemic to study the effect of domestic responsibilities on analysts' attention at work. School closures significantly reduce the forecast timeliness of female analysts rather than that of male analysts. Using manually-collected data on whether analysts have children, I show that mothers are 20% less likely to issue timely forecasts after school closures. Professional women are more likely to get distracted from work by domestic duties, which makes it harder for them to be as successful as their male counterparts in competitive industries.

What drives closed-end fund discounts? evidence from COVID-19

Liang Ma *(University of South Carolina, United States of America)*

By exploiting the exogenous COVID-19 shock, this paper attempts to shed light on the closed-end fund (CEF) discount puzzle. CEF discounts increased after COVID-19, and I identify a causal role of sentiment in this effect. I show that COVID-19 reduced individual investor sentiment. Using the difference-in-differences (DiD) approach, I find that CEFs with higher sentiment beta or higher retail ownership experienced a larger increase in discounts after the COVID-19 shock. The DiD results are unlikely to be driven by alternative channels such as the liquidity, expense, payout, and leverage channels. Overall, the results support the sentiment-based explanation of CEF discounts.

Session E1 – Asset Pricing: Momentum HS1

Momentum? What Momentum?

Can Yilanci, Erik Theissen *(University of Mannheim, Germany)*

Risk-adjusted momentum returns are usually estimated by sorting stocks into a regularly rebalanced long-short portfolio based on their prior return and then running a full-sample regression of the portfolio returns on a set of factors (portfolio-level risk adjustment). This approach implicitly assumes constant factor exposure of the momentum portfolio. However, momentum portfolios are characterized by high turnover and time-varying factor exposure. We propose to estimate the risk exposure at the stock-level. The risk-adjusted return of the momentum portfolio in month t then is the actual return minus the weighted average of the expected returns of the component stocks (stock-level risk adjustment). Based on evidence from the universe of CRSP stocks, from momentum returns conditional on market states, from volatility-scaled momentum strategies, from sub-periods and size-based sub-samples, and from an international sample covering 20 developed countries, we conclude that the momentum effect may be weaker than previously thought.

Decomposing momentum: Eliminating its crash component

Pascal Büsing, Hannes Mohrschladt, Susanne Siedhoff *(University of Muenster, Germany)*

We propose a purely cross-sectional momentum strategy that avoids crash risk and does not depend on the state of the market. To do so, we simply split up the standard momentum return over months t-12 to t-2 at the highest stock price within this formation period. Both resulting momentum return components predict subsequent returns on a stand-alone basis. However, the long-short returns associated with the first component completely avoid negative skewness since momentum crashes are entirely driven by the second component.

Analyst recommendations and anomalies across the globe

Vitor Azevedo, Sebastian Müller *(Technical University of Munich, Germany)*

We reexamine the value of analyst recommendations using a dataset of 45 countries, 3.8 million firm-month observations, and 222 return anomalies from 1994 to 2019. Recommendations lead to highly significant (insignificant) abnormal returns in international markets (in the U.S.). Analysts do not seem to strengthen mispricing in international markets, as they give more favorable recommendations to (anomaly-ranked) underpriced stocks, and inconsistencies between recommendations and composite anomaly ranks lead to lower, not higher, abnormal returns. Recommendations are more valuable in less developed, less individualistic markets, and in low sentiment periods. Our results support limits-to-arbitrage and behavioral explanations of global market inefficiencies.

Session E2 – Regulation HS2

The Markets in Financial Instruments Directive and sensitivity of investors' portfolio allocation to analyst recommendations

Falko Fecht[1], Patrick Weber[2], Huiting Xu[1]
[1]Frankfurt School of Finance & Management gGmbH, Germany; [2]Deutsche Bundesbank

The update of the Markets in Financial Instruments Directive (henceforth MiFID II) regulation unbundles research costs from the commission fees since January 2018 in Europe. Using a unique data set, we find that after the implementation of MiFID II: 1) the information context in particular with respect to the earnings per share predictions of analysts became more precise, 2) while the propensity to buy stocks did on average not change for households as a whole, we find that customers will buy more of a stock if their affiliated bank issued a buy recommendation on a stock, and 3) banks can more strongly steer their affiliated customers to buy into stocks the bank intends to sell.

Does monetary policy affect mergers and acquisitions?

Johannes J. Fischer, Carl-Wolfram Horn *(European University Institute, Italy)*

We analyse the effects of monetary policy on mergers and acquisitions (M&A) activity in the United States. We find that aggregate M&A activity decreases sig- nificantly following a monetary policy shock. This result is confirmed on the firm level with the likelihood of becoming an acquirer decreasing significantly following a contractionary monetary policy shock. The acquisition likelihood falls significantly more for relatively more financially constrained firms, suggesting a strong role for a credit channel of monetary policy transmission to firms' M&A decisions. M&A transactions are associated with positive abnormal returns on average, suggesting that expansionary monetary policy can facilitate beneficial capital reallocation by enabling more M&A activity. At the margin, however, expansionary monetary policy leads to lower abnormal returns as more constrained firms engage in M&A. We rationalise these findings in a stylised partial-equilibrium model.

Back to the roots of internal credit risk models: Why do banks' risk-weighted asset levels converge over time?

Victoria Boehnke[1], Steven Ongena[2,3,4,5,6], Florentina Paraschiv[5,7], Endre J. Reite[8]
[1]University of Muenster, Germany; [2]University of Zuerich, Switzerland; [3]Swiss Finance Institute, Switzerland; [4]KU Leuven, Belgium; [5]NTNU Business School, Norway; [6]Center for Economic Policy Research (CEPR), United Kingdom; [7]University of St. Gallen, Switzerland; [8]NTNU Department of International Business, Norway

The internal ratings-based (IRB) approach maps banks' distinct risk profiles more adequately than the standardized approach. After the switch to the IRB approach,

banks' risk-weighted asset (RWA) densities are thus expected to diverge, especially across countries with different supervisory strictness and risk levels. However, by examining 52 listed banks headquartered in 14 European countries that adopted the IRB approach, we observe a gradual convergence of their RWA densities over time. Whereas banks in high-risk countries and in countries with lax regulation reduce their RWA densities, those of banks in countries with strict supervision increase. We show evidence that the IRB approach provides opportunities for regulatory arbitrage, whereby authorities only enforce strict supervision on capital requirements if they do not jeopardize bank resilience.

Session E3 – Index SR1

LIBOR reform: Option pricing for compounded rates

Andreas Blöchlinger *(University of Zurich, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland)*

I present analytical pricing formulae for derivatives of compounded rates. Since the announced replacement of LIBOR, the compounded overnight rate has become the new market standard for floating-rate loans and notes. Many contracts contain a zero-based floor. The compounded rate is a time average of a series of benchmark rates. Floors and caps on compounded rates are thus Asian types of options. I prove that even if the rate process is non-Gaussian, the Gaussian process is asymptotically the correct model for pricing derivatives due to the central limit theorem. The approximation's maximum mispricing is bounded by the Berry-Esseen inequality.

Has Manipulation in the VIX decreased?

Tim Baumgartner, Andre Guettler *(Ulm University, Germany)*

Manipulation in the VIX settlement can cause significant losses to investors. Analysing high-frequency data, we present indications of VIX manipulation accelerating since 2017. Deviations have an upward direction and average at around 6%. After settlement, VIX volatility increases within the first 30 minutes. Specific effects accompany expiration days. The put/call ratio of underlying options surges by 10.9%. A time series decomposition demonstrates that this difference exceeds the day-specific variations of all other days by 80\%. The span of index values widens exclusively in the VIX, while a manipulation-independent VIX adaption shows no differenc. Data on open interest point towards leveraged funds, who systematically gather additional exposure in the seven days before settlement. All other players seem to reduce their VIX exposure before settlement. A difference-in-difference estimator suggests an abnormal component of 4.8% in settlement prices. We propose strategies how traders can mitigate manipulative costs.

The index effect: Evidence from the option market

Fabian Hollstein[1], Chardin Wese Simen[2]
[1]Leibniz University Hannover, Germany; [2]University of Liverpool, UK

We document a significantly positive response of delta-hedged option positions on companies entering or leaving the S&P 500 index. Our findings (i) hold for both call and put options, (ii) are robust to placebo- and risk-adjustments, and (iii) are stronger for companies that are likely subject to more demand pressure from stock index investors. The inclusion effect is permanent, while the exclusion effect is transitory. We explore various mechanisms to explain these results, including leading theories of benchmarking, investor recognition, noise trading, and dispersion trading. We find that these explanations cannot individually account for all our novel results.

Session E4 – Behavioral Finance: Asset Pricing HS3

Beliefs about beta: Upside participation and downside protection

Christoph Merkle[2], Michael Ungeheuer[1]
[1]Aalto Univertsity, Finland; [2]Aarhus University, Denmark

In a large online experiment, we study how investors assess the relationship between their portfolio and the stock market. Participants either select a portfolio of stocks or are randomly assigned a portfolio from a U.S. stock market index. They state their portfolio return expectations conditional on different market outcomes, allowing us to calculate implied beliefs about portfolio beta. We find a general underestimation of beta, which is particularly strong for downside beta. This asymmetric assessment of dependence is amplified for participants who select a portfolio themselves instead of receiving a randomly assigned portfolio. They believe their portfolio goes up with the market but does not come down with it. Our findings reveal yet unknown patterns in beliefs about systematic risk, which shed light on the source of investor overconfidence.

Optimal asset allocation, time-inconsistency and the value of information

Nicole Branger[2], Lara Becker[1], Antje Mahayni[1], Sascha Offermann[1]
[1]University Duisburg-Essen, Germany; [2]University of Münster, Germany

We shed light on the impact of time-inconsistency in a stylized setup on pre- commitment strategies in investment decisions. Using a double risk situation, the outer risk is given by a simple a priori lottery, the inner risk is a regime coinciding with the classic Merton problem. The weights on the pure Merton strategies resemble the regime probabilities in the myopic case, and as the investment horizon increases, the weight on the good state is reduced. Accounting for ambiguity about the "success" probability in a smooth ambiguity setup, we separate the effects of the two risk situations and the ambiguity aversion. The impact of time-inconsistency gets more ambiguous since varying the ambiguity situation may also change the risk situation.

Do investors care about impact?

Florian Heeb[2], Julian Koelbel[2,3], Falko Paetzold[2,4], Stefan Zeisberger[1,2]
[1]Radboud University; [2]Zurich University; [3]MIT Sloan School; [4]EBS European Business School

In a framed field experiment, we assess how investors' willingness-to-pay (WTP) for a sustainable investment responds to the investment's impact in the form of CO2 emission savings. We find that, although investors have a substantial WTP for sustainable investments, they do not pay more for an investment with more impact. This finding also holds for a unique sample of dedicated impact investors. We further show that investors' WTP responds to impact when they can directly compare several investment options. Yet, the response is far from being proportional to the level of investments' impact. Our findings indicate that the WTP for sustainable investments depends strongly on the presented choice set and the emotional experience of choosing a sustainable option. Further, our findings suggest that investors do not optimize the impact of their investments but instead optimize the "warm glow" they gain from investing sustainably.

Session E5 – Risk Management SR2

Simple is simply not enough – features versus labels of complex financial securities

Martin Hibbeln, Werner Osterkamp, Fabian Rendchen *(University of Duisburg-Essen, Germany)*

Based on a unique data set of European residential mortgage-backed security (RMBS) deals with 31 million quarterly loan observations, we examine how design features and design labels of complex financial securities affect tranches' pricing and loan performance. Utilizing the features required by the European Union's Securitization Regulation and the STS (Simple, Transparent, Standardized) label, we find that the features of the security design and not the label are crucial for loan performance. However, investors hardly consider the features but simply rely on the existence of the label.

Measuring comprehensive carbon prices of national climate policies

Mark Carhart[1], Bob Litterman[1], Clayton Munnings[2], Olivia Vitali[1]
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We measure the comprehensive carbon prices from 2008 to 2019 resulting from climate policies imposed by 25 high polluting countries that represent 82 percent of global carbon dioxide (CO2) emissions in 2019. Comprehensive carbon prices build upon previous notions—including explicit, implicit, and implied carbon prices—by incorporating a broader range of policies that reduce carbon emissions. We consider seven types of market-based policies commonly used to create incentives to reduce emissions: carbon taxes, emissions trading systems, fossil fuel taxes, fossil fuel subsidies, renewable portfolio standards, feed-in tariffs, and low-carbon fuel standards. We define the comprehensive carbon price as the average of the marginal incentives to emit carbon in a country, defined as total compliance costs imposed by these policies divided by total country-level CO2 emissions. Our results indicate that these 25 countries collectively spent 353 billion USD on their national climate policies in 2019. Our measurement of the global comprehensive carbon price has risen upward from 6.15 USD in 2008 to 12.56 USD in 2019, with a dip to 1.83 USD per ton in 2012. However, these values are too low to appropriately address climate change. National climate policy mixes vary widely in their composition and incentives, with countries imposing comprehensive carbon prices ranging from -128.36 to 95.60 USD in 2019.

Contingent convertible bonds: Optimal Call Strategy and the impact of Refinancing

Christian Koziol, Philipp Roßmann *(University of Tübingen, Department of Finance, Germany)*

In this paper, we analyze if banks financed with contingent convertible bonds (CoCos) can rely on the classical (CoCo value minimizing) rather than the optimal (equity value maximizing) call strategy. We show that the refinancing assumption of the call price will determine whether high deviations occur or not. In an empirical study comprising 79 European CoCos, we find that the critical stock price triggering a call deviates (on average) by 56.49% from the classical case, which carries over to a CoCo mispricing equal to 8.73%. These results reveal that the classical call strategy is only justifiable in the special cases of equity injection or junior debt refinancing for a CoCo with a low face value and a late call.

Session E6 – Portfolio Management SR3

Investors in the housing market

Daniel Ruf[1], Marcel Fischer[2], Roland Füss[3], Simon Stehle[2]
[1]Goethe University Frankfurt, Germany; [2]University of Konstanz; [3]University of St. Gallen

In this paper, we analyze the sizable and systematic differences in annualized capital gains across investor groups in the US housing market. Using data on more than 21 million repeat sales, we investigate the performance of highly heterogeneous buyers: owner-occupiers, private, short-term, and long-term investors. Our results link the differences in capital gains to heterogeneous risk-taking. Investor-specific exposure to lagged local return risk explains a sizable and persistent share of investors' high capital gains. In contrast, neither location choice nor temporal factors on the local or aggregate level, respectively, can help explain investors' outperformance.

Diversifying estimation errors: An efficient averaging rule for portfolio optimization

Felix Miebs[1], Christian Köppel[2], Roland Füss[2]
[1]University of Applied Sciences Cologne, Germany; [2]Swiss Institute of Banking and Finance (s/bf), University of St. Gallen, Switzerland

We propose an averaging rule that combines established minimum-variance strategies to minimize the expected out-of-sample variance. Our rule overcomes the problem of selecting the "best" strategy ex-ante and diversifies remaining estimation errors of the strategies included in the averaging. Extensive simulations show that the contributions of estimation errors to the out-of-sample variances are uncorrelated between the considered strategies. This implies that averaging over multiple strategies offers sizable diversification benefits. Across all data sets we find that our rule achieves a significantly lower out-of-sample standard deviation than any competing strategy and that the Sharpe ratio is at least 25% higher than for the 1/N portfolio.

Do speculators exacerbate managerial myopia? Evidence from margin traders in China

Jun Chen
Rady School of Management, *UC San Diego, United States of America*

From 2013 to 2015, China lifted the ban on margin trading for designated stocks based on a public ranking index. Using a regression discontinuity design that exploits the threshold rules, I find that margin trading eligibility causes the stock share turnover and prices to increase. Moreover, firms react to this speculative pressure by manipulating earnings and reducing long-term investment. These effects are stronger for firms that are more prone to investor short-termism ex-ante. Consistent with managerial myopia, marginable firms experience a decline in operating performance and equity valuation in the long run. My results suggest that margin traders, as short-term speculators, pressure the manager to focus on current earnings and take myopic actions.

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