

Swiss Finance Institute Activity Report 2017



Growing Knowledge Capital for the Swiss Financial Marketplace

Swiss Finance Institute Our Founding Members

Swiss Finance Institute (SFI) gratefully acknowledges the precious support of its founding members—the Swiss banking industry, the Swiss Confederation, and leading Swiss universities. Without their support Swiss Finance Institute would not be able to fulfill its important mandate.



Our Partner Universities:













About Swiss Finance Institute



Nurture Knowledge – Cultivate Talent – Create Expertise

Growing Knowledge Capital for the Swiss Financial Marketplace

Never before has the Swiss financial center undergone such rapid and fundamental change. Digital disruption and abrupt changes in regulation are challenging established business models. In order to remain competitive, the Swiss banking and finance industry must nurture innovation and its most valuable asset: the expertise of its labor force—its knowledge capital.

Mandated by the Swiss financial sector and the Swiss Confederation, Swiss Finance Institute makes an important contribution to each through its close integration of research and practice, its up-to-date continuing education courses for finance professionals, and the access it provides to a unique pool of outstanding Swiss-based academics. This unique combination is based on a systematic exchange of knowledge and expertise, nurtured by the fundamental research conducted at our six partner universities across three language regions in Switzerland. As a result, the Swiss banking and finance industry profits from the expertise created by SFI, embodied both by the thousands of graduates from our continuing education activities and the Banking and Finance programs of our partner universities and by the thousands of readers of our publications and participants at our events and workshops.

Research and development leads to new technologies and innovations, and in turn promotes competitiveness, prosperity, and employment. SFI contributes an important economic added value that will enable future generations to build upon others' achievements and guarantee that Switzerland's financial center will continue to thrive.

Find out more about the vast amount of our activities from January to December 2017 in this year's Activity Report.

The Swiss Finance Institute Activity Report is published once a year by the Institute.

An abridged version of the Activity Report can be obtained free of charge from:

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Swiss Finance Institute, c/o University of Geneva, 42, Bd du Pont d'Arve, CH-1211 Geneva 4; T +41 22 379 84 71

A Word from the Board

In the words of Mauro Dell'Ambrogio, State Secretary for Education, Research and Innovation, "Swiss Finance Institute has achieved international recognition as the Swiss center of excellence for research, continuing education, and knowledge exchange in the domain of banking and finance." This is a significant achievement for SFI, only eleven years after its creation. It was made possible by our founders' investment in expertise and innovation, and we would like to thank them for their trust.

SFI's mission is to grow knowledge capital for the Swiss financial marketplace. In order to accomplish this mission, in 2017 SFI initiated a new strategy, emphasizing closer ties between academia and the banking and finance industry. Closer engagement of the SFI faculty with the industry brings benefit to both. Practitioners benefit from the academic expertise of almost 60 SFI professors in all areas of banking and finance. SFI professors keep abreast of the topics of interest to key decision makers and benefit from their practical expertise.

SFI has introduced several new initiatives to establish bridges between academia and industry. The *Knowledge Exchange Seminar* series brings together SFI professors and top experts from the industry on topics of mutual interest. Our popular *SFI Practitioner Roundups* now combine the contributions of an SFI professor and a practitioner. Our newly published *SFI Expertise Guide* highlights the expertise areas of SFI professors in an easily accessible way. The 2017 SFI Annual Meeting focused on "*The New Contours of Banking*", with two keynote speakers from academia and industry—Nobel Laureate Prof. Jean Tirole and Prof. Axel A. Weber. The 2017 Swiss Asset Management Day, organized in cooperation with the Canton Schwyz, featured presentations and panels on "*Digital Realities and Opportunities in Private Markets*".

In the continuing education sphere, SFI offers training and examinations for the SAQ standard, further establishing SFI's presence. In the words of Patrick Odier, Managing Partner at Banque Lombard Odier & Cie SA, "SFI is the ideal certification partner thanks to its mix of faculty and practitioners. It represents the counterparty of reference to regulators' requirements for further education in the field of finance."

Olivier Steimer completed his tenure as Chairman of the Foundation Board in 2017. Throughout the years Olivier Steimer played a vital role and showed exceptional commitment to SFI, and we take this opportunity to thank him warmly.

Introduction :



Dr. Romeo Cerutti Chairman of the Foundation Board

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Prof. François Degeorge Managing Director

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Swiss Finance Institute Faculty

Swiss Finance Institute has an extensive network of over 50 local and international faculty members who support its research and continuing education activities.

SFI Partner University Faculty

(as of December 2017)

The SFI Research Faculty is made up of over 50 exceptional researchers from six SFI partner universities. Their outstanding publications contribute to the international research community and ensure that Switzerland makes its mark on the international research agenda.

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* SFI chair-holder

Continuing Education Adjunct Faculty

(as of December 2017) The title of SFI Adjunct Professor is awarded to selected academics from recognized universities and universities of applied science. Recipients are chosen because of their strategic and/or reputational engagements for SFI, for example within its continuing education programs.

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SFI works with its partner universities to create and establish academic expertise and excellence.



SFI Partner University Faculty Highlights

Swiss Finance Institute strives for excellence in research in order to build academic expertise with staying power. The SFI faculty is made up of professors from six partner universities: École Polytechnique Fédérale de Lausanne (EPFL), Eidgenössische Technische Hochschule Zürich (ETHZ), the University of Geneva (UNIGE), the University of Lausanne (UNIL), Università della Svizzera italiana (USI), and the University of Zurich (UZH). SFI's outstanding researchers contribute to the international research community by publishing in top academic journals. SFI is one of the top three finance institutes in Europe and is on a par with some of the foremost institutions worldwide.

Academic excellence is guaranteed by the SFI Scientific Council, an independent committee composed of internationally renowned professors of Banking and Finance from around the world. The Council places extra weight on publications appearing in journals that historically have been the first to promote those ideas that have changed financial practice: the American Economic Review, Econometrica, The Journal of Finance, the Journal of Financial Economics, the Journal of Political Economy, the Quarterly Journal of Economics, the Review of Economic Studies, and The Review of Financial Studies. In 2017 the following 14 articles were published by SFI researchers:

2017

Brumm, J., Kryczka, D., & <u>Kübler, F.</u> (2017). Recursive equilibria in dynamic economies with stochastic production. *Econometrica*, 85(5), 1467–1499.

<u>Collin-Dufresne, P.</u>, Johannes, M., & Lochstoer, L. A. (2017). Asset pricing when "this time is different." *The Review of Financial Studies*, 30(2), 505–535. Décamps, J.-P., Gryglewicz, S., <u>Morellec, E.</u>, & Villeneuve, S. (2017). Corporate policies with permanent and transitory shocks. *The Review of Financial Studies*, 30(1), 162–210.

<u>Dimopoulos, T.</u>, & Sacchetto, S. (2017). Merger activity in industry equilibrium. *Journal of Financial Economics*, 126(1), 200–226.

<u>Fahlenbrach, R.</u>, Low, A., & Stulz, R. M. (2017). Do independent director departures predict future bad events? *The Review of Financial Studies*, 30(7), 2313–2358.

<u>Fahlenbrach, R.</u>, & Schmidt, C. (2017). Do exogenous changes in passive institutional ownership affect corporate governance and firm value? *Journal of Financial Economics*, 124(2), 285–306.

Favara, G., <u>Morellec, E.</u>, Schroth, E., & Valta, P. (2017). Debt enforcement, investment, and risk taking across countries. *Journal of Financial Economics*, 123(1), 22–41.

<u>Filipović, D.</u>, Larsson, M., & <u>Trolle, A. B.</u> (2017). Linear-rational term structure models. *The Journal of Finance*, 72(2), 655–704.

<u>Franzoni, F.</u>, & Schmalz, M. C. (2017). Fund flows and market states. *The Review of Financial Studies*, 30(8), 2621–2673.

Hollifield, B., <u>Neklyudov, A.</u>, & Spatt, C. (2017). Bid-ask spreads, trading networks, and the pricing of securitizations. *The Review of Financial Studies*, 30(9), 3048–3085.

<u>Hugonnier, J.</u>, & <u>Morellec, E.</u> (2017). Bank capital, liquid reserves, and insolvency risk. *Journal of Financial Economics*, 125(2), 266–285. Jiménez, G., <u>Ongena, S.</u>, Peydró, J.-L., & Saurina, J. (2017). Macroprudential policy, countercyclical bank capital buffers, and credit supply: Evidence from the Spanish dynamic provisioning experiments. *Journal of Political Economy*, 125(6), 2126–2177.

<u>Kübler, F.</u>, & Polemarchakis, H. (2017). The identification of beliefs from asset demand. *Econometrica*, 85(4), 1219–1238.

<u>Malamud, S.</u>, & Rostek, M. (2017). Decentralized exchange. *American Economic Review*, 107(11), 3320–3362.

Other Publications

Research Paper Series

Over 75 papers were published in the 2017 SFI Research Paper Series hosted on the Social Science Network (SSRN). A complete list of titles included in the series is available in the digital version of this report.

SFI Research Days

Over 85 academics and PhD students from across Switzerland came together at the 2017 SFI Research Days to present and discuss their current research. The SFI Research Days, held at the Study Center Gerzensee, are structured into academic research sessions, a keynote speech, as well as doctoral workshops and sessions. This year, the keynote speech was given by Prof. Suresh Sundaresan, Professor at Columbia Business School (USA), and was entitled "An explanation of negative swap spreads: Demand for duration from underfunded pension plans". The winners of the SFI Doctoral Award for the Best Paper and the Best Discussant are also nominated during the SFI Research Days.

Awards, Grants, and Honors for SFI Faculty in 2017

Hansjörg Albrecher

Honorary Professor, Department of Statistics and Actuarial Science, University of Hong Kong

Ines Chaieb and Olivier Scaillet

INQUIRE EUROPE Grant, "Time-Varying Risk Premia in Large International Equity Markets"

Paul Embrechts

Honorary Doctorate of Science, Cass Business School, City, University of London

Rüdiger Fahlenbrach

Elected Director, European Finance Association

Patrick Gagliardini

Fellow, Society for Financial Econometrics

Rajna Gibson Brandon and Philipp Krüger

Best Quantitative Paper Award, PRI, "The Sustainability Footprint of Institutional Investors"

Harald Hau

SNSF Grant, "Fintech at Alibaba: What Automated Firm Credit Reveals About the Inefficiency of Chinese Banking?"

Thorsten Hens

SIX Swiss Exchange Grant, "Market Micro Structure"

Martin Hoesli

President, International Real Estate Society

Semyon Malamud

Research Fellow, Bank of International Settlements

Erwan Morellec

Senior Member, Finance Theory Group

Kjell G. Nyborg

President, European Finance Association

Steven Ongena

ERC Advanced Grant, "Drivers of Growth in Bank Lending and Financial Crises"

Jean-Charles Rochet

SNSF Grant, "CoCo Bond Issuances", jointly with Harald Hau SNSF Grant, "New Approaches to Sustainable Finance", jointly with Rajna Gibson Brandon and Philip Krüger

Josef Teichmann

Bob Alting von Geusau Prize, "Consistent Yield Curve Prediction"

Alexander Wagner

TEDx talk: "What Really Motivates People to be Honest in Business" TEDx Zürich

Outstanding Paper Award

The Outstanding Paper Award winners for 2017 were Prof. Bruno Biais (Toulouse School of Economics), Prof. Christophe Bisière (Toulouse School of Economics), Prof. Matthieu Bouvard (McGill University), and Prof. Catherine Casamatta (Toulouse School of Economics) for their paper entitled "The Blockchain Folk Theorem".

The Outstanding Paper Award is given annually in recognition of an unpublished research paper circulated over the previous 12 months that makes an outstanding contribution to the field of finance. The jury that selects the winning paper is composed of all Swiss Finance Institute chaired professors and is headed by Prof. Jean-Charles Rochet, SFI Head of Research, and Prof. Norman Schürhoff, Chairman of the Jury.



Best Paper winner Thomas Geelen with Prof. Erwan Morellec (left).

SFI PhD Program in Finance

The Swiss Finance Institute PhD Program in Finance promotes the pursuit of academic excellence, providing an intellectual environment and a curriculum comparable with other top PhD programs in Europe and North America. The PhD program operates in collaboration with SFI's partner universities: École Polytechnique Fédérale de Lausanne (EPFL), the University of Geneva (UNIGE), the University of Lausanne (UNIL), Università della Svizzera italiana (USI), and the University of Zurich (UZH). SFI students benefit from regular contact with outstanding local and international academics. The program seeks to offer the best training possible to both future academics and future practitioners.

As of January 2017, there were 102 active students enrolled: EPFL, 22; UNIGE, 11; UNIL, 15; USI, 24; and UZH, 30. The 2017/2018 academic year had an intake of 25 students, mostly from Europe, but also from farther afield. SFI supports students financially in their first year of the program so they can study full time. In subsequent years, students often work as teaching or research assistants in local institutions while writing their theses, following advanced courses, and pursuing their research interests. SFI provides further support that enables program participants to travel to international conferences and helps them prepare for the job market.

PhD Awards & Support:

Swiss Finance Institute Doctoral Award for the Best Paper

The annual SFI Doctoral Award for the Best Paper recognizes a PhD student for an outstanding research paper presented at the SFI Research Days. The winning paper is nominated by a committee formed of external experts participating in the SFI Research Days. The award is presented at the SFI Annual Meeting. In 2017, the award was won jointly by Thomas Geelen, SFI@EPFL, for his paper entitled "News About Zero-leverage Firms" and Paola Pederzoli, SFI@UNIGE, for her paper entitled "Crash Risk in Individual Stocks".

Swiss Finance Institute Doctoral Award for the Best Discussant

The annual SFI Doctoral Award for the Best Discussant recognizes Swiss doctoral students in Finance for an outstanding discussion of a paper presented at the SFI Research Days. Recipients are nominated by the chairpersons of the respective workshop sessions. The award is presented at the SFI Annual Meeting. In 2017, the award was presented to Igor Pozdeev, University of St. Gallen, for his discussion of the paper entitled "The Value Premium Under Short-run and Long-run Consumption Risk".

PhD Study Abroad

SFI PhD students visit other institutions in the advanced stages of their education in order to gain exposure to top scholars and other internationally renowned institutions, providing them with a well-balanced foundation upon which they can base their move into the job market.

- <u>Paola Pederzoli</u> from SFI@UNIGE visited the London School of Economics (UK) from January 2016 to August 2017 (faculty sponsor: Prof. Andrea Vedolin).
- <u>Alessio Ruzza</u> from SFI@USI visited the University of California Berkeley (USA) from September 2016 to August 2017 (faculty sponsor: Prof. Nicolae Garleanu).
- Davide Tedeschini from SFI@USI visited the University of Maryland (USA) from September 2016 to August 2017 (faculty sponsor: Prof. Gurdip Bakshi).
- <u>Thomas Geelen</u> from SFI@EPFL visited the University of California Berkeley (USA) from March 2017 to May 2017 (faculty sponsor: Prof. Brett Green).
- Wojciech Zurowski from SFI@USI is visiting Fuqua Business School, Duke University (USA) from September 2017 to August 2018 (faculty sponsor: Prof. Anna Cieślak).



Best Discussant winner Igor Pozdeev with Prof. Erwan Morellec (left).

"The rigorous academic training of the SFI PhD program and the opportunity to learn from the best scholars in financial engineering were most valuable to me."

Kevin Chen, SFI PhD Graduate 2004

SFI PhD Graduate Placements



Europe/Africa

- 16. NHH Norwegian School of Economics
- 17. BI Norwegian School of Management
- 18. Copenhagen Business School
- 19. University Magdeburg
- 20. University of Amsterdam
- 21. Utrecht University School of Economics
- 22. London School of Economics
- 23. Queen Mary University of London
- 24. Goethe University Frankfurt
- 25. HEC Paris
- 26. Université Paris-Dauphine
- 27. University of St.Gallen

- 28. University of Bern
- 29. University of Lausanne
- 30. University of Geneva
- 31. Bocconi University
- 32. Collegio Carlo Alberto
- 33. ESADE Business School
- 34. ISCTE Business School
- 35. Akdeniz University
- 36. African School of Economics
- 37. Università Cattolica del Sacro Cuore

Asia

- 38. Shandong University
- 39. Shanghai University of Finance & Economics
- 40. Shanghai Jiao Tong University
- Hong Kong University of Science & Technology

Oceania

42. University of New South Wales

"The course phase with SFI faculty provided me with solid foundations on which to build my research agenda. Most importantly, my supervisor and other SFI faculty members gave me the feedback and support necessary to go on the academic job market well prepared. The SFI PhD program gave me the opportunity to pursue an academic career at a top business school in the US. In addition, SFI helped me expand my network among both academics and practitioners by providing the funding needed to attend conferences and carry out an academic visit in the US."

Vincent Bogousslavsky, SFI PhD Graduate 2017

SFI has one of the world's largest and most competitive PhD programs in Finance. SFI PhD graduates go on to work in top industry organizations or take up posts at outstanding academic institutions.

SFI PhD Graduates 2017

The following students graduated from the SFI PhD Program during 2017:

- <u>Damien Ackerer</u> (EPFL), Quantitative Researcher and Portfolio Manager, Swissquote, Switzerland.
- Andrin Bögli (UZH) is on the 2018 job market.
- <u>Vincent Bogousslavsky</u> (EPFL), Assistant Professor of Finance, Boston College, USA.
- <u>Andreea Constantin</u> (UNIL), Assistant, University of Lausanne, Switzerland.
- <u>Nataliya Gerasimova</u> (UNIL), Assistant Professor, Norwegian School of Economics (NHH), Norway.
- <u>Christoph Herpfer</u> (EPFL), Assistant Professor of Finance, Emory University, USA.
- Elisabeth Megally (UZH), Independent Researcher.
- Jules Munier (UNIL) is on the 2018 job market.
- Tamara Nunes (UNIL) is on the 2018 job market.
- <u>Piotr Orłowski</u> (USI), Assistant Professor of Finance, HEC Montréal, Canada.
- <u>Evgeny Petrov</u> (EPFL), Doctoral Research Fellow, Tuck School of Business, USA.
- Yalda Sigrist (EPFL), Associate, Freeman & Co. LLC, USA.
- <u>Carlo Sommavilla</u> (USI), Quantitative Investment Strategies, Morgan Stanley, UK.
- <u>Ally Quan Zhang</u>, Assistant Professor, Lancaster University, UK.

Industry Placements

PhD Graduates—Industry Placements:

SFI PhD students have been placed in a broad range of institutions, including: Allianz, the Bank for International Settlements, Banque Cantonale Vaudoise, Banque Centrale du Luxembourg, Cornèr Banca, Credit Suisse, Deloitte, Deutsche Bank, the European Commission, the Federal Reserve, Goldman Sachs, Keiger, Lombard Odier & Cie, Morgan Stanley, the Norwegian Ministry of Finance, PricewaterhouseCoopers, Pro Credit Bank, Qatar Investment Authority, Swiss Life, the Swiss National Bank, Swissquote, Swiss Re, the Swiss State Secretariat for International Finance Matters, UBS, the US Securities and Exchange Commission, and Zürcher Kantonalbank.

Overview— SFI Continuing Education

2017 Highlights Certification

In 2017 the Continuing Education team successfully continued to broaden the scale of its offering to incorporate specialist certification training. SFI has been mandated by the Swiss Association for Quality (SAQ) as an examination institute for the certification of client advisors in wealth management (ISO 17024). SFI, with its expertise in wealth management, joined forces with two strong partners—namely, the University of Zurich and the CYP Association. These partners complement SFI's expertise and education setup ideally, which allows the three bodies to jointly offer certifications not only in wealth management but in all planned client advisor bank profiles of SAQ. The new certification offering comprises a self-assessment test for all candidates and selected e-learning and/or on-site training elements, as well as an examination. All elements of the certification are offered in four languages—German, French, Italian, and English—and can be customized upon request. In 2017, the first participants were successfully trained and passed examinations set by Swiss Finance Institute.

"SFI is the ideal certification partner thanks to its mix of faculty and practitioners. It represents the counterparty of reference to regulators' requirements for further education in the field of finance."

Patrick Odier, Managing Partner at Banque Lombard Odier & Cie SA

International Cooperation

In 2015, SFI Continuing Education won—for the second time—the pitch for providing a three-year "Bank Directors Training Program" in Vietnam, as an implementing agency of the Swiss State Secretariat for Economic Affairs (SECO). The program combines components such as e-learning, on-site bankers' training in Hanoi and Ho Chi Minh City, advice regarding change management projects carried out in the banks, advice to a government training division, and a train-the-trainer module designed to encourage sustainable banking training in Vietnam in the future. A total of 73 participants successfully graduated in 2017. SFI hopes to extend its successful collaboration with SECO in Vietnam, and also in other developing economies in the future.

Personnel

As of December 31, 2017 Dr. Gabriela Maria Payer has stepped down as Head of Continuing Education in order to focus on her own business, which she launched already in 2012. Dr. Silvia Helbling joined the institute as new Head of Continuing Education and Member of the Management Board as of January 2018. She has a proven track record in the field of banking and finance training and a strong familiarity with Swiss Finance Institute from an earlier employment with the Institute.

Strategy Review

A strategy review has been initiated by the SFI Foundation Board for 2018 in order to ensure that SFI Continuing Education is in line with the Institute's overall strategy.

Facts and Figures 2017

The focus of the SFI Continuing Education offering is to provide insight into key knowledge and trends in the financial industry, both on a strategic and an operational level. The concepts underlying these trends are presented by academics and practitioners selected for their extensive industry involvement and their understanding of the implications of these concepts for the finance industry. Senior executives are invited to give presentations on their institutions' experience of these developments.

"SFI Continuing Education offers a good mix of theory and practice and interesting exchanges with other participants to hear how they approach current issues and challenges in their daily business."

Roland Iberg, SFI Continuing Education participant and Head of Sales & Execution SLF at UBS AG

A systematic and regular update of the topics and of the course structure ensures that the needs of the market are constantly met. Finally, the carefully selected participants are of the highest caliber, ensuring a critical peer discussion of the ideas presented and offering the benefits of outstanding networking and interaction platforms.

In-house Offerings

In addition to its open-enrolment programs, SFI also provides company-specific, in-house training offerings to both Swiss and international financial institutions. These courses, workshops, and focused certification programs are tailored to clients' individual requirements.

Why In-house Offerings from SFI?

- Our focus on the finance industry: SFI's focus on financial institutions results in a profound understanding of the needs and challenges of the financial industry. With a teaching faculty of more than 50 SFI professors, a total faculty of around 120 educators from academia and industry specialized in banking and finance, and an openarchitecture approach to lecturing, SFI offers in-depth and unmatched expertise.
- A strong and experienced partner in education: Building on more than 25 years of experience in banking and finance education, SFI offers customized training courses not only in Switzerland, but also in Europe and Asia. Clients include Swiss and international banks, universities and bankers' associations, and the Swiss State Secretariat for Economic Affairs (SECO).
- Thought leaders: A unique network of leading researchers, teachers, and senior bank practitioners puts SFI in a position to offer exceptional value in education. The institute's lecturers are aware of the challenges facing the finance industry, can combine theoretical concepts and practical examples, and ensure best-practice knowledge transfer to the client company.

In 2017 SFI Continuing Education offered 21 courses and 40 training courses related to certification. In total Swiss Finance Institute conducted more than 4'700 participant days in 2017.

- 5 degree offerings for a total of 13 weeks' study (plus a re-certification program for an earlier non-degree program)
- 3 executive offerings for a total of 10 weeks' study
- 6 specialist offerings for a total of 1 week's study
- 7 in-house training courses for a total of 7 weeks' study
- 40 training courses related to certification for a total of 5 weeks' study

More than 500 participants took part in one or more of the institute's courses.

SFI Alumni Association

The Swiss Finance Institute Alumni Association (SFIAA) replaced the former Swiss Banking School Alumni Association on April 28, 2006. Graduates of any of the Swiss Finance Institute training programs or continuing education offerings—in particular the Diploma of Advanced Studies (DAS), the Certificate of Advanced Studies (CAS), the Advanced Executive Program (AEP), and the International Bank Management Program (IBMP) are eligible to join. The SFIAA currently has 1'395 members.

The SFIAA Promotes:

- Networking among its members
- The continuing education of its members by means of seminars and lectures (in collaboration with SFI)
- Contributions to the ongoing development of SFI

In addition to an annual meeting of members, SFIAA and SFI jointly organize the Alumni Luncheons, with prominent guest speakers; after-work aperitifs in Zurich and Basel; luncheons in Bern; and networking dinners in Geneva, as well as the SFIAA Golf Trophy. Furthermore, in 2015, for the first time, social events were organized, starting with a one-day excursion to Mercedes-AMG in Affalterbach.

2017 Alumni Luncheons

January 26, 2017 SFIAA Fondue Enjoyment

February 17/18, 2017 SFIAA Social Event: Winter Driving Training

March 15, 2017 Networking Dinner, Romandie

March 22, 2017 General Assembly & Luncheon, Zurich. Speaker: Frank Biernat, Senior BDM Enterprise, Apple Switzerland AG

April 5, 2017 Networking Luncheon, Bern

April 11, 2017 After-work Aperitif, Basel

May 10, 2017 After-work Aperitif, Zurich

May 30, 2017 SFIAA FinTech Start-up Event, Zurich. Speakers: Daniel Abebe, Advanon AG; Stefan Mühlemann, Ioanboox; Felix Niederer, True Wealth AG **June 13, 2017** SFIAA Luncheon, Zurich. Speaker: Prof. Donato Scognamiglio, IAZI AG – CIFI SA

June 14, 2017 Networking Dinner, Romandie

June 20, 2017 Networking Luncheon, Bern

September 5, 2017 After-work Aperitif, Basel

September 6, 2017 Networking Luncheon, Bern

September 7, 2017 SFIAA BBQ

September 8, 2017 SFIAA Golf Trophy

September 12, 2017 SFIAA Luncheon, Zurich. Speaker: Hannes Schmid, Smiling Gecko

November 15, 2017 Networking Dinner, Romandie **November 16, 2017** After-work Aperitif, Zurich

November 21, 2017 Networking Luncheon, Bern

Women's Luncheons

This event was launched in 2008 to promote networking among female members of the SFIAA. A total of 150 women participated in this year's events:

February 2, 2017 Speaker: Dr. Annette Krauss, Center for Microfinance, UZH Dept of Banking and Finance

April 4, 2017 Speaker: Susanne Brandenberger, EFG Int. AG and Thurgauer Kantonalbank

June 14, 2017 Speaker: Karina Storinggaard, Purpose Economist, Think Yellow

June 15, 2017 Speaker: Kristin Engvig, founder, WIN Conference



Daniel Abebe, Advanon AG spoke at the SFIAA FinTech Startup Event in Zurich.



Networking at SFIAA's FinTech Startup Event in Zurich.

Overview— Communication Activities

SFI's communication activities are primarily aimed at disseminating the extensive expertise of SFI's more than 50 renowned professors to finance professionals and the broader public, at enhancing the awareness and perception of our up-to-date continuing education offering, and at enabling finance practitioners and academics to exchange the knowledge and expertise that will keep Switzerland at the top in banking and finance. In addition, various other communication activities were conducted for the Institute in 2017, positioning it to meet future challenges and enabling the Swiss banking and finance industry to profit from SFI's extensive expertise.

Revised Corporate Communication— Growing Knowledge Capital

Aligned with the Institute's strategic realignment, SFI's corporate communication strategy was also revised in 2017 based on the commitment to our foundation's purpose of creating intellectual value, what we call knowledge capital, in the interest of SFI's founding members—the Swiss financial sector and the Confederation. Via a memorable analogy, SFI's commitment to growing knowledge capital in order to guarantee the long-term prosperity of Switzerland's financial marketplace, along with our core competencies, is impressively illustrated in the new SFI brochure—available in English, French, German, and Italian—and was adapted for various marketing documents as well as for our website.

Intensified Social Media Work— Digital Knowledge Exchange

An essential element of the revised corporate communication strategy was to intensify our social media work in order to further foster digital knowledge exchange. During 2017, we considerably grew our social media presence and engagement through targeted activity, resulting in a sharp rise in Twitter, Facebook, LinkedIn, YouTube, and Google+ post visits and follower audiences. In 2017, short, customized video clips were also created in-house to share, via social media, the extensive expertise of our renowned faculty in the most user-friendly manner available.

SFI Expertise Guide—Extensive Expertise at a Glance

SFI unites more than 50 professors from six partner universities, spread across three language regions in Switzerland. SFI's extensive expertise is impressively illustrated in the *SFI Expertise Guide* (www.sfi.ch/ expertiseguide), which was compiled for the first time in 2017 and made available to finance professionals and the media. Fast access to specific expertise is essential for an active exchange of knowledge, be it for practitioners seeking scientific advice or journalists commenting on current developments in the financial industry. This valuable reference guide, which presents SFI's specific finance expertise by subject and activity area at a glance, makes this important task easier for practitioners and journalists alike.

Events and Conferences— Academia Meets Practice

SFI's events and conferences remained highly successful in 2017. A total of 11 high-quality, publicly available events attracted a combined audience of over 1'500 participants. Active knowledge exchange, relevance, and visibility are the focus of all such events as they aim to foster the exchange of knowledge and expertise among practitioners and academics that will keep Switzerland at the top in banking and finance. Topical themes addressed in 2017 included private markets, collateral banking, digital transformation, and retirement provision.

One of the many highlights was the successful full-day conference on asset management: the 6th Swiss Asset Management Day, which took place in April 2017 with the overarching topic "Digital Realities and Opportunities in Private Markets". This prestigious event, held in Pfäffikon (SZ), attracted over 250 financial industry professionals and academics, who enriched the outstanding and innovative program through their participation.

Panel discussion (from left to right): Andreas Iten, SIX Group; Dr. Jutta Steiner, Parity Technologies; Reto Lipp, SRF; and Dr. Andreas Kind, IBM.



Panelists (second left to right): SFI Prof. Francesco Franzoni, SFI@Università della Svizzera italiana; Pius Fritschi, LGT Capital Partners; Dr. Michael Loretan, FINMA; Luc Mathys, Credit Suisse; and Mikko Syrjänen, Man Global Private Markets. Moderation: Reto Lipp, SRF (left).

Another highlight was the very insightful evening event with Mickael Benhaim of Pictet Asset Management, SFI Professor Kjell G. Nyborg from the University of Zurich, and Dr. Andréa M. Maechler of the Swiss National Bank. SFI Professor Kjell G. Nyborg presented his new book "Collateral Frameworks: The Open Secret of Central Banks" and explained how central banks inject money into economies, how this impacts financial markets and the real economy, and how such policies have been a central part of the ECB's efforts to preserve the euro. The discussion continued with the panelists, who shared their views and talked about the SNB's monetary policy. Registration for the event had had to be closed due to high demand, and the over 300 participants experienced—live in the form of a lively dialogue between academia and practice how a complex topic can be illustrated in an understandable way.



SFI's Managing Director Prof. François Degeorge; Dr. Andréa M. Maechler, Swiss National Bank; SFI Prof. Kjell G. Nyborg, SFI@University of Zurich; and Mickael Benhaim, Pictet Asset Management (left to right).



SFI Prof. Kjell G. Nyborg, SFI@University of Zurich, during his book presentation.



Over 300 participants listened to the stimulating panel discussion.

SFI Practitioner Roundups— A Popular Publication

In 2017, SFI again attracted significant interest with its industry-oriented publications. Particularly noteworthy is the SFI Practitioner Roundups (www.sfi.ch/roundups) series. This monthly publication summarizes the latest research findings from an SFI Professor on a relevant theme in a concise format. As of 2017, each issue also provides practical insights from an experienced practitioner and is available in English, French, German, and Italian. We received large amounts of positive feedback and generated a strong interest in the new publication format from the financial industry and the media alike. The number of media references to these concise research summaries increased considerably, thus enabling us to make new finance insights available to a broader public.

Survey on Career Prospects— Training and Development Remains a Crucial Success Factor

The importance of knowledge capital was also acknowledged by bank employees themselves in 2017, as the sixth annual online survey on "Career Prospects in the Financial Industry"—carried out in the autumn in collaboration with Finews and Communicators—revealed. For financial-market players, well-founded and up-to-date training and further education remains a crucial success factor for their personal development, especially against the background of the profound changes currently transforming the financial industry. The survey also revealed that the new thematic focuses—including those in the areas of Fintech and digitalization that SFI incorporated into its continuing education offerings at an early stage are of vital relevance for finance practitioners. The same applies for SFI faculty members' new finance research findings, which are disseminated to finance practitioners and the broader public through various channels.

The Media as Partners and Valuable Multipliers

Systematic exchange and collaboration with the media is an essential part of SFI's public relations work. SFI underpins its claim to thought leadership with articles and editorial contributions in the relevant financial press and specialized media. This includes regularly placing expert opinions, channeling media inquiries, and communicating on behalf of the Institute, for example in relation to our high-quality continuing education offering. SFI professors as well as members of the SFI management team regularly seek dialogue with the media to share their expertise and to explain the important role and purpose of SFI and of fundamental research, and the added value that each brings the Swiss financial marketplace.

12th Annual Meeting of SFI— The New Contours of Banking

In 2017, SFI assembled an impressive roster of speakers and participants at its 12th Annual Meeting and stayed true to its mission—bringing together the financial community and academia to exchange the knowledge and expertise that will keep Switzerland at the top in banking and finance.

SFI's Annual Meeting is one of the leading events in the Swiss financial community's calendar and an exclusive discussion platform for key financial market players—as confirmed each year by the event's top-class speakers and the participation of industry representatives of the highest seniority. This year, away from daily business, thought leaders discussed how digitalization is reshaping the landscape of the financial industry. Digital disruption is challenging the entire financial sector, albeit to varying degrees. But the core business—personal client advice remains the unique selling proposition of individual financial market players. Innovative technologies challenge the value chain and established business models, but also create opportunities to identify customer needs and individual customer solutions even more precisely, thus ultimately creating added value. At the center of all these reflections, however, we still find the human being. In order to meet the high expectations of banks' customers and to continue doing so in the future, financial market players must adapt to this new environment and translate these structural changes into innovative approaches. SFI grows the necessary knowledge capital and provides forward-thinking ideas by disseminating the latest research findings from its renowned faculty—a faculty that enjoys worldwide recognition and contributes to SFI being ranked among the top three European finance institutesfrom academia to practice. SFI achieves this through its practice-oriented training and continuing education and by connecting key players.

Understanding Change as an Opportunity—Professor Axel A. Weber, Chairman of the Board of Directors at UBS Group AG

Professor Axel A. Weber, Chairman of the Board of Directors at UBS Group AG, talked in his keynote address about how digitalization impacts wealth management and highlighted resulting opportunities for banks. He stated that banks' views of the world and their clients were, in the past, driven from an inside-out perspective, which now needs to be changed to an outside-in view. Moreover, banks should support their clients in their efforts to master increasing complexity, a trend that will not go away in today's digital world. Professor Weber also stressed how important it is to put theory into practice in the digital world, as he believes that both artificial intelligence and blockchain will in future play key roles. In this context, Professor Weber also explicitly emphasized the important role of SFI, which ultimately creates the necessary knowledge capital and supports bank employees in their efforts to acquire the expertise and skills that guarantee that Switzerland's financial center will continue to thrive.



Keynote speaker Prof. Axel A. Weber, Chairman of the Board of Directors at UBS Group AG.

The Future of Labor—2014 Nobel Laureate Professor Jean Tirole, Toulouse School of Economics

In his keynote speech, Nobel Prize Laureate Professor Jean Tirole from the Toulouse School of Economics spoke about how technology will impact the economy, data ownership, and the future of labor. He addressed how technological advances enable increased efficiency and better services. This may lead to the breaking up of existing structures, which may have both positive and negative effects. New job profiles will emerge and replace existing profiles. The fundamental laws of the economy, however, are not undermined by innovation as there will always be jobs. Economic growth, especially in a digitized world, is essentially based on innovation. However, the essential point of an increasingly data-supported economy will be the question of data ownership.



Keynote speaker 2014 Nobel Laureate Prof. Jean Tirole, Toulouse School of Economics.

Are Tech Giants the New Banks? Panel Discussion

The panelists—Professor Alexander Lipton, MIT Connection Science, StrongHold Labs, and EPFL; Dr. Ksenia Wahler, Credit Suisse; and SFI Adjunct Professor Paolo Vanini, swissQuant Group AGdiscussed how tech giants or Fintech will change business models in the financial services industry. The panel was moderated by SFI Professor Jean-Charles Rochet from the University of Geneva. The experts shared their views with the over 250 participants and expressed their opinions on whether lending platforms and P2P lending will disrupt commercial banking, which human skills will be the most valuable in the financial industry of the twenty-first century, and whether the tyranny of data analytics will bring back privacy-based business models.



Moderator SFI Prof. Jean-Charles Rochet, SFI@University of Geneva (left) with (from left to right) panelists Prof. Alexander Lipton, MIT Connection Science, StrongHold Labs, and EPFL; Dr. Ksenia Wahler, Credit Suisse; and SFI Adjunct Prof. Paolo Vanini, swissQuant Group AG.

The day was rounded off by the awards ceremony, where SFI Professor Erwan Morellec from EPFL announced the winners of the SFI Outstanding Paper Award 2017, Best Discussant Doctoral Award 2017, and Best Paper Doctoral Award 2017. In his closing address, the SFI Foundation Board Chairman, Dr. Romeo Cerutti of Credit Suisse, acknowledged SFI's gratitude to the speakers and participants for having moved beyond current practice and exchanged their knowledge and expertise.

Governing and Advisory Bodies

The main governing body of Swiss Finance Institute is the Foundation Board. It includes representatives of its founding members and of its academic regional centers. The Foundation Board has four committees: the Executive Committee, the Fund Management Committee, the Audit and Risk Committee, and the Faculty Appointment and Research Project Committee. The aim of these committees is to discuss financial and faculty issues in detail before each meeting of the Foundation Board in order to bring recommendations to the members of the Board. All Foundation Board members have a secondary role on one of the four committees.

The Foundation Board is advised by the Scientific Council on matters of scientific content and by the Education and Knowledge Advisory Board on matters of continuing education and knowledge exchange with the industry.

Foundation Board

Foundation Board members represent the finance and banking community in Switzerland, both locally and internationally. SFI gratefully acknowledges the participation of Marco Bizzozero, representative of the Association of Foreign Banks in Switzerland, Boris Collardi, representative of the Association of Swiss Commercial and Investment Banks in Switzerland, and Dr. Renaud de Planta, representative of Swiss Private Bankers Association. All completed their tenure on the Foundation Board during 2017. Olivier Steimer, representative of Banque Cantonale Vaudoise and Chairperson of the Board of Directors since the foundation of the Institute in 2006, decided to step down from the Board and did so on May 31, 2017. Swiss Finance Institute gratefully acknowledges his leading role during the Institute's inception phase and his significant contributions toward the vision and direction of the Institute. The new Chairperson of the Board of Directors, Dr. Romeo Cerutti, and the Institute's Managing Director, Prof. Francois Degeorge, thank him for his long-standing commitment and the enormous energy he has devoted to ensuring the success and the further development of SFI.

Swiss Finance Institute Foundation Board—December 2017 Chairperson

<u>Romeo Cerutti</u>¹, Member of the Executive Board of Credit Suisse Group

Vice-Chairperson

Lukas Gähwiler¹, Chairman of UBS Switzerland

Romeo Lacher¹, Chairman SIX Group AG, Zurich

Members

<u>Prof. Boas Ere</u>z⁴, Rector, Università della Svizzera italiana—as representative of the Swiss Finance Institute Lugano Center

<u>Prof. Yves Flückiger</u>⁴, Rector, University of Geneva as representative of the Swiss Finance Institute Léman Center

<u>Prof. Michael O. Hengartner</u>⁴, President of the University of Zurich—as representative of the Swiss Finance Institute Zurich Center <u>Christophe Hentsch</u>³, Managing Partner at Lombard Odier—as representative of the Association of Swiss Private Banks

<u>Dr. Stephanino Isele</u>², Head of Institutionals & Multinationals and Member of the Executive Board, Zürcher Kantonalbank

Pascal Kiener³, CEO, Banque Cantonale Vaudoise

<u>Claude-Alain Margelisch</u>⁴, CEO and Delegate of the Board of Directors, Swiss Bankers Association

<u>Adrian V. Nösberger</u>², CEO Schroder & Co. Bank AG as representative of the Association of Foreign Banks in Switzerland

<u>Dr. Christian Poerschke</u>³, Chief Financial Officer and Member of the Executive Board, Raiffeisen Group

<u>Gian A. Rossi</u>, Head Switzerland and Member of the Executive Board, Julius Baer Group Ltd—as representative of the Association of Swiss Asset and Wealth Management Banks

Luca Soncini², Member of the Board of Directors, Banca dello Stato del Cantone Ticino—as representative of the Ticino Bankers Association (ABT)

¹ Executive Committee, ² Audit and Risk Committee,

³ Fund Management Committee, ⁴ Faculty Appointment and Research Project Committee

Scientific Council

The scientific council is an independent committee of internationally renowned professors of Banking and Finance from around the world. It advises the Foundation Board on all matters where scientific criteria should predominate and as such plays a crucial role in the pursuit of the objectives of Swiss Finance Institute. Indeed, in full respect of academic freedom and scientific integrity, the Swiss Finance Institute Foundation Board refuses to take decisions involving research or researchers unless armed with the appropriate recommendation from the Scientific Council. SFI is very fortunate to be able to count on the enthusiastic support of the following internationally renowned experts:

Chairperson

<u>Prof. René Stulz</u>, Fisher College of Business, Ohio State University

Members

<u>Prof. Tim Bollerslev</u>, Fuqua School of Business, Duke University

<u>Prof. Patrick Bolton</u>, Columbia Business School, Columbia University

<u>Prof. Markus Brunnermeier</u>, Department of Economics, Princeton University

<u>Prof. Darrell Duffie</u>, Graduate School of Business, Stanford University

<u>Prof. Maureen O'Hara</u>, Johnson Graduate School of Management, Cornell University

Education and Knowledge Center Advisory Board

SFI gratefully acknowledges the participation of Judith Eberl, EFG Bank, Johannes Toetzke, Credit Suisse AG, and Felix Wenger, representative of Raiffeisen Group. All completed their tenure on the Education and Knowledge Center Advisory Board during 2017.

The members of the Education and Knowledge Advisory Board as of December 2017 are:

Chairperson

<u>Dr. Philipp Halbherr</u>, Head of Retail Banking and Capital Markets, Member of the Executive Board of the Swiss Bankers Association

Members

<u>Hans Baumgartner</u>, Head of Private & Wealth Management Clients Region Zürich Zentrum and Head of Region Zürich, Credit Suisse (Schweiz) AG

<u>Christian Donzé</u>, Head of Professional Training, Banque Cantonale Vaudoise

<u>Christophe Lapaire</u>, SFI Alumni Association Chairperson and SIX Securities Services AG

Lukas Stucky, Leadership Development, Bank Julius Baer & Co. Ltd

Markus Tanner, Senior Talent Partner, UBS Schweiz

<u>Dr. Thomas Ulrich</u>, Head of Governmental Affairs, Group Regulatory & Governance, Managing Director, UBS AG

<u>Ernst Näf</u>, Business Development Private and Corporate Clients at Raiffeisen Schweiz

Project Evaluation Committee

The SFI Project Evaluation Committee is an independent committee of professors selected from around the world for their expertise in financial economics. Projects are assessed on the basis of their scientific rigor and their potential impact on financial economics, in particular through successful publication.

The members of the SFI Project Evaluation Committee as of December 2017 are:

Chairperson

<u>Prof. Jean-Charles Rochet</u>, University of Zurich and Swiss Finance Institute (Head of Research)

Members

<u>Prof. Suleyman Basak</u>, Institute of Finance and Accounting, London Business School

Prof. Bruno Biais, CRM, University of Toulouse

<u>Prof. Arnoud Boot</u>, Faculty of Economics and Econometrics, University of Amsterdam

<u>Prof. Wayne Ferson</u>, Marshall School of Business, University of Southern California

<u>Prof. Alexander Ljungqvist</u>, Stern School of Business, New York University

<u>Prof. Josef Zechner</u>, Institute for Finance, Banking and Insurance, Vienna University of Economics and Business



Members of the SFI Foundation Board during a meeting in 2017.

Summary of Swiss Finance Institute Financial Accounts 2017

Balance Sheet as of 31 December	2017 CHF	2016 CHF
Assets		
Current Assets		
Cash and cash equivalents	5'009'133	21'318'696
Trade receivables	55'330	81'927
Other current receivables	193'064	69'077
Accrued income and prepaid expenses	64'263	286'311
Total Current Assets	5'321'790	21'756'011
Capital Assets		
Financial assets	35'822'921	20'556'814
Tangible fixed assets	129'672	148'101
Total Capital Assets	35'952'593	20'704'915
Total Assets	41'274'382	42'460'926
Liabilities and Founders' Equity		
Short-Term Liabilities		
Trade creditors	637'529	225'273
Other current liabilities	1'595'374	411'723
Deferred income and accrued expenses	903'602	1'297'716
Total Short-Term Liabilities	3'136'505	1'934'712
Long-Term Liabilities		
Other long-term liabilities	4'000'000	4'000'000
Total Long-Term Liabilities	4'000'000	4'000'000
Total Liabilities	7'136'505	5'934'712
Founders' Equity		
Foundation capital	19'000'000	19'000'000
Statutory capital reserves	37'564'785	37'564'785
Statutory retained earnings	-20'038'571	-18'160'905
Result of the period	-2'388'336	-1'877'666
Total Founders' Equity	34'137'878	36'526'214
Total Liabilities and Founders' Equity	41'274'382	42'460'926

Profit and Loss Account for the Period Ending 31 December	2017 CHF	2016 CHF
Income from Continuing Education courses Income from Communication & Projects Income from PhD Program	2'801'152 38'151 8'172	3'196'626 56'786 9'792
Income from Activity Areas	2'847'475	3'263'204
Expenses from Continuing Education courses Expenses from Partner University Faculty	–1'378'144 –3'800'678	-1'553'361 -5'354'160
Expenses from PhD Program	-3 800 878 -699'402	-5 354 160 -763'858
Expenses from Communication & Projects Total Expenses from Activity Areas	–400'986 –6'279'209	–228'089 –7'899'468
Net Result before General Expenses	-3'431'734	-4'636'264
Personnel expenses	-3'815'914	-3'401'533
Audit and accounting services	-106'731	-185'148
Other professional services IT services	-94'205 -107'249	-122'297 -74'942
Office expenses	-219'805	-181'663
Marketing and other operational expenses	-134'211	-320'657
Total Other Operational Expenses Earnings before Interest, Depreciation, and Amortization	-662'202 -7'909'850	-884'708 -8'922'504
Depreciation of tangible assets Earnings before Interest	-26'267 -7'936'117	-15'350 -8'937'854
Financial income	6'300	3'328
Financial expenses Earnings before Non-Operational and Extraordinary Results	–15'650 –7'945'467	-8'096 -8'942'622
Net result on investments Net non-operational income Extraordinary, non recurring, or prior-period result	1'922'255 3'600'000 34'876	-289'679 7'351'500 3'135
Net Result of the Period	-2'388'336	- 1'877'666

Swiss Finance Institute Research Paper Series 2017

The aim of the Swiss Finance Institute Research Paper Series is to disseminate original theoretical or empirical research with relevance to banking and finance. The series includes research contributions made at Swiss Finance Institute by faculty, PhD students, and affiliated researchers. Papers issued in 2017 were included in the SFI Series on the Social Science Research Network's Financial Economics Network. To access the Swiss Finance Institute Research Paper Series, please use the following link:

www.ssrn.com/link/swiss-finance-institute.html.



N°79

Testing the Stochastic Disorder Model on Stock Markets

<u>Anastasiia Sokko,</u> University of Zurich and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3107629

N°78

Analytical Option Pricing under an Asymmetrically Displaced Double Gamma Jump-Diffusion Model

<u>Matthias Thul</u>, IMC Financial Markets <u>Ally Quan Zhang</u>, University of Zurich and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2311673

N°77

Earnings Management and Managerial Compensation

<u>Kremena Bachmann</u>, University of Zurich and Zurich University of Applied Sciences <u>Thorsten Hens</u>, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2240369

N°76

The Dynamics of Heterogeneity and Asset Prices

<u>Walter Farkas</u>, University of Zurich, ETH Zurich, and Swiss Finance Institute <u>Ciprian Necula</u>, University of Zurich and Bucharest University of Economic Studies

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2973276

N°75

The Blockchain Folk Theorem (Outstanding Paper Award)

<u>Bruno Biais,</u> Toulouse School of Economics and CNRS

<u>Christophe Bisière,</u> Université Toulouse 1 Capitole <u>Matthieu Bouvard,</u> McGill University

<u>Catherine Casamatta</u>, Université Toulouse 1 Capitole https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3108601

N°74

Move a Little Closer? Information Sharing and the Spatial Clustering of Bank Branches

<u>Shusen Qi, Xiamen University</u> <u>Ralph de Haas,</u> European Bank for Reconstruction and Development and Tilburg University <u>Steven Ongena,</u> University of Zurich, KU Leuven, Swiss Finance Institute, and Center for Economic and Policy Research <u>Stefan Straetmans,</u> University of Maastricht

http://ssrn.com/abstract=3099119

N°73

Principle or Opportunism? Discretion, Capital, and Incentives

<u>Josef Falkinger</u>, University of Zurich <u>Michel A. Habib</u>, University of Zurich and Swiss Finance Institute http://ssrn.com/abstract=3099117

U.S. Metropolitan House Price Dynamics

Elias Oikarinen, University of Turku Steven C. Bourassa, Florida Atlantic University Martin Hoesli, University of Geneva, University of Aberdeen, and Swiss Finance Institute Janne Engblom, University of Turku http://ssrn.com/abstract=3099094

N°71

Periodic or Generational Actuarial Tables: Which One to Choose?

<u>Severine Arnold (-Gaille)</u>, University of Lausanne <u>Anca Jijiie</u>, Faculty of Business and Economics <u>Eric Jondeau</u>, University of Lausanne and Swiss Finance Institute

<u>Michael Rockinger</u>, University of Lausanne, Swiss Finance Institute, and Center for Economic and Policy Research

http://ssrn.com/abstract=3099103

N°70

Discriminatory Pricing of Over-the-Counter Derivatives

<u>Harald Hau</u>, University of Geneva, Swiss Finance Institute, Center for Economic and Policy Research, and CESifo

<u>Peter Hoffmann,</u> European Central Bank <u>Sam Langfield,</u> European Central Bank <u>Yannick Timmer,</u> Trinity College Dublin http://ssrn.com/abstract=3099089

N°69

Asset-Liability Management for Long-Term Insurance Business

Hansjoerg Albrecher, University of Lausanne and Swiss Finance Institute Daniel Bauer, University of Alabama Paul Embrechts, ETH Zurich and Swiss Finance Institute Damir Filipović, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute Pablo Koch-Medina, University of Zurich and Swiss **Finance Institute** Ralf Korn, University of Kaiserslautern Stéphane Loisel, University of Lyon 1 Antoon Pelsser, Maastricht University and Netspar Frank Schiller, Munich Re Hato Schmeiser, University of Muenster and University of St. Gallen Joël Wagner, University of Lausanne and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3089627

N°68

Corporate Bond Dealers' Inventory Risk and FOMC

<u>Alessio Ruzza</u>, Università della Svizzera italiana and Swiss Finance Institute (PhD Program) <u>Wojciech Zurowski</u>, Università della Svizzera italiana and Swiss Finance Institute (PhD Program) https://papers.srn.com/solʒ/papers.cfm?abstract_ id=2967017

N°67

Credit Spreads, Daily Business Cycle, and Corporate Bond Returns Predictability

<u>Alexey Ivashchenko</u>, University of Lausanne and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2945444

Does Protectionist Anti-Takeover Legislation Lead to Managerial Entrenchment?

<u>Marc Frattaroli,</u> École Polytechnique Fédérale de Lausanne and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3013077

N°65

Quantile-Based Risk Sharing with Heterogeneous Beliefs

Paul Embrechts, ETH Zurich and Swiss Finance Institute <u>Haiyan Liu</u>, Michigan State University <u>Tiantian Mao</u>, University of Science and Technology of China <u>Ruodu Wang</u>, University of Waterloo https://papers.srn.com/sol3/papers.cfm?abstract_ id=3079998

N°64

Market Efficiency and Limits to Arbitrage: Evidence from the Volkswagen Short Squeeze

Franklin Allen, Imperial College London Marlene Haas, independent researcher Eric Nowak, Università della Svizzera italiana and Swiss Finance Institute Angel Tengulov, independent researcher

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2977019

N°63

Approximating Equilibria with Ex-Post Heterogeneity and Aggregate Risk

<u>Elisabeth Pröhl</u>, University of Geneva and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2620937

N°62

Arbitrage Crashes, Financial Accelerator, and Sudden Market Freezes

<u>Ally Quan Zhang,</u> University of Zurich and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3034291

N°61

Brokers and Order Flow Leakage: Evidence from Fire Sales

Andrea Barbon, Università della Svizzera italiana and Swiss Finance Institute (PhD Program) Marco Di Maggio, Harvard Business School and National Bureau of Economic Research Francesco A. Franzoni, Università della Svizzera italiana and Swiss Finance Institute Augustin Landier, Toulouse School of Economics https://papers.srn.com/sol3/papers.cfm?abstract_ id=2991617

N°60

Polynomial Jump-Diffusion Models

Damir Filipović, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute <u>Martin Larsson,</u> ETH Zurich http://ssrn.com/abstract=3075520

N°59

Dynamic Leverage Targets

<u>Filippo Ippolito</u>, Universitat Pompeu Fabra, Barcelona Graduate School of Economics, and Center for Economic and Policy Research <u>Stefano Sacchetto</u>, IESE Business School <u>Roberto Steri</u>, University of Lausanne and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3063517

N°58

Stressed Banks

Diane Pierret, University of Lausanne and Swiss Finance Institute <u>Roberto Steri,</u> University of Lausanne and Swiss Finance Institute https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=3066403

Asset Pricing with Large Investors

<u>Semyon Malamud,</u> École Polytechnique Federale de Lausanne, Swiss Finance Institute, and Center for Economic and Policy Research

<u>Alberto Teguia,</u> Rice University and Jesse H. Jones Graduate School of Business

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3064800

N°56

Risky Arbitrage and Collateral Policies

<u>Ally Quan Zhang</u>, University of Zurich and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2485099

N°55

Risk-Reward Ratio Optimisation (Revisited)

<u>Manfred Gilli</u>, University of Geneva and Swiss Finance Institute <u>Enrico Schumann</u>, independent researcher https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=2975529

N°54

Quantile-Based Risk Sharing

Paul Embrechts, ETH Zurich and Swiss Finance Institute Haiyan Liu, Michigan State University Ruodu Wang, University of Waterloo http://ssrn.com/abstract=3099067

N°53

Financial Market Misconduct and Public Enforcement: The Case of Libor Manipulation

Priyank Gandhi, Mendoza College of Business and University of Notre Dame (PhD Program) <u>Benjamin Golez</u>, University of Notre Dame Jens Carsten Jackwerth, University of Konstanz <u>Alberto Plazzi</u>, Università della Svizzera italiana and Swiss Finance Institute https://papers.srn.com/sol3/papers.cfm?abstract_ id=2342075

N°52

A Term Structure Model for Dividends and Interest Rates

Damir Filipović, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute <u>Sander Willems,</u> École Polytechnique Fédérale de Lausanne and Swiss Finance Institute (PhD Program) https://ssrn.com/abstract=3016310

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Which Measures Predict Risk Taking in a Multi-Stage Controlled Decision Process?

<u>Kremena Bachmann</u>, University of Zurich and Zurich University of Applied Sciences <u>Thorsten Hens</u>, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute <u>Remo Stössel</u>, University of Zurich https://ssrn.com/abstract=2535859

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Fundamental Risk and Capital Structure

<u>Jakub Hajda</u>, University of Lausanne and Swiss Finance Institute (PhD Program) http://ssrn.com/abstract=3076436

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Short Selling and the Subsequent Performance of Initial Public Offerings

<u>Biljana Seistrajkova</u>, University of Geneva and Swiss Finance Institute (PhD Program) https://ssrn.com/abstract=3022653

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Viability and Arbitrage under Knightian Uncertainty

<u>Matteo Burzoni,</u> ETH Zurich <u>Frank Riedel,</u> Bielefeld University <u>Halil Mete Soner,</u> ETH Zurich and Swiss Finance Institute http://ssrn.com/abstract=3099057

Does Monetary Policy Impact Market Integration? Evidence from Developed and Emerging Markets

<u>Massimiliano Caporin,</u> University of Padua <u>Loriana Pelizzon,</u> Goethe University Frankfurt and Ca Foscari University of Venice

<u>Alberto Plazzi,</u> Università della Svizzera italiana and Swiss Finance Institute

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2976267

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Optimal Dividend Policies with Random Profitability

Max Reppen, ETH Zurich Jean-Charles Rochet, University of Zurich, University of Toulouse, and Swiss Finance Institute <u>Halil Mete Soner</u>, ETH Zurich and Swiss Finance Institute http://ssrn.com/abstract=3099015

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CDS Central Counterparty Clearing Liquidation: Road to Recovery or Invitation to Predation?

<u>Magdalena Tywoniuk</u>, University of Geneva and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3035798

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Hawkes Graphs

Paul Embrechts, ETH Zurich and Swiss Finance Institute <u>Matthias Kirchner,</u> ETH Zurich http://ssrn.com/abstract=3099022

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Do Risk Simulations Lead to Persistently Better Investment Decisions?

Meike Bradbury, University of Zurich <u>Thorsten Hens</u>, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute <u>Stefan Zeisberger</u>, Radboud University and University of Zurich https://papers.cfm?abstract

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2603780

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Monetary Policy and Bond Risk Premia in the US and the UK

<u>Wojciech Zurowski</u>, Università della Svizzera italiana and Swiss Finance Institute (PhD Program) https://papers.srn.com/solʒ/papers.cfm?abstract_ id=2903837

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Option Pricing with Orthogonal Polynomial Expansions

Damien Ackerer, Swissquote Bank (PhD Program) Damir Filipović, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute https://papers.ssrn.com/abstract=3076519

N°40

The Rise of NGO Activism

<u>Julien Daubanes</u>, ETH Zurich <u>Jean-Charles Rochet</u>, University of Zurich, University of Toulouse, and Swiss Finance Institute http://ssrn.com/abstract=3098805

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The Reluctant Defaulter: A Tale of High Government Debt

<u>Michel A. Habib,</u> University of Zurich <u>Fabrice Collard,</u> University of Bern <u>Jean-Charles Rochet,</u> University of Zurich, University of Toulouse I, and Swiss Finance Institute http://ssrn.com/abstract=3098748

Financial Intermediation, Capital Accumulation and Crisis Recovery

Hans Gersbach, ETH Zurich, IZA Institute of Labor Economics, Center for Economic and Policy Research, and CESifo Jean-Charles Rochet, University of Zurich, University of Toulouse, and Swiss Finance Institute Martin Scheffel, University of Cologne http://ssrn.com/abstract=3097015

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p-Hacking: Evidence from Two Million Trading Strategies

<u>Tarun Chordia</u>, Emory University <u>Amit Goyal</u>, University of Lausanne and Swiss Finance Institute <u>Alessio Saretto</u>, University of Texas https://papers.srn.com/sol3/papers.cfm?abstract_ id=3017677

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Paths to Convergence: Stock Price Behavior After Donald Trump's Election

<u>Alexander F. Wagner</u>, University of Zurich, Swiss Finance Institute, Center for Economic and Policy Research, and European Corporate Governance Institute

<u>Richard J. Zeckhauser</u>, Harvard University and National Bureau of Economic Research <u>Alexandre Ziegler</u>, University of Zurich https://papers.srn.com/sol3/papers.cfm?abstract_ id=3037023

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The Price of Law: The Case of the Eurozone Collective Action Clauses

<u>Elena Carletti,</u> Bocconi University and European University Institute Paolo Colla, Bocconi University

<u>G. Mitu Gulati</u>, Duke University School of Law <u>Steven Ongena</u>, University of Zurich, KU Leuven, Swiss Finance Institute, and Center for Economic and Policy Research https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2686879

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A Generalized 2D-Dynamical Mean-Field Ising Model with a Rich Set of Bifurcations (Inspired and Applied to Financial Crises)

Damian Smug, University of Exeter Didier Sornette, ETH Zurich and Swiss Finance Institute Peter Ashwin, University of Exeter https://papers.srn.com/sol3/papers.cfm?abstract_ id=3064673

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Super-Exponential RE Bubble Model with Efficient Crashes

Jerome L Kreuser, ETH Zurich <u>Didier Sornette</u>, ETH Zurich and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3064668

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The Sovereign Debt Crisis: Rebalancing or Freezes?

<u>Per Östberg,</u> University of Zurich and Swiss Finance Institute

<u>Thomas Richter</u>, University of Zurich and Swiss Finance Institute (PhD Program)

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3060504

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Earning Investor Trust: The Role of Past Earnings Management

<u>Florian Eugster</u>, Stockholm School of Economics <u>Alexander F. Wagner</u>, University of Zurich, Swiss Finance Institute, Center for Economic and Policy Research, and European Corporate Governance Institute

https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=2960560

Relationship Trading in OTC Markets

Terrence Hendershott, University of California Dan Li, Federal Reserve Board Dmitry Livdan, University of California Norman Schürhoff, University of Lausanne, Swiss Finance Institute, and Center for Economic and Policy Research https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=3051859

N°29

Dynamic Mean-Variance Optimisation Problems with Deterministic Information

<u>Martin Schweizer</u>, ETH Zurich and Swiss Finance Institute <u>Danijel Zivoi</u>, ETH Zurich <u>Mario Sikic</u>, University of Zurich https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=3051199

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An Evolutionary Finance Model with a Risk-Free Asset

<u>Sergei Belkov</u>, University of Manchester <u>Igor V. Evstigneev</u>, University of Manchester <u>Thorsten Hens</u>, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3051037

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Can We Use Volatility to Diagnose Financial Bubbles? Lessons from 40 Historical Bubbles

<u>Didier Sornette</u>, ETH Zurich and Swiss Finance Institute <u>Peter Cauwels</u>, ETH Zurich <u>Georgi Smilyanov</u>, ETH Zurich https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=3006642

N°26

Evolutionary Finance Models with Short Selling and Endogenous Asset Supply

Sergei Belkov, University of Manchester Igor V. Evstigneev, University of Manchester Thorsten Hens, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute https://papers.srn.com/solʒ/papers.cfm?abstract_

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id=2886325

The Sovereign Money Initiative in Switzerland: An Assessment

<u>Philippe Bacchetta,</u> University of Lausanne, Swiss Finance Institute, and Center for Economic and Policy Research

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2994926

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A Sovereign Wealth Fund for Switzerland

<u>Richard Senner</u>, ETH Zurich <u>Didier Sornette</u>, ETH Zurich and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2991115

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Predicting Financial Market Crashes Using Ghost Singularities

Damian Smug, University of Exeter Peter Ashwin, University of Exeter Didier Sornette, ETH Zurich and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2990488

The 'New Normal' of the Swiss Balance of Payments in a Global Perspective: Central Bank Intervention, Global Imbalances and the Rise of Sovereign Wealth Funds

Richard Senner, ETH Zurich

<u>Didier Sornette</u>, ETH Zurich and Swiss Finance Institute

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2990512

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Uniform Integrability of a Single Jump Local Martingale with State-Dependent Characteristics

<u>Michael Schatz</u>, ETH Zurich <u>Didier Sornette</u>, ETH Zurich and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2987695

N°20

Margin Requirements and Evolutionary Asset Pricing

<u>Anastasiia Sokko,</u> University of Zurich and Swiss Finance Institute (PhD Program)

<u>Klaus Reiner Schenk-Hoppé</u>, University of Manchester and Norwegian School of Economics

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2982405

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High-Frequency Jump Analysis of the Bitcoin Market

<u>Olivier Scaillet,</u> University of Geneva and Swiss Finance Institute

Adrien Treccani, University of Zurich <u>Christopher Trevisan</u>, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute https://papers.srn.com/sol3/papers.cfm?abstract_ id=2982298

N°18

Anticipating Critical Transitions of Chinese Housing Markets

Zhang Qun, Guangdong University of Foreign Studies Didier Sornette, ETH Zurich and Swiss Finance Institute

Hao Zhang, Guangdong University of Foreign Studies https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=2969801

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Nash Equilibrium Strategies and Survival Portfolio Rules in Evolutionary Models of Asset Markets

Sergei Belkov, University of Manchester Igor V. Evstigneev, University of Manchester Thorsten Hens, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute Le Xu, University of Manchester https://papers.srn.com/solʒ/papers.cfm?abstract_ id=3018530

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Unspanned Stochastic Volatility in the Multi-Factor CIR Model

Damir Filipović, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute <u>Martin Larsson,</u> ETH Zurich <u>Francesco Statti,</u> École Polytechnique Fédérale de Lausanne

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2964751

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Gradual Portfolio Adjustment: Implications for Global Equity Portfolios and Returns

<u>Philippe Bacchetta,</u> University of Lausanne, Swiss Finance Institute, and Center for Economic and Policy Research

<u>Eric van Wincoop,</u> University of Virginia and National Bureau of Economic Research

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2968277

Democracy and Credit 'Democracy Doesn't Come Cheap' But at Least Credit to Its Corporations Will Be

<u>Manthos D. Delis,</u> Montpellier Business School <u>Iftekhar Hasan,</u> Fordham University, Gabelli School of Business, and Bank of Finland

<u>Steven Ongena</u>, University of Zurich, KU Leuven, Swiss Finance Institute, and Center for Economic and Policy Research

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2896818

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Straight Talkers and Vague Talkers: The Effects of Managerial Style in Earnings Conference Calls

<u>Michał Dzieliński,</u> Stockholm University <u>Alexander F. Wagner</u>, University of Zurich, Swiss Finance Institute, Center for Economic and Policy Research, and European Corporate Governance Institute

<u>Richard J. Zeckhauser</u>, Harvard University and National Bureau of Economic Research https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2965108

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The British Pound on Brexit Night: A Natural Experiment of Market Efficiency and Real-Time Predictability

<u>Ke Wu,</u> ETH Zurich <u>Spencer Wheatley,</u> ETH Zurich <u>Didier Sornette,</u> ETH Zurich and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2940173

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Closing Down the Shop: Optimal Health and Wealth Dynamics near the End of Life

<u>Julien Hugonnier,</u> École Polytechnique Fédérale de Lausanne and Swiss Finance Institute <u>Florian Pelgrin,</u> EDHEC Business School <u>Pascal St-Amour,</u> University of Lausanne and Swiss Finance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_

id=2938545

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Front-Running and Market Quality: An Evolutionary Perspective on High Frequency Trading

<u>Thorsten Hens</u>, University of Zurich, Norwegian School of Economics and Business Administration, and Swiss Finance Institute <u>Terje Lensberg</u>, Norwegian School of Economics <u>Klaus Reiner Schenk-Hoppé</u>, University of Manchester and Norwegian School of Economics https://papers.srn.com/sol3/papers.cfm?abstract_

id=2930844

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Market Discipline through Credit Ratings and Too-Big-to-Fail in Banking

<u>Sascha Kolaric</u>, Technische Universität Darmstadt <u>Florian Kiesel</u>, Technische Universität Darmstadt <u>Steven Ongena</u>, University of Zurich, KU Leuven, Swiss Finance Institute, and Center for Economic and Policy Research

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2928113

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Product Market Competition and Option Prices

<u>Erwan Morellec</u>, École Polytechnique Fédérale de Lausanne and Swiss Finance Institute <u>Alexei Zhdanov</u>, Pennsylvania State University https://papers.ssrn.com/solʒ/papers.cfm?abstract_ id=2919354

Company Stock Price Reactions to the 2016 Election Shock: Trump, Taxes and Trade

<u>Alexander F. Wagner,</u> University of Zurich, Swiss Finance Institute, Center for Economic and Policy Research, and European Corporate Governance Institute

<u>Richard J. Zeckhauser</u>, Harvard University and National Bureau of Economic Research <u>Alexandre Ziegler</u>, University of Zurich https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2909835

N°05

The Sustainability Footprint of Institutional Investors

<u>Rajna Gibson</u>, University of Geneva and Swiss Finance Institute <u>Philipp Krueger</u>, University of Geneva and Swiss Finance Institute https://papers.ssrn.com/solʒ/papers.cfm?abstract_

N°04

id=2918926

Re-Use of Collateral: Leverage, Volatility, and Welfare

<u>Johannes Brumm</u>, Karlsruhe Institute of Technology <u>Michael Grill</u>, European Central Bank <u>Felix Kubler</u>, University of Zurich and Swiss Finance Institute <u>Karl Schmedders</u>, University of Zurich https://papers.srn.com/solʒ/papers.cfm?abstract_ id=2912799

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Investing in Managerial Honesty

Rajna Gibson, University of Geneva and Swiss Finance Institute <u>Matthias Sohn</u>, Zeppelin University <u>Carmen Tanner</u>, University of Zurich <u>Alexander F. Wagner</u>, University of Zurich, Swiss Finance Institute, Center for Economic and Policy Research, and European Corporate Governance Institute https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2912795

N°02

Best Friend or Worst Enemy? -- Dynamics and Multiple Equilibria with Arbitrage, Production and Collateral Constraints

<u>Ally Quan Zhang,</u> University of Zurich and Swiss Finance Institute (PhD Program) https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2899866

N°01

The Consumption Response to Minimum Wages: Evidence from Chinese Households

Ernest Dautović, University of Lausanne and European Central Bank <u>Harald Hau</u>, University of Geneva, Swiss Finance Institute, Center for Economic and Policy Research, and CESifo <u>Yi Huang</u>, Graduate Institute of International and Development Studies

https://papers.ssrn.com/sol3/papers.cfm?abstract_ id=2896170

SFI Faculty Guide



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Hansjörg Albrecher is Professor of Actuarial Science at the University of Lausanne and has been an SFI Faculty Member since 2010. Professor Albrecher is a regular speaker at leading conferences on insurance. He has published extensively and also serves on the editorial boards of the top academic journals in his areas of research expertise.

Recent Research

In a recent study Professor Albrecher and his coauthor discuss the potential of randomizing reinsurance treaties for the efficient risk management of insurance companies. Although it may, at first, seem counterintuitive to introduce additional randomness to an already uncertain insurance issue, the researchers show that such randomness allows insurance companies to exploit diversification opportunities, drop premium levels, and also mitigate moral hazard problems that exist within traditional forms of reinsurance.

Publications 2017 and Forthcoming

Albrecher, H., Asadi, P., Köberl, J., & Prettenthaler, F. (2017). On flood risk pooling in Europe. *Natural Hazards*, 88(1), 1–20. https://doi.org/10.1007/ s11069-016-2616-2

Albrecher, H., Azcue, P., & Muler, N. (2017). Optimal dividend strategies for two collaborating insurance companies. *Advances in Applied Probability*, 49(2), 515–548. https://doi.org/10.1017/apr.2017.11

Albrecher, H., Beirlant, J., & Teugels, J. L. (2017). *Reinsurance: Actuarial and financial aspects. Chichester*, UK: John Wiley & Sons, Ltd.

Albrecher, H., Boxma, O., Essifi, R., & Kuijstermans, R. (2017). A queueing model with randomized depletion of inventory. *Probability in the Engineering and Informational Sciences*, 31(1), 43–59. https://doi.org/10.1017/S0269964816000322

Albrecher, H., & Cani, A. (in press). Risk theory with affine dividend payment strategies. In C. Elsholtz & P. Grabner (Eds.), *Number theory – Diophantine problems, uniform distribution and applications. Festschrift in Honour of Robert F. Tichy's 60th Birthday.* Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-55357-3

Albrecher, H., & Ivanovs, J. (in press). Linking dividends and capital injections – A probabilistic approach. *Scandinavian Actuarial Journal.* https://doi.org/10.1080/03461238.2017.1300605

Albrecher, H., & Ivanovs, J. (2017). On the joint distribution of tax payments and capital injections for a Lévy risk model. *Probability and Mathematical Statistics*, 37(2), 219–227. https://doi.org/10.19195/0208-4147.37.2.1

Albrecher, H., & Ivanovs, J. (2017). Strikingly simple identities relating exit problems for Lévy processes under continuous and Poisson observations. *Stochastic Processes and Their Applications*, 127(2), 643–656. https://doi.org/10.1016/j.spa.2016.06.021

Dalit, D. A., & Albrecher, H. (2017). On effects of asymmetric information on non-life insurance prices under competition. *International Journal of Data Analysis Techniques and Strategies*, 9(4), 287–299. https://doi.org/10.1504/IJDATS.2017.10009425



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Philippe Bacchetta is Professor of Economics at the University of Lausanne. He joined SFI in 2006 and has been an SFI Senior Chair since 2013. He holds a PhD in Economics from Harvard University. He has been a visiting scholar at the International Monetary Fund on several occasions and has provided consultancy services at numerous central banks around the world.

Recent Research

One of Professor Bacchetta's recent studies reviews the arguments regarding and discusses the potential impact of the Sovereign Money Initiative. If the proposal—on which the Swiss people will be called to vote in 2018—is approved, then only the Swiss National Bank (SNB) will be able to issue bank notes and scriptural money. Such a move would be similar to having a 100 percent reserve requirement imposed on commercial banks' sight deposits. It would shift all sight deposits away from commercial banks' balance sheets to the SNB's balance sheet, provide the SNB with full control over these deposits, and strip interest away from accounts, even in periods of high interest rates. The text of the proposal carries with it a high level of uncertainty. First, regarding the way it would be implemented. Second, regarding the way economic agents might react, as such a system has never before been implemented. Furthermore, there is little empirical evidence that supports the central arguments that the initiators put forward regarding the fact that money amplifies business cycles and that the reform could help us avoid financial crises.

Publications 2017

Bacchetta, Phillippe. (2017). Is Swiss public debt too small? In Schweizerische Nationalbank (Ed.), *Monetary economic issues today. Festschrift in honour of Ernst Baltensperger.* Orell Füssli. Retrieved from http://ofv.ch/sachbuch/detail/ monetary-economic-issues-today/103031/

Bacchetta, Philippe. (in press). The sovereign money initiative in Switzerland: an economic assessment. *Swiss Journal of Economics and Statistics.*

Bacchetta, Philippe, Perazzi, E., & van Wincoop, E. (in press). Self-fulfilling debt crises: What can monetary policy do? *Journal of International Economics*.



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Giovanni Barone-Adesi is Professor of Economics at the Università della Svizzera italiana. Professor Barone-Adesi held an SFI Senior Chair from 2006 to 2016. He is President of OpenCapital, an asset management firm based in Lugano, and a member of the Board of Credit Agricole Indosuez (Suisse). His recent research has focused on developing new tools for the management of market risk.

Recent Research

In recent research, Professor Barone-Adesi and his coauthors investigate the robustness of the financial resources that central counterparties (CCPs) operating in the European Union must allocate in order to be in compliance with the European Market Infrastructure Regulation (EMIR). EMIR, which came into force in 2013, requires a mandatory clearing of standardized over-the-counter derivative transactions through CCPs to limit systemic and counterparty risk, and to prevent the financial system from collapsing. The authors contribute to the ongoing debate regarding banking and financial regulation by estimating the potential losses CCPs would face in the case of multiple defaults. Their results reveal how extreme market conditions may adversely affect the value of the collateral that defaulting members have deposited with the CCP to meet their initial margin requirements.

Publications 2017

Barone-Adesi, G., Giannopoulos, K., & Vosper, L. (in press). Estimating the joint tail risk under the filtered historical simulation: An application to the CCP's default and waterfall fund. *The European Journal of Finance*.

https://doi.org/10.1080/1351847X.2017.1308876



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Stefano Battiston is SNF Professor at the Department of Banking and Finance of the University of Zurich. He holds a PhD in Physics from Eurobios and the Ecole Normale Supérieure and became an SFI Faculty Member in 2017. His work applies the complex networks approach to both the empirical analysis of large economic networks and the modelling of their dynamics. For several years his main interests have been financial contagion, default cascades, and propagation of financial distress, where he combines insights from the statistical mechanics of networks with the analysis of economic incentives.

Recent Research

One of Professor Battiston's recent coauthored research papers contributes to the growing literature on market procyclicality and systemic risk. To do so, the researchers model the systemic risk associated with the so-called balance-sheet amplification mechanism in a system of banks with interlocked balance sheets and with positions in real-economyrelated assets. Their modeling integrates price dynamics with active balance-sheet management aimed at maintaining the value at risk at a target level. Results show that a strong compliance with capital requirements, usually alleged to be procyclical, does not increase systemic risk unless the asset market is illiquid. Yet when the asset market is illiquid, even a weak compliance with capital requirements significantly increases systemic risk. Such findings bear implications for policy makers seeking to mitigate systemic risk by using macro-prudential tools.

Publications 2017

Bardoscia, M., Battiston, S., Caccioli, F., & Caldarelli, G. (2017). Pathways towards instability in financial networks. *Nature Communications*, 8, 14416. https://doi.org/10.1038/ncomms14416

Battiston, S., Caldarelli, G., Golub, A., Ivliev, S., Nikulin, M., & Olsen, R. (2017). Case study of Lykke exchange: Architecture and outlook. *The Journal of Risk Finance*, 19(1), 26–38. https://doi.org/10.1108/JRF-12-2016-0168

Battiston, S., Deghi, A., & Tasca, P. (2017). Portfolio diversification and systemic risk in interbank networks. *Journal of Economic Dynamics and Control*, 82, 96–124. https://doi.org/10.1016/j.jedc.2017.01.013 Battiston, S., D'Errico, M., Peltonen, T., & Scheicher, M. (in press). How does risk flow in the credit default swap market? *Journal of Financial Stability*. https://doi.org/10.1016/j.jfs.2017.05.007

Battiston, S., Janetos, A. C., Monasterolo, I., & Zheng, Z. (2017). Vulnerable yet relevant: the two dimensions of climate-related financial disclosure. *Climatic Change*, 145(3–4), 495–507. https://doi.org/10.1007/ s10584-017-2095-9

Battiston, S., Mandel, A., Monasterolo, I., Schütze, F., & Visentin, G. (2017). A climate stress-test of the financial system. *Nature Climate Change*, 7(4), 283–288. https://doi.org/10.1038/nclimate3255



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Tony Berrada is Professor of Finance at the University of Geneva and has been an SFI Faculty Member since 2006. Professor Berrada is a regular speaker at leading finance conferences and workshops worldwide. He teaches executive education courses on portfolio management.

Recent Research

In a recent paper, Professor Berrada and his coauthors contribute to the asset pricing literature by focusing on the general lack of ability that exists when one seeks to predict the dynamic features of asset prices. The researchers innovate by developing a model that includes unobservable growth regimes, beliefsdependent risk aversion, and macroeconomic information to predict future asset returns. Their model possesses attractive predictive properties and is able to produce a measure of equity volatility that tracks realized volatility and a countercyclical equity premium that spikes during recessions. Empirical results, based on data from 1957 to 2014, show that the macroeconomic metric the researchers develop provides a significant contribution to predicting future asset returns for all time horizons, which is not the case for the usual consumption– wealth and dividend yield metrics, which provide statistically significant results only after three and 11 quarters, respectively.

Publications 2017

Berrada, T., Detemple, J., & Rindisbacher, M. (in press). Asset pricing with beliefs-dependent risk aversion and learning. *Journal of Financial Economics*.

https://doi.org/10.1016/j.jfineco.2018.03.002



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Ines Chaieb is Associate Professor of Finance at the University of Geneva and has been an SFI Faculty Member since 2010. She obtained her PhD in Finance from McGill University. Professor Chaieb is a regular speaker at major academic conferences and workshops in finance worldwide.

Recent Research

In ongoing research on international asset pricing and market integration, Professor Chaieb and her coauthors contribute to the asset pricing literature by using individual stock level data, instead of aggregated measures such as portfolios or indices, to estimate worldwide and region- and country-specific factors. Results obtained using 58'674 stocks across 46 countries from 1985 to 2017 show that different factors, such as market, size, value, momentum, investment, and profitability, are at work. In developed markets, for example, the country market premia are smaller than world or regional market premia, suggesting that diversification benefits are limited. Results differ for emerging markets and reveal that the country factor risk premia are large relative to the world or regional factor risk premia and that investors can benefit from further investment decisions in such markets. Further estimations also reveal that factor risk premia change over time.



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Patrick Cheridito is Professor of Mathematics at ETH Zurich. He became an SFI Faculty Member in 2017. Since June 2016, he has been serving as Co-director of RiskLab Switzerland, an interdisciplinary center in the Department of Mathematics of ETH Zurich devoted to research and education in financial and actuarial mathematics. He is also a member of the steering committee of ETH Zurich's Master's program in Data Science and is involved in various industry collaborations.

Recent Research

In a recent paper, Professor Cheridito and his coauthor develop a framework for measuring, allocating, and managing financial systemic risk. Their measure of total systemic risk, SystRisk, incorporates the a priori cost to society related to the fact that governments often do not have a choice but to support failing financial institutions in order to protect the economy. Their approach views financial institutions as parts of the financial system and relates the financial industry to the real economy. As a consequence, a bank that behaves as part of a herd is allocated more systemic risk than a bank that acts more independently, and the costs of externalities grow disproportionally as they become large in comparison to a country's economy. The researchers provide recommendations regarding how regulation can be improved by setting systemic risk limits and imposing systemic risk charges and a cap and trade system for systemic risk.

Publications 2017

Bartl, D., Cheridito, P., Kupper, M., & Tangpi, L. (2017). Duality for increasing convex functionals with countably many marginal constraints. *Banach Journal of Mathematical Analysis*, 11(1), 72–89. https://doi.org/10.1215/17358787-3750133

Cheridito, P., Kupper, M., & Tangpi, L. (2017). Duality formulas for robust pricing and hedging in discrete time. *SIAM Journal on Financial Mathematics*, 8(1), 738–765. https://doi.org/10.1137/16M1064088

Cheridito, P., & Nam, K. (2017). BSE's, BSDE's and fixed-point problems. *The Annals of Probability, 45(6A),* 3795–3828. https://doi.org/10.1214/16-AOP1149



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Pierre Collin-Dufresne is Professor of Finance at the Ecole Polytechnique Fédérale de Lausanne and has been an SFI Senior Chair since 2011. Prior to his appointments in Switzerland, Professor Collin-Dufresne held a Chair in Business at the Graduate School of Business at Columbia University. He also worked in the Quantitative Strategy Group of Goldman Sachs Asset Management where he was in charge of fixed income and credit trading strategies. He currently sits on the academic advisory board of Lombard Odier Asset Management, provides expert advice for Cornerstone Research, is a consultant for the European Central Bank, and serves on the editorial boards of various academic journals.

Recent Research

One of the recent topics Professor Collin-Dufresne and his coauthors have been investigating is the market structure and transaction costs within the index credit default swap market. Since its inception, the index credit default swap market has operated as a two-tiered over-the-counter market with a dealer-to-client market and an interdealer market. with dealer-to-client trades bearing higher transaction costs and larger price impacts than interdealer trades. The Dodd–Frank Act had the potential to change this to an all-to-all trading environment. Data reveal that the persistent difference in transaction costs is entirely explained by the higher and largely permanent price impact of client trades. Further research reveals that clients who value immediacy could not get better execution by sending their orders to the interdealer market, suggesting that the two-tiered market structure will remain.

Publications 2017

Collin-Dufresne, P., Johannes, M., & Lochstoer, L. A. (2017). Asset pricing when "this time is different." *The Review of Financial Studies*, 30(2), 505–535. https://doi.org/10.1093/rfs/hhw084.



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Suzanne de Treville is Professor of Operations Management at the University of Lausanne and became an SFI Faculty Member in 2017. Professor de Treville obtained her doctorate from the Harvard Business School. She has played a pioneering role in the application of quantitative finance methods to the cash flows that flow through the supply chain. She created OpLab (Operations Laboratory at the University of Lausanne) to facilitate the implementation of these research insights and tools by managers and policy makers. She has recently been appointed as Editor in Chief for the *Journal of Operations Management*.

Recent Research

In a recent paper, Professor de Treville and her coauthors contribute to the debate relating to the future of industrial manufacturing in the developed world. On the one hand, there is a consensus regarding the fact that manufacturing strengthens the economy in which it is carried out by creating follow-on production. On the other hand, there is recognition regarding the fact that manufacturing must pay its own way, and that it is not up to governments and shareholders to support unprofitable activities. Over the past twenty years economists generally expected that as jobs were lost in the developed world, new jobs would be created based on the wealth generated by the savings arising from low-cost industrial sourcing. Recent data shows that trade shocks have negatively impacted workers in affected industries and highlights the fact that trade has not only benefits, but also significant costs. Both policy makers and economists should focus on developing effective tools for better managing and mitigating the costs related to international trade adjustments.



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François Degeorge is SFI Managing Director, an SFI Senior Chair, and Professor of Finance at the Università della Svizzera italiana. He is a former Dean of the Faculty of Economics at the Università della Svizzera italiana and a former President of the European Finance Association. He has taught at HEC Paris, where he also served as Associate Dean for Research. He has been a visiting professor at the Tuck School of Business, at Université Paris-Dauphine, and at the Saïd Business School. Professor Degeorge holds a PhD from Harvard University, where he was a Fulbright Scholar and an Arthur Sachs Scholar. He has received numerous teaching and research awards.

Recent Research

One of Professor Degeorge's most recent coauthored projects looks at how investor attention changes when firms adopt modern news dissemination technologies. To shed light on this topic, the researchers focus on the consequences of the adoption of an Englishlanguage electronic wire service by European firms to disseminate news on stock market behavior. Quantitative results suggest that firms that start disseminating news through English-language wire services experience smaller price stock drifts and larger abnormal trading volumes following earnings announcements. Overall, findings highlight the importance of the format of company news when seeking to capture investor attention.



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Theodosios Dimopoulos is Professor of Finance at the University of Lausanne and has been an SFI Faculty Member since 2011. He obtained his PhD in Finance from London Business School with a dissertation on managerial incentives in corporate decisions. Professor Dimopoulos has received several grants and awards during his studies in finance.

Recent Research

In a recent paper. Professor Dimopoulos and his coauthor study a model of sovereign borrowing in which governments exhibit myopic behavior in the form of instantaneous gratification. Governments' decisions regarding investment, consumption, and borrowing determine their wealth dynamics and the frequency at which default boundaries are reached. The researchers show that sufficiently myopic governments create self-inflicted crises in which wealth growth deteriorates the poorer the government becomes. Furthermore, they examine whether myopia leads to a hastening or to procrastination with regard to seeking International Monetary Fund support aimed at avoiding creditor loses and contagion effects. Finally, results show how the International Monetary Fund's optimal response, in terms of size and frequency of bailouts, should vary depending on governments' degree of myopia.

Publications 2017

Dimopoulos, T., & Sacchetto, S. (2017). Merger activity in industry equilibrium. *Journal of Financial Economics*, 126(1), 200–226. https://doi.org/10.1016/j.jfineco.2017.06.014



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Paul Embrechts is Professor of Mathematics at ETH Zurich. He joined SFI in 2007 and has held an SFI Senior Chair since 2009. Professor Embrechts' research has been published in top academic journals worldwide and featured in the international media. He is a regular speaker at leading international conferences on risk management aimed at both academics and industry professionals. He also serves on the editorial boards of several international journals and is a member of numerous international advisory panels. He holds four Honorary Degrees, awarded, respectively, by the University of Waterloo, Heriot-Watt University, the Université catholique de Louvain, and the University of London.

Recent Research

In a recent paper, Professor Embrechts and his coauthors address some of the underlying issues regarding operational risks for financial institutions by applying a non-homogeneous Poisson model and dynamic extreme value theory (EVT) while taking the frequency, severity, and risk measures for operational risk into account. Compared with a classical EVT approach, dynamic EVT offers better performance with respect to statistical fit and realism, and has good flexibility with respect to different empirical data sets. The researchers further include firm-specific variables associated with internal control weaknesses (ICWs) and empirically show that firms with higher incidences of selected ICWs have higher time-varying severities for operational risk. Their methodology provides risk managers and regulators with a tool that uncovers the non-obvious patterns hidden in operational risk data.

Publications 2017

Embrechts, P. (2017). A Darwinian view on internal models. *The Journal of Risk*, 20(1), 1–21. https://doi.org/10.21314/JOR.2017.394

Embrechts, P., & Kirchner, M. (2017). Hawkes graphs. *Theory of Probability & Its Applications*, 61(1), 163–193. https://doi.org/10.4213/tvp5093

Embrechts, P., Liu, H., & Wang, R. (in press). Quantile-based risk sharing. *Operations Research*. Retrieved from https://ssrn.com/abstract=2744142

Embrechts, P., Marelli, S., Sudret, B., & Torre, E. (in press). A general framework for uncertainty quantification under non-Gaussian input dependencies. *Probabilistic Engineering Mechanics*.



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Recent Research

One of Professor Fahlenbrach's latest coauthored papers shows that the common stock of US banks with loan growth in the top quartile of banks over a three-year period significantly underperforms the common stock of banks with loan growth in the bottom quartile over the next three years. High-growth banks also carry significantly higher crash risk and provision less for loan losses than other banks. After the expansion period, these same high-growth banks have a lower return on assets and increase their loan loss reserves. The evidence the researchers find is consistent with the fact that fast-growing banks, analysts, and investors fail to properly appreciate the extent to which fast loan growth results from making riskier loans and failing to charge for these risks correctly.

Publications 2017

Fahlenbrach, R., Low, A., & Stulz, R. M. (2017). Do independent director departures predict future bad events? *The Review of Financial Studies*, 30(7), 2313–2358. https://doi.org/10.1093/rfs/hhx009

Fahlenbrach, R., Prilmeier, R., & Stulz, R. M. (in press). Why does fast loan growth predict poor performance for banks? *The Review of Financial Studies*. https://doi.org/10.1093/rfs/hhx109

Fahlenbrach, R., & Schmidt, C. (2017). Do exogenous changes in passive institutional ownership affect corporate governance and firm value? *Journal of Financial Economics*, 124(2), 285–306. https://doi.org/10.1016/j.jfineco.2017.01.005



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Walter Farkas is Professor of Quantitative Finance at the University of Zurich and a team member of the SFI Knowledge Catalyst, an industry placement program for SFI academic partner institutions' Master's students. Professor Farkas is also an associated Faculty Member at the Department of Mathematics of ETH Zurich and is the program director of the Master of Science in Quantitative Finance, a degree jointly offered by ETH Zurich and the University of Zurich since 2003.

Recent Research

In a recent study, Professor Farkas and his coauthor contribute to the asset pricing literature by developing a methodology that analyzes the evolution of heterogeneity over time and studies its impact on asset prices. In their model, market participants differ with respect to impatience, risk aversion, beliefs about the growth rate of output, and to the rules for updating beliefs. This heterogeneity is described by a single measure and its dynamics by a random process. The main finding of their paper consists in obtaining a formulation for asset prices when preferences are homogeneous and risk aversion is given by a natural number.

Publications 2017

Farkas, W., Gourier, E., Huitema, R., & Necula, C. (2017). A two-factor cointegrated commodity price model with an application to spread option pricing. *Journal of Banking & Finance*, 77, 249–268. https://doi.org/10.1016/j.jbankfin.2017.01.007



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Damir Filipović holds the Swissquote Chair in Quantitative Finance at the Ecole Polytechnique Fédérale de Lausanne. He has held an SFI Senior Chair since 2010. Since 2011, Professor Filipović has been a member of the board of directors of Swiss Life Holding. He is the recipient of numerous research grants and is a regular speaker at leading quantitative finance conferences and workshops worldwide.

Recent Research

Professor Filipović and his coauthor look into the consequences of the fact that, over the last decade, dividends have become a standalone asset class instead of a mere side product of an equity investment. The researchers contribute to the asset pricing literature by developing a framework that jointly prices the term structures of dividends and interest rates, and the stock. In their model, prices for dividend futures, bonds, and the dividend paying stock are derived in closed form. In a calibration exercise they show that a parsimonious model specification has a good fit with Euribor interest rate swaps and swaptions, Euro Stoxx 50 index dividend futures and dividend futures options, and Euro Stoxx 50 index options.

Publications 2017

Cambou, M., & Filipović, D. (2017). Model uncertainty and scenario aggregation. *Mathematical Finance*, 27(2), 534–567. https://doi.org/10.1111/mafi.12097

Cambou, M., & Filipović, D. (in press). Replicating portfolio approach to capital calculation. *Finance and Stochastics.*

https://doi.org/10.1007/s00780-017-0347-1

Filipović, D., Larsson, M., & Trolle, A. B. (2017). Linear-rational term structure models. *The Journal of Finance*, 72(2), 655–704. https://doi.org/10.1111/jofi.12488



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Francesco Franzoni is Professor of Finance at the Università della Svizzera italiana. He joined SFI in 2007 and has held an SFI Senior Chair since 2012. Professor Franzoni obtained his PhD in Economics from the Massachusetts Institute of Technology. Professor Franzoni's research has been published in the top finance journals worldwide and has featured in the international press. He is a regular speaker at leading academic conferences in finance.

Recent Research

In recent research, Professor Franzoni and his coauthors assess whether brokers, who are in the privileged position of observing the daily trades of funds and to predict future trades, play a role in spreading order information. To do so, the researchers use trade-level data and focus on large portfolio liquidations, which result in temporary drops in stock prices, and are able identify the brokers that intermediate these trades. Data show that brokers' best clients tend to predate on the liquidating funds by first selling their holdings in the liquidated stocks at the beginning of the fire sale and then by covering their positions once asset prices start recovering. Such predatory trades generally cause the liquidation costs for the distressed fund to almost double. These results bear implications for academics, practitioners, and policy makers alike by indicating an important cost associated with slow execution and highlighting the fact that information leakage amplifies the costs associated with fire sales.

Publications 2017

Ben-David, I., Franzoni, F. A., & Moussawi, R. (in press). Do ETFs increase volatility? The Journal of Finance. Retrieved from https://ssrn.com/ abstract=1967599

Ben-David, I., Franzoni, F., & Moussawi, R. (in press). Exchange-traded funds (ETFs). Annual Review of Financial Economics. https://doi.org/10.1146/ annurev-financial-110716-032538 Franzoni, F., & Schmalz, M. C. (2017). Fund flows and market states. The Review of Financial Studies, 30(8), 2621–2673. https://doi.org/10.1093/rfs/hhx015



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Laurent Frésard is Professor of Finance at the Università della Svizzera italiana and has held an SFI Senior Chair since 2017. Before joining the faculty in Lugano, Professor Frésard was a member of the faculty at the University of Maryland and prior to that at HEC Paris. Professor Frésard's papers have been published in leading academic journals and he has received a number of grants and awards.

Recent Research

A recent paper by Professor Frésard and his coauthor provides empirical evidence to the ongoing debate regarding the distortion that excessive finance compensation may have on the economy as talented individuals move, away from high-social-return sectors, over to the financial sector to maximize their private return. Data covering 13 sectors in 24 countries over 35 years reveal a modest reallocation of skilled workers from non-finance sectors into finance sectors when the finance wage premium is high. Further analysis reveals that this reallocation is too small to hinder aggregate economic growth, research productivity, and innovation. Interestingly, this same reallocation has no significant impact on the riskiness, efficiency, or competitiveness of the banking sector either. These results contribute to the literature regarding the social value of the finance sector.



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Patrick Gagliardini is Professor of Econometrics at the Università della Svizzera italiana and is currently Dean of the Faculty of Economics. He held an SFI Junior Chair from 2008 to 2012. He obtained his PhD in Econometrics from the Università della Svizzera italiana. Professor Gagliardini's papers have been published in the top academic journals in finance, economics, and financial econometrics.

Recent Research

In ongoing research Professor Gagliardini and his coauthors tackle the question of determining whether industrial production is still the dominant factor for the US economy. To do so, the researchers propose a novel class of large scale approximate factor models that can handle mixed-frequency data. Such a framework allows data with different frequenciesboth high and low-to be included in the estimation of a common factor. Empirical results based on this mixed-frequency setting show that a single common factor explains 85 percent of industrial production output and 60 percent of total GDP output despite the diminishing role of manufacturing. A single low-frequency factor, unrelated to manufacturing but related to sectors such as professional and business services, construction, and government, drives GDP growth fluctuations.

Publications 2017

Gagliardini, P., Ghysels, E., & Rubin, M. (in press). Indirects inference estimation of mixed frequency stochatic volatility state space models using MIDAS regressions and ARCH models. *Journal of Financial Econometrics*. https://doi.org/10.1093/jjfinec/nbw013

Gagliardini, P., & Gourieroux, C. (in press). Identification by Laplace Transforms in nonlinear panel or time series models with unobserved stochastic dynamic effects. *Journal of Econometrics*. Gagliardini, P., & Gouriéroux, C. (2017). Double instrumental variable estimation of interaction models with big data. *Journal of Econometrics*, 201(2), 176–197. https://doi.org/10.1016/j.jeconom.2017.08.002

Gagliardini, P., & Scaillet, O. (2017). A specification test for nonparametric instrumental variable regression. *Annals of Economics and Statistics*, (128), 151–202. https://doi.org/10.15609/ annaeconstat2009.128.0151



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Rajna Gibson Brandon is Professor of Finance at the University of Geneva and Deputy Director of the Geneva Finance Research Institute. She joined SFI in 2006, acted as SFI Head of Research from 2007 to 2014, and has held an SFI Senior Chair since 2007. Professor Gibson Brandon is a member of the board of directors of Swiss Re.

Recent Research

In a recent study, Professor Gibson Brandon and her coauthors contribute to the corporate governance literature by determining the role of perceived managerial honesty in investment decisions. Experimental data reveals that 60 percent of the participants choose to invest with CEOs who do not engage in upward earnings management—a legally, yet ethically questionable, way for CEOs to skew corporate earnings upward to obtain a higher bonus—even if this implies lower financial returns. Results show that both "pro-self" and "pro-social" investors seek the same goal-managerial honesty—but for different reasons. The former assign greater credibility to announcements issued by CEOs perceived to be more committed to honesty, as such announcements are viewed as more reliable; the latter seem to favor perceived managerial honesty simply because they themselves value honesty, and are willing to accept lower returns in order to invest with a similarly minded CEO. The researchers' findings suggest that managerial integrity should be a key consideration when recruiting top management, as firms with CEOs perceived as being more honest may enjoy better access to funds and therefore a lower cost of capital.



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Manfred Gilli is Emeritus Professor at the University of Geneva and has been an SFI Faculty Member since 2006. Professor Gilli has published extensively and has contributed many chapters to books on computational finance. He is a regular speaker at leading finance conferences worldwide.

Recent Research

In one of his latest papers, Professor Gilli and his coauthor revisit the empirical performance of alternative risk and reward specifications in portfolio selection when taking into account the asymmetry of returns and treating losses and gains differently. Share-price data from German firms, covering the period from 2002 to 2017, confirms the low-risk effect, suggesting that different specifications work well and outperform the market index as long as they emphasize low return variability. Results also confirm that alternative risk measures, notably those that differentiate between risks and rewards, often work better than the minimum variance benchmark.

Publications 2017

Gilli, M., & Schumann, E. (2017). Heuristics for portfolio selection. In P. Brandimarte, G. Consigli, & D. Kuhn (Eds.), *Optimal financial decision making under uncertainty* (pp. 225–253). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-41613-7_10



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Amit Goyal is Professor of Finance at the University of Lausanne and has held an SFI Senior Chair since 2008. Professor Goyal's research has been published in the top finance journals worldwide and has featured in the international press. He is a regular speaker at leading academic conferences in finance.

Recent Research

In ongoing research, Professor Goyal and his coauthor compare the return predictability of cross-sectional (CS) and time-series (TS) investment strategies. CS strategies are, by construction, zero-net investment strategies, as investors are long in stocks that have returns greater than the cross-sectional average return, and short otherwise. TS strategies are based on each asset's own past performance and because generally more stocks earn positive returns than negative returns, TS strategies take bigger long positions than short positions. The researchers contribute to the asset pricing literature by accounting for this fundamental difference between CS and TS portfolios, and by adjusting CS portfolios to make them comparable to TS portfolios. Empirical results show that both adjusted CS and TS strategies perform similarly when one selects assets using individual stock data. Further estimates show that with international asset classes, such as equities, bonds, commodities, and currencies, CS strategies significantly outperform TS strategies, and that CS strategies exhibit a better ability to identify overvalued and undervalued bonds.

Publications 2017

Chordia, T., Goyal, A., Nozawa, Y., Subrahmanyam, A., & Tong, Q. (2017). Are capital market anomalies common to equity and corporate bond markets? An empirical investigation. *Journal of Financial and Quantitative Analysis*, 52(4), 1301–1342. https://doi.org/10.1017/S0022109017000515

Eisdorfer, A., Goyal, A., & Zhdanov, A. (in press). Distress anomaly and shareholder risk: International evidence. *Financial Management*. https://doi.org/10.1111/fima.12203

Goyal, A., & Jegadeesh, N. (in press). Cross-sectional and time-series tests of return predictability: What is the difference? *The Review of Financial Studies*. https://doi.org/10.1093/rfs/hhx131



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Michel Habib is Professor of Finance at the University of Zurich and has been an SFI Faculty Member since 2006. He held an SFI Senior Chair from 2007 to 2011. After graduating from the Wharton School of Business he taught at the London Business School.

Recent Research

In recent research, Professor Habib and his coauthor examine the determinants of the choice between principle and opportunism. They tackle the questions of knowing when a manager should be constrained to be principled and when a manager should be afforded the discretion to be opportunistic. In their analysis, the researchers examine the links between discretion, incentives, and capital. They show that discretion is associated with lower-powered incentives than is constraint and that opportunism may put shareholder capital at risk. Shareholders can lessen that risk by lowering the power of managerial incentives, thereby decreasing managers' incentives to spurn principle for opportunity. The researchers further show that the cost of capital plays a central role in favoring discretion over constraint and that the use of capital constitutes an externality. When the cost of capital is low, its externality is of relatively little importance, and managers are afforded the discretion to be opportunistic.

Publications 2017

Habib, M. A. (in press). Multifaceted transactions and organizational ownership. *The Review of Corporate Finance Studies*. https://doi.org/10.1093/rcfs/cfx019



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Harald Hau is Professor of Finance at the University of Geneva, where he has held an SFI Senior Chair since 2011 and is Director of the Geneva Finance Research Institute. He obtained his PhD in Economics from Princeton University. Professor Hau has several ongoing collaborations with the European Central Bank. His work has been published in top academic journals and has featured in the international press.

Recent Research

One of Professor Hau's latest coauthored studies focuses on discriminatory pricing in the overthe-counter (OTC) foreign exchange (FX) derivatives market. Recent empirical data reveals that transaction spreads across clients are highly heterogeneous and that less sophisticated clients trade at spreads up to 20 times higher than more sophisticated clients. Further calculations reveal that non-financial clients who use request-for-quote multi-dealer electronic trading platforms benefit from significantly more competitive offers. Finally, dealers benefit from opacity in the derivatives market by exploiting price movements to their advantage. Overall, forcing OTC FX deals to take place on an organized platform would help less sophisticated clients to better hedge their international business.

Publications 2017

Hau, H., & Lai, S. (2017). The role of equity funds in the financial crisis propagation. *Review of Finance*, 21(1), 77–108.



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Thorsten Hens is Professor of Financial Economics and a member of the Directorate of the Department of Banking and Finance at the University of Zurich. He has been an SFI Faculty Member since 2006. Professor Hens is the founder of the UZH spin-off firm Behavioral Finance Solutions, which assists financial firms in developing and implementing investor profiling methods, making use of behavioral finance principles.

Recent Research

In his ongoing research on evolutionary finance models, Professor Hens and his coauthors disrupt the existing portfolio theories by building a portfolio theory model in the form of a dynamic stochastic game in which portfolio strategies compete for market capital. Their model allows for both rational and irrational behavior, and provides conditions for market efficiency. The model offers a plausible alternative to the capital asset pricing model and improves the back-testing of portfolio strategies by adding an impact test and a reflexivity test.

Publications 2017

Gerber, A., & Hens, T. (2017). Modelling alpha in a CAPM with heterogenous beliefs. *Journal of Finance and Economics*, 5(2), 1–21. https://doi.org/10.12735/jfe.v5n2p01

Hens, T., Lensberg, T., & Schenk-Hoppé, K. R. (in press). Front-running and market quality: An evolutionary perspective on high frequency trading. *International Review of Finance*. https://doi.org/10.1111/irfi.12159

Hens, T., & Mayer, J. (in press). Decision Theory matters for financial advice. *Computational Economics*. https://doi.org/10.1007/s10614-017-9668-6

Hens, T., & Mayer, J. (2017). Cumulative prospect theory and mean–variance analysis: a rigorous comparison. *Journal of Computational Finance*, 21(3), 47–73. https://doi.org/10.21314/JCF.2017.336

Hens, T., Rieger, M. O., & Wang, M. (2017). The impact of culture on loss aversion: Loss aversion. *Journal of Behavioral Decision Making*, 30(2), 270–281. https://doi.org/10.1002/bdm.1941

Hens, T., & Sethe, R. (2017). Die Bestimmung der Angemessenheit und der Geeignetheit von Finanzdienstleistungen und Finanzinstrumenten. In R. H. Weber, W. A. Stoffel, J.-L. Chenaux, & R. Sethe (Eds.), Aktuelle Herausforderungen des Gesellschafts- und Finanzmarktrechts: Festschrift für Hans Caspar von der Crone zum 60. Geburtstag (pp. 589–618). Zürich: Schulthess.



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Martin Hoesli is Professor of Real Estate Investments and Finance at the University of Geneva and has been an SFI Faculty Member since 2006. Professor Hoesli is the author of numerous books and papers on real estate investments and serves on the editorial boards of several leading international real estate journals. He is a past president of the International Real Estate Society and of the European Real Estate Society. He is a Fellow of the Royal Institution of Chartered Surveyors and of the Weimer School of Advanced Studies in Real Estate and Land Economics.

Recent Research

In one of his recently published papers, Professor Hoesli and his coauthors seek to identify which methods are the most effective in identifying house price bubbles from both an ex ante and an ex post perspective. To do so they survey data covering six cities in three countries over a 30-year period. Three distinct families of methods are used to identify bubbles: ratios (price-rent, price-income, and imputed-actual rent), multivariate and univariate regression analyses estimating real house prices, and exponential growth rate models. Among the tested methods, data show that the simple price-rent ratio method dominates all other methods and is capable of predicting bubble and non-bubble periods accurately in 84 percent of all ex ante cases and 89 percent of all ex post ones. Such a result bears important policy implications, as a reliable signal that a bubble is forming can be easily used.

Publications 2017

Bourassa, S. C., Engblom, J., Hoesli, M., & Oikarinen, E. (in press). U.S. metropolitan house price dynamics. *Journal of Urban Economics*. https://doi.org/10.1016/j.jue.2018.03.001

Bourassa, S. C., & Hoesli, M. (2017). High-frequency house price indexes with scarce data. *Journal of Real Estate Literature*, 25(1), 207–220. https://doi.org/10.5555/0927-7544.25.1.207

Bourassa, S. C., Hoesli, M., & Oikarinen, E. (in press). Measuring house price bubbles. *Real Estate Economics*. https://doi.org/10.1111/1540-6229.12154

Falkenbach, H., & Hoesli, M. (2017). Real estate investing: Opportunities and challenges. *BMI* (*Bankers, Markets & Investors*, 148, 3–16.

Hoesli, M., Kadilli, A., & Reka, K. (2017). Commonality in liquidity and real estate securities. *The Journal of Real Estate Finance and Economics*, 55(1), 65–105. https://doi.org/10.1007/s11146-016-9554-3

Hoesli, M., Milcheva, S., & Moss, A. (in press). Is financial regulation good or bad for real estate companies? – An event study. *The Journal of Real Estate Finance and Economics*. https://doi.org/10.1007/s11146-017-9634-z



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Recent Research

In recent work, Professor Hugonnier and his coauthors contribute to the literature on

over-the-counter financial markets by developing a search and bargaining model of an asset market in which investors value assets in an arbitrary and heterogeneous manner. The model yields a complete closed-form characterization of the unique equilibrium both in and out of the steady state. Relying on this characterization, the researchers show that, consistent with prominent examples of over-the-counter markets, their model exhibits a core-periphery structure and features non-trivial intermediation chains whose dynamics can be determined in closed form. In particular, they show that the joint distribution of the characteristics of an intermediation implied by the model makes it possible to replicate many of the empirical regularities found in micro-level data coming from over-thecounter markets such as the corporate bond market, the asset-backed securities.

Publications 2017

Hugonnier, J., & Morellec, E. (2017). Bank capital, liquid reserves, and insolvency risk. *Journal of Financial Economics*, 125(2), 266–285. https://doi.org/10.1016/j.jfineco.2017.05.006



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Recent Research

In one of his latest papers, Professor Jondeau and his coauthors tackle the question of which actuarial table—periodic or generational—should be used to update the amount of financial reserves that life insurance institutions should set aside to guarantee future payments. This question is of paramount importance in view of the increase in life expectancy that occurred over recent decades and the current interest rate environment. Using Swiss actuarial tables, the researchers demonstrate that generational tables, in contrast to periodic tables, are more sensitive to the choice of the mortality forecasting model and provide more volatile estimates of the value of financial reserves. The reason behind this finding narrows down to the fact that the valuation of the financial reserve based on generational reserves relies on death rates forecasted into the far future, whilst periodic tables forecast mortality on a much shorter timescale. The choice of which actuarial table should be used needs to be made based on the institution's objectives.

Publications 2017

Jondeau, E., Jurczenko, E., & Rockinger, M. (in press). Moment component analysis: An illustration with international stock markets. *Journal of Business & Economic Statistics.* https://doi.org/10.1080/07350015.2016.1216851

Jondeau, E., & Khalilzadeh, A. (2017). Collateralization, leverage, and stressed expected loss. *Journal of Financial Stability*, 33, 226–243. https://doi.org/10.1016/j.jfs.2017.01.005



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Pablo Koch-Medina is Professor of Finance and Insurance at the University of Zurich. He became an SFI Faculty Member in 2017. He holds a PhD in Mathematics from the University of Zurich. He was responsible for the launching of the Center for Finance and Insurance (CFI) at the University of Zurich in 2013. The CFI aims to advance research and foster education in the application of finance theory and mathematical finance to insurance related topics, building a bridge between the areas of finance and insurance. Professor Koch worked for more than 20 years in the finance and insurance industry, most recently as a managing director responsible for the oversight of capital and liquidity risk, risk reporting, and risk governance at Swiss Re.

Recent Research

In recent research, Professor Koch-Medina and his coauthor study the existence and uniqueness of equilibria in the capital asset pricing model in a setting with incomplete markets in which a part of the endowments are non-tradeable. Although existence results have been established in the case of tradeable endowments, there was a gap in the case of non-tradeable endowments. It is shown that, in equilibrium, agents are willing to assume the aggregate hedgeable risk of the market but will no longer hold fractions of the market portfolio. The researchers' paper studies the effects of non-traded endowments on equilibrium asset prices and allocations and establishes a linear pricing formula, a security market line, and conditions for the positivity of asset prices.

Publications 2017

Koch-Medina, P., Munari, C., & Šikić, M. (2017). Diversification, protection of liability holders and regulatory arbitrage. *Mathematics and Financial Economics*, 11(1), 63–83. https://doi.org/10.1007/s11579-016-0171-y

Koch-Medina, P., & Wenzelburger, J. (in press). Equilibria in the CAPM with non-tradeable endowments. *Journal of Mathematical Economics*. https://doi.org/10.1016/j.jmateco.2017.12.004



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Recent Research

One of Professor Krüger's latest coauthored papers sheds light on the environmental and sustainability preferences of institutional investors. The researchers propose a novel measure to quantify the portfoliolevel sustainability of institutional investors and show that portfolios of institutions with longer investment horizons exhibit higher sustainability footprints. They further document that high sustainability footprint investors display higher risk-adjusted performance and show that this result is primarily driven by the reduction in total portfolio risk. Finally, by taking advantage of the unexpected occurrences of natural disasters they are able to prove the causal direction of sustainability footprints on institutional investors' risk-adjusted performance.



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Recent Research

In a recent paper, Professor Kübler and his coauthors assess the quantitative implications of the reuse of collateral on financial market leverage, volatility, and welfare in an asset-pricing model with heterogeneous agents and an infinite-horizon. In the developed model, agents have the opportunity to reuse collateral to back more transactions; such reuse contributes to the buildup of leverage and increases volatility in financial markets. When limits on reuse are introduced, results show that volatility decreases as such limits become tighter. The impact of such limits on welfare is non-trivial to determine. On the one hand, reuse can improve welfare as it enables agents to share risk more effectively. On the other hand, reuse beyond intermediate levels can lead to excessive leverage and lower welfare. In terms of policy recommendations, this paper provides a rationale for limiting, yet not banning, reuse in financial markets.

Publications 2017

Brumm, J., Kryczka, D., & Kübler, F. (2017). Recursive equilibria in dynamic economies with stochastic production. *Econometrica*, 85(5), 1467–1499. https:// doi.org/10.3982/ECTA13047

Brumm, J., Kübler, F., & Scheidegger, S. (2017). Computing equilibria in dynamic stochastic macro-models with heterogeneous agents. In B. Honoré, A. Pakes, M. Piazzesi, & L. Samuelson (Eds.), Advances in Economics and Econometrics. *Eleventh World Congress* (Vol. 2, pp. 185–230). Cambridge: Cambridge University Press.

Kübler, F., & Polemarchakis, H. (2017). The identification of beliefs from asset demand. *Econometrica*, 85(4), 1219–1238. https://doi.org/10.3982/ECTA13880

Kübler, F., Selden, L., & Wei, X. (2017). What are asset demand tests of expected utility really testing? *The Economic Journal*, 127(601), 784–808. https://doi.org/10.1111/ecoj.12481



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Henri Loubergé is Emeritus Professor at the University of Geneva. He has been an SFI Faculty Member since October 2006. For many years, Professor Loubergé was also the head of the University of Geneva's PhD program in Economics and of its Master's program.

Recent Research

In recent research, Professor Loubergé and his coauthors provide a generalization of non-monetary measures of risk by introducing the nth order utility premium as a measure of pain from facing the passage from one risk to a more severe one. They investigate more particularly welfare changes of merging increases in risk, first ignoring background risks and then taking them into account. Merging increases in risk may be beneficial, or not, depending on whether and how background risks are considered. Finally, the authors provide conditions on individual preferences for superadditivity of the nth order utility premium.

Publications 2017

Courbage, C., Loubergé, H., & Peter, R. (2017). Optimal prevention for multiple risks. *Journal of Risk and Insurance*, 84(3), 899–922. https://doi.org/10.1111/jori.12105



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Recent Research

In recent research, Professor Malamud and his coauthor develop a general equilibrium model of decentralized international financial markets. In their model, financial intermediaries bargain with their customers and extract endogenous rents for providing access to foreign claims. The behavior of intermediaries, by tilting state prices, generates a non-linear risk structure in exchange rates. The researchers use this risk structure to explicitly derive a link between monetary and stabilization policies and safe haven properties of exchange rates, the global monetary spillover matrix, and deviations from covered interest rate parity, and show how all these effects depend on international intermediation capacities.

Publications 2017

Malamud, S., & Rostek, M. (2017). Decentralized exchange. *American Economic Review*, 107(11), 3320–3362. https://doi.org/10.1257/aer.20140759

Malamud, S., & Vilkov, G. (in press). Non-myopic betas. *Journal of Financial Economics*. Retrieved from https://ssrn.com/abstract=2694573



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Recent Research

In recent research, Professor Mancini and his coauthors model the investment and cash holdings decisions of a firm facing financing frictions and subject to both permanent and transitory cash flow shocks. The researchers show that while cash holdings increase and investments decrease with the volatilities of either type of shocks, a higher correlation between these shocks makes the firm hold less cash and invest more. Their empirical analysis, carried out using a sample of publicly traded US firms from 1975 to 2014, demonstrates that corporate policies are better understood when they recognize the separate effects of permanent and transitory shocks on cash flow risk.



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Antonio Mele is Professor of Finance at the Università della Svizzera italiana and has held an SFI Senior Chair since 2011. Before moving to Switzerland, he held a professorship at the London School of Economics. Professor Mele is the co-inventor of the CBOE Interest Rate Swap Volatility Index and the CBOE Treasury Volatility Index, the first standardized volatility measures in the interest rate swap and treasury markets. He is a regular speaker at leading finance conferences worldwide.

Recent Research

Professor Mele's recent coauthored research studies asset markets in which uncertainty about fundamentals can be mitigated when acquiring costly information. Acquiring private information helps reduce the value of parameter uncertainty. The authors show that because of ambiguity aversion the value of parameter uncertainty increases as markets become informationally more efficient and can diminish the usual free-riding benefits arising from others' information choices. The combination of these effects can lead, even after small changes in uncertainty, to strategic complementarities in information acquisition and induce large price swings.



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Recent Research

In recent work, Professor Morellec and his coauthors focus on the design of optimal compensation contracts and the trade-off between incentivizing managers over the short and the long term. Their research shows that this trade-off naturally leads to asymmetric benchmarking in executive compensation in that managers should be rewarded for good performance but not penalized for bad performance. It also shows how an optimal compensation contract should incentivize managers to focus more on shortor long-term objectives depending on a firm's financial health, future growth prospects, or cash flow risk.

Publications 2017

Décamps, J.-P., Gryglewicz, S., Morellec, E., & Villeneuve, S. (2017). Corporate policies with permanent and transitory shocks. *The Review of Financial Studies*, 30(1), 162–210. https://doi.org/10.1093/rfs/hhw078

Favara, G., Morellec, E., Schroth, E., & Valta, P. (2017). Debt enforcement, investment, and risk taking across countries. *Journal of Financial Economics*, 123(1), 22–41. https://doi.org/10.1016/j.jfineco.2016.09.002

Hugonnier, J., & Morellec, E. (2017). Bank capital, liquid reserves, and insolvency risk. *Journal of Financial Economics*, 125(2), 266–285. https://doi.org/10.1016/j.jfineco.2017.05.006



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Cosimo-Andrea Munari is Assistant Professor of Finance and Insurance at the University of Zurich. He became an SFI Faculty Member in 2017. He holds a PhD in Mathematics from ETH Zurich. He undertook his graduate studies in Mathematics at the University of Milan and in Finance at Collegio Carlo Alberto. In 2016 he was awarded the Walter Saxer Insurance Prize and in 2017 he received the ACRI Research Prize.

Recent Research

In ongoing research, Professor Munari and his coauthors take a closer look at risk-sensitive solvency regimes for banks and insurance companies. The objective of such regimes should be aligned with the fundamental objectives of regulation: protecting liability holders and securing the stability of the financial system. The researchers show that the first objective leads to considering capital adequacy tests that depend only on the default profile of capital positions. The second objective leads to studying tests that behave well with changes of the accounting currency. The researchers contribute to the literature by providing a complete characterization of the above tests that highlights an inherent tension between surplus and currency invariance and the desire to give credit for diversification. In particular, they show that tests based on expected shortfall fail to be either surplus or currency invariant.

Publications 2017

Koch-Medina, P., Munari, C., & Šikić, M. (2017). Diversification, protection of liability holders and regulatory arbitrage. *Mathematics and Financial Economics*, 11(1), 63–83. https://doi.org/10.1007/s11579-016-0171-y



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Recent Research

In recent research, Professor Neklyudov and his coauthor focus on the core–periphery network structure of the over-the-counter market. The current network structure shows that 10 to 30 central dealers trade frequently and with many dealers, while hundreds of peripheral dealers trade sparsely and with few dealers. The researchers contribute to the literature by building a search-based model of network formation and by showing that the observed core–periphery network arises from specialization, as dealers specialize in different clients with different liquidity needs. Further results show that the dealers specializing in clients who trade frequently form the core, while the dealers specializing in buy-and-hold investors form the periphery.

Publications 2016 and Forthcoming

Hollifield, B., Neklyudov, A., & Spatt, C. (2017). Bid-ask spreads, trading networks, and the pricing of securitizations. *The Review of Financial Studies*, 30(9), 3048–3085. https://doi.org/10.1093/rfs/hhx027



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Boris Nikolov has been SFI Assistant Professor of Finance at the University of Lausanne since 2014. Professor Nikolov graduated from the University of Lausanne with a PhD in Finance. He is a regular speaker at major conferences and his research has been published in leading finance journals.

Recent Research

In ongoing research, Professor Nikolov and his coauthors develop a quantitative framework that allows measurement of the extent of firms' financing constrains and also identification of the quantitatively most prevalent sources of these constraints. To do so, the authors build, solve, and structurally estimate a range of dynamic models of corporate investment and financing. Specifically, they consider tax and default-based models—that is to say, trade-off models, dynamic limited commitment models, as well as dynamic moral hazard models. All the models share a common technology structure, but differ in the friction generating financial constraints. The authors determine which features of the observed data allow one to distinguish among the models, and assess which model performs best at rationalizing observed corporate investment and financing policies across various samples. The results favor trade-off models for larger public firms, limited commitment models for smaller public firms, and moral hazard models for private firms. Finally, the results point to significant financing constraints due to agency frictions.

Publications 2017

Morellec, E., Nikolov, B., & Schürhoff, N. (in press). Agency conflicts around the world. The Review of Financial Studies. https://doi.org/10.1093/rfs/hhy018

Nikolov, B., Schmid, L., & Steri, R. (in press). Dynamic corporate liquidity. *Journal of Financial Economics*. Retrieved from http://www.ssrn.com/ abstract=2232538



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Eric Nowak is Professor of Finance at the Università della Svizzera italiana and has been an SFI Faculty Member since 2006. Throughout his career, Professor Nowak has held visiting appointments at leading universities worldwide, including Stanford University, the University of Chicago, and the National University of Singapore. He is also the founder and director of the Master of Science in FinTech at the Università della Svizzera italiana, the first MSc program in Fintech targeting Computer Science students in Europe.

Recent Research

In a recent paper, Professor Nowak and his coauthor look at the introduction of SME equity segments and bond segments in Europe and find that it increases the equity financing of SMEs by more than 5 percent and the bond financing by 10 percent. Their results suggest that equity and bond markets are not substitutes but complementary forms of financing for SMEs. The researchers suggest that bank debt is likely to remain an important financing source for SMEs, but to a lower extent than previously as higher collateral requirements make bank financing particularly uninteresting for young and asset-light enterprises, and further argue that there is a lot of potential for SME equity and bond market segments as complementary financing innovations.

Publications 2017

Croci, E., Ehrhardt, O., & Nowak, E. (2017). The corporate governance endgame – minority squeeze-out regulation and post-deal litigation in Germany. *Managerial Finance*, 43(1), 95–123. https://doi.org/10.1108/MF-01-2016-0032

Eisele, A., & Nowak, E. (in press). Market innovations for (non-bank) financing of SMEs in light of crisis and new regulation – A policy perspective. In C. Mayer, S. Micosi, M. Onado, M. Pagano, & A. Polo (Eds.), *Finance and investment: The European case*. Oxford University Press.



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Kjell Nyborg is Professor of Finance at the University of Zurich and has held an SFI Senior Chair since 2009. He graduated from Stanford University with a PhD in Finance. Professor Nyborg has published extensively in his areas of expertise and has spent research periods at the European Central Bank, the Deutsche Bundesbank, the Bank of Norway, and Stanford University. He has been on the executive committee of the European Finance Association since 2013 and served as its president in 2017.

Recent Research

In a recent study, Professor Nyborg and his coauthor focus on the valuation of investments that have a fixed debt plan. Such a situation, where the amount of debt is not expected to fluctuate with the future value of the investment, arises in leveraged buyouts, project finance, and other highly leveraged transactions where the future amortization of the debt has been agreed upon at the time of the investment. The authors' focus is especially on the flows-to-equity method. They contribute by showing, on the one hand, that the standard formulas used to calculate the equity discount rate and equity valuations are incorrect when debt levels evolve according to a predetermined schedule and, on the other hand, by deriving a formula for the equity discount rate that yields correct equity values. Simulations show that the error from using the wrong formulas can be large, especially in today's low interest rate environment.

Publications 2017

Cooper, I. A., & Nyborg, K. G. (2017). Consistent valuation of project finance and LBOs using the flows-to-equity method. *European Financial Management*, 24(1), 34–52. https://doi.org/10.1111/eufm.12136

Nyborg, K. G. (2017). Central bank collateral frameworks. *Journal of Banking & Finance*, 76, 198–214. https://doi.org/10.1016/j.jbankfin.2016.12.010

Nyborg, K. G. (2017). *Collateral frameworks: The open secret of central banks*. Cambridge: Cambridge University Press. Retrieved from https://doi. org/10.1017/9781316659250

Nyborg, K. G. (2017). Reprint of: Central bank collateral frameworks. *Journal of Banking & Finance*, 83, 232–248. https://doi.org/10.1016/j. jbankfin.2017.07.016



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Recent Research

A recent paper by Professor Ongena and his coauthors studies the impact of the 2011 European Banking Authority capital exercise—which unexpectedly required certain banks to increase their regulatory capital ratios—on banks' balance sheets and the real economy. Based on this capital exercise, the researchers forecast that the Basel III agreement, due to be implemented in 2019, may induce banks to reduce the amount of assets they finance by lowering their credit exposure to certain businesses, but that they will likely not increase their amount of regulatory capital. In terms of policy recommendations, the researchers predict that requiring banks to increase their amount of regulatory capital, instead of their regulatory capital ratio, may be a more effective policy that would both strengthen the banking sector and avoid penalizing business activities.

Publications 2016 and Forthcoming

Braggion, F., Dwarkasing, M., & Ongena, S. (in press). Household wealth inequality, entrepreneurs' financial constraints, and the great recession: Evidence from the Kauffman Firm Survey. *Small Business Economics*. https://doi.org/10.1007/s11187-017-9906-2

Braggion, F., & Ongena, S. (in press). Banking sector deregulation, bank–firm relationships and corporate leverage. *The Economic Journal.* https://doi.org/10.1111/ecoj.12569 Delis, M. D., Kokas, S., & Ongena, S. (2017). Bank market power and firm performance. *Review of Finance*, 21(1), 299–326. https://doi.org/10.1093/rof/rfw004

Ebrahim, M. S., Molyneux, P., & Ongena, S. (2017). Finance and development in Muslim economies. *Journal of Financial Services Research*, 51(2), 165–167. https://doi.org/10.1007/s10693-017-0273-6

Fuertes, A.-M., Izzeldin, M., Ongena, S., & Pappas, V. (2017). A survival analysis of Islamic and conventional banks. *Journal of Financial Services Research*, 51(2), 221–256. https://doi.org/10.1007/s10693-016-0239-0

Jiménez, G., Ongena, S., Peydró, J.-L., & Saurina, J. (2017). "In the short run blasé, in the long run risqué". On the effects of monetary policy on bank credit risk-taking in the short versus long run. *Schmalenbach Business Review*, 18(3), 181–226.

Jiménez, G., Ongena, S., Peydró, J.-L., & Saurina, J. (2017). Macroprudential policy, countercyclical bank capital buffers, and credit supply: Evidence from the Spanish dynamic provisioning experiments. *Journal of Political Economy*, 125(6), 2126–2177. https://doi.org/10.1086/694289

Ongena, S., & (Ania) Zalewska, A. (in press). Institutional and individual investors: Saving for old age. *Journal of Banking & Finance*. https://doi.org/10.1016/j.jbankfin.2017.10.012

Ongena, S., & Tittoto, D. (2017). Shadow banking and competition: Decomposing market power by activity. In J. A. Bikker & L. Spierdijk (Eds.), *Handbook of competition in banking and finance* (pp. 264–304). Edward Elgar Publishing. Retrieved from https://doi.org/10.4337/9781785363306.00021

Ongena, S., & Yu, Y. (2017). Firm industry affiliation and multiple bank relationships. *Journal of Financial Services Research*, 51(1), 1–17. https://doi.org/10.1007/s10693-015-0237-7



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Recent Research

One of Professor Östberg's latest coauthored research projects focuses on the recent European sovereign debt crisis. Using high-frequency data, the authors document that episodes of market turmoil in the European sovereign bond market are usually associated with large decreases in trading volume. The response, in trading volume, to market stress is related to transaction costs. Low transaction cost turmoil episodes are associated with volume increases, when investors rebalance their portfolios, while high transaction cost turmoil periods are associated with abnormally low volume, during which the market freezes. Results show that investors tended to rebalance their portfolios in the pre-crisis period, while during the crisis reductions in the risk-bearing capacity of financial intermediaries resulted in increased transaction costs and market freezes. Overall, the results suggest that the recent sovereign debt crisis was not associated with large-scale investor rebalancing.



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Marc Paolella is Professor of Empirical Finance at the University of Zurich and has been an SFI Faculty Member since 2006. Professor Paolella is the author of several books on graduate level probability, statistics, and time series analysis. His research papers have been published in the top academic journals in his areas of expertise.

Recent Research

Professor Paolella recently revisited the properties of the univariate collapsing method (UCM) for portfolio optimization. Such a method is based on obtaining the predictive mean and risk measure, such as variance or expected shortfall, of the return series generated from a given set of portfolio weights and a multivariate set of assets. The UCM is straightforward to implement and possesses several advantages over existing multivariate models, but has rightfully been criticized for being too slow to estimate. Professor Paolella contributes to the portfolio literature by proposing a way to accelerate and optimize estimation methods by combining new heuristics, based on easily determined data characteristics. An extensive empirical analysis, conducted with 15 years of data on the Dow Jones Industrial Average, confirms the viability of his suggested method.

Publications 2017

Butler, R. W., & Paolella, M. S. (2017). Autoregressive lag-order selection using conditional saddlepoint approximations. *Econometrics*, 5(3), 43. https://doi.org/10.3390/econometrics5030043

Gambacciani, M., & Paolella, M. S. (2017). Robust normal mixtures for financial portfolio allocation. *Econometrics and Statistics*, 3, 91–111. https://doi.org/10.1016/j.ecosta.2017.02.003

Paolella, M. S. (2017). Asymmetric stable Paretian distribution testing. *Econometrics and Statistics*, 1, 19–39. https://doi.org/10.1016/j.ecosta.2016.05.002

Paolella, M. S. (2017). The univariate collapsing method for portfolio optimization. *Econometrics*, 5(2), 18. https://doi.org/10.3390/econometrics5020018



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Diane Pierret is Assistant Professor at the Department of Finance, HEC, at the University of Lausanne. She became an SFI Faculty Member in 2017. Professor Pierret's research in the field of empirical banking has led her to investigate questions related to banks' responses to regulatory stress-testing practices, the consequences of unconventional central bank interventions, sovereign-bank linkages, bank profitability and monetary policy, and the interaction between solvency and liquidity regulations. Since the financial crisis, she has gained unique expertise in bank business models, regulation, and central bank interventions in Europe and the US.

Recent Research

In ongoing research, Professor Pierret contributes to the burgeoning literature around the upcoming Basel III regulations by examining short-term balance sheet and solvency risk measures. Using US data on bank holding companies over 2000-13, she finds that the solvency-liquidity nexus should be accounted for when designing liquidity and capital regulations where the macroprudential regulation of funding liquidity risk would be a combination of liquid assets requirements and capital requirements. In terms of policy recommendations, her results suggest that maintaining the capitalization of the banking sector reduces systemic risk not only by addressing the solvency risk problems of banks in a crisis but also by attenuating the solvency–liquidity nexus that makes banks particularly vulnerable to an aggregate crisis. Further estimates reveal that higher capital requirements for systemically important institutions act as a loss-absorbing buffer when banks' asset values deteriorate, and ensure-even during a crisis—the confidence of creditors to continue to provide funding to the banks.



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Recent Research

In a recent paper, Professor Plazzi and his coauthors develop an asset pricing model that accounts for the likelihood and extent of bailouts undertaken by governments. Empirical results, based on data covering nearly 10'000 financial firms from 31 countries, show that equity is a cheap source of capital for very large banks, that banks' cost of equity adjusts in anticipation of a financial crisis, and that equity is a cheaper source of funding for large banks when bailouts seem more likely and more valuable. These findings contribute to the ongoing debate about forcing banks to carry more equity capital as a buffer against large adverse shocks to the financial system. The researchers do not find evidence that leverageconstrained investors inflate the share prices of large bank stocks, but instead find evidence that equity has always been a cheap source of funding for the largest banks in any country.



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Jean-Charles Rochet is Professor of Finance at the University of Geneva. He has held an SFI Senior Chair since 2010. Before joining the faculty in Geneva, Professor Rochet held a Chair at the Toulouse School of Economics and at the University of Zurich. Professor Rochet is the author of *Why Are There so Many Banking Crises?*, a book that sheds light on the causes of recent and past banking crises.

Recent Research

Professor Rochet and a coauthor have recently developed a model in which "activist NGOs" decide to oppose potentially harmful projects that have been approved by public regulators. NGOs may decide to oppose such harmful projects on the basis of their own information, and impact both the efficiency of public regulation and the economic performance of the industry. The researchers' results show that public regulation becomes vulnerable to industry lobbying as economic stakes rise and NGOs become active. Further analysis reveals that activists' mobilization consumes economic resources and that activists may mistakenly oppose socially beneficial projects due to both their bias regarding the choices society should make and the imperfect information they hold. However, when an NGO is sufficiently efficient and sufficiently well informed, it has the potential to improve social welfare.

Publications 2017

Coculescu, D., & Rochet, J.-C. (in press). Shareholder risk measures. *Mathematical Finance*. https://doi.org/10.1111/mafi.12142

Gersbach, H., & Rochet, J.-C. (2017). Capital regulation and credit fluctuations. *Journal of Monetary Economics*, 90, 113–124. https://doi.org/10.1016/j.jmoneco.2017.05.008

Klimenko, N., Pfeil, S., & Rochet, J.-C. (2017). A simple macroeconomic model with extreme financial frictions. *Journal of Mathematical Economics*, 68, 92–102. https://doi.org/10.1016/j.jmateco.2016.04.002

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Rochet, J.-C. (2017). Countercyclical capital buffers: A regulatory challenge. In R. H. Weber, W. A. Stoffel, J.-L. Chenaux, & R. Sethe (Eds.), *Aktuelle Herausforderungen des Gesellschafts- und Finanzmarktrechts: Festschrift für Hans Caspar von der Crone zum 60. Geburtstag* (pp. 379–390). Zürich: Schulthess.



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Michael Rockinger is Professor of Finance at the University of Lausanne and has been an SFI Faculty Member since 2006. Professor Rockinger has published extensively on computational finance and financial econometrics and is an active member of the Center for Risk Management, Lausanne—a group that focuses on diffusing independent and transparent decision-making tools for banks, insurance companies, and industrial firms. Professor Rockinger also acts as a research fellow of the Society for Financial Econometrics and is a regular speaker at leading conferences in his areas of expertise.

Recent Research

In one of his latest papers, Professor Rockinger and his coauthor put themselves in the shoes of an institutional investor who wishes to implement a long-term portfolio strategy based on forecasts of financial returns. To better select the underlying assets, the authors compare the performance of two competing macro-finance models: an unrestricted vector auto-regression (VAR) model and a fully structural dynamic stochastic general equilibrium (DSGE) model. Using data spanning the period 1955 to 2014, the researchers find that the optimal portfolio should be long in stocks and short in bonds for investors using either a VAR or DSGE model. Further analysis reveals that, on the one hand, the DSGE model generates sufficient mean reversion for both bond and stock returns, such that the term structure of risks decreases for both asset classes, and that, on the other hand, the VAR model is not able to produce such long-term mean reversion for stocks. Ultimately, the DSGE model provides more accurate and timely forecasts of financial returns and clearly outperforms the VAR model for long-term allocation. Finally, the Sharpe ratios obtained using the DSGE model are up to twice as large as those obtained using the VAR model.

Publications 2017

Jondeau, E., Jurczenko, E., & Rockinger, M. (in press). Moment component analysis: An illustration with international stock markets. *Journal of Business & Economic Statistics.* https://doi.org/10.1080/07350015.2016.1216851



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Recent Research

In recent research, Professor Scaillet and his coauthors revisit the predictive properties of tail measure for market returns by employing a robust resampling test of predictive ability. The researchers' motivation lies in the fact that most approaches to testing predictability hypotheses are based on a small fraction of influential observations in the data, which may easily inflate inference when using bootstrap and subsampling tests. Empirical results, covering US stocks from 1926 to 2014, reveal influential observations in concomitance and immediately after the Black Monday of 1987, and two clusters of infrequent influential data in the subperiods of 1998–2000 and 2008–2010, which correspond to well-known periods of financial market turbulence and distress.

Publications 2017

Camponovo, L., Scaillet, O., & Trojani, F. (2017). Comment on: "Nonparametric Tail Risk, Stock Returns, and the Macroeconomy." *Journal of Financial Econometrics*, 15(3), 377–387. https://doi.org/10.1093/jjfinec/nbx004

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https://doi.org/10.15609/annaeconstat2009.128.0151



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Recent Research

In recent research, Professor Schneider raises the question of knowing whether it pays to be an optimist in a trading environment. To do so he develops a framework using quoted bid–ask spreads in the liquid S&P 500 options market to investigate the behavior of traders of different character types. First, data reveal that pessimistic type traders generally go short, whilst optimistic type traders go long and pragmatic type traders often change their minds. Second, the pessimistic and pragmatic types tend to sell variance swaps, whereas optimistic types tend to buy them. Third, belief dispersion predicts both actual trading volume and open interest.

Publications 2017

Schneider, P., & Trojani, F. (in press). (Almost) model-free recovery. *The Journal of Finance*. Retrieved from https://ssrn.com/abstract=2641896



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Recent Research

In ongoing research, Professor Schürhoff and his coauthors focus on agency conflicts and their effects on wealth transfers among stakeholders and value losses from policy distortions. Empirical analysis covering 74'855 observations for 12'652 firms and 14 countries between 1997 and 2011 reveals that conflicts of interest vary significantly across and within countries and lead to a 5 percent reduction in firm value, with about equal shares coming from net transfers between stakeholders and net losses due to financial distortions. Agency costs mainly arise from control benefits and the financial frictions that they cause. The researchers offer several pieces of advice regarding policy recommendations for shareholders. First, improving corporate governance to diminish the private benefits of control seems to have a greater effect than simply strengthening credit rights. Second, legal origin and provisions for creditor and minority shareholder protection all have an effect on the severity of agency conflicts. Finally, incentive misalignments may explain a considerable share of the internationally observed heterogeneity in terms of financial leverage.

Publications 2017

Morellec, E., Nikolov, B., & Schürhoff, N. (in press). Agency conflicts around the world. *The Review of Financial Studies*. https://doi.org/10.1093/rfs/hhy018



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Martin Schweizer is Professor of Mathematics at ETH Zurich. Professor Schweizer has published extensively in the top academic journals in his areas of expertise. He is a regular speaker at leading conferences worldwide.

Recent Research

In recent work, Professor Schweizer and his coauthors solve the problems of mean-variance hedging and mean-variance portfolio selection in a restricted information setting where strategies must be deterministic functions. The underlying price process in their model follows a time dependent affine transformation of a square-integrable martingale. This class of processes includes in particular arithmetic and exponential Lévy models with suitable integrability. The researchers provide explicit solutions to the mean-variance hedging and mean-variance portfolio selection problems in this setting and show for the Lévy case how they can be expressed in terms of the Lévy triplet.

Publications 2017

Herdegen Martin, & Schweizer Martin. (in press). Semi-efficient valuations and put-call parity. *Mathematical Finance*. https://doi.org/10.1111/mafi.12162



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Recent Research

In recent research, Professor Soner and his coauthors put themselves in the shoes of a large investor facing price impacts when trading large quantities of assets. They contribute to the existing literature by focusing on linear price impact in a setting that allows for arbitrary preferences, as well as for general Markovian dynamics of market prices and impact parameters. From this general setting, the researchers are able to obtain explicit formulas for the optimal policy and welfare, asymptotically for small price impacts, and highlight deep connections to other market frictions.

Publications 2017

Altarovici, A., Reppen, M., & Soner, H. M. (2017). Optimal consumption and investment with fixed and proportional transaction costs. *SIAM Journal on Control and Optimization*, 55(3), 1673–1710. https://doi.org/10.1137/15M1053633

Bank, P., Soner, H. M., & Voß, M. (2017). Hedging with temporary price impact. *Mathematics and Financial Economics*, 11(2), 215–239. https://doi.org/10.1007/s11579-016-0178-4

Moreau, L., Muhle-Karbe, J., & Soner, H. M. (2017). Trading with small price impact. *Mathematical Finance*, 27(2), 350–400. https://doi.org/10.1111/mafi.12098

Muhle-Karbe, J., Reppen, M., & Soner, H. M. (2017). A Primer on portfolio choice with small transaction costs. *Annual Review of Financial Economics*, 9(1), 301–331. https://doi.org/10.1146/ annurev-financial-110716-032445



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Didier Sornette holds the Chair of Entrepreneurial Risks at ETH Zurich and has been an SFI Faculty Member since 2007. Professor Sornette is the founding director of the Financial Crisis Observatory, a scientific platform aimed at studying financial market inefficiencies. His writings have been published in numerous academic journals as well as by the international media.

Recent Research

In a recent paper, Professor Sornette and his coauthors analyze the relationship between offering and transaction prices in the Swiss residential real estate market from 2005 to 2015. Data reveal that offering prices are informative of the general trend in the real estate market and provide a valuable alternative when monitoring the market when actual transactions are scarce. One must nonetheless use caution as the relationship between offering and transaction prices may be highly market phase dependent: when the market is booming and auction-like dynamics are in place, offering prices might understate the extent of price increases; whilst offering prices may understate the size of the correction when the market enters a bust phase, as offering prices are stickier than actual transaction prices and adjust more gradually. Offering prices seem to be a practical substitute for transaction prices, though restraint should be used regarding an excessive reliance on offering prices when determining policy responses.

Publications 2017

Ardila, D., Cauwels, P., Sanadgol, D., & Sornette, D. (2017). Identification and critical time forecasting of real estate bubbles in the USA. *Quantitative Finance*, 17(4), 613–631. https://doi.org/10.1080/14697688.2016.1207796

Becke, S. von der, & Sornette, D. (2017). Should banks be banned from creating money? An analysis from the perspective of hierarchical money. *Journal of Economic Issues*, 51(4), 1019–1032. https://doi.org/10.1080/00213624.2017.1391586 Cauwels, P., Ryckebusch, J., Schoors, K., Sornette, D., & Vandermarliere, B. (2017). Discrete hierarchy of sizes and performances in the exchange-traded fund universe. *Physica A: Statistical Mechanics and Its Applications*, 469, 111–123. https://doi.org/10.1016/j.physa.2016.11.084

Cauwels, P., Smilyanov, G., & Sornette, D. (in press). Can we use volatility to diagnose financial bubbles? lessons from 40 historical bubbles. *Quantitative Finance and Economics.* https://doi.org/10.3934/QFE.2018.1.1

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Demos, G., Filimonov, V., & Sornette, D. (2017). Modified profile likelihood inference and interval forecast of the burst of financial bubbles. *Quantitative Finance*, 17(8), 1167–1186. https://doi.org/10.1080/14697688.2016.1276298

Demos, G., & Sornette, D. (2017). Birth or burst of financial bubbles: Which one is easier to diagnose? Quantitative Finance, 17(5), 657–675. https://doi.org/ 10.1080/14697688.2016.1231417

Hisano, R., Mizuno, T., Ohnishi, T., Sornette, D., & Watanabe, T. (2017). The gradual evolution of buyer–seller networks and their role in aggregate fluctuations. *Applied Network Science*, 2(1), 9–24. https://doi.org/10.1007/s41109-017-0030-7

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Lera, S. C., & Sornette, D. (2017). Quantification of the evolution of firm size distributions due to mergers and acquisitions. *PLOS ONE*, 12(8), e0183627. https://doi.org/10.1371/journal.pone.0183627

Lera, S. C., & Sornette, D. (in press). Gross domestic product growth rates as confined L\'evy flights: Towards a unifying theory of economic growth rate fluctuations. *Physical Review E.* https://doi.org/10.1103/PhysRevE.97.012150 Lin, L., & Sornette, D. (in press). "Speculative Influence Network" during financial bubbles: Application to Chinese stock markets. *Journal of Economic Interaction and Coordination*. https://doi.org/10.1007/s11403-016-0187-7

Meng, H., Sornette, D., Xu, H.-C., & Zhou, W.-X. (2017). Symmetric thermal optimal path and time-dependent lead-lag relationship: novel statistical tests and application to UK and US real-estate and monetary policies. *Quantitative Finance*, 17(6), 959–977. https://doi.org/10.1080/14697688.2016.1241424

Sandro, C. L., & Sornette, D. (2017). Evidence of a bimodal US GDP growth rate distribution: A wavelet approach. *Quantitative Finance and Economics. Special Issue: Financial Business Cycle §*, 1(1), 26–43. https://doi.org/10.3934/QFE.2017.1.26 Sornette, D., Sousa, A. M. Y. R. de, Takayasu, H., & Takayasu, M. (2017). Power-law distributions from sigma-pi structure of sums of random multiplicative processes. *Entropy. Special Issue Statistical Mechanics of Complex and Disordered Systems*, 19(8), 417–430. https://doi.org/10.3390/e19080417

Sornette, D., & von der Becke, S. (in press). An asset-based framework of credit creation (applied to the global financial crisis). *Accounting, Economics, and Law: A Convivium.* https://doi.org/10.1515/ael-2015-0002

Xu, H.-C., Zhou, W.-X., & Sornette, D. (2017). Time-dependent lead-lag relationship between the onshore and offshore Renminbi exchange rates. *Journal of International Financial Markets, Institutions and Money*, 49, 173–183. https://doi.org/10.1016/j.intfin.2017.05.001



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Pascal St-Amour is Professor of Economics at the University of Lausanne and has been an SFI Faculty Member since 2006. He holds a PhD in Economics from Queen's University. Professor St-Amour's papers have been published in the leading academic journals in economics.

Recent Research

Recent research by Professor St-Amour and his coauthors focuses on the differences in the valuation of human life between the human capital (HC) and the value of statistical life (VSL) approaches. The HC life value approach equals the present value of net cash flows, where dividend is proxied by labor market income, whilst the VSL approach relies on one's willingness to pay to avert small increases in exposure to death risks. The researchers contribute to the literature by providing an alternative unified model that links both the HC and VSL approaches named gunpoint value of life (GPV)—and that measures one's willingness to pay to avoid certain and instantaneous death. Results show that the GPV approach estimates of the valuation of human life are similar to those obtained with the HC approach and considerably lower than those obtained with the VSL approach. In terms of policy recommendations, the HC and GPV are the approaches best suited when life values are required, such as is the case in wrongful death litigation or in taking curative versus palliative care decisions.



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Roberto Steri is Assistant Professor at the Department of Finance, HEC, at the University of Lausanne. He became an SFI Faculty Member in 2017. Professor Steri's research lies at the interface between corporate finance and asset pricing. Some of his latest research revisits the relationship between equity returns and financial leverage and carries implications for real-world industry practices. His research attempts to improve the understanding of the implications of corporate decisions for investment and security prices.

Recent Research

In recent research, Professor Steri and his coauthor investigate the risk-taking incentives of stressed banks—those banks that are subject to annual regulatory stress tests in the US since 2011. They document that stringent capital requirements give both stressed and non-stressed banks motives to invest in risky assets, whose expected returns offset banks' increased cost of funding, which originates from the use of costly equity capital. Regulatory monitoring through stress tests effectively encourages prudent investment from stressed banks, but also provides them with steeper risk-taking incentives through tighter capital requirements. The researchers' results contribute to the ongoing regulation debate by highlighting the importance of the regulatory monitoring of banks portfolios in parallel to setting more stringent capital requirements.

Publications 2017

Nikolov, B., Schmid, L., & Steri, R. (in press). Dynamic corporate liquidity. *Journal of Financial Economics*. Retrieved from http://www.ssrn.com/abstract=2232538



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Josef Teichmann is Professor of Mathematics at ETH Zurich and has been an SFI Faculty Member since 2009. Professor Teichmann is a regular speaker at international conferences on finance and mathematics. He has published extensively in his areas of research expertise.

Recent Research

In recent work Professor Teichmann and his coauthors develop an asset pricing model for continuous time large financial markets with two filtrations, which extends existing models yet preserves the simplicity of the discrete time setting. Their model does not assume that price processes are semi-martingales, or that price processes have any path properties, or the admissibility of portfolio wealth processes. The applications of their model range from modeling trading with delayed information to trading on different time grids and dealing with inaccurate price information.

Publications 2017

Döring, L., Horvath, B., & Teichmann, J. (2017). Functional analytic (ir-)regularity properties of sabr-type processes. *International Journal of Theoretical and Applied Finance*, 20(3), 1750013. https://doi.org/10.1142/S0219024917500133

Richter, A., & Teichmann, J. (2017). Discrete time term structure theory and consistent recalibration models. SIAM Journal on Financial Mathematics, 8(1), 504–531. https://doi.org/10.1137/15M1007434



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Recent Research

In ongoing research, Professor Trojani and his coauthors develop a model-free approach characterizing international discount factors with respect to existing exchange rate puzzles and the deviations from the market view of exchange rates. The researchers consider various economies where domestic and foreign investors have access to short- and long-term bonds and stocks. In order to characterize international discount factors without committing to a particular model, they use 40 years of data on a cross-section of countries and estimate different projections on the tradable returns available to domestic and foreign investors. They find that discount factors with large long-run components help to reconcile the well-known exchange rate puzzles. However, the discount factors implied by integrated markets entail implausibly high Sharpe ratios and almost perfectly co-moving international state prices. In contrast, segmented markets generate more plausible risk-returns trade-offs and less similar international discount factors. Finally, in quest of relating observable economic variables to international discount factors, they document strong links between the latter and proxies of financial intermediaries' risk-bearing capacity.

Publications 2016 and Forthcoming

Camponovo, L., Scaillet, O., & Trojani, F. (2017). Comment on: "Nonparametric Tail Risk, Stock Returns, and the Macroeconomy." *Journal of Financial Econometrics*, 15(3), 377–387. https://doi.org/10.1093/jjfinec/nbx004

Schneider, P., & Trojani, F. (in press). (Almost) model-free recovery. *The Journal of Finance*. Retrieved from https://ssrn.com/abstract=2641896



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Alexander Wagner is an Associate Professor of Finance at the University of Zurich. He joined SFI in 2006 and has held an SFI Junior Chair since 2012. He obtained his PhD in Political Economy from Harvard University. His research has been published in leading academic journals and professional reviews. Professor Wagner is Chairman of the Swipra Foundation and an independent counsel for PwC. He is a regular speaker at conferences and panel debates both in Switzerland and abroad.

Recent Research

In recent coauthored research, Professor Wagner focuses on the effects of managerial style. Using data covering thousands of quarterly earnings conference calls for publicly listed US companies from 2003 to 2015, the researchers show that word choice by CEOs and CFOs affects information processing. Vague talkers, who use uncertain words more often than straight talkers, cloud the message and induce investors to respond less to both negative and positive earnings surprises. Interestingly, vagueness in answers drives this result more than vagueness in presentations. Further analysis shows that firms with vaguer managers are more likely to exceed than undershoot expectations, suggesting that vague communication appears to help steer the market from making overly optimistic predictions for future earnings. When hiring top managers, corporate boards should be aware that their decision will include the consequential choice of a particular communication style.

Publications 2016

Halla, M., Wagner, A. F., & Zweimüller, J. (2017). Immigration and voting for the far right. Journal of the European Economic Association, 15(6), 1341–1385. https://doi.org/10.1093/jeea/jvx003

Wagner, A. F., & Weber, R. H. (2017). Corporate Governance auf der Blockchain [Corporate governance on the blockchain]. Schweizerische Zeitschrift Für Wirtschafts- Und Finanzmarktrecht / Swiss Review of Business and Financial Market Law (SZW), 89, 59–70. Wagner, A. F., Zeckhauser, R. J., & Ziegler, A. (in press). Company stock price reactions to the 2016 election shock: Trump, taxes and trade. Journal of Financial Economics. Retrieved from https://ssrn. com/abstract=2909835



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Recent Research

In one of his recent papers, Professor Wagner and coauthor focus on the profitability of the German motor insurance market, the pricing of the services it provides, and the impact of the recent growth in direct insurance offerings. Using extensive data covering the 2002-14 period, the researchers are able to provide a detailed overview regarding premiums, claim costs, and operating expenses, and provide investors with a better understanding of the motor insurance market. Results show that companies with the legal status of a mutual have lower premiums, claim costs, and operating expenses than listed companies. Furthermore, direct insurance companies are characterized by lower premiums and expenses than traditional companies selling products via agents or brokers. This result can be related to the fact that direct companies are mostly used by younger people, who bear higher claim risks but drive cheaper cars and have overall smaller claims. Finally, multiproduct offering companies seem unable to benefit from their size to increase efficiency and lower operating expenses.

Publications 2016

Maichel-Guggemoos, L., & Wagner, J. (in press). Profitability and growth in motor insurance business: Empirical evidence from Germany. *The Geneva Papers on Risk and Insurance - Issues and Practice.* https://doi.org/10.1057/s41288-017-0053-4

Mau, S., Pletikosa Cvijikj, I., & Wagner, J. (in press). Forecasting the next likely purchase events of insurance customers: A case study on the value of data-rich multichannel environments. *International Journal of Bank Marketing*.

Müller, K., Schmeiser, H., & Wagner, J. (in press). Insurance claims fraud: Optimal auditing strategies in insurance companies. *Variance*.

Müller, P., & Wagner, J. (2017). The impact of pension funding mechanisms on the stability and payoff from Swiss DC pension schemes: A sensitivity analysis. *The Geneva Papers on Risk and Insurance - Issues and Practice*, 42(3), 423–452. https://doi.org/10.1057/s41288-017-0048-1

Staudt, Y., & Wagner, J. (in press). What customer, policy and distribution characteristics drive the development of insurance customer relationships? – A case study analysis. International Journal of Bank Marketing.

SFI Adjunct Professors



Prof. **Teodoro D. Cocca** SFI Adjunct Professor (since 2010)

Teodoro D. Cocca is full Professor for Wealth and Asset Management at the Johannes Kepler University of Linz in Austria and has been an SFI Adjunct Professor since 2010. Previously he worked for Citibank in investment and private banking and was a research fellow at the Stern School of Business in New York and a senior researcher at the Swiss Banking Institute in Zurich.

Professor Cocca frequently addresses academics and investment professionals and is a consultant to a number of financial institutions on issues relating to strategic bank management. He has published numerous articles in academic journals and is a member of the board of directors at VP Bank AG (Liechtenstein) and Geneva Group International (Switzerland).



Prof. Christopher Culp SFI Adjunct Professor (since 2015)

Christopher Culp is a research fellow at the Johns Hopkins Institute for Applied Economics, has been a Swiss Finance Institute Adjunct Professor since 2015, and is an Adjunct Professor in the Institut für Finanzmanagement at the University of Bern. From 1998 to 2013 he was an Adjunct Professor of Finance at The University of Chicago's Booth School of Business, from which he also received his PhD in Finance. His research specializations include (re-)insurance, risk management, derivatives, and structured finance, and he has written four books, co-edited two books (one with Merton Miller and the other with William Niskanen), and authored numerous articles on these topics. As a Senior Advisor with Compass Lexecon (Chicago) and Managing Director of Financial Economics Consulting, Inc. (Chicago), he also regularly provides advisory consulting services and testimonial expertise in these same subject areas.



Prof. **Rudolf Gruenig** SFI Adjunct Professor (since 2010)



In addition to his academic career, Professor Grünig is a board member and strategy consultant in several Swiss companies. He has written numerous books and articles on strategic management, planning, and decision-making (including Rudolf Grünig and Richard Kühn, *Solving Complex Decision Problems*, 4th edition, Berlin Heidelberg, 2017; Rudolf Grünig and Richard Kühn, *The Strategy Planning Process*, 2nd edition, Berlin Heidelberg, 2018; and Rudolf Grünig and Dirk Morschett, *Developing International Strategies*, 2nd edition, Berlin Heidelberg, 2017.)



Prof. **Erwin W. Heri** SFI Adjunct Professor (since 2010)

Erwin W. Heri is Professor of Financial Theory at the University of Basel and has been an SFI Adjunct Professor since 2010. He has held various posts as an executive board member of renowned international financial service providers, including as Chief Financial Officer at Winterthur Insurance Group and CFO and Chief Investment Officer at Credit Suisse Financial Services. For approximately 10 years he was chairman of the board of a Swiss private banking group listed on the Swiss stock exchange (Valartis Group). For many years he was also the chairman of the Investment Committee of Publica, the pension fund of State Government employees in Switzerland. Professor Heri also holds mandates on several advisory boards and boards of directors and is the author of numerous books and articles on financial and investment matters.



Prof. **Roger M. Kunz** SFI Adjunct Professor (since 2010)

Roger M. Kunz is Professor at the University of Basel and an Adjunct Professor of Swiss Finance Institute. He is also an independent consultant in the areas of asset management, investment strategy, and finance.

He holds a PhD from the University of Basel and was a visiting researcher at Georgetown University in Washington (DC). He worked for several years at Credit Suisse, in roles including Head of Financial Market Research, Head of Investment Strategy, and member of the Investment Committee of the private bank Clariden Leu. Following that he was responsible for investment research in asset management at the SBB (Swiss Federal Railways) pension fund. He has published numerous articles and given speeches in the fields of corporate finance, financial markets, investments, and taxes.



Prof. François-Serge Lhabitant SFI Adjunct Professor (since 2010)

François-Serge Lhabitant is the Chief Executive Officer and the Chief Investment Officer of Kedge Capital, where he manages more than USD 5 billion of capital invested in hedge funds. Professor Lhabitant was previously a member of senior management at Union Bancaire Privée (Geneva) and a Director at UBS Global Asset Management, in charge of quantitative modeling and risk management. On the academic side, he is a Professor of Finance at the EDHEC Business School (France) and a Visiting Professor of Finance at the Hong Kong University of Science and Technology (Hong Kong). He has been a Swiss Finance Institute Adjunct Professor since 2010, and was formerly a Professor of Finance at the HEC University of Lausanne (Switzerland). Professor Lhabitant received a PhD in Finance, an MSc in Banking and Finance, and a BSc in Economics from the University of Lausanne, as well as a computer engineering degree from a Swiss Federal Institute of Technology. He also holds an LLM in Tax Law from the University of Geneva.



Prof. Alfred Mettler SFI Adjunct Professor (since 2010)





Prof. **Conrad Meyer** SFI Adjunct Professor (since 2010)

Conrad Meyer is Professor in Business Administration at the universities of Zurich and Lucerne and has been an SFI Adjunct Professor since 2010. His specialized areas in research and teaching are management accounting and selected problems of banking business management, including management accounting, controlling, and asset and liability management.

Professor Meyer serves on the boards of directors of several private companies. He is a member of national and international scientific societies, and the author of numerous publications and contributions to specialist journals. He plays an important role in teaching and as a consultant to both banking and industrial enterprises.



Prof. Donato Scognamiglio

SFI Adjunct Professor, IAZI AG – CIFI SA Informations- und Ausbildungszentrum für Immobilien

Donato Scognamiglio is CEO and co-owner of the company Informations- und Ausbildungszentrum für Immobilien AG (IAZI AG), Zurich. He is Honorary Professor for Real Estate at the University of Bern, from which he received his PhD, at the William E. Simon Graduate School in Rochester (NY), and at ETH Zurich. He is an expert in the field of real estate and finance and in parallel to his activities at SFI lectures on quantitative methods and financial analysis at the Swiss Training Centre for Investment Professionals (AZEK). Professor Scognamiglio has been elected by the Swiss Federal Council to the board of the Pfandbriefbank schweizerischer Hypothekarinstitute AG. He coauthored Land Leverage and House Prices (Bourassa, Steven C.; Hoesli, Martin; Scognamiglio, Donato Flavio; and Zhang, Sumei; November 17, 2010, Swiss Finance Institute Research Paper No. 10–48) and various articles published in important national newspapers. Professor Scognamiglio is currently undertaking ongoing research into hedonic valuation models and real estate indices, together with other, national and international, academics.



Prof. **Urs Wälchli** SFI Adjunct Professor (since 2016)

Urs Wälchli was an Assistant Professor of Finance at the University of Bern from 2008 until 2014. Since then, he has been the Associate Academic Director of Rochester–Bern Executive Programs and a visiting professor of Finance at the University of Rochester (NY) and Purdue University (IN). He earned his PhD at the University of Bern and is an expert on corporate lifecycles, corporate governance, mergers and acquisitions, valuation, and empirical corporate finance. He provides advisory services on issues such as succession transactions in SMEs and direct investments in entrepreneurial firms.

He has authored several papers, including "Firm Rigidities and the Decline in Growth Opportunities" (with C. Loderer and R. Stulz, *Management Science, forthcoming*) and "Corporate Aging and Takeover Risk" (with C. Loderer, *Review of Finance* 19, 2277–2315). His most important applied contributions are *Handbuch der Bewertung Band* 1: Projekte (5., vollständig überarbeitete Auflage. Verlag Neue Zürcher Zeitung. Mit C. Loderer, P. Joerg, K. Pichler, L. Roth, and P. Zgraggen) and *Handbuch der Bewertung*, Band 2: Unternehmen (5., vollständig überarbeitete Auflage. Verlag Neue Zürcher Zeitung. Mit C. Loderer.).



Prof. **Paolo Vanini** SFI Adjunct Professor

Paolo Vanini is Swiss Finance Institute Adjunct Professor and Adjunct Professor of Banking at the University of Basel. He is Head of Big Data Finance Technologies at swissQuant Group AG. Professor Vanini's research focus is on investment, risk management, and banking topics. He has conducted extensive research into operational risk and credit risk and is the author of numerous articles published in international finance and financial economics journals. He holds a PhD in Mathematics from ETH.

Overview of Courses Offered in 2017 at Swiss Finance Institute

Swiss Offerings

January 2017–April 2018 Diploma of Advanced Studies in Banking

This bank management program is held in German and runs for six weeks spread over a period of 16 months. It is aimed at management and technical experts within the banking industry who have experience of leading a demanding client portfolio and who wish to broaden their roles. It is conducted in collaboration with the Rochester–Bern Executive Programs.

September 2017–March 2018

Certificate of Advanced Studies in Real Estate Finance

This certificate program is held in German and targets real estate specialists from finance and the real estate industry. It comprises 12 days of classroom study. It is conducted in collaboration with the Rochester–Bern Executive Programs.

February 2017–November 2017

Advanced Executive Program

This bank management program for senior executives synthesizes the latest insights into banking and finance issues in theory and current practice. The program, held predominantly in German, consists of 25 days spread over roughly one year.

International Offerings

September 25–30, 2017

International Bank Management Program

This program provides finance industry executives with an integrated and systematic view of the industry. It is targeted at those senior managers in banking and finance who have responsibility for business lines, integrated services to clients, or an individual operational area, and at executives moving into any of the above positions. The program is held in English and lasts for one week from Monday to Saturday.

June 2017–November 2017 Certificate of Advanced Studies in Asset Management

This CAS provides asset management executives with an integrated and systematic view of the industry. The 12-day program is held in English and is conducted in collaboration with the Rochester–Bern Executive Programs. The program can also be completed without its university degree element, as an executive program.

June 2017–November 2017

Managing International Asset Management

This program provides asset management executives with an integrated and systematic view of the asset management industry. The 12-day program is held in English and can also be attended as a Certificate of Advanced Studies (CAS) in Asset Management, which includes academic exams.

Swiss Banking School Certification

In collaboration with the University of Zurich and the CYP Association, Swiss Finance Institute launched an inclusive offering—available in German, English, French, and Italian—at the end of 2016 to prepare individuals for certification as client advisors by the Swiss Association for Quality (SAQ) under the ISO standard 17024.

Specialist Offerings and In-house Training

Several in-house and specialist training courses were offered in 2017, among them the Swiss Cross-Border Wealth Management Certification. In collaboration with the Centro di Studi Bancari, SFI offered courses covering various markets.

Overview of Events Organized in 2017 by Swiss Finance Institute

Automatic Exchange of Information— A Lot of Data for the Tax Administration... but What Now?

Zurich, Breakfast Seminar, January 25, 2017 <u>Dr. Hans-Joachim Jaeger</u>, Partner, Ernst & Young AG, Zurich

Erhöhte Ertragsquellen mit Wertschriftenbeständen seit der Finanzkrise

Zurich, Breakfast Seminar, March 21, 2017 <u>Ueli von Burg</u>, CIIA, Head of Cash & Collateral Trading & Management, Zürcher Kantonalbank

6th Swiss Asset Management Day

Digital Realities and Opportunities in Private Markets Pfäffikon (SZ), Conference, April 6, 2017

Introduction

Welcome Address from host <u>Andreas Barraud</u>, Department for Economic Affairs, Canton of Schwyz Art as an Asset Class? <u>Dr. Bertold Müller</u>, Christie's Zurich

Wealth Inequality

Why We Should Worry about Income & Wealth Inequality, <u>Prof. Robert Wade</u>, The London School of Economics and Political Science

Digital Opportunities

Blockchain: Smashing the System, <u>Dr. Jutta Steiner</u>, Parity Technologies Future of Finance—The View of a Global Bank, <u>Dr. Veronica Lange</u>, UBS Making Blockchain Real for Business, <u>Dr. Andreas Kind</u>, IBM How to Foster Innovation in the Age of Digitalization? Andreas Iten, SIX Group

Impulse Survey

SAM X "revisited"—Survey on Big Data Impacting Swiss Asset Management, <u>Dr. Gabriela Maria Payer</u>, Swiss Finance Institute

Private Market

Private Market Initiative for Swiss Pension Funds, <u>Iwan Deplazes</u>, Swisscanto Invest by Zürcher Kantonalbank Panel Discussion: Private Markets—Moving Center

Stage in Asset Management?

- <u>Prof. Francesco Franzoni</u>, Swiss Finance Institute@ Università della Svizzera italiana
- Pius Fritschi, LGT Capital Partners
- <u>Dr. Michael Loretan</u>, FINMA
- Luc Mathys, Credit Suisse

• <u>Mikko Syrjänen</u>, Man Global Private Markets Moderation: Reto Lipp, SRF

Altersvorsorge in einer digitalen Wirtschaft und Gesellschaft

Zurich, Breakfast Seminar, May 3, 2017 <u>Prof. Martin Eling</u>, Lehrstuhlinhaber und Direktor I.VW–Institut für Versicherungswirtschaft, University of St. Gallen

Reinventing Retirement: Lessons from around the World

Zurich, Evening Seminar, May 29, 2017 <u>Prof. Olivia S. Mitchell</u>, University of Pennsylvania—The Wharton School

Mutual Distributed Ledgers (aka

Blockchains): Myths, Facts, and Fantasies Zurich, Evening Seminar, June 7, 2017 Prof. Michael Mainelli, Director, Z/Yen Group Limited

SFI Outstanding Paper Award Evening Lecture

An Explanation of Negative Swap Spreads: Demand for Duration from Underfunded Pension Plans

Gerzensee, Evening Seminar, June 12, 2017 Prof. Suresh Sundaresan, Columbia Business School

Collateral Frameworks: The Open Secret of Central Banks

Zurich, Panel Discussion, June 22, 2017 <u>Mickael Benhaim</u>, Pictet Asset Management <u>Dr. Andréa M. Maechler</u>, Swiss National Bank <u>Prof. Kjell G. Nyborg</u>, Swiss Finance Institute@ University of Zurich Moderation: Maren Peters, SRF Radio

Private Markets—Transformational Trends & Lessons Learned

Zurich, Evening Seminar, August 24, 2017 André Frei, Co-CEO Partners Group

The Future of LIBOR: SARON as the Swiss Franc Alternative

Zurich, Partner Event, September 22, 2017 Martin Bardenhewer, Zürcher Kantonalbank Dewet Moser, Swiss National Bank Prof. Darrell Duffie, Stanford University

12th Annual Meeting

The New Contours of Banking Zurich, Conference, October 4, 2017

Keynote Speeches

Prof. Jean Tirole, Toulouse School of Economics and 2014 winner of the Economics Nobel Prize Prof. Axel A. Weber, UBS Group AG

Opening Remarks

Prof. François Degeorge, Swiss Finance Institute

Panel Discussion—Digital Business Models in the Financial Industry

<u>Prof. Alexander Lipton</u>, MIT Connection Science, StrongHold Labs, Visiting Professor of Financial Engineering at EPFL <u>Prof. Paolo Vanini</u>, Swiss Finance Institute & swissQuant Group AG <u>Dr. Ksenia Wahler</u>, Credit Suisse

Awards Ceremony

Prof. Erwan Morellec, Swiss Finance Institute@EPFL

Closing Remarks

Dr. Romeo Cerutti, Credit Suisse

Swiss Finance Institute

Swiss Finance Institute (SFI) is the national center for fundamental research, doctoral training, knowledge exchange, and continuing education in the fields of banking and finance. SFI's mission is to grow knowledge capital for the Swiss financial marketplace. Created in 2006 as a public–private partnership, SFI is a common initiative of the Swiss finance industry, leading Swiss universities, and the Swiss Confederation.

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