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PART A:
SELF-EVALUATION REPORT
SWISS FINANCE INSTITUTE @ EPFL
The Swiss Finance Institute at EPFL (SFI@EPFL) was created in 2009 with the dual mission of promoting research excellence in the field of finance and related disciplines while educating outstanding students. The current research activities of SFI@EPFL focus on areas of strategic importance to EPFL, namely mathematical finance, financial econometrics, and entrepreneurial finance. These topics overlap significantly with the research interests of other faculty members on the campus (e.g. computer science, mathematics, management of technology), which creates interesting cooperation opportunities and synergies.

It is the aim of SFI@EPFL to be recognized - both within and outside EPFL - as a center of competence in finance and related areas, as evidenced by:

- A strong academic record with publications in top journals
- Presentations at leading institutions and conferences
- Teaching programs in finance at all levels (Bachelor, Master, PhD)
- Successful recruitment of top students and faculty
- Fundraising from public and private agencies
- Knowledge transfer (industry, policymakers, etc.)
- Commitment to fostering interdisciplinary and inter-institutional research in finance at EPFL.

SFI@EPFL currently offers two highly selective teaching programs. The two-year Master Program in Financial Engineering (MFE) has been developed in response to increasing demand from the private sector for engineers who understand today's complex financial market systems. It concludes with a six-month internship in the finance industry, which gives students their first opportunity to put their knowledge to work. The Doctoral Program in Finance (EDFI) is part of the Swiss Finance Institute PhD Program for the Léman Area and targets primarily students interested in pursuing academic careers. The program has an excellent placement record in both industry and academia.

In addition to these two existing teaching programs, which are discussed in more detail in the following paragraphs, SFI@EPFL is planning to develop a curriculum at Bachelor level. One important objective of these Bachelor courses would be to recruit more EPFL students for the Master and PhD programs by arousing their interest for financial research at an early stage of their studies.

SFI@EPFL enjoys broad support from the Swiss Finance Institute, Swissquote and the NCCR FINRISK (National Centre of Competence in Research in the field of Financial Valuation and Risk Management). Among other things, these external funds provide finance for four faculty positions: the Swissquote Chair in Quantitative Finance and three tenure track assistant professor positions in finance funded by the Swiss Finance Institute.

Over the last five years, SFI@EPFL has been ranked first among its peers in Europe in terms of research output measured as number of publications in top finance and mathematical finance journals per faculty.

SFI@EPFL aims for excellence in research, education, and knowledge transfer. To meet these ambitions, it is critical that the institute further expands its research focus and diversity, which will require the recruitment of additional faculty members in the short and medium term.
2. BRIEF HISTORY

SFI@EPFL was created in March 2009 as a new academic unit within the College of Management of Technology (CDM), which itself was established in 2004. CDM is one of the seven research departments of EPFL (see Figure 1). The only other unit within CDM is the Management of Technology and Entrepreneurship Institute (MTEI), established at the same time as SFI@EPFL. During its short existence, CDM has witnessed several leadership changes and since September 2008 the College has been led by two ad interim directors\(^1\).

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\(^1\) Prof. Martin Vetterli, Professor for Communication Systems, EPFL (1.9.2009-31.12.2011) and Prof. Philippe Gillet, Vice-President for Academic Affairs, EPFL (1.1.2012 - present).

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Figure 1: SFI@EPFL is part of CDM which was founded in 2004 as one of the seven research departments of EPFL. The other unit within CDM is MTEI.
At its outset, SFI@EPFL consisted of three senior faculty members - Peter Bossaerts, Luisa Lambertini and Erwan Morellec - and two newly developed teaching programs at Master and PhD levels. An extensive hiring campaign initiated in 2008 led to the recruitment of seven outstanding new team members within a very short period (see Figure 2). In summer 2009, four tenure track assistant professors (Rüdiger Fahlenbrach, Semyon Malamud, Loriano Mancini and Anders Trolle) and one associate professor (Julien Hugonnier) joined the Institute, followed by two full professors in 2010 (Damir Filipovic) and 2011 (Pierre Collin-Dufresne). In 2012, one of the assistant professors (Rüdiger Fahlenbrach) was promoted to the rank of tenured associate professor.

In 2009, EPFL and the University of Lausanne (UNIL) signed an agreement with the aim of carrying out coordinated research and teaching activities in the area of finance and economics. As a result, the "University Finance Centre of Lausanne (CULF)" (Centre universitaire lausannois en finance) was created in 2010. An important idea behind this center is to facilitate interactions between SFI@EPFL and the UNIL Institute of Banking and Finance by bringing together the researchers of both institutes under one roof. To this end, UNIL made office space for both institutes available in the EXTRANEF building on the UNIL campus.

While the SFI@EPFL team experienced growth from 2007 to 2011, it lost Peter Bossaerts to the California Institute of Technology (Caltech) in 2012. Peter had already been Professor of Finance at Caltech before he came to EPFL in 2007. In 2009, he opted for a joint appointment with EPFL (20%) and Caltech (80%) and this year, he resigned from his EPFL position to return permanently to Caltech.

**Figure 2:** Historical overview of SFI@EPFL. 2007: Recruitment of P. Bossaerts (PO) and L. Lambertini (PA). 2008: Recruitment of E. Morellec (PO). 2009: Official creation of SFI@EPFL; recruitment of R. Fahlenbrach, S. Malamud, L. Mancini & A. Trolle (PATTs) as well as J. Hugonnier (PA); promotion of L. Lambertini to PO; P. Bossaerts reduces appointment percentage to 20%. 2010: Recruitment of D. Filipovic. 2011: Recruitment of P. Collin-Dufresne. 2012: Promotion of R. Fahlenbrach to PA; departure of P. Bossaerts. FTE stands for full time equivalent.
The structure and organization of CDM and its two institutes, SFI@EPFL and MTEI, are defined in the ordinance “Rules and Regulations of CDM” which was amended in 2009 and can be visited at the following internet address: http://polylex.epfl.ch/files/content/sites/polylex/files/recueil_pdf/ENG/1.2.7._r_organisation_cdm_en.pdf. The principal governing body of CDM is the Comité de Direction (Executive Committee) comprising the CDM director, the two institute directors and the CDM administrator. Meetings of the Comité de Direction are held on a regular basis (usually monthly) to exchange information and discuss strategic matters concerning both institutes. The second governing body is the CDM Council made up of faculty members, students, scientific staff members and administrative representatives from both institutes. The Council advises on all matters related to the organization of the College and its teaching programs and participates in decisions taken by the CDM Comité de Direction.

SFI@EPFL and MTEI have their own Master and PhD programs and organize separate seminar series [see Figure 3]. Although managed independently, the two institutes interact regularly and share some committees (e.g. Academic Promotion Committee, Research Committee, IT & Communication Committee).

Since January 2011, SFI@EPFL is directed by Damir Filipovic, who succeeded Erwan Morellec. The institute director plays an important role as spokesman to the CDM director for all matters concerning the institute’s strategic lines and its financial and human resource management. The directors of the MFE master program and EDFI doctoral school are Julien Hugonnier and Pierre Collin-Dufresne respectively (previous directors of EDFI: Damir Filipovic, Erwan Morellec). They are responsible for the overall management, coherence and quality of the two teaching programs and provide advice and guidance for students.

SFI@EPFL attaches great importance to participative decision-making and all important issues and initiatives are openly discussed at faculty meetings. Such meetings are usually held when necessary and all faculty members and senior scientists are invited to participate and encouraged to voice their opinion. Major decisions concerning the institute are usually made by the faculty body as a whole.

Figure 3: Although managed independently, SFI@EPFL and MTEI share a general service unit and certain committees.
4. FACULTY

4.1 COMPOSITION

The SFI@EPFL faculty body is made up of nine full-time professors consisting of two-thirds senior and one-third junior scholars, which we consider an ideal ratio to ensure the smooth functioning of the Institute [see Figure 4]. Employed at EPFL since mid-2009, the three tenure track assistant professors will undergo a mid-term review at the end of this year and may initiate the process of consideration for promotion to associate professor and tenure in summer 2015 (at the end of their sixth year). This may lead to a spate of promotions - or departures - in 2016. Both cases will leave the Institute without junior faculty if no new assistant professors are hired in time.

4.2 MENTORING AND PROMOTION OF ASSISTANT PROFESSORS

Assistant professors of finance are usually hired directly after receiving their doctoral degree. This means that they generally have little understanding of “how things work” in academia and need guidance in planning their career. SFI@EPFL places high importance on the successful integration of assistant professors and our senior faculty members devote considerable time and effort to providing advice and assistance with manuscripts, teaching duties, grant applications and general research questions. In addition, SFI@EPFL’s flat hierarchy and “open door policy” encourage regular exchanges and many important conversations between seniors and juniors take place spontaneously over a cup of coffee or lunch.

With regard to the promotion and tenure review of assistant professors, CDM (responsible for the first level review) and EPFL (responsible for the second level review) have clearly defined and transparent criteria and procedures. These guidelines are described in specific documents readily available on the Internet [see: http://cdm.epfl.ch/committees and http://polylex.epfl.ch/] and we encourage our junior professors to familiarize themselves with these as soon as possible.

Figure 4: The SFI@EPFL faculty body is made up of a balanced mix of two-thirds seniors and one-third juniors.

FULL PROFESSORS (PO)
Pierre Collin-Dufresne
Ph.D. in Finance (HEC Paris, 1998)
Damir Filipovic
Ph.D. in Mathematics (ETH Zurich, 2000)
Luisa Lambertini
Ph.D. in Economics (University California, 1995)
Erwan Morellec
Ph.D. in Finance (HEC Paris, 1999)

ASSOCIATE PROFESSORS (PA)
Rüdiger Fahlenbrach
Ph.D. in Finance (Wharton School, 2005)
Julien Hugonnier
Ph.D. in Finance (University Sorbonne, 2001)

TENURE TRACK ASSISTANT PROFESSORS (PATT)
Semyon Malamud
Ph.D. in Mathematics (ETH Zurich, 2006)
Loriano Mancini
Ph.D. in Economics (University of Lugano, 2004)
Anders Trolle
Ph.D. in Finance (Copenhagen Business School, 2007)
Moreover, in order to provide assistant professors with optimal support in their early professional development at SFI@EPFL, we have adopted the following “best practices”:

- The Institute Director ensures that assistant professors receive adequate resources [e.g. for databases, travel, conferences, PhD student salaries, administrative assistance].
- Assistant professors have reduced teaching and service loads.
- Assistant professors are actively encouraged to attend (inter)national conferences and give poster and oral presentations (“become visible”).
- The Institute Director organizes annual meetings with assistant professors. The main purpose of these meetings is to evaluate their progress during the past year and help them develop a strategy for achieving their career goals [e.g. steps needed to establish international reputation in their field of research].
- The CDM Academic Promotion Committee reviews the annual progress reports of the assistant professors and provides written feedback including advice for successful promotion and tenure.
- Assistant professors undergo a comprehensive mid-term review in their fourth year (near the mid-point of their tenure-track period), which provides an early assessment of the likelihood of successful promotion and helps identify weaknesses before it is too late for correction. The mid-term review dossier covers the entire period at SFI@EPFL and resembles the dossier that has to be prepared for the promotion and tenure review (except that no outside letters are required for the mid-term review). The mid-term review is conducted by the CDM Academic Promotion Committee, which will, in case of weaknesses in the assistant professor’s record, offer comprehensive advice on how to improve performance in order to meet EPFL’s promotion and tenure requirements.

In addition to the “tenure track” path for assistant professors, SFI@EPFL also offers “tenure track” opportunities to successful senior researchers. Scientists interested in being promoted to a permanent position as senior researcher also have to undergo an academic review [for which the guidelines and criteria are also clearly defined and available on the Internet], although the requirements for promotion are somewhat less demanding then for assistant professors.

Being a young institute, SFI@EPFL has so far witnessed only one promotion (Rüdiger Fahlenbrach to associate professor in spring 2012). It is expected that Claudia Ravanelli will submit a dossier for promotion to senior researcher with permanent position in 2013. Our three tenure track assistant professors will have to initiate their promotion and tenure review at the end of their 6th year at the latest (summer 2015).

As of today, asset pricing, corporate finance and financial engineering are particularly strongly represented in our group. Venturing into new areas and research methods would allow us to offer additional courses [e.g. at Bachelor level], increase our collaboration with other EPFL groups and gain even more visibility within our professional community.
The Swiss Finance Institute is supported by the Swiss banking and finance community, the Swiss stock exchange, the Swiss Confederation, the Swiss National Science Foundation (SNSF) and several Swiss universities.

The following SFI@EPFL professors have been elected as faculty members of the Swiss Finance Institute at the rank of Senior and Junior Chair:

- **Senior Chair:** Peter Bossaerts, Pierre Collin-Dufresne, Rüdiger Fahlenbrach, Damir Filipovic, Julien Hugonnier, Erwan Morellec
- **Junior Chair:** Semyon Malamud, Loriano Mancini, Anders Trolle

The Swiss Finance Institute forms part of the nationwide Swiss Finance Institute network. The Swiss Finance Institute is a private foundation that was established in 2006 at the initiative of the Swiss Bankers Association.

In pursuit of its mission to achieve excellence in banking and finance education and research, the Swiss Finance Institute supports faculty positions, research activities, a PhD program in finance and selected executive programs at partner universities at three regional centers: the Swiss Finance Institute-Léman (EPFL, University of Geneva, University of Lausanne), the Swiss Finance Institute-Zurich (ETHZ, University of Zurich) and the Swiss Finance Institute-Lugano (University of Lugano) (see Figure 5). The Léman-Center is directed by Erwan Morellec.

**Figure 5:** The three regional centers of the Swiss Finance Institute: Swiss Finance Institute-Léman (EPFL, University of Geneva, University of Lausanne), Swiss Finance Institute-Zurich (ETHZ, University of Zurich) and Swiss Finance Institute-Lugano (University of Lugano).
Being a partner of this network offers several key benefits to SFI@EPFL and its researchers:

• **Interesting collaboration opportunities:** The Swiss Finance Institute connects scientists with shared interests and knowledge and fosters a collaborative spirit among its faculty members. It applies the highest academic standards for the acceptance of professors as Swiss Finance Institute faculty members and thereby ensures high quality research and an inspiring scientific environment within its community.

• **International competitiveness on the faculty job market:** By providing salary supplements to professors holding a "Senior Chair" or "Junior Chair", the Swiss Finance Institute contributes significantly to the international competitiveness of its partner universities in faculty recruitment.

• **Top-ranked PhD program:** The Swiss Finance Institute offers a unique, nationwide PhD program in finance providing an intellectual environment and a curriculum comparable to the top PhD programs in Europe and North America. The program is available at the three Swiss Finance Institute Centers - Léman, Zurich and Lugano. Since its inception, the nationwide PhD Program has been directed by Erwan Morellec.

• **Knowledge transfer:** The Swiss Finance Institute regularly organizes outreach events (e.g. breakfast seminars, business luncheons and conferences) and circulates press releases to actively promote the information flow between academia, financial institutions and the public.

• **Comprehensive financial support:**
  - In the context of the Swiss Finance Institute PhD Program for the Léman Area: scholarships for first-year PhD students, funds for inviting lecturers, and funds enabling PhD students to participate in academic conferences or conduct research during a certain period of time at another university.
  - Salaries of three tenure track assistant professors (Loriano Mancini, Semyon Malamud, Anders Trolle) over a period of three years, extendable up to a maximum of eight years.
  - Funds to purchase databases.
  - Co-funding of research projects (e.g. the NCCR Finrisk).
  - Co-funding of research seminars.
  - Co-funding of conferences (e.g. the Swissquote conference).
SFI@EPFL actively fosters national and international networks and all SFI@EPFL faculty members are involved in various collaborations with research colleagues from renowned universities around the world. In addition to these individual partnerships and the collaboration between SFI@EPFL and the Swiss Finance Institute as well as its affiliated partner universities, we would also like to highlight the following networks:

7.1 UNIVERSITY FINANCE CENTRE OF LAUSANNE (CULF)

CULF is a joint initiative of EPFL and UNIL designed to pool their human resources in finance and economics by bringing together SFI@EPFL and the UNIL Institute of Banking and Finance in one building, thus creating opportunities for various interactions.

While both institutes are administratively independent, they enjoy research collaboration in multiple activities such as joint research projects, the organization of seminars on subjects of common interest, such as the Finance Research Seminars and the Brown Bag Seminars and joint publications [see Table 1 and Annex 1 and 2, pages 39-40]. Most recently, they initiated the SFI@EPFL-UNIL joint reading group addressing topics in “macroeconomics with financial frictions”.

In addition, CULF members coordinate their teaching and recruitment strategy [e.g. SFI@EPFL faculty members serve on the committees of their UNIL CULF colleagues and vice versa] in order to obtain synergies and avoid the duplication of efforts.

2 The EXTRANEF building on the UNIL campus.

TABLE 1: SELECTED EXAMPLES OF JOINT ACTIVITIES BETWEEN RESEARCHERS FROM SFI@EPFL AND UNIL

FINANCE RESEARCH SEMINARS

SFI@EPFL and the University of Lausanne organize joint research seminars in finance. The seminars attract speakers from academic institutions around the world and cover a variety of topics of interest to both academics and research-oriented professionals. The seminars take place at EXTRANEF. Please see Annex 1 (page 39) for the seminar schedule 2012 - 2013.

BROWN BAG SEMINARS

The SFI@EPFL Brown Bag Seminars provide a platform for internal faculty and students, as well as for faculty members from other institutes and visiting scholars to present their research. Within this seminar series, a few slots are reserved for internal SFI@EPFL-UNIL Brown Bags sessions, where faculty members from SFI@EPFL and UNIL discuss early-stage research projects and ideas in a workshop-like setting. Please see Annex 2 (page 40) for an overview of the most recent seminars.
CO-PUBLICATIONS

- Health and (Other) Asset Holdings. J. Hugonnier, P. St-Amour (UNIL), and F. Pelgrin (UNIL), Review of Economic Studies, forthcoming.

CO-SUPERVISION OF PHD STUDENTS

- Cornelius Schmidt, current PhD student at UNIL. Thesis directors: Rüdiger Fahlenbrach & Norman Schürhoff [UNIL]
- Nataliy Guseva, PhD in 2011 from UNIL. Thesis directors: Erwan Morellec & Norman Schürhoff [UNIL]
- Maria Cecilia Bustamante, PhD in 2009 from UNIL. Thesis directors: Erwan Morellec & Jean-Pierre Danthine (UNIL)
- Boris Nikolov, PhD in 2008 from UNIL. Thesis directors: Erwan Morellec & Norman Schürhoff [UNIL]

CO-TEACHING

- The EDFI doctoral program course “Empirical Corporate Finance” [EDFI] is taught by Rüdiger Fahlenbrach and Norman Schürhoff [UNIL].

JOINT RESEARCH ACTIVITIES

- “Insurance Solvency Testing” [work in progress] D. Filipovic, H. Albrecher (UNIL) & V. Lautscham (UNIL)
7.2 COLLABORATION IN MACROECONOMICS

Luisa Lambertini has established close and fruitful working relationships with the UNIL Department of Economics (DEEP) (Département d’économie et économie politique). Since September 2007, the two units jointly organize an advanced research seminar series, the DEEP-EPFL Seminar in Macroeconomics, throughout the academic year. Speakers include renowned academic economists and promising young researchers working on international economics and macroeconomic issues from all over the world [see Table 2]. These seminars are open to the public, although they are usually mainly attended by faculty members and students.

TABLE 2: RECENTLY ORGANIZED DEEP-EPFL SEMINARS IN MACROECONOMICS

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Speaker/Institution</th>
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<tbody>
<tr>
<td>19.12.2012</td>
<td>Prudential Policy for Peggers</td>
<td>Martin URIBE, Columbia University, New York, USA</td>
</tr>
<tr>
<td>11.10.2012</td>
<td>The Share of Systematic Variation in Bilateral Exchange Rates</td>
<td>Adrien VERDELHAN, MIT Sloan School of Management, Cambridge, USA</td>
</tr>
<tr>
<td>03.10.2012</td>
<td>House Price Booms, Current Account Deficits, and Low Interest Rates</td>
<td>Andrea FERRERO, Federal Reserve Bank of New York, USA</td>
</tr>
<tr>
<td>19.09.2012</td>
<td>Collateral Constraints and Macroeconomic Asymmetries</td>
<td>Matteo IACOVIELLO, Federal Reserve Board, Washington, USA</td>
</tr>
<tr>
<td>23.05.2012</td>
<td>Fiscal Devaluations</td>
<td>Gita GOPINATH, Harvard University, USA</td>
</tr>
<tr>
<td>07.03.2012</td>
<td>Exorbitant Privilege and Exorbitant Duty</td>
<td>Pierre-Olivier GOURINCHAS, University of California, Berkeley, USA</td>
</tr>
<tr>
<td>14.12.2011</td>
<td>The Effects of Quantitative Easing on Interest Rates: Channels and Implications for Policy</td>
<td>Annette VISSING-JORGENSEN, Kellogg School of Management, Northwestern University, Evanston, USA</td>
</tr>
<tr>
<td>08.12.2012</td>
<td>Large Shocks in Menu Cost Models</td>
<td>Peter KARADI, New York University, USA</td>
</tr>
<tr>
<td>04.04.2011</td>
<td>Inequality, Leverage and Crises</td>
<td>Romain RANCIÈRE, Paris School of Economics, France</td>
</tr>
<tr>
<td>08.12.2010</td>
<td>Credit constraints and growth in a global economy</td>
<td>Nicolas COEURDacier, London Business School, UK</td>
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</table>
In addition, Luisa Lambertini and DEEP also jointly coordinate the Macro Workshop for PhD students, a brown bag seminar series offering graduate and post-doctoral students an opportunity to present ongoing work. Occasionally presentations are also given by visitors or local faculty.

### 7.3 NCCR FINRISK

SFI@EPFL is deeply involved in the NCCR FINRISK large-scale research network, which was initiated by the SNSF in 2001. This prestigious project was designed to increase knowledge creation in the field of financial valuation and risk management and includes more than forty professors of finance from EPFL and ETHZ as well as from the universities of Geneva, Lausanne, Lugano, St. Gallen and Zurich [see Figure 6].

Participation in such a nationwide network provides a unique opportunity for collaboration and the exchange of ideas. Apart from promoting cutting-edge research and doctoral education in finance, the NCCR FINRISK places great emphasis on fostering strategic partnerships between its researchers and the private financial sector. For this purpose, it organizes several outreach activities each year, which stimulate the dialogue between scientists and practitioners.³

³ http://www.nccr-finrisk.uzh.ch/conferences.php

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**Figure 6:** SFI@EPFL faculty members are heavily represented in the NCCR FINRISK network.

<table>
<thead>
<tr>
<th>MODULE A - ASSET PRICING AND PORTFOLIO MANAGEMENT</th>
<th>MODULE B - CORPORATE FINANCE</th>
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<tbody>
<tr>
<td>COORDINATOR: F. TROJANI (University Lugano)</td>
<td>COORDINATOR: RÜDIGER FAHLENBRACH (SFI@EPFL)</td>
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<tr>
<td>LEADER: T. HENS (University Zurich)</td>
<td>LEADER: M. HABIB (University Zurich)</td>
</tr>
<tr>
<td>LEADER: P. BACCHETTA (University Lausanne)</td>
<td>LEADER: ERWAN MORELLEC (SFI@EPFL)</td>
</tr>
<tr>
<td>PROJECT A3: New Methods in Theoretical and Empirical Asset Pricing</td>
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<tr>
<td>LEADER: F. TROJANI (University Lugano)</td>
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<tr>
<td>PROJECT A4: Dynamic Asset Pricing</td>
<td></td>
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<td>LEADER: DAMIR FILIPOVIC (SFI@EPFL)</td>
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<th>MODULE C - RISK MANAGEMENT</th>
<th>MODULE D - QUANTITATIVE METHODS IN FINANCE</th>
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<tr>
<td>COORDINATOR: LORIANO MANCINI (SFI@EPFL)</td>
<td>COORDINATOR: O. SCAILLET (University Geneva)</td>
</tr>
<tr>
<td>PROJECT C1: Credit Risk and Non-standard Sources of Risk in Finance</td>
<td>PROJECT D1: Mathematical Methods in Financial Risk Management</td>
</tr>
<tr>
<td>LEADER: R. GIBSON BRANDON (University Geneva)</td>
<td>LEADER: M. SCHWEIZER (ETHZ)</td>
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<tr>
<td>LEADER: G. BARONE-ADESİ (University Lugano)</td>
<td>LEADER: O. SCAILLET (University Geneva)</td>
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<td>PROJECT D3: Computational Financial Economics</td>
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<td>LEADER: FELIX KÜBLER (University Zurich)</td>
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<th>MODULE E - BANKING AND REGULATION</th>
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<tr>
<td>COORDINATOR: J.C. ROCHET (University Zurich)</td>
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<tr>
<td>PROJECT E1: Systemic Risk and Dynamic Contract Theory.</td>
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<tr>
<td>LEADER: J.C. ROCHET (University Zurich)</td>
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</table>
7.4 COLLABORATION WITH PRINCETON UNIVERSITY

Last year saw the inaugural event of the Princeton-Lausanne workshop series on quantitative finance, held in Lausanne. It brought together around 25 participants from the CULF network (researchers from SFI@EPFL and UNIL) and eight researchers from Princeton University with the specific objective of fostering interactions between these institutions. The workshop offered an ideal platform for lively discussions about the latest developments in quantitative finance, such as carbon dioxide emission trading schemes, optimal security design for insurance risk, asset pricing puzzles, information percolation in social networks, volatility and interest rate risk trading. SFI@EPFL’s junior scientists and PhD students were particularly encouraged to present their research and very much appreciated the opportunity to establish contacts with researchers from Princeton. We intend to continue the Princeton-Lausanne workshop series on a rotating two-year cycle, once in Lausanne, once in Princeton.

7.5 SWISSQUOTE

Since 2010, Swissquote sponsors the “Swissquote Chair in Quantitative Finance” which is held by Damir Filipovic. Through this Chair, Swissquote and SFI@EPFL, but particularly Damir Filipovic, have established a fruitful cooperation in research topics of mutual interest which culminates in the Swissquote conference organized annually on the EPFL campus [see paragraph 13: Outreach, page 37].
SFI@EPFL is currently composed of nine faculty members, one senior researcher, five post-doctoral students and 18 PhD students. The academic body is complemented by a small group of staff members providing administrative and technical assistance to the researchers [see Table 3]. Part of the administrative staff is shared with MTEI.

Unlike most of the other EPFL departments where professors have their specific budget and supervise mainly their own PhD students, SFI@EPFL has adopted the concept of “resource pooling” which is common in traditionally organized Finance Departments at top U.S. universities. This implies that administrative personnel are shared and the major part of the Institute’s budget [e.g. salaries for administrative staff and PhD students, costs for seminars and invited professors, databases, costs related to conference participation of students, IT equipment and software, teaching] is administered centrally.

Moreover, PhD students are admitted by the group as a whole (and not hired by individual professors) and enjoy co-supervision by several faculty members.

Resource pooling has several advantages:

- Co-supervision of PhD students by several professors stimulates academic interactions within the team and provides the best possible learning environment for students.
- Pooling administrative staff furthers the efficient and effective deployment of personnel resources and their experience. Indeed, numbers show that SFI@EPFL has a very cost-effective structure and gets its administrative work done with very few administrative staff members (2.65 EFT administrative staff / 37.95 EFT total staff).
- The pooling of budgetary resources is an efficient way to achieve flexibility and transparency in the utilization of funds and optimize expenditures.

**TABLE 3: SFI@EPFL STAFF SUMMARY (REFERENCE DATE: 2012)**

<table>
<thead>
<tr>
<th>STAFF CATEGORY</th>
<th>TOTAL NUMBER</th>
<th>WHEREOF WOMEN</th>
<th>FULL-TIME EQUIVALENTS</th>
<th>WHEREOF FINANCED WITH EXTERNAL FUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full professors</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Associate professors</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Tenure track assistant professors</td>
<td>3</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Senior scientists</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Communication</td>
<td>1</td>
<td>1</td>
<td>0.8</td>
<td>-</td>
</tr>
<tr>
<td>Postdoctoral students</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>PhD students</td>
<td>18</td>
<td>3</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>IT support²</td>
<td>3</td>
<td></td>
<td>1.5</td>
<td>-</td>
</tr>
<tr>
<td>Administrative support Administrator²</td>
<td>1</td>
<td>1</td>
<td>0.35</td>
<td>-</td>
</tr>
<tr>
<td>Secretaries</td>
<td>3</td>
<td>3</td>
<td>1.5</td>
<td>-</td>
</tr>
<tr>
<td>Section²</td>
<td>2</td>
<td>2</td>
<td>0.8</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>43</strong></td>
<td><strong>14</strong></td>
<td><strong>37.95</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

² Staff shared with MTEI.
SFI@EPFL has a flat and participative organizational structure, which furthers direct communication and the flow of information between all individuals. This “culture of open dialogue” and the small group size are conducive to informal and frank discussions where issues can usually be resolved in a very efficient way. Twice a year, special events are organized for all faculty and staff members that provide important opportunities to interact socially and strengthen team spirit. Similarly, dinners are organized for the whole group to welcome new faculty members to the team. Overall, the working ambiance at SFI@EPFL can be considered very good which may partly explain the very low staff turnover (since the creation of SFI@EPFL in 2009, only two staff members have had to be replaced).

8.1 PROMOTION OF GENDER EQUITY

SFI@EPFL seeks the input and participation of women in all activities and strives for gender balance in academic and management positions. The Institute therefore offers flexible working arrangements and, whenever possible, part-time positions. These measures are perfectly complemented by EPFL efforts to provide sufficient day-care facilities on the campus and organize activities for children during school vacations.

While such measures have doubtlessly helped fill SFI@EPFL’s management positions with female candidates (all three positions are actually occupied by women\(^5\)), the proportion of women holding senior academic positions at SFI@EPFL remains very small (1 Full Professor\(^6\), 1 Senior Researcher\(^7\)). Hiring female professors has so far proved extremely difficult due to the lack of qualified candidates.

An important obstacle to the recruitment of female professors, which is not specific to SFI@EPFL but a general problem, is the fact that women are often not interested in relocating because their husbands usually have their own career plans which they are reluctant to relinquish. Dual career programs offered by EPFL may be helpful in overcoming these obstacles.

\(^5\) Dr. Barbara Baumann (Administrator), Mrs. Carole Bonardi (Head of Communication), Mrs. Françoise Jeannotat (Deputy Head of Section).
\(^6\) Prof. Luisa Lambertini
\(^7\) Dr. Claudia Ravaneli
In all leading finance departments worldwide, publishing consistently in the top journals in finance and economics is critical to the success of both faculty members and the department. Many schools have formal requirements in terms of number of top publications for promotions. At the London Business School for example, which we consider together with the London School of Economics and INSEAD as our primary competitors in Europe, it is generally understood that individuals with fewer than four (full-length refereed) publications in top journals are not eligible for tenure. A similar criterion is used by a number of American finance departments. The Swiss Finance Institute will not award a senior chair to researchers with fewer than four top publications.


One of the specifics of our department is that we not only do research in financial economics, but have members who focus on mathematical finance. The list of top mathematical finance journals includes Mathematical Finance, Finance and Stochastics, and Annals of Applied Probability.

Members of our institute have had 35 publications or articles accepted for publication in the above-mentioned top finance and economics journals and 12 publications in the top mathematical finance journals (see Table 4) in the last five years. This publication record in top journals sets us apart from other finance departments.

**TABLE 4: PUBLICATIONS OF SFI@EPFL FACULTY MEMBERS IN TOP FINANCE AND MATHEMATICAL FINANCE JOURNALS (2007–2012)**

**ANNALS OF APPLIED PROBABILITY**


**ECONOMETRICA**


**FINANCE AND STOCHASTICS**

JOURNAL OF FINANCE


JOURNAL OF FINANCIAL ECONOMICS

**MATHEMATICAL FINANCE**


**REVIEW OF ECONOMIC STUDIES**


**REVIEW OF FINANCIAL STUDIES**

In Switzerland and most finance departments in Europe [see Figures 7, 8, and 9]. Historically, finance researchers in Europe concentrated on national and field journals, publishing more in less visible journals. To remain internationally visible, we attach a lot of importance to top journals.

Our faculty members have also published in other high quality journals such as the Journal of Economic Theory, Journal of Econometrics, Journal of Financial and Quantitative Analysis, Review of Finance, SIAM Journal on Financial Mathematics, Insurance: Mathematics and Economics, and Stochastic Processes and their Applications. A full list of all publications of members of our institute during the period 2007 to 2012 is given in Part B of this report.

**Figure 7:** Publication output of SFI@EPFL faculty members from 2007 to 2012.

![Bar chart showing publication output from 2007 to 2012](chart.png)
Figure 8: Research output of SFI@EPFL (9.2 FTE), the Institute of Finance at the University of Lugano (9 FTE), the Department of Banking and Finance at the University of Zurich (16 FTE), the Finance Group at the London Business School (21 FTE), the Financial Markets Group at the London School of Economics and Political Science (34 FTE) and the Finance Group at INSEAD (19 FTE) in finance and economics. The overview includes publications in the following journals: Journal of Finance, Journal of Financial Economics, Review of Financial Studies, American Economic Review, Journal of Political Economy, Quarterly Journal of Economics, Econometrica, and Review of Economic Studies. FTE stands for full time equivalent.

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFI@EPFL</td>
<td>0.43</td>
<td>0.76</td>
<td>0.54</td>
<td>0.65</td>
<td>0.65</td>
</tr>
<tr>
<td>Institute of Finance, University of Lugano (USI)</td>
<td>0.22</td>
<td>0.44</td>
<td>0.44</td>
<td>0.22</td>
<td>0.44</td>
</tr>
<tr>
<td>Department of Banking and Finance, University of Zurich (UZH)</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.25</td>
<td>0.06</td>
</tr>
<tr>
<td>Finance Group, London Business School (LBS)</td>
<td>0.43</td>
<td>0.24</td>
<td>0.57</td>
<td>0.29</td>
<td>0.67</td>
</tr>
<tr>
<td>Financial Markets Group, London School of Economics and Political Science (LSE)</td>
<td>0.18</td>
<td>0.27</td>
<td>0.18</td>
<td>0.30</td>
<td>0.41</td>
</tr>
<tr>
<td>Finance Group, INSEAD</td>
<td>0.21</td>
<td>0.53</td>
<td>0.32</td>
<td>0.16</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Figure 9: Research output of SFI@EPFL (9.2 FTE), the Institute of Finance at the University of Lugano (9 FTE), the Department of Banking and Finance at the University of Zurich (16 FTE), the Finance Group at the London Business School (21 FTE), the Financial Markets Group at the London School of Economics and Political Science (34 FTE) and the Finance Group at INSEAD (19 FTE) in finance, economics and mathematical finance. In addition to the journals mentioned in the caption for Figure 8, this overview includes also the following top journals in mathematical finance: Mathematical Finance, Finance and Stochastics, and Annals of Applied Probability. FTE stands for full time equivalent.

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFI@EPFL</td>
<td>1.09</td>
<td>0.87</td>
<td>0.76</td>
<td>0.76</td>
<td>0.76</td>
</tr>
<tr>
<td>Institute of Finance, University of Lugano (USI)</td>
<td>0.22</td>
<td>0.44</td>
<td>0.44</td>
<td>0.22</td>
<td>0.44</td>
</tr>
<tr>
<td>Department of Banking and Finance, University of Zurich (UZH)</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.25</td>
<td>0.19</td>
</tr>
<tr>
<td>Finance Group, London Business School (LBS)</td>
<td>0.43</td>
<td>0.24</td>
<td>0.57</td>
<td>0.29</td>
<td>0.67</td>
</tr>
<tr>
<td>Financial Markets Group, London School of Economics and Political Science (LSE)</td>
<td>0.18</td>
<td>0.27</td>
<td>0.18</td>
<td>0.30</td>
<td>0.41</td>
</tr>
<tr>
<td>Finance Group, INSEAD</td>
<td>0.21</td>
<td>0.53</td>
<td>0.32</td>
<td>0.16</td>
<td>0.16</td>
</tr>
</tbody>
</table>
10. MASTER PROGRAM IN FINANCIAL ENGINEERING

SFI@EPFL offers a highly selective two-year Master program in Financial Engineering (MFE) comprising a total of 120 ECTS credits. The study program includes three semesters of intensive coursework followed by a mandatory six-month internship with Master thesis in the finance industry (see Figure 11). The curriculum is entirely in English.

Figure 11: MFE program structure

<table>
<thead>
<tr>
<th>SEMESTER M1: CORE COURSES</th>
<th>SEMESTER M2: ADVANCED COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMESTER M3: ADVANCED COURSES &amp; ELECTIVES</td>
<td>SEMESTER M4: INDUSTRY INTERNSHIP AND MASTER THESIS</td>
</tr>
</tbody>
</table>

MFE is the result of a multi-disciplinary effort involving faculty members with a variety of disciplinary backgrounds, e.g. asset pricing, computer science, corporate finance, economics, mathematical finance, mathematics, statistics, operations research (see Table 5). The program is broad yet specific, with an extensive range of electives to enable students to tailor their studies to their individual needs.

Overall, MFE students learn how to combine modern finance theory and computational methods with a practical knowledge of the real business world in which they can employ these skills. They will thus have the perfect profile to rapidly integrate into banks, investment and hedge funds, re-insurance companies, financial software firms, consulting and auditing firms or to pursue an academic career in a top international PhD program in finance or financial engineering.

10.1 STUDY PROGRAM

During the first semester all MFE students participate in several compulsory foundation courses that provide them with in-depth knowledge

TABLE 5: MFE FACULTY MEMBERS (ACADEMIC YEAR 2012 – 13)

FROM SFI@EPFL

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pierre Collin-Dufresne</td>
<td>Professor of Finance</td>
</tr>
<tr>
<td>Rüdiger Fahlenbrach</td>
<td>Professor of Finance</td>
</tr>
<tr>
<td>Damir Filipovic</td>
<td>Professor of Quantitative Finance</td>
</tr>
<tr>
<td>Julien Hugonnier</td>
<td>Professor of Finance</td>
</tr>
<tr>
<td>Luisa Lambertini</td>
<td>Professor of International Finance</td>
</tr>
<tr>
<td>Semyon Malamud</td>
<td>Professor of Finance</td>
</tr>
<tr>
<td>Loriano Mancini</td>
<td>Professor of Finance</td>
</tr>
<tr>
<td>Claudia Ravaneli</td>
<td>Senior Researcher in Finance</td>
</tr>
<tr>
<td>Anders Trolle</td>
<td>Professor of Finance</td>
</tr>
</tbody>
</table>

FROM EPFL

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michel Bierlaire</td>
<td>Professor of Operations Research, ENAC</td>
</tr>
<tr>
<td>Anthony Davison</td>
<td>Professor of Statistics, SB</td>
</tr>
<tr>
<td>Boi Faltings</td>
<td>Professor of Computer Science, IC</td>
</tr>
</tbody>
</table>

FROM OUTSIDE EPFL

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marc-Olivier Boldi</td>
<td>Professor of Statistics and Service Operation Management, HEL</td>
</tr>
<tr>
<td>Laurent Gauthier</td>
<td>Director, Structured Products Experts, Paris</td>
</tr>
<tr>
<td>Lorenz Goette</td>
<td>Professor of Economics, UNIL</td>
</tr>
<tr>
<td>Eric Jondeau</td>
<td>Professor of Finance, UNIL</td>
</tr>
<tr>
<td>Alain Siegrist</td>
<td>Financial Director</td>
</tr>
<tr>
<td>Philip Valta</td>
<td>Professor of Finance, HEC Paris</td>
</tr>
</tbody>
</table>

ECTS: European Credit Transfer and Accumulation System
and understanding of subjects with which every financial professional should be familiar (see Figure 12). The core curriculum also lays a strong foundation for the advanced (which are also compulsory) and elective courses (where students are given a choice) taught in the second and third semesters. Depending on the number of students enrolled, the portfolio of electives may vary slightly from year to year. Furthermore, subject to the approval of the MFE Section, students may also choose elective courses from the entire EPFL/UNIL Master program portfolio.

In line with EPFL teaching guidelines, MFE courses consist of weekly lectures and hands-on exercises where students can put into practice what they learned in the theoretical part of the course. Student performance is evaluated via homework assignments (including class presentations where applicable), a midterm examination and a final examination that is in some cases replaced by an individual project.

In their fourth semester, MFE students spend a period of 25 weeks as interns in the finance industry. During this time, students write their Master thesis project under the joint supervision of an internship supervisor from the host company and an MFE faculty member acting as academic supervisor. The company in which students carry out their internship and the subject of the Master project thesis must have been previously approved by MFE section members.

Table 6 (page 28) gives some examples of recent master projects. A complete list of the companies concerned and Master thesis projects completed since the inception of our Master program is provided in Annex 3 (page 42) to this document.
members from the Financial Engineering Section and the admissions decisions made in the section are then discussed at school level to ensure consistent admission procedure across disciplines.

Immediately after its inception, the MFE program witnessed a rapid increase in candidates which, during the last three years, has stabilized at around 180 applications per year. MFE is highly selective and seeks only the best and brightest students, which is why in the past we accepted only around 30% of applications. Unfortunately, the number of female enrolments remains small (around four per year), which is not untypical however for a major with a strong technical focus. In spite of its short lifetime, the MFE enjoys significant international recognition and around 70% of students who started in 2011 were from foreign universities. For detailed admission statistics, see Figures 13 - 17.

The MFE program is directed by Julien Hugonnier. He is assisted by a group of part-time staff members, responsible for the daily office administration of MFE and the oversight and management of the internship program\(^\text{10}\). Two committees, the Steering Committee and the Teaching Committee, provide advice and guidance.

\(^{10}\) Mrs. Carole Bonardi [Internship Manager], Mrs. Françoise Jeannotat [Deputy Head of Section], Mrs. Emanuela Mancianti [Secretary].

As a way of preparing our students for the job market, we strongly encourage them to find internship places. Of course, we actively support them in this endeavor by giving them access to our professional contacts and also by helping with the preparation of a comprehensive candidate dossier. Students have also access to the EPFL internships platform where companies post internship offers: http://internships.epfl.ch/

Since 2010-2011, MFE also offers a Minor in Financial Engineering to all EPFL master students regardless of their field of study. The minor is designed to introduce students to the key concepts and tools of financial engineering through a choice of courses worth 30 ECTS credits. In order to maintain limited class sizes that foster interactions between students and professors, the minor program is restricted to ten participants per academic year.

### TABLE 6: EXAMPLES OF INDUSTRY INTERNSHIP PROJECTS BY MFE STUDENTS

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The changing nature of commodity returns</td>
<td>Banque Cantonale Vaudoise, Lausanne</td>
</tr>
<tr>
<td>Corporate valuation models for mergers and acquisitions</td>
<td>Lazard Investment Bank, Paris</td>
</tr>
<tr>
<td>Factor-based commodity trading strategies</td>
<td>Lombard Odier, Geneva</td>
</tr>
<tr>
<td>Valuation of convertible bond options</td>
<td>Jabe Capital Partners, Geneva</td>
</tr>
<tr>
<td>Predictable trading strategies create profit opportunities for sophisticated investors in the commodity market</td>
<td>Four Elements Capital, Singapore</td>
</tr>
</tbody>
</table>

10.2 STUDENT ADMISSION PROCEDURES AND STATISTICS

MFE has two admission rounds with application deadlines on January 15 and April 15 respectively, though admissions are only accepted for the beginning of a new academic year (mid-September). The idea of the two admission rounds is to give foreign students the opportunity to apply as early as possible to give them sufficient time for the completion of visa procedures. The main criteria used in the selection process are the students’ background and qualifications, and their letters of recommendation and motivation. Each application is reviewed by at least two faculty
Figure 13: MFE student applications, admissions and enrollment numbers for the academic year 2008-09 through 2012-13.

Figure 14: Number of new entering exchange and Minor students. The Minor program is being offered since the academic year 2010-11.

Figure 15: New entering students by gender.

Figure 16: Number of new entering MFE students with an EPFL background. Representation of “sections” over the period AY 2008-09 to AY 2011-12: Mathematics (5 students), Communication Science (4 students), Physics (3 students), Computer Science (2 students), Life Sciences & Technology (1 student), Mechanical Engineering (1 student), Microengineering (1 student).

Figure 17: Country where students completed their qualification before enrolling in MFE (data in this figure represent information reported during the academic year 2011-12).
MFE Steering Committee
Oversees the curriculum and quality of the MFE teaching program.
• Jacques Bourachot, Chief Operating Officer, Crédit Agricole Suisse SA
• Paolo Buzzi, Chief Technology Officer, Swissquote
• Paul Embrechts, Professor of Mathematics, ETH Zurich
• Christopher Finger, Head of Risk Research, RiskMetrics Group
• Helene Harastly, Head of Quantitative Asset Management and Research, Lombard Odier
• Julien Hugonnier, MFE Director, SFI@EPFL
• Paolo Koch, Head of Group Risks & Analytics, Swiss Re
• Olivier Ledoit, Department of Economics, University of Zurich
• Erwan Morellec, SFI@EPFL

MFE Teaching Committee
Assesses the implementation of study plans and evaluations, proposes improvements and adjustments and advises on new trends and developments in teaching.
• MFE Director: Julien Hugonnier
• SFI@EPFL faculty members: Rüdiger Fahlenbrach, Damir Filipovic, Erwan Morellec, Anders Trolle
• MFE student representatives: Hussein Nassereddine and Ali Beydoun, Yan Wang [2nd year]
• PhD student representative: Julien Cujean

10.4 MFE VERSUS THE MASTER SPECIALIZATION “STATISTICS AND FINANCIAL MATHEMATICS” OFFERED BY THE MATHEMATICS SECTION OF THE EPFL SCHOOL OF BASIC SCIENCES

In 2008, the School of Basic Sciences launched a new specialization: “Statistics and financial mathematics” within their Master program in applied mathematics, which offers students the opportunity to take courses related to financial mathematics. However, apart from a course in stochastic calculus, and some courses in statistics, the curriculum includes only one finance-related course, namely “Martingales and Financial Mathematics” (MATH-470), whose stated goal is to “apply the theory of martingales in the context of mathematical finance”.

In our opinion, this specialization is therefore not comparable with our Master program which provides a complete range of finance courses taking students from basic finance and economic concepts to the latest developments in all fields of financial engineering including derivatives, credit risk, fixed income analysis, securitization and high frequency data econometrics. It is important to note that our aim is to teach students not only the models but also the tools to analyze and convey the assumptions behind them and the risks associated with their use.

We think that, while it could be appropriate as an introduction to mathematical finance for prospective PhD students, the Master specialization proposed by the Mathematics Section is not sufficient for students wishing to work in the finance industry, especially given the competition in today’s job market and the challenges currently faced by this industry. In our opinion, a better way for Master students in mathematics to get acquainted with financial engineering would be for them to do a Minor in Financial Engineering. According to EPFL guidelines, they could replace 30 credits of their original Master curriculum with 30 credits taken from a specific list of financial engineering courses [see Figure 18]. Some of these courses are mandatory to ensure that these students possess a certain basic knowledge in finance when they graduate.

Our section currently accepts ten Minor students in each MFE class. To attract a higher number of mathematics students, we are in contact with the director of the Mathematics Section in order to jointly develop a proposal for some specific series of Minor courses in financial engineering that would integrate well into the Master curriculum of these students.

10.5 INITIATIVES TO RECRUIT MORE EPFL STUDENTS FOR THE MFE PROGRAM

As shown in our admissions statistics [see Figure 16, page 29], MFE recruits a large number of its students externally. This is unfortunate because
we believe, and our limited experience confirms this, that students with an EPFL Bachelor do very well both academically during studies and after graduation in terms of placement.

In order to attract more EPFL students we have tried over the last two years to promote the MFE program more effectively on the campus. More specifically,

• We organized two information sessions in March 2011 and March 2012 including a presentation about the program and an informal Q&A session. Both events were successful, with around 40 registered participants at the first session and 90 at the second one who came from almost all sections at EPFL.
• We organized a public advertisement campaign with flyers in the Lausanne-EPFL metro during the 2012 application period.
• We actively participated in all outreach events organized on campus including the EPFL forum, the open days and the information days targeted at high school students potentially interested in attending EPFL.
• A number of articles were published in the campus journal Flash.
• In addition to our efforts, the EPFL Finance Association (see http://tfa.epfl.ch/), created by MFE students in 2011, also organized finance-related activities on campus promoting the MFE master program.

These measures have shown their first positive results with eleven applications from EPFL students in 2011 (compared to only five in 2010) and ten in 2012. We hope these numbers will further increase in the future.

The main difficulty we face in attracting applications from EPFL students is that these students generally have only a very vague idea about what financial engineering actually is and are therefore reluctant to forgo their primary field of studies to join us. The development of introductory courses in economics and finance at Bachelor level could be very helpful in this respect, as it would allow students to gain some understanding of the topic before making their application decisions.
11. DOCTORAL PROGRAM IN FINANCE

The Doctoral Program in Finance at EPFL (EDFI) is targeted towards the pursuit of academic excellence. It aims at providing an intellectual environment and a curriculum comparable to the top PhD programs in Europe and North America. It comprises two phases: a preparatory year of intensive coursework followed by three to four years of advanced studies and research. The course program covers a wide range of subjects including asset pricing, corporate finance, banking, mathematical finance and econometrics.

11.1 FIRST PHASE: FOUNDATION COURSES

The EDFI program starts with a curriculum of courses (foundation courses) taught partly by local faculty members and partly by distinguished visitors from high-ranking European and American universities. The aim of this intensive coursework is to provide all candidates with a broad and complete education covering the basic building blocks and conceptual tools of finance.

During their first year, PhD students take the following courses:

1st Quarter:
• Mathematics for financial economics (2 ECTS)  
  Semyon Malamud, Professor of Finance, SFI@EPFL
• Financial econometrics (2 ECTS)  
  Eric Jondeau, Professor of Finance, UNIL
• Game theory (2 ECTS)  
  Thomas Mariotti, Professor of Finance and Economics, Toulouse School of Economics
• Asset pricing (2 ECTS)  
  Pierre Collin-Dufresne, Professor of Finance, SFI@EPFL

2nd Quarter:
• Theoretical corporate finance (2 ECTS)  
  Erwan Morellec, Professor of Finance, SFI@EPFL
• Financial institutions (2 ECTS)  
  Yuki Sato, Professor of Finance, UNIL
• Empirical asset pricing (2 ECTS)  
  Michael Rockinger, Professor of Finance, UNIL

3rd Quarter:
• International finance (2 ECTS)  
  Ines Chaieb, Professor of Finance, University Geneva (UNIGE) & Harald Hau, Professor of Finance and Economics, UNIGE
• Empirical corporate finance (2 ECTS)  
  Rüdiger Fahlenbrach, Professor of Finance, SFI@EPFL & and Norman Schürhoff, Professor of Finance, UNIL
• Dynamic asset pricing (2 ECTS)  
  Julien Hugonnier, Professor of Finance, SFI@EPFL

Each core course is followed by an examination. The faculty member responsible attributes the final grade for the course based on project assessments, class participation and graded interim homework.

Student admission to the second phase (thesis writing) is determined on the basis of the grades obtained for the core courses as well as the successful completion of a summer research paper (Candidacy Exam). The summer paper should be the first draft of a “publishable” research paper and should contain original theoretical or empirical work developed by students on their own (with minimal guidance by a supervisor). At the Léman-Center, 50 to 60% of students are admitted to the second phase of the PhD program.

11.2 SECOND PHASE: PHD RESEARCH

Upon admission to the second phase of the program, doctoral students select a thesis topic and chose their thesis supervisor. In this second phase, all PhD students are required to follow the annual PhD workshop at the “Gerzensee Study Center”, the faculty’s research seminars in finance, and the internal Brown Bag Lunch Seminar. In addition, NCCR FINRISK project partners offer a wide variety of specialized courses. The goal of these advanced courses is to provide students with the opportunity to acquire the specialized skills that are most relevant to their thesis work. The selection of the appropriate specialized courses will be made jointly by the student and their thesis supervisor.
The completion of the second phase entails a successful final defense of the doctoral thesis.

11.3 STUDENT SUPPORT

Our doctoral students receive support via various means.

- **Scholarships for 1st year students**
  PhD students receive scholarships of CHF 30'000.- from the Swiss Finance Institute during their first year as the course program requires full-time commitment to studies and students are not permitted to work or receive any external funding during this period. The Swiss Finance Institute budgets an average of ten scholarships per year for the Léman-Center.

- **Conference reimbursement / travel budget**
  SFI@EPFL encourages PhD students to actively attend professional association meetings and covers the costs for doctoral students presenting a paper at a conference approved by the student’s thesis supervisor and the Head of the EDFI program.

- **Workshop series**
  In collaboration with other Swiss universities, SFI@EPFL has launched a new workshop series to further enhance community building among Swiss PhD students in finance. These one-day workshops will take place once a year, in September or February/March, alternately at one of the three Swiss Finance Institute Centers - Léman, Zurich and Lugano. Each workshop is organized by local PhD students.

- **Academic job market support**
  A workshop to prepare advanced PhD students for the academic job market is under development. The main idea of this workshop, which will be directed by Pierre Collin-Dufresne, Head of the EDFI program, is to provide comprehensive information regarding the various aspects of applying for academic jobs in finance, conduct mock interviews (during the workshop and in local centers) with constructive feedback, and provide help with preparing a successful application package.

- **Advanced doctoral grants**
  Swiss Finance Institute PhD students with academic ambitions are encouraged to spend an extended period abroad at a leading research institute under the pre-arranged supervision of a scholar interested in the student’s research. For this purpose, the Swiss Finance Institute has launched a Program of Advanced Doctoral Grants. PhD candidates interested in this program submit a funding request to the SNSF and send a copy of their request to the Swiss Finance Institute. If the SNSF will not support the student’s request, however, but the Swiss Finance Institute ad-hoc committee deems it worthy, the Swiss Finance Institute will guarantee financial support of CHF 40'000.-, allowing the student to go ahead and plan the visit.

11.4 STUDENT PLACEMENT RECORD

Since its inception, the Swiss Finance Institute PhD Program for the Léman Area has been very successful at placing students in leading organizations in academia and industry.

Recent academic placements include:

- Lukas M. Schmid, Assistant Professor of Finance, Duke University: The Fuqua School of Business (2008)
- Emilio Osambella, Assistant Professor of Finance, Tepper School of Business, Carnegie Mellon University (2009)
- Boris Nikolov, Assistant Professor of Finance, Simon School of Business, University of Rochester (2009)
- Cecilia Bustamante, Assistant Professor of Finance, London School of Economics (2009)
- Philip Valta, Assistant Professor of Finance, HEC Paris (2010)
- Rodolfo Prieto, Assistant Professor of Finance, Boston University School of Management (2010)
- Elise Payzan le Nestour, Assistant Professor of Finance, Australian School of Business (2010)
- Daniel Andrei, Assistant Professor of Finance, Anderson Graduate School of Management, University of California Los Angeles (2012).
11.5 PROGRAM STRUCTURE

The EDFI program is part of the Swiss Finance Institute PhD program in finance, which is a centrally coordinated program directed by Erwan Morellec and operating on multiple campuses. The EPFL based program is directed by Pierre Collin-Dufresne who is assisted by a part-time secretary responsible for the daily office administration\textsuperscript{11}. A Program Committee provides strategic advice and guidance. It is composed of Pierre Collin-Dufresne, Rüdiger Fahlenbrach, Damir Filipovic, and Erwan Morellec.

12. STRATEGIC PRIORITIES

SFI@EPFL has set itself the following goals in the area of teaching and research:

A. Develop curriculum at Bachelor level

Offering courses in basic finance at the Bachelor level, e.g. via offering elective modules within selected EPFL Bachelor programs, would have the dual advantage of improving the visibility of SFI@EPFL on the campus as well as sparking an early interest in financial research among EPFL students which, again, would hopefully lead to more of them enrolling in the SFI@EPFL Master program.

The following courses would certainly be of great interest and benefit to a broad cross-section of the student body and provide them with a fundamental understanding of financial markets and the basic tools and skills needed to analyze and understand the economic environments within which they will pursue their careers:

- **Finance**: e.g. evaluation of investment projects, technologies, patents and/or firms, the identification and management of risks, etc.
- **Macro-finance**: e.g. role of central banks and other financial institutions, exchange rates and interest rates, role of money, etc.
- **Microeconomics**: e.g. game theory, industrial organization, intertemporal choices, etc.

B. Have more Master and PhD courses taught by in-house faculty

To ensure the consistently high quality of SFI@EPFL Master and PhD programs, as well as coherence between the Institute’s teaching and research activities, we endeavor to offer as many courses as possible taught by SFI@EPFL faculty members.

In this context, there is a particular need for faculty members with expertise to teach the following courses:

- **Quantitative Risk Management** (MFE Master Program)
  Lecturer vacancy: Course formerly taught by Valérie Chavez who moved to UNIL
- **Design of Market-Based Solutions to Allocation Problems / Game Theory** (MFE Master Program)
  Lecturer vacancy: Course formerly taught by Peter Bossaerts who returned to Caltech
- **Financial Econometrics** (MFE Master Program)
  Course currently taught by Eric Jondeau (UNIL)
- **Game Theory** (EDFI PhD Program)
  Course currently taught by Thomas Mariotti (Toulouse School of Economics)

C. Expand research focus

Our research to date focuses mainly on asset pricing, corporate finance and financial engineering, which can be explained by the fact that recent recruitments were mainly motivated by the need to staff the Master in Financial Engineering program. We would now like to expand our research in several areas that would allow SFI@EPFL to develop new, or strengthen existing, relations with other EPFL researchers and other areas that are markedly different from those already covered.

\textsuperscript{11}Mrs. Valérie Maillard
Our research responds to actual needs and issues and we endeavor to disseminate new knowledge and findings to practitioners and the public at large. To this end, SFI@EPFL is involved in different outreach activities with political and economic impact:

### Public Press Articles

As shown in Table 7, SFI@EPFL research and events receive broad coverage in the international media.

#### TABLE 7: SFI@EPFL Media Coverage 2010–2012

<table>
<thead>
<tr>
<th>DATE</th>
<th>MEDIA</th>
<th>COUNTRY</th>
<th>SFI@EPFL</th>
<th>TITLE OF THE ARTICLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.11.2012</td>
<td>L’Agefi</td>
<td>CH</td>
<td>Swissquote Conference</td>
<td>“Mesures très hétérogènes”</td>
</tr>
<tr>
<td>09.11.2012</td>
<td>L’Agefi</td>
<td>CH</td>
<td>Swissquote Conference</td>
<td>“La difficile redéfinition des risques systémiques”</td>
</tr>
<tr>
<td>17.10.2012</td>
<td>Bilan</td>
<td>CH</td>
<td>Chaire Swissquote</td>
<td>“Universités et Sponsors, les liaisons dangereuses”</td>
</tr>
<tr>
<td>24.09.2012</td>
<td>Financial Times</td>
<td>USA</td>
<td>L. Mancini</td>
<td>“Carrying liquidity as far as you can”</td>
</tr>
<tr>
<td>05.09.2012</td>
<td>Le Temps</td>
<td>CH</td>
<td>E. Morellec</td>
<td>“Gestion des risques dans les banques: les leçons de la crise”</td>
</tr>
<tr>
<td>03.09.2012</td>
<td>VoxEU</td>
<td>UK</td>
<td>L. Mancini</td>
<td>“Foreign exchange market not liquid you may think”</td>
</tr>
<tr>
<td>21.06.2012</td>
<td>L’Hebdo</td>
<td>CH</td>
<td>MFE</td>
<td>“La Crise ne stoppe pas l’embauche de jeunes talents”</td>
</tr>
<tr>
<td>03.06.2012</td>
<td>Sonntag</td>
<td>CH</td>
<td>Swissquote</td>
<td>“Private Gelder auch für Schweizer Hochschulen”</td>
</tr>
<tr>
<td>28.03.2012</td>
<td>Finanz und Wirtschaft</td>
<td>CH</td>
<td>D. Filipovic &amp; A. Trolle</td>
<td>“Risk barometer of the interbank market”</td>
</tr>
<tr>
<td>14.03.2012</td>
<td>Bilan</td>
<td>CH</td>
<td>Swissquote</td>
<td>“Les clients ne veulent plus avoir leur argent camouflé dans un réduit alpin”</td>
</tr>
<tr>
<td>06.02.2012</td>
<td>L’Agefi</td>
<td>CH</td>
<td>MFE /Swissquote</td>
<td>“R&amp;D dans le e-private banking”</td>
</tr>
<tr>
<td>03.02.2012</td>
<td>Slash Gear</td>
<td>USA</td>
<td>R. Fahlenbrach</td>
<td>“Facebook founder’s iron-grip IPO could sink or save site”</td>
</tr>
<tr>
<td>02.02.2012</td>
<td>CNBC.com</td>
<td>USA</td>
<td>R. Fahlenbrach</td>
<td>“Should Facebook Investors Worry About Lack of Control?”</td>
</tr>
<tr>
<td>26.01.2012</td>
<td>L’Hebdo</td>
<td>CH</td>
<td>P. Bossaerts</td>
<td>“La crise a fait disparaître les références de placements sans risque”</td>
</tr>
<tr>
<td>24.10.2011</td>
<td>VDX</td>
<td>UK</td>
<td>L. Lambertini</td>
<td>A “bridge to somewhere”: Building a comprehensive strategy for resolving the Eurozone debt crisis</td>
</tr>
<tr>
<td>Date</td>
<td>Source</td>
<td>Country</td>
<td>Author/Institution</td>
<td>Text</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------</td>
<td>---------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>21.10.2011</td>
<td>L’Agefi</td>
<td>CH</td>
<td>SFI@EPFL</td>
<td>“Event Swissquote: un système mathématique pour prédire l’avenir des marchés actions”</td>
</tr>
<tr>
<td>13.10.2011</td>
<td>L’Hebdo</td>
<td>CH</td>
<td>P. Collin-Dufresne</td>
<td>“Crise financière: La bombe à retardement des CDS”</td>
</tr>
<tr>
<td>10.10.2011</td>
<td>L’Agefi</td>
<td>CH</td>
<td>SFI@EPFL</td>
<td>“Financement: l’innovation favorisée en période de surchauffe”</td>
</tr>
<tr>
<td>12.06.2011</td>
<td>Frankfurter Allgemeine</td>
<td>D</td>
<td>R. Fahlenbach</td>
<td>“Die Banken lernen nicht”</td>
</tr>
<tr>
<td>10.06.2011</td>
<td>L’Agefi</td>
<td>CH</td>
<td>R. Fahlenbach</td>
<td>“Les banques ne bénéficient pas de l’expérience des crises”</td>
</tr>
<tr>
<td>06.05.2011</td>
<td>Le Temps</td>
<td>CH</td>
<td>E. Morelec</td>
<td>“L’utilisation des CoCos offre des avantages majeurs”</td>
</tr>
<tr>
<td>21.04.2011</td>
<td>Lfm Radio</td>
<td>CH</td>
<td>SFI@EPFL</td>
<td>“Swissquote &amp; EPFL day on quantitative finance”</td>
</tr>
<tr>
<td>20.04.2011</td>
<td>L’Agefi</td>
<td>CH</td>
<td>SFI@EPFL</td>
<td>“Leçons de profileurs d’investissements Premier Day”</td>
</tr>
<tr>
<td>20.04.2011</td>
<td>Le Temps</td>
<td>CH</td>
<td>E. Morelec</td>
<td>“L’enseignement de la finance en pleine mutation”</td>
</tr>
<tr>
<td>29.03.2011</td>
<td>L’Agefi</td>
<td>CH</td>
<td>SFI@EPFL</td>
<td>“Cycle de seminaires en finance”</td>
</tr>
<tr>
<td>02.02.2011</td>
<td>Bilan</td>
<td>CH</td>
<td>P. Bossaerts</td>
<td>“les 20 suisses qui font l’innovation”</td>
</tr>
<tr>
<td>09.12.2010</td>
<td>L’Hebdo</td>
<td>CH</td>
<td>R. Fahlenbrach</td>
<td>“Des PDG gros actionnaires n’ont pas évité la faillite de leur banque”</td>
</tr>
<tr>
<td>17.11.2010</td>
<td>Bilan</td>
<td>CH</td>
<td>R. Fahlenbrach</td>
<td>Deux chercheurs primés par le SFI</td>
</tr>
<tr>
<td>06.11.2010</td>
<td>Le Temps</td>
<td>CH</td>
<td>R. Fahlenbrach</td>
<td>“Etudes suisses récompensées”</td>
</tr>
<tr>
<td>29.10.2010</td>
<td>L’Agefi</td>
<td>CH</td>
<td>Swissquote conference</td>
<td>“Danthine en faveur du maintien d’une politique accommodante”</td>
</tr>
<tr>
<td>09.10.2010</td>
<td>Tribune de Genève</td>
<td>CH</td>
<td>P. Bossaerts</td>
<td>“Wall Street” suscite un buzz dans les rangs universitaires à Genève</td>
</tr>
<tr>
<td>29.10.2010</td>
<td>Le Nouvelliste</td>
<td>CH</td>
<td>MFE</td>
<td>“Prestigieux Master of science MSc en ingénierie financière”</td>
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<tr>
<td>01.09.2010</td>
<td>24 Heures</td>
<td>CH</td>
<td>CULF</td>
<td>“Lausanne affirme sa place dans la formation financière”</td>
</tr>
<tr>
<td>09.07.2010</td>
<td>24 Heures</td>
<td>CH</td>
<td>MFE</td>
<td>“Le Credit Suisse crée 250 emplois pour faire de l’informatique à l’EPFL</td>
</tr>
<tr>
<td>20.05.2010</td>
<td>Handelsblatt</td>
<td>D</td>
<td>R. Fahlenbrach</td>
<td>“Warum Millionengehälter überrmütig machen”</td>
</tr>
</tbody>
</table>
Events
Since the creation of the Swissquote Chair in Quantitative Finance, once a year SFI@EPFL organizes the “Swissquote Conference” addressing “hot topics” in finance [see Table 8]. These conferences are well attended by numerous participants representing various backgrounds including academia, the finance industry, economy and media.

Equally succesfull was the “Day on Quantitative Finance - When Academics Meet Practitioners” organized at EPFL on 19 April 2011.

Swiss Finance Institute outreach initiatives
Moreover, SFI@EPFL is also actively involved in outreach initiatives coordinated by the Swiss Finance Institute such as the recently created Knowledge Center aimed at promoting the flow of information between academia and industry. In the context of this Center, Swiss Finance Institute faculty members act as expert advisers to practitioners and industry representatives. Other related activities include the creation of a database with topical articles and presentations given at events, the organization of seminars and workshops for practitioners and regular circulation of press releases.

**TABLE 8: SWISSQUOTE CONFERENCES ORGANIZED BY THE SWISSQUOTE CHAIR IN QUANTITATIVE FINANCE AND SFI@EPFL**

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>VENUE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity and Systemic Risk</td>
<td>EPFL</td>
<td>November 8th &amp; 9th, 2012</td>
</tr>
<tr>
<td>Asset Management</td>
<td>EPFL</td>
<td>October 20th &amp; 21st, 2011</td>
</tr>
<tr>
<td>Interest Rate and Credit Risk</td>
<td>EPFL</td>
<td>October, 28th &amp; 29th, 2010</td>
</tr>
</tbody>
</table>
Since its inception, SFI@EPFL has had considerable success in attracting third party funding. In 2010 and 2011, external sources contributed 27% and 35% of the Institute’s overall budget [see Table 9]. A level similar to that of 2011 is expected for 2012.

SFI@EPFL’s external sources include sponsored research chairs and grants awarded on a competitive basis [see Figure 20]. Our institute is currently home to four sponsored chairs, three of which were created thanks to contributions from the Swiss Finance Institute and the fourth funded by Swissquote.

The Swiss Finance Institute chairs provide funds for the salaries of three tenure track assistant professors, Loriano Mancini, Semyon Malamud and Anders Trolle. The chairs are limited to a period of three years, which can be extended up to a maximum of eight years depending on whether the beneficiaries make sufficient academic progress. The chairs are also restricted to the rank of assistant professor. As soon as any of the three junior professors is promoted to associate professor, the chair will expire regardless of whether the maximum period of eight years has been reached.

The fourth chair at SFI@EPFL is the Swissquote Chair in Quantitative Finance, which is, as the name indicates, financed by Swissquote. This chair provides funding for the salary of the chairholder, Damir Filipovic, as well as for general expenses related to the chair’s research program over a period of ten years.

In addition to attracting four sponsored chairs, SFI@EPFL has a very successful track record in fundraising through competing for grants. Current grants include support from SNSF (individual projects, Sinergia, NCCR), the Swiss Finance Institute, SCOR and FWF Austrian Science Fund (FWF) allowing us to cover the salaries of 50% of our PhD students and 60% of our postdoctoral students with third party funds. Furthermore, this year Damir Filipovic has been awarded the prestigious ERC Starting Grant for his project on Polynomial Term Structure Models. This grant has a value of CHF 1.2 million and will support a PhD student and post-doctoral student for five years as from December 2012.

The chairs of Loriano Mancini and Anders Trolle, initiated in 2009, have just been renewed. The chair of Semyon Malamud, initiated in 2010, will undergo evaluation next year.

Figure 20: SFI@EPFL’s third-party revenues in 2012

![Figure 20: SFI@EPFL’s third-party revenues in 2012](image)

TABLE 9: SFI@EPFL REVENUES IN 2010, 2011 AND 2012

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgetary funds</td>
<td>CHF 3’370’927</td>
<td>CHF 3’726’670</td>
<td>CHF 3’996’875</td>
</tr>
<tr>
<td>Third-party revenues</td>
<td>CHF 1’233’900</td>
<td>CHF 1’974’811</td>
<td>CHF 2’349’841</td>
</tr>
<tr>
<td>TOTAL</td>
<td>CHF 4’604’827</td>
<td>CHF 5’701’481</td>
<td>CHF 6’346’716</td>
</tr>
</tbody>
</table>
## ANNEX 1. FINANCE RESEARCH SEMINARS AT SFIGEPFL, SCHEDULE FOR 2012 - 2013 (SPONSORED BY UNIGESTION)

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.06.2013</td>
<td>Michael WEISBACH</td>
<td>The Ohio State University</td>
</tr>
<tr>
<td>31.05.2013</td>
<td>Gregory DUFFEE</td>
<td>Johns Hopkins University</td>
</tr>
<tr>
<td>24.05.2013</td>
<td>Jose SCHEINKMAN</td>
<td>Princeton University</td>
</tr>
<tr>
<td>17.05.2013</td>
<td>Andrea EISFELDT</td>
<td>UCLA, Anderson School of Management</td>
</tr>
<tr>
<td>26.04.2013</td>
<td>Michael JOHANNES</td>
<td>Columbia University, Graduate School of Business</td>
</tr>
<tr>
<td>19.04.2013</td>
<td>Lars A. LOCHSTOER</td>
<td>Columbia University, Graduate School of Business</td>
</tr>
<tr>
<td>12.04.2013</td>
<td>Margarita TSOUTSOURA</td>
<td>The University of Chicago, Booth School of Business</td>
</tr>
<tr>
<td>15.03.2013</td>
<td>Darren KISGEN</td>
<td>Boston College</td>
</tr>
<tr>
<td>08.03.2013</td>
<td>Andrew KAROLYI</td>
<td>Cornell University, Johnson Graduate School of Management</td>
</tr>
<tr>
<td>01.03.2013</td>
<td>Christopher HENNESSY</td>
<td>London Business School</td>
</tr>
<tr>
<td>22.02.2013</td>
<td>Nathalie MOYEN</td>
<td>University of Colorado, Leeds School of Business</td>
</tr>
<tr>
<td>15.02.2013</td>
<td>Daniel PARAVISINI</td>
<td>London School of Economics</td>
</tr>
<tr>
<td>08.02.2013</td>
<td>Miguel FERREIRA</td>
<td>Nova School of Business and Economics, Lisbon</td>
</tr>
<tr>
<td>01.02.2013</td>
<td>Sergey TSYPLAKOV</td>
<td>Darla Moore School of Business, University of South Carolina</td>
</tr>
<tr>
<td>25.01.2013</td>
<td>Paolo GHIRARDATO</td>
<td>University of Torino</td>
</tr>
<tr>
<td>18.01.2013</td>
<td>Evgeny LYANDRES</td>
<td>Boston University</td>
</tr>
<tr>
<td>14.12.2012</td>
<td>Is the rise of secondary buyouts good news for investors?</td>
<td>François DEGEORGE, University of Lugano, Swiss Finance Institute</td>
</tr>
<tr>
<td>07.12.2012</td>
<td>Simple variance swaps</td>
<td>Ian MARTIN, Stanford Graduate School of Business</td>
</tr>
<tr>
<td>23.11.2012</td>
<td>Good Monitoring, Bad Monitoring</td>
<td>Yaniv GRINSTEIN, Cornell University, Johnson Graduate School of Management</td>
</tr>
<tr>
<td>16.11.2012</td>
<td>Precision of Ratings</td>
<td>Anastasia KARTASHEVA, Bank for International Settlements</td>
</tr>
<tr>
<td>02.11.2012</td>
<td>Optimal Transportation and Robust Hedging of Derivatives</td>
<td>Nizar TOUZI, Ecole Polytechnique, Centre de Mathématiques Appliquées</td>
</tr>
<tr>
<td>12.10.2012</td>
<td>Idiosyncratic Risk and the Manager</td>
<td>Brent GLOVER, Carnegie Mellon University, Tepper School of Business</td>
</tr>
<tr>
<td>05.10.2012</td>
<td>Corporate Default Prediction and the RMI Corporate Vulnerability Index</td>
<td>Jin-Chuan DUAN, National University of Singapore, Risk Management Institute</td>
</tr>
<tr>
<td>Date</td>
<td>Title</td>
<td>Speaker/Institution</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>28.09.2012</td>
<td>Investment Horizons and Asset Prices Under Asymmetric Information</td>
<td>Elias ALBAGLI, University of Southern California, Marshall School of Business</td>
</tr>
<tr>
<td>21.09.2012</td>
<td>Measuring Corporate Default Risk Premia: 2001-2010</td>
<td>Darrell DUFFIE, Stanford University, Graduate School of Business</td>
</tr>
</tbody>
</table>

**ANNEX 2. BROWN BAG SEMINARS AT SFI@EPFL**

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.07.2012</td>
<td>From Gossip to Voting</td>
<td>Patrick THIRAN, Computer Science Department, EPFL</td>
</tr>
<tr>
<td>22.05.2012</td>
<td>Parallel Tournaments</td>
<td>Muruvvet BUYUKBOYACI, California Institute of Technology</td>
</tr>
<tr>
<td>15.05.2012</td>
<td>Supply-Demand Symmetry of Market Impact Models</td>
<td>Carlo ACERBI, MSCI, Analytics Research</td>
</tr>
<tr>
<td>03.04.2012</td>
<td>Bank Capital Regulation with an Opportunistic Rating Agency</td>
<td>Matthias EFING, SFI, UNIGE</td>
</tr>
<tr>
<td>02.04.2012</td>
<td>Can Spanned Term Structure Factors Drive Stochastic Volatility</td>
<td>Jens CHRISTENSEN, Senior Economist at the Federal Reserve Bank of San Francisco</td>
</tr>
<tr>
<td>06.12.2011</td>
<td>Information Percolation Driving Volatility</td>
<td>Daniel ANDREI, UNIL</td>
</tr>
<tr>
<td>27.07.2011</td>
<td>Damien CHALLE, UNIL &amp; UniFR</td>
<td></td>
</tr>
<tr>
<td>30.06.2011</td>
<td>Discretely Sampled Variance Swaps Versus their Continuous Approximations</td>
<td>Martin LARSSON, Cornell University</td>
</tr>
<tr>
<td>14.06.2011</td>
<td>Alexei ZHDANOV, UNIL, Internal Brown Bag</td>
<td></td>
</tr>
<tr>
<td>09.06.2011</td>
<td>Agostino CAPPONI, Purdue University</td>
<td></td>
</tr>
<tr>
<td>24.05.2011</td>
<td>The WACC Fallacy: The Real Effects of Using a unique Discount Rate</td>
<td>Philipp KRUEGER, Geneva Finance Research Institute</td>
</tr>
<tr>
<td>03.05.2011</td>
<td>Can Equity Volatility Explain the Global Loan Pricing Puzzle</td>
<td>Pinar UYSAL, EPFL</td>
</tr>
<tr>
<td>Date</td>
<td>Title</td>
<td>Presenter</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>07.04.2011</td>
<td>Hamed AMINI, Ecole Normale Supérieure de Paris</td>
<td></td>
</tr>
<tr>
<td>05.04.2011</td>
<td>Pareto Optimal Allocations for Probabilistic Sophisticated Variational Preferences on L1</td>
<td>Claudia RAVANELLI, EPFL, Internal Brown Bag</td>
</tr>
<tr>
<td>22.03.2011</td>
<td>Credit Default Swaps and Systemic Risk</td>
<td>Andreea MINCA, Paris 6 University INRIA</td>
</tr>
<tr>
<td>05.03.2011</td>
<td>Higher-Order Infinitesimal Robustness</td>
<td>Davide LA VECCHIA, University of Lugano</td>
</tr>
<tr>
<td>08.02.2011</td>
<td>Eric JONDEAU, UNIL, Internal Brown Bag</td>
<td></td>
</tr>
<tr>
<td>25.01.2011</td>
<td>This Time is the Same: Using the Events of 1998 to Explain Bank Returns During the Financial Crisis</td>
<td>Ruediger FAHLENBRACH, EPFL, Internal Brown Bag</td>
</tr>
<tr>
<td>18.01.2011</td>
<td>Credit Spreads, Factors and Noise</td>
<td>Marcin JASKOWSKI, Vienna Graduate School of Finance</td>
</tr>
<tr>
<td>11.01.2011</td>
<td>Information Percolation in Centralized Markets</td>
<td>Julien CUJEAN, EPFL</td>
</tr>
</tbody>
</table>
## ANNEX 3. OVERVIEW OF INDUSTRY INTERNSHIP PROJECTS CONDUCTED BY MFE STUDENTS

### CLASS 2010

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant Proportion Portfolio Insurance (CPPI)</td>
<td>Goldman Sachs, London</td>
</tr>
<tr>
<td>Princing Trees and Local Volatility</td>
<td>Credit Suisse, Zurich</td>
</tr>
<tr>
<td>Portfolio Stress Testing Models</td>
<td>FinLab, Geneva</td>
</tr>
<tr>
<td>Analysis of Leading Indicators for Commodities Positioning and Portfolio Optimization</td>
<td>LGT Capital Management, Pfäffikon</td>
</tr>
<tr>
<td>Essays on Asset Pricing with Asymmetric Information</td>
<td>Ernst &amp; Young, Geneva</td>
</tr>
<tr>
<td>Reflective Barrier in the Swiss Exchange Rate - Partial Equilibrium Model</td>
<td>Banque Rothschild, Geneva</td>
</tr>
<tr>
<td>Applications of Malliavin Calculus to the Pricing and Hedging of Derivatives</td>
<td>Credit Suisse, Zurich</td>
</tr>
<tr>
<td>Fundamentally Weighted Benchmarks for Corporate bond Portfolios</td>
<td>Lombard Odier, Geneva</td>
</tr>
<tr>
<td>Variance-Covariance Forecast Model Pooling</td>
<td>Lombard Odier, Geneva</td>
</tr>
<tr>
<td>The Development of Automated Trading Algorithms in Forex Market on the Event-Based Intrinsic Time</td>
<td>Olsen, Zurich</td>
</tr>
<tr>
<td>Pricing Cross Commodity Options in Energy Market</td>
<td>Academic thesis</td>
</tr>
<tr>
<td>Risk Measures in Private Equity and Implications for Portfolio Management</td>
<td>Unigestion, Geneva</td>
</tr>
<tr>
<td>Quantitative Portfolio Management</td>
<td>Lombard Odier, Geneva</td>
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<tr>
<td>Portfolio Management</td>
<td>GlobalView Investments</td>
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</table>

### CLASS 2009

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>COMPANY</th>
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<tbody>
<tr>
<td>Convertible Bonds Valuation</td>
<td>Swissquote, Gland</td>
</tr>
<tr>
<td>Liquidity Comparison Between Different Commodity Markets: A Framework for Optimal Trading Strategies</td>
<td>4Elements, Singapore</td>
</tr>
<tr>
<td>Tailoring Risks to Returns in Structured Products</td>
<td>Deutsche Bank, Geneva</td>
</tr>
<tr>
<td>Quantitative Portfolio Management - An Application to the Swiss Equity Market</td>
<td>ZKB, Zurich</td>
</tr>
<tr>
<td>Business Valuation Techniques: An Application to the Luxury Goods Industry</td>
<td>Helvea, Geneva</td>
</tr>
<tr>
<td>Interest Rate Modelling in Insurance Risk Management</td>
<td>Axa Winterthur</td>
</tr>
<tr>
<td>Brazil and its Relationship with Modern Portfolio Theory</td>
<td>JPMorgan, Geneva</td>
</tr>
<tr>
<td>Understanding and Pricing of Autocallable Structured Products: Numerical valuation through Monte Carlo Methods Using Local Volatility and Stochastic Volatility Models</td>
<td>HSBC, Paris</td>
</tr>
<tr>
<td>An Exchange Rate Assessment</td>
<td>Lombard Odier, Geneva</td>
</tr>
<tr>
<td>Variance Reduction Methods for the Evaluation of Barrier Reverse Convertible</td>
<td>Julius Baer, Zurich</td>
</tr>
<tr>
<td>Unvealing the Risks of Cliquet Options: Implications for Pricing and Hedging</td>
<td>Goldman Sachs, London</td>
</tr>
</tbody>
</table>
Performance Analysis of Alternative Strategies in Commodities Industry 4Elements, Singapore
Portfolio Optimization: Theories and Implementations for Hedge Funds FinLab SA, Geneva
Yield Curve in the Presence of Sentiment Risk and Excess Volatility Academic thesis
Statistical Arbitrage on the VIX Academic thesis
Naphta and Lpg Analysis Trafigura, Geneva
Financial Consulting for the Los Angeles Community College District’s Renewable Energy Program Sanli, Pastore & Hill, Los Angeles

**CLASS 2008**

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Changing Nature of Commodity Returns</td>
<td>BCV, Lausanne</td>
</tr>
<tr>
<td>Corporate Finance: From Theory to the Real World in the Context of M&amp;As</td>
<td>Lazard Frères, Paris</td>
</tr>
<tr>
<td>Developing Signals and Strategies for Commodity Investments</td>
<td>Lombard Odier, Geneva</td>
</tr>
<tr>
<td>Can Predictable Trading Strategies of Commodity Market Participants Create Profit Opportunities for Sophisticated Investors?</td>
<td>4Elements, Singapore</td>
</tr>
<tr>
<td>Modeling the Implied Volatility Surface for the Pricing of European Options</td>
<td>Swissquote, Gland</td>
</tr>
<tr>
<td>Estimation of Correlation Based on High Frequency Data</td>
<td>Academic thesis</td>
</tr>
<tr>
<td>Equilibrium Analysis of Portfolio Insurance and its Effects on Option Prices</td>
<td>Academic thesis</td>
</tr>
<tr>
<td>The Pricing and Hedging of ASCOTS</td>
<td>Jabre Capital, Geneva</td>
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</tbody>
</table>
PART B:
ACTIVITY REPORT 2007 - 2012
SWISS FINANCE INSTITUTE @ EPFL
### DEGREES AND EMPLOYMENT HISTORY

<table>
<thead>
<tr>
<th>Year</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>1990 – 1994</td>
<td>Assistant Professor of Finance, California Institute of Technology</td>
</tr>
<tr>
<td>1987 – 1990</td>
<td>Assistant Professor of Finance, Carnegie Mellon University</td>
</tr>
<tr>
<td>1986</td>
<td>Ph.D. in Management, University of California</td>
</tr>
<tr>
<td>1998 – 1993</td>
<td>Associate Professor of Finance (with tenure), California Institute of Technology (on leave, 1994 – 95)</td>
</tr>
<tr>
<td>1994 – 1996</td>
<td>Research Professor [Center for Economic Research] and Professor of Investments Analysis (Department of Economics) at Tilburg University</td>
</tr>
<tr>
<td>1999 – present</td>
<td>Research Fellow, Centre for Economic Policy Research (CEPR), London</td>
</tr>
<tr>
<td>June 1999</td>
<td>Leif Johansen Distinguished Visiting Scholar, Norwegian School of Management, Oslo</td>
</tr>
<tr>
<td>1998 – present</td>
<td>Professor of Finance, California Institute of Technology (on leave, 2007 – 2009)</td>
</tr>
<tr>
<td>March 2006</td>
<td>Fellow, Center of Excellence, Kobe University</td>
</tr>
<tr>
<td>April 2004</td>
<td>Guest Professor, University of Zurich</td>
</tr>
<tr>
<td>2003 – present</td>
<td>William D. Hacker Professor of Economics and Management, California Institute of Technology</td>
</tr>
<tr>
<td>2006 – 2007</td>
<td>Swiss Finance Institute Visiting Professor, HEC, University of Lausanne (on sabbatical from Caltech)</td>
</tr>
<tr>
<td>2006 – present</td>
<td>Member of the faculty of the Computation and Neural Systems Program, California Institute of Technology</td>
</tr>
<tr>
<td>2012 – present</td>
<td>Fellow, Center for Engineering Social and Economic Institutions, University of Zurich</td>
</tr>
<tr>
<td>2012 – 2015</td>
<td>Honorary Professorial Fellow, University of Melbourne</td>
</tr>
<tr>
<td>1990 – 1994</td>
<td>Assistant Professor of Finance, California Institute of Technology</td>
</tr>
<tr>
<td>1987 – 1990</td>
<td>Assistant Professor of Finance, Carnegie Mellon University</td>
</tr>
<tr>
<td>1986</td>
<td>Ph.D. in Management, University of California</td>
</tr>
</tbody>
</table>
RESEARCH INTERESTS

Peter Bossaerts’ research and publications have encompassed many areas of theoretical, empirical and experimental finance, and related fields such as econometrics, game theory and general equilibrium theory. He has been a pioneer in developing experimental methods for the study of asset pricing theory in the laboratory. Likewise, he has been a pioneer in the neuroscience of decision making under uncertainty. His work borrows tools from many relevant fields, such as decision theory, general equilibrium theory, game theory, cognitive psychology, and decision neuroscience. Earlier, Bossaerts’ work focused on the econometrics of tests of asset pricing theory, studying in particular how to accommodate learning in traditional testing.

KEY WORDS

Asset pricing theory, experimental finance, decision neuroscience, neuroeconomics, financial econometrics, game theory.

PUBLICATIONS


BOOK CHAPTERS AND BOOKS


FORMER PHD STUDENTS


• Elise Payzan-Le Nestour, Essays on Individual Decision Making under Uncertainty, EPFL, 2009

AWARDS

INVITED TALKS [selected examples]

2011  “The Human Brain Behind Financial Skill”: Swiss Finance Institute Annual Meeting, Switzerland
2011  “Neurobiological Foundations of Decision Making under Uncertainty”: Finance Down Under: Building on the Best from the Cellars of Finance, University of Melbourne, Australia
2010  “Market Bubbles and Crashes as an Expression of Tension between Social and Individual Rationality: Theory and Experiments”: WISE International Workshop on Experimental Economics and Finance, Xiamen University, China
2010  “Experiments on Market Dynamics”: Experimental Finance 2010 Conference, University of Gothenburg, Sweden
2009  “Potential Policy Implications of Neuroeconomics”: The Social Brain, symposium organized by the Royal Academy of Arts, Manufacture and Commerce (RSA) and the Wellcome Trust, London, UK

GRANTS

2011 – 2013 National Science Foundation
Project title: Market Bubbles As Expression of Social Norms: Experiments
Budget: USD 350’000

2008 – 2012 SystemsX.ch (Swiss National Science Foundation)
Project title: Neural Correlates of Collective Decision Making: From Molecules to Minds
Budget: CHF 250’000

2008 – 2013 NCCR FINRISK (Swiss National Science Foundation)
Project title: Behavioural Finance
Budget: CHF 160’000

TEACHING ACTIVITIES

EPFL
• Design of market-based solutions to allocation problems [MFE, 2 ECTS, 2012]
• Design of market-based solutions to allocation problems [MFE, 4 ECTS, 2010 – 2011]
• Game theoretic foundations of market microstructure theory [MFE, 6 ECTS, 2009]
• Neuroeconomics [MFE, 5 ECTS, 2009]
• Introductory finance [MFE, 6 ECTS, 2008 – 2009]
• Experimental finance [PhD Program in Finance, 2008]
PROFESSIONAL SERVICES AND ACTIVITIES

EPFL

• Chair, Search Committee, Swiss Finance Institute (six) professorial positions in finance, EPFL, 2007 – 2009
• Co-Interim-Director (with Christopher Tucci and Ralf Seifert), CDM, EPFL, 2008
• Program Chair (and Developer), Master in Financial Engineering, EPFL, 2007 – 2008

Others

President, Society for Neuroeconomics, 2011 – 2012
**PIERRE COLLIN-DUFRESNE**

**Present position:** Full Professor of Finance  
**Address:** École polytechnique fédérale de Lausanne  
**Swiss Finance Institute at EPFL**  
**Quartier UNIL-Dorigny, Extranef 209**  
**CH-1015 Lausanne**  
**Phone:** +41 (0)21 693 01 36  
**Email:** pierre.collin-dufresne@epfl.ch

### DEGREES AND EMPLOYMENT HISTORY

<table>
<thead>
<tr>
<th>Year</th>
<th>Position and Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011–present</td>
<td>Professor of Finance, EPFL</td>
</tr>
<tr>
<td>2008–present</td>
<td>Carson Family Professor, Graduate School of Business, Columbia University</td>
</tr>
<tr>
<td>2005–2008</td>
<td>Goldman Sachs Asset Management: Senior Portfolio Manager, Credit and Fixed Income Strategies, Quantitative Strategies Group</td>
</tr>
<tr>
<td>2004–2007</td>
<td>Associate Professor, Haas School of Business, UC Berkeley</td>
</tr>
<tr>
<td>2003–2004</td>
<td>Associate Professor with Indefinite Tenure, GSIA, Carnegie Mellon University</td>
</tr>
<tr>
<td>1998–2002</td>
<td>Assistant Professor, GSIA, Carnegie Mellon University</td>
</tr>
<tr>
<td>1998</td>
<td>Ph.D. [Finance], HEC School of Management, Jouy-en-Josas, France</td>
</tr>
<tr>
<td>1992</td>
<td>D.E.A. (M.A.) in Mathematical Economics, EHESS, Paris, France</td>
</tr>
<tr>
<td>1991</td>
<td>B.S. Degree in Business, HEC School of Management</td>
</tr>
</tbody>
</table>

### RESEARCH INTERESTS

Pierre’s research focuses on dynamic asset pricing with an emphasis on credit and fixed income markets. He has investigated credit derivatives markets, both empirically and theoretically, proposing and testing models for pricing Credit Default Swaps and Collateralized Debt Obligations. Recently, he has worked on models of credit contagion with an emphasis on the European sovereign crisis. His recent research also focuses on how to measure market liquidity, and in particular, how to construct measures of price impact that capture the adverse selection risk among traders.

### KEY WORDS

Term structure, fixed income, credit risk, credit default swaps, securitization, collateralized debt obligation, credit contagion, sovereign risk, liquidity measures, adverse selection.

### CURRENT PHD STUDENTS

- Vincent Bogousslavsky
- Christopher Trevisan
PUBLICATIONS


FORMER PHD STUDENTS

• Damla Gunes [2012] (Thesis Committee) [Columbia, Operations Research]
• Matthias Juettner [2012] (Thesis Committee, Outside Reader) [ETH, Zurich]
• Yiqun (Ethan) Mou [2010] (Thesis Committee Chair) [Columbia, Finance] [Merrill Lynch]
• Vyacheslav Fos [2010] (Thesis Committee) [Columbia, Finance] [UIUC]
• Francisco Barillas [2010] (Outside Reader, Thesis Committee) [NYU, Finance] [Emory University]
• Andreas Stathopoulos [2008] (Thesis Committee) [Columbia, Finance] [USC]
• Yael Eisenenthal [2008] (Chair, Thesis Committee) [Columbia, Finance] [GSAM]

AWARDS

2010  WFA CME Group Award for the best paper in derivatives markets for “On the Relative Pricing of Long Maturity SP 500 Index Options and CDX Tranche”

2008  Finalist (nominated) for the Smith-Breeden Prize of the American Finance Association for “Identification of Maximal Affine Term Structure Models”
INVITED TALKS [selected examples]

2013  
Winter School in Mathematical Finance, Korteweg-de Vries Institute for Mathematics, University of Amsterdam

2012  
Keynote lectures (2) on “Asset Allocation and Long Run Endowment Risk”, Netspar (Amsterdam), UNIL-Institute of Banking and Finance Conference on “Long Term Asset Management” [Lausanne], Centre for Asset Pricing Research at BI Norwegian School of Business [Oslo], NBIM Financial Research Conference Roundtable on ”Time-Varying Expected Returns and Correlation” [Oslo], NCCR-FINRIS Workshop on Asset Pricing [Getzensee], HEC [Paris], INSEAD [Paris], Copenhagen Business School [Copenhagen], IESE-ESADE [Barcelona], BI Norwegian School of Business [Oslo], University of Zurich [Zurich], European Summer Symposium in Financial Markets (organizer of “Focus session on Credit Risk,” Gertzensee)

2011  
First Annual Roundtable on “Treasury Markets and Debt Management”, US Treasury (NY), Kepos Capital (NY), European Central Bank (Frankfurt)

2010  

2009  

2008  

2007  
Federal Reserve Board Credit Risk Conference [DC], New York Quantitative Finance Seminar [NY], Rady Risk Management Conference [UCSD], Global Derivatives & Risk Conference [Paris], OS Quantitative Finance Conference, [Lugano], 5th Gutmann Center Symposium on “Credit Risk and Management of Fixed Income Portfolios” (Vienna Univ), 3rd Vienna Symposium on Asset Management “Global Bond Portfolios” (Vienna)
TEACHING ACTIVITIES

- Theory of financial economics [PhD]
- Credit derivatives (MFE)
- Advanced derivatives [MBA]
- Introductory finance [Undergraduate]
- Continuous time finance [PhD]
- Advanced debt markets [Master in Computational Finance]
- Term structure theory and credit derivatives [Master in Computational Finance]
- Futures, options and other derivatives [MBA]
- Applied stochastic calculus for finance [MFE]

PROFESSIONAL SERVICES AND ACTIVITIES

Consulting assignments

- Expert Witness Consultant - Cornerstone Research (2012 – present)

Affiliation and Committees

- NBER Research Associate [since 2004]
- Moody’s Academic Research and Advisory Committee (2003 - 2007)
- European Financial Management Association Program Committee (2012)
- Center for Computational Finance, Carnegie Mellon University
- Inquire Europe Academic Advisory Board (2009 – present)
- Member of The Executive Council of the Bachelier Finance Society (2009 – present)
- Society for Financial Econometrics (SOFIE) program committee (2010 – 2011)
- Practitioner Director, Financial Management Association (2011 – present)
- Netspar Research Fellow (2011 – present)
- Scientific Committee of the Institut de la Finance Structurée et des Instruments Dérivés de Montréal (2011 – present)
- Program Committee of the Arizona State University Sonoran Winter Conference (2012)

Conference Discussant

2012 AFA [Chicago], ES [Chicago], Adam Smith Conference (Oxford), Center for Asset Pricing Research at BI Norwegian School of Business (Oslo)

2011 Swissquote Conference on Asset Management (Lausanne), Credit Risk conference on Stability and Risk Control in Banking, Insurance and Financial Markets (Venice)

2010 AFA [Atlanta]

2009 Central Bank Liquidity Tools (NY-FED), NBER [Stanford]

2008 WFA [Hawaii]

2007 NBER-AP [Chicago], Moody’s Credit Risk Conference [Copenhagen], NBER-AP [Boston]
Session Chair
2007 – 2011 AFA, WFA

Referee


Books: Prentice Hall, Pearson, Wiley

Projects: Assessor for Research Project Funded by the Program for Collaborative Research Initiatives (CRSHC / SSHRC, Ottawa Canada), Reviewer for NBER Research Grants, Member of the Final Review Group of the LBS Masters in Finance (London, Jan 2012)

Editorial Roles

- Associate Editor, Finance and Stochastics [2006 – 2011]
- Co-Editor, Finance and Stochastics [2012 – present]
- Associate Editor, Management Science [2008 – 2011]
- Associate Editor, International Journal of Central Banking [2009 – present]
- Associate Editor, European Financial Management [2008 – present]
- Associate Editor, The Review of Finance [2010 – present]

Academic Advisory Board

- Moody’s-KMV [2007]
- Kepos Capital [2010 – present]
- Sancus Capital [2010 – present]
RÜDIGER FAHLENBRACH

Present position  Associate Professor (with tenure) of Finance
Address  École polytechnique fédérale de Lausanne
         Swiss Finance Institute at EPFL
         Quartier UNIL-Dorigny, Extranef 211
         CH-1015 Lausanne
Phone  +41 (0)21 693 00 98
Email  ruediger.fahlenbrach@epfl.ch

DEGREES AND EMPLOYMENT HISTORY

2012 – present  Professor of Finance [Associate Professor with tenure], EPFL
2012  Visiting Professor at Vienna Graduate School of Finance (Apr 2012), Copenhagen Business School [Jul 2012]
2011  Visiting Professor at University of New South Wales, Sydney [Mar 2011 – Apr 2011]
2009 – 2012  Professor of Finance [Assistant Professor], EPFL
2004 – 2009  Assistant Professor, Fisher College of Business, Ohio State University
2005  Ph.D. in Finance, The Wharton School, University of Pennsylvania
2001  M.A. in Finance, The Wharton School, University of Pennsylvania
1999  Diplom-Kaufmann, University of Mannheim
1999  Diplomé de l’ESSEC, ESSEC, Cergy

RESEARCH INTEREST

Ruediger Fahlenbrach has research interests in empirical corporate finance, in particular corporate governance. His research is concerned with the resolution of corporate governance problems arising from the separation of ownership and control in the modern public corporation. He uses empirical methods to study how different governance mechanisms may help resolve principal-agents problems. Ruediger has studied whether different ownership structures, in particular concentrated ownership by both outside investors and insiders can help align the interests of managers and shareholders. He has recently contributed to the emerging literature on understanding the causes of the financial crisis of 2007 and 2008. This research has been reported in many large-circulation newspapers such as The New York Times, The Wall Street Journal, The Economist, Le Temps, NZZ, Handelsblatt, Forbes Magazine, USA Today, and Fortune Magazine.

KEYWORDS

Corporate governance, corporate finance, principal-agent problems, large shareholders, executive compensation
CURRENT PHD STUDENTS

- Hoang Ngoc Giang
- Christoph Herpfer
- Cornelius Schmidt [UNIL]
- Yalda Sigrist

PUBLICATIONS

FORMER PHD STUDENTS

- Jan-Peter Kulak (supervisor), EPFL, 2012. On the job market
- Philip Valta, EPFL, 2010. First placement: HEC Paris (Assistant Professor)
- Rose C. Liao, Ohio State University – Fisher College of Business, 2010. First placement: Rutgers Business School (Assistant Professor)
- Jérôme Taillard, Ohio State University – Fisher College of Business, 2010. First placement: Boston College (Assistant Professor)
- Jeff Jiewei Yu, Ohio State University – Fisher College of Business, 2007. First placement: M.I.T. Sloan School of Management (Assistant Professor)
- Angie Low, Ohio State University – Fisher College of Business, 2007. First placement: Nanyang Technological University, Singapore (Assistant Professor)
- Carrie Pan, Ohio State University – Fisher College of Business, 2007. First placement: Santa Clara University (Assistant Professor)

AWARDS

<table>
<thead>
<tr>
<th>Year</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Swiss Finance Institute Senior Chair</td>
</tr>
<tr>
<td>2012</td>
<td>Distinguished Referee Award, Review of Financial Studies</td>
</tr>
<tr>
<td>2011</td>
<td>Best Teacher Award, EPFL Master of Financial Engineering</td>
</tr>
<tr>
<td>2010</td>
<td>Swiss Finance Institute / Banque Privée Espírito Santo Prize</td>
</tr>
<tr>
<td>2009–2012</td>
<td>Outstanding Teaching in a Major, Fisher College of Business Undergraduate Program, Ohio State University</td>
</tr>
</tbody>
</table>

INVITED TALKS (selected examples)

<table>
<thead>
<tr>
<th>Year</th>
<th>Invited Talks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Western Finance Association; London Business School; Vienna University; Manchester Business School; Copenhagen Business School; Humboldt University Berlin; University of Lugano</td>
</tr>
<tr>
<td>2011</td>
<td>Keynote speaker, Executive Compensation after the Financial Crisis International Conference at Copenhagen Business School; HKUST Finance Symposium on Corporate Finance; Aalto University Helsinki; University Bocconi; Università Cattolica; Milan; IESE Barcelona; European Central Bank; Frankfurt School of Finance and Management; University of Hamburg; Vienna University; University of Sydney; University of Technology, Sydney; Singapore Management University; Nanyang Technological University; Chinese University of Hong Kong; University of New South Wales; Queensland University</td>
</tr>
<tr>
<td>2010</td>
<td>Geneva University; ISCTE/NOVA Lisbon; University of Zurich; University of Bern; University of Alabama; University of Neuchâtel; HEC Paris; University of Karlsruhe</td>
</tr>
<tr>
<td>2007–2012</td>
<td>American Finance Association</td>
</tr>
</tbody>
</table>
GRANTS

2012 – 2015  Swiss Finance Institute
Budget: CHF 165’000

2011 – 2013  Swiss National Science Foundation
Project title: Private Equity Sponsors and the Structure of CEO Compensation and Employment Contracts
Budget: CHF 150’000

2011 – 2012  Inquire Europe
Project title: Dual Management of Retail and Institutional Portfolios
Budget: CHF 25’000

TEACHING ACTIVITIES

EPFL

• Introduction to finance [MFE, 6 ECTS]
• Venture capital and private equity [MFE, 4 ECTS]
• Empirical corporate finance, jointly with Norman Schuerhoff,
• University of Lausanne (PhD Program in Finance, 4 ECTS)

PROFESSIONAL SERVICES AND ACTIVITIES

EPFL

• Database management SFI@EPFL
• Ph.D. program selection committee
• Teaching committee SFI@EPFL

Others

• Associate Editor, Financial Management
• Member WFA, AFA
• Program Committee EFA, WFA (2008 – present)

Referee

Present position | Full Professor, Swissquote Chair in Quantitative Finance
---|---
Address | École polytechnique fédérale de Lausanne
Swiss Finance Institute at EPFL
Quartier UNIL-Dorigny, Extranef 218
CH-1015 Lausanne
Phone | +41 (0)21 693 01 08
Email | damir.filipovic@epfl.ch

### DEGREES AND EMPLOYMENT HISTORY

<table>
<thead>
<tr>
<th>Year</th>
<th>Position and Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 – present</td>
<td>Professor of Finance, Swissquote Chair in Quantitative Finance, EPFL</td>
</tr>
<tr>
<td>2007 – 2009</td>
<td>Full Professor, Faculty of Business, Economics and Statistics, University of Vienna</td>
</tr>
<tr>
<td>2004 – 2007</td>
<td>Full Professor, Chair of Financial and Insurance Mathematics, Department of Mathematics, University of Munich</td>
</tr>
<tr>
<td>December 2006</td>
<td>Visiting Professor, Faculty of Business, University of Technology Sydney</td>
</tr>
<tr>
<td>2003 – 2004</td>
<td>Scientific Consultant for Solvency Testing and Risk Analysis in Insurance, Swiss Federal Office of Private Insurance (BPVI), and Senior Researcher, Department of Mathematics, ETH Zurich</td>
</tr>
<tr>
<td>2002 – 2003</td>
<td>Tenure-Track Assistant Professor, Department of Operations Research and Financial Engineering, Princeton University</td>
</tr>
<tr>
<td>2000</td>
<td>Ph.D. in Mathematics, ETH Zurich</td>
</tr>
<tr>
<td>1995</td>
<td>Diploma in Mathematics, ETH Zurich</td>
</tr>
</tbody>
</table>

### RESEARCH INTEREST

My research focus is in mathematics and applications in finance and risk management. In particular, I am elaborating on stochastic models for the term structure of interest rates, credit risk, and volatility risk. In this context I study more fundamental issues in stochastic analysis, such as the theory of polynomial preserving or affine Markov processes. I am also interested in the empirical counterpart where we develop and test new efficient model estimation methods. On the quantitative risk management side, I am working on insurance solvency related topics, such as scenario aggregation or model estimation for the Swiss Solvency Test and Solvency II. On a more general level I study systemic and liquidity risks on networks of financial institutions.
KEY WORDS

Mathematical finance, stochastic analysis, interest rate models, credit risk models, volatility risk models, quantitative risk management, solvency, systemic risk.

CURRENT POSTDOCS

- Dr. Hamed Amini
- Dr. Klaas Schulze

CURRENT PHD STUDENTS

- Mathieu Cambou
- Emmanuel Leclercq

PUBLICATIONS

AWARDS

2010  Swiss Finance Institute Senior Chair
2010  AXA-EDGIE Prize, World Risk and Insurance Economics Congress, Singapore

INVITED TALKS (selected examples)

2012  10th German Probability and Statistics Days, Mainz
2011  7th Seminar on Stochastic Analysis, Random Fields and Applications, Ascona
2010  6th World Congress of the Bachelier Finance Society, Toronto
2009  Quantitative Methods in Finance Conference, Sydney
2008  12th International Congress on Insurance: Mathematics and Economics, Dalian, China
2008  6th Seminar on Stochastic Analysis, Random Fields and Applications, Ascona

GRANTS

2012 – 2017  ERC Starting Grant
Project title: Polynomial Term Structure Models
Budget: EUR 995’155

2011 – 2014  SCOR Actuarial Fellowship for Doctoral Students
Budget: CHF 289’500

2009 – 2013  NCCR FINRISK (Swiss National Science Foundation)
Project title: Dynamic Asset Pricing [Principal Investigator]
Budget: CHF 600’000

Budget: EUR 262’682

2007 – 2012  WWTF (Vienna Science and Technology Fund)
Science Chair in “Mathematics and Economics”
Budget: EUR 1’500’000
TEACHING ACTIVITIES

EPFL

• Fixed income analysis (MFE, 2011)
• Stochastic calculus II (MFE, 2010–2012)
• Credit risk and fixed income analysis (MFE, 2010)

WU Executive Academy

Advanced financial mathematics and structured derivatives: interest rate derivatives (with A. Pelsser, 2008)

Vienna Graduate School of Finance

Interest rate models (2009, 2008)

PROFESSIONAL SERVICES AND ACTIVITIES

Conference committees

• Scientific Committee, 8th World Congress of the Bachelier Finance Society, Brussels, 2014.
• Organizer, Invited Paper Session on Stochastics in Finance, 29th European Meeting of Statisticians, Budapest, 2013.
• Organizer, Swissquote Conference on Liquidity and Systemic Risk, Lausanne, 2012.
• Scientific Advisory Committee, 7th World Congress of the Bachelier Finance Society, Sydney, 2012.
• Organizer, Swissquote Conference on Asset Management, Lausanne, 2011.
• Organizer, Princeton-Lausanne Workshop on Quantitative Finance, Lausanne, 2011.
• Organizer, Swissquote Conference on Interest Rate and Credit Risk, Lausanne, 2010.

Others

• Head of SFI@EPFL, Jan 2011 – present.
• Director of the Swiss Finance Institute PhD program at EPFL, Aug 2010 to Dec 2011.
• Member of the Council of the Bachelier Finance Society, since 2010.
• Selection Committee Member for SCOR Fellowship Switzerland, since 2010.
• Faculty Member of the Vienna Graduate School of Finance, Oct 2007 to Dec 2009.
• Committee Member for SCOR’s Actuarial Prize Germany, since 2008.
• Research Fellow, Netspar (Network for Studies on Pensions, Aging and Retirement), Apr 2008 to Dec 2011.
• Member of the Board of Directors of Swiss Life Holding Ltd, since May 2011.
JULIEN HUGONNIER

DEGREES AND EMPLOYMENT HISTORY

2009 – present  Associate Professor of Finance, École Polytechnique Fédérale de Lausanne (EPFL)
2004 – 2009  Assistant Professor of Finance, University of Lausanne
2002 – 2004  Assistant Professor of Finance, HEC Montréal
2000 – 2002  Postdoctoral Associate in Mathematics, Carnegie Mellon University
2001  Ph.D. in Finance, Université Paris 1 and Essec
1998  M.Sc. in Economics and Finance, Université Paris 1
1996  B.A. in Economics and Finance, Université Paris 1

RESEARCH INTEREST

Julien Hugonnier has research interests in the areas of asset pricing, asset allocation, general equilibrium theory, mathematical finance and probability theory. His most recent research examines the impact of portfolio constraints on equilibrium prices, the effect of search frictions on corporate policy choices and the relations between financial and health-related choices. His research has been published in a variety of top tier academic journals including The Review of Economic Studies, Econometrica, The Journal of Financial Economics, Mathematical Finance and The Annals of Applied Probability. He is a member of the board of various journals including Mathematical Finance and Mathematics & Financial Economics and serves as the head the Master in Financial Engineering at EPFL.

KEY WORDS

Asset pricing under frictions, general equilibrium, search theory, mathematical finance, probability theory, decisions under uncertainty.

CURRENT PHD STUDENTS

- Julien Cujean
- Giuliano Curatola
- Michael Hasler
**PUBLICATIONS**


**BOOK CHAPTERS AND BOOKS**


**FORMER PHD STUDENTS**

Rodolfo Prieto, Essays on Equilibrium Asset Pricing, EPFL, 2010. First placement: Boston University (Assistant Professor)

**AWARDS**

- 09/2012 Swiss Finance Institute Senior Chair
- 2007–2012 Swiss Finance Institute Junior Chair
- 2009–2010 Meritorious Service Award, Operations research

**INVITED TALKS [selected examples]**

- 2012 Toulouse School of Economics
- 2012 Oxford Man Institute
- 2010 Bachelier seminar (IH Paris)
- 2008 MFI Oberwolfach “Stochastic analysis in Finance and Insurance”
- 2008 ETH Zurich
GRANTS

2009 – 2013  NCCR FINRISK (Swiss National Science Foundation)
Project title: Dynamic Asset Pricing [Co-Principal Investigator]
Budget: CHF 600’000

TEACHING ACTIVITIES

EPFL

• Derivatives [MFE, 2009 – present]
• Dynamic asset pricing (SFI PhD Program in Finance) 2009 – present
• Fixed income and credit risk [MFE, 2009]

PROFESSIONAL SERVICES AND ACTIVITIES

Editorial positions

• Associate editor for Mathematical Finance
• Associate editor for Mathematics and Financial Economics
• Associate editor for Operations Research [2008-2011]

External examiner in PhD committees (since 2008)

• Gorazd Brumen, University of Zurich, 2009
• Alexey Medvedev, University of Geneva, 2008
• Emilio Osombela, University of Lausanne, 2008

EPFL

• Head of the Financial Engineering section (MFE), 2009 – present
• Steering committee, Master in Financial Engineering, 2009 – present
• Teaching committee, Master in Financial Engineering, 2009 – present
• Member of the Commission des Directeurs de Section, 2009 – present

Referee

RESEARCH INTERESTS

My research interests focus on modeling financial frictions in dynamic stochastic general equilibrium (DSGE) models and analyzing their consequences on macroeconomic variables and implications for policymaking. I am currently introducing endogenous default on mortgages, heterogeneous (prime versus subprime) borrowers, and alternative mortgage products in a model with housing to analyze an increase in subprime lending and evaluate alternative policy responses. In another project I am introducing financial intermediaries with a portfolio choice (between equity and deposits) in a DSGE model to study the macroeconomic consequences of bank capital requirements along the lines of Basel III. I am working on the interaction between monetary and fiscal policies, an area of research I have already contributed to with my earlier work. My current focus is on the interaction between a committed central bank and a discretionary fiscal policymaker when taxes are distortionary. On the empirical side, I am studying fiscal adjustments in U.S. States to evaluate the output effect of fiscal consolidations in monetary unions.

KEYWORDS

Financial frictions, housing market, monetary and fiscal policy, macroeconomics, exchange rate, international finance.
CURRENT POSTDOCS

- Dr. Chiara Forlati
- Dr. Punnoose Jacob
- Dr. Pinar Uysal

CURRENT PHD STUDENTS

- Abhik Mukherjee
- Victoria Nuguer

PUBLICATIONS


FORMER PHD STUDENTS

- Laura Alfaro [Supervisor], UCLA. First placement: Harvard Business School.
- Mariano Pando [Supervisor], UCLA. First placement: Key Point Consulting.
- Fernanda Llussa [Supervisor], UCLA. First placement: Universidade Nova de Lisboa.
- Fabio Kanczuck [Co-supervisor], UCLA. First placement: Universidade de São Paulo.
- Rajesh Singh [Co-supervisor], UCLA. First placement: University of Iowa.
- Andrea Raffo [Co-supervisor], UCLA. First placement: Federal Reserve Bank of Kansas.
- Albert Lee [Co-supervisor], UCLA. First placement: KMPG Peat Marwick.
- Ja hyun Nahm [Co-supervisor], UCLA. First placement: Kookmin University.
- Kyongchul Kim [Co-supervisor], UCLA. First placement: Analytic Investors.
- Ari Aisen [Co-supervisor], UCLA. First placement: International Monetary Fund.
- James Dixon [Co-supervisor], UCLA. First placement: University of Ottawa.
- Giovanni Veronese [Co-supervisor], UCLA. First placement: Bank of Italy.
- Sabina Pogorelec [Co-supervisor], Boston College. First placement: European Central Bank.
- Tatiana Mihailovschi-Muntean [Co-supervisor], Boston College. First placement: Trent University.
- Emmanuel Larkey [Co-supervisor], Boston College. First placement: California State University, Fullerton.
- Yoto Yotov [Co-supervisor], Boston College.
INVITED TALKS (selected examples)

2012
- European Economic Association, Malaga, Spain
- Financial and Macroeconomic Stability: Challenges Ahead, Istanbul, Turkey
- Infiniti Conference on International Finance, Trinity College Dublin, Ireland
- Canadian Economic Association Conference, Calgary, Canada

2011
- 10th Workshop on Macroeconomic Dynamics, University of Bologna, Italy
- Rethinking Economic Policies in a Landscape of Heterogeneous Agents conference, Catholic University, Milan, Italy
- The Interaction between Monetary Policy and Financial Stability, Norges Bank, Oslo, Norway

2010
- Bank of Italy and Bank of France Conference on The Future of Monetary Policy, Ente Einaudi
- SNB Research Conference on Monetary Policy after the Financial Crisis, Swiss National Bank
- IJCB Conference on Monetary Policy Lessons from the Global Crisis, the Bank of Japan
- Monetary and Fiscal Policy for Macroeconomic Stability, University of Pavia
- Workshop on Heterogeneous Nations and Globalized Financial Markets, Central Bank of Poland

GRANTS

2011 – 2014
- Sinergia (Swiss National Science Foundation)
  Project title: The Macroeconomics of Financial Crises
  Total budget: CHF 1’200’000

2006 – 2007
- The Lowe Institute of Political Economy Research Grant
  Total budget: USD 30’000

TEACHING ACTIVITIES

EPFL
- Global business environment (MFE & MTE, 4 ECTS)
- Macro-finance (MFE, 6 ECTS)
**PROFESSIONAL SERVICES AND ACTIVITIES**

**EPFL**
- EPFL Library Committee, CDM representative, 2008 – present
- Search Committee for Professor of Public Finance and Social Security Economics (ETHZ), 2012
- Search Committee for Professor of Macroeconomics (UNIL), 2010, 2011, 2012
- CDM Director Search Committee, 2008 – 2011
- Search Committee for Professor of Finance (EPFL), 2008 – 2009
- Search Committee for Professor of Financial Systems (ETHZ), 2010

**External examiner in PhD committees (since 2008)**
- Benjamin Jonen, University of Zurich, 2012
- Maja Ganarin, University of Lausanne, 2012

**Editorial positions**
- Associate Editor, The B.E. Journal of Macroeconomics, 2012 – present

**Consulting positions**

**Program committees**
- European Economic Association 2012 Meeting
- Infiniti Conference on International Finance, 2012

**Italian Ministry of Research, University and Education (MIUR)**

**Referee**

**Others**
- Member of the Global Agenda Council on Fiscal Crises, World Economic Forum, 2010 – present
DEGREES AND EMPLOYMENT HISTORY

2009 – present  Professor of Finance (Tenure Track Assistant Professor), EPFL
2009  Visiting Assistant Professor, McCombs School of Business, University of Texas, Austin (Jan 2009 – Jun 2009)
2007 – 2009  Assistant Professor of Quantitative Risk Management, ETH Zurich
2006  Ph.D. in Mathematics, ETH Zurich
2001  Diploma in Mathematics, Donetsk National University, Donetsk, Ukraine

RESEARCH INTEREST

Semyon Malamud has research interest in financial economics, both in asset pricing and in corporate finance. His research papers have addressed important questions in different areas of financial economics. He has published papers on such diverse topics as equilibrium asset pricing, optimal security design, asymmetric information and over-the-counter markets. Most of these papers have been published in the leading academic journals such as Econometrica, Journal of Financial Economics and Journal of Economic Theory.

KEYWORDS

Equilibrium asset pricing, market microstructure, asymmetric information, optimal contracting and security design, market imperfections and liquidity, dynamic capital structure, game theory.

CURRENT PHD STUDENTS

- Evgeny Petrov
- Rémy Fraz
PUBLICATIONS

Publications in financial economics


Publications in mathematical finance

FORMER PHD STUDENTS


AWARDS

2010 – present
Swiss Finance Institute Junior Chair

INVITED TALKS (selected examples)

2012 Risk Management and Financial Markets, Toulouse School of Economics
2012 European Finance Association, Copenhagen
2012 IDC Herzliya, Israel, July 2012. Summer Conference and Invited research visitor
2012 Western Finance Association, Las Vegas
2012 European Winter Finance Conference, Davos
2011 American Economic Association Meeting, Denver, Colorado
2010 Tel Aviv Finance Conference, Tel Aviv, Israel
2010 World Congress of the Econometric Society, Shanghai

GRANTS

2009 – 2013 NCCR FINRISK (Swiss National Science Foundation)
Project title: Dynamic Asset Pricing (Co-Principal Investigator)
Budget: CHF 600'000

2009 – 2013 NCCR FINRISK (Swiss National Science Foundation)
Project title: Mathematical Methods in Financial Risk Management (Co-Principal Investigator)
Budget: CHF 600'000

2008 – 2010 ProDoc (Swiss National Science Foundation)
Project title: Utility Maximization in Incomplete Markets (Co-Principal Investigator)
Budget: CHF 200’000
TEACHING ACTIVITIES

EPFL

• Derivatives (MFE, 4 ECTS, 2010)
• Stochastic Calculus (MFE, 4 ECTS, 2010–present)
• Mathematics for Financial Economics
  (PhD Program in Finance, 4 ECTS, 2009–present)

Others

Summer school: Dynamic Capital Structure Models, Dublin City University (2012)

PROFESSIONAL SERVICES AND ACTIVITIES

• Co-editor, Mathematics and Financial Economics
• Member of derivatives workgroup, Swiss Federal Social Security Funds
• Member of the Program Committee, The Rothschild Caesarea Center Annual Conference
• Organizer of a joint UNIL-EPFL reading group “Macroeconomics with Financial Frictions”
• Member of the UNIL recruiting committee
• Member of Ph.D. committee for Daniel Andrei (University of Lausanne), Elyse Payzan-LeNestour (EPFL), Rodolfo Prieto (EPFL), Huaxia Rui (McCombs School of Business), Pierre Ruther (Université Paris-Dauphine)
LORIANO MANCINI

Present position | Assistant Professor (tenure track), Professor of Finance
Address | École polytechnique fédérrale de Lausanne
Swiss Finance Institute at EPFL
Quartier UNIL-Dorigny, Extranef 217
CH-1015 Lausanne
Phone | +41 (0)21 693 01 07
Email | loriano.mancini@epfl.ch

DEGREES AND EMPLOYMENT HISTORY

2009–present  | Professor of Finance (Tenure Track Assistant Professor), EPFL
2007–2009  | Assistant Professor of Finance, Swiss Banking Institute, University of Zurich
2005–2007  | Senior Researcher, Swiss Banking Institute, University of Zurich
2004  | Ph.D. in Economics, University of Lugano
1999  | M.A. in Economics (cum laude), University of Perugia, Italy

RESEARCH INTEREST

Loriano Mancini has research interest in financial econometrics, both in theoretical and empirical aspects. His research papers have investigated various relevant issues, such as liquidity in the foreign exchange markets; term structure dynamics of variance, equity and jump risk premiums; optimal allocations using variance swap contracts; impact of sentiment, optimism and overconfidence on asset prices; connection between liquidity and systemic risk. His research has appeared in leading finance and econometric journals, such as the Journal of Finance, Review of Financial Studies, Journal of the American Statistical Association, and Journal of Econometrics.

KEYWORDS

Liquidity, volatility, sentiment, systemic risk.

CURRENT PHD STUDENTS

Emmanuel Leclercq
PUBLICATIONS


BOOK CHAPTERS AND BOOKS


FORMER PHD STUDENTS

- Jan Wrampelmeyer, Ambiguity, Illiquidity, and Hedge Funds: An Analysis of Recent Developments and Current Research Topics in Post-Crisis Financial Markets, University of Zurich, 2011. First placement 2011: University of St. Gallen [Assistant Professor]

AWARDS

2012 Swiss Finance Institute Junior Chair

INVITED TALKS [selected examples]

2012 First Financial Econometrics Workshop, Zurich, Switzerland
2011 Princeton-Lausanne Workshop, Lausanne, Switzerland
2011 Seminar at Tinbergen Institute, Amsterdam, Netherlands
2010 Swiss Finance Institute 5th Annual Meetings, Zurich, Switzerland
2010 ICORS, Prague, Czech Republic
2010 Statistic and Finance, Evry, France
GRANTS

2009 – 2013  NCCR FINRISK (Swiss National Science Foundation)
Project title: Dynamic Asset Pricing (Co-Principal Investigator)
Budget: CHF 600'000

2008 – 2011  ProDoc (Swiss National Science Foundation)
Project title: Financial Econometrics (jointly with Marc Paolella, University of Zurich)
Budget: CHF 309'450

2007 – 2009  Swiss National Science Foundation
Project title: Nonparametric Model Risk Detection (jointly with Rajna Gibson, University of Geneva)
Budget: CHF 120'000

TEACHING ACTIVITIES

EPFL

Econometrics (MFE, 6 ECTS)
Advanced topics in financial econometrics (MFE, 4 ECTS)

PROFESSIONAL SERVICES AND ACTIVITIES

EPFL

PhD thesis committee at EPFL (Anjali Nursimulu)
Steering committee MFE
Supervision of eleven MFE master thesis projects (2009 – 2012)
Institute representative in the CDM IT & Communication Committee

University of Zurich

PhD thesis committee at University of Zurich (Matteo Bonato, Remo Crameri)
Coordinator of the “Quantitative Finance” project in the framework of the university research priority program “Finance and Financial Markets” (2007-2009)

Referee

ERWAN
MORELLEC

<table>
<thead>
<tr>
<th>Present position</th>
<th>Full Professor, Professor of Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>École polytechnique fédérale de Lausanne</td>
</tr>
<tr>
<td></td>
<td>Swiss Finance Institute at EPFL</td>
</tr>
<tr>
<td></td>
<td>Quartier UNIL-Dorigny, Extranef 210</td>
</tr>
<tr>
<td></td>
<td>CH-1015 Lausanne</td>
</tr>
<tr>
<td>Phone</td>
<td>+41 (0)21 693 01 16</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:erwan.morellec@epfl.ch">erwan.morellec@epfl.ch</a></td>
</tr>
</tbody>
</table>

DEGREES AND EMPLOYMENT HISTORY

2008 – present  Professor of Finance, EPFL
2003 – 2008  Professor of Finance, University of Lausanne (UNIL)
1999 – 2003  Assistant Professor of Finance, William E. Simon Graduate School of Business
            Administration, University of Rochester, New York
1996 – 1999  Lecturer, HEC Paris; EDHEC Nice; ESA Beirut
1999  Ph.D. in Finance, Summa Cum Laude, HEC Paris
1994  M.A. in Finance, Sorbonne University

RESEARCH INTEREST

Erwan Morellec has research interest in corporate finance and asset pricing. His research papers have addressed central questions in corporate finance – such as the effects of corporate governance, of bankruptcy procedures, or of economic conditions on corporate investment, financing, and risk management decisions – within consistent frameworks for multi-period valuation. As such, his papers have contributed to unify asset pricing theory with corporate finance and characterized the effects of the macroeconomic environment of the legal environment on economic growth and default risk, and ultimately on welfare. He has contributed to both the theoretical and the empirical literature and has published extensively in the leading academic journals in finance, such as the Journal of Finance, the Journal of Financial Economics, and the Review of Financial Studies.

KEYWORDS

Corporate finance, corporate governance, risk management, liquidity management, investment decisions under uncertainty, financing decisions.

CURRENT PHD STUDENTS

• Stefano Colonnello
• Hoang Ngoc Giang
• Yalda Sigrist
• Francesca Zucchi
PUBLICATIONS


BOOK CHAPTERS AND BOOKS

Real Options and Risk Aversion, J. Hugonnier and E. Morellec. In: A. Bensoussan et al. (eds.), Ambiguity, Real Options, Credit Risk and Insurance, IOS Press, 2012

FORMER PHD STUDENTS

- Jan Peter Kulak [Co-Supervisor], Essays in Financial Economics, EPFL, 2012. On the job market
- Philip Valta [Supervisor], Corporate Finance, Asset Returns, and Credit Risk, EPFL, 2010. First placement: HEC Paris (Assistant Professor)
- Maria Cecilia Bustamante [Supervisor], Three Essays in Corporate Finance, University of Lausanne, 2009. First placement: London School of Economics [Lecturer]
- Boris Nikolov [Supervisor], Three Essays in Dynamic Corporate Finance, University of Lausanne, 2008. First placement: University of Rochester [Assistant Professor]
- Jijun Niu [Supervisor], Three Essays in Banking, University of Lausanne, 2007. First placement: Simon Fraser University [Assistant Professor]
AWARDS

2009 – present  
Research Fellow, Center for Economic Policy Research (CEPR), UK

2008  
Invited speaker, conference on “Corporate Governance” Fundación Ramón Areces, Madrid, Spain

2007  
Keynote speaker, European Institute for Advanced Studies in Management conference on Default Risk and Financial Distress, University of Rennes, France

2006 – present  
Swiss Finance Institute Senior Chair

2006  
Barclays Global Investors Award (Runner-up prize, with Dirk Hackbart) for best conference paper at the 2006 European Finance Association meeting

INVITED TALKS (selected examples)

2008 – 2012  
“Financing investment: The choice between public and private debt”, HEC Montreal, McGill Desautels School of Management, University of Konstanz, University of Lancaster  
“Capital supply uncertainty, cash holdings and investment”, Boston University, Collegio Carlo Alberto, London Business School, London School of Economics, MIT Sloan, Sabanci University, University of Bern, University of Bologna, University of Rochester  
“Corporate governance and capital structure dynamics”, EPFL, Fundacion Ramon Aceres Madrid, University of Rennes, University of Rochester  
“Stock returns in mergers and acquisitions”, NHH Norwegian School of Business Administration and Economics, University of Vienna, University of Zurich

GRANTS

2009 – 2013  
NCCR FINRISK (Swiss National Science Foundation)  
Project title: Dynamic Corporate Finance: Theory and Tests  
Budget: CHF 1’100’000

2005 – 2008  
NCCR FINRISK (Swiss National Science Foundation)  
Project title: Dynamic Corporate Finance  
Budget: CHF 760’000

TEACHING ACTIVITIES

EPFL (2008 – present)

- Principles of finance (MTE, 2010 – present)
- Real options and financial structuring (MFE, 2009 – present)
- Introduction to finance (MFE, 2008 – 2009)
- Cases in finance (MFE, 2009 – 2010)
- Corporate finance (PhD Program in Finance, 2008 – present)

Swiss National Bank (2003 – present)

Instruments of financial markets [Study Center Gerzensee]

Executive education in Switzerland (2003 – 2010)

- Credit risk [International Center FAME]
- Derivative instruments and financial engineering [Swiss Banking School]
PROFESSIONAL SERVICES AND ACTIVITIES

Swiss National Science Foundation, Switzerland
• Project director for NCCR FINRISK, Corporate Finance and Financial Innovation, 2005 – 2009
• Project director for NCCR FINRISK, Dynamic Corporate Finance: Theory and Tests, 2009 – 2013
• Coordinator for doctoral education for NCCR FINRISK, 2005 – 2013

EPFL
• Head of SF@EPFL, 2008 – 2011
• Creation of SFI@EPFL, 2008
• Finance Recruiting Chair, 2009 – 2011
• Member of the Finance PhD committee at EPFL, 2008 – present
• Steering committee, Master in Financial Engineering, 2008 – present
• Teaching committee, Master in Financial Engineering, 2008 – present
• Member of the commission de coordination UNIL-EPFL in finance, 2009 – present
• Member of the CDM Academic Promotion Committee, 2008 – present
• Member of the CDM Council, 2008 – 2010
• Member of the CDM Executive Committee, 2008 – 2010
• Head of the PhD program in finance at EPFL, 2008 – 2010
• Development of a PhD program in Finance, 2008
• Director of Master in Financial Engineering, 2008 – 2009
• Member of the recruiting commission in Finance, 2008 – 2009
• Member of the University-wide doctoral commission, 2008 – 2010

Swiss Finance Institute, Switzerland
• Head of the nation-wide doctoral program, 2006 – present
• Member of the committee for the outstanding research paper prize, 2006 – present
• Head of the Léman center (Universities of Geneva and Lausanne and EPFL), 2009 – present

External examiner in PhD committees (since 2008)
• Laurent Frésard, University of Neuchatel, 2008
• Zhihua Chen, University of Lausanne, 2009
• Jürg Burkhard, University of Lausanne, 2010
• Stefano Sacchetto, London Business School, 2010
• Natalia Guseva, University of Lausanne, 2011
• Ramona Westermann, University of Geneva, 2012

Editorial positions
• Associate editor Review of Corporate Finance Studies, 2010 – present
Reviewer

- National Science Foundation (USA); Hong Kong Research Grants
- Council; Social Sciences and Humanities Research Council (Canada); Research Foundation Flanders (Belgium); Research Promotion Foundation of Cyprus; Swiss National Science Foundation

Program committee

- American Finance Association meetings; European Finance Association meetings; French Finance Association meetings; Western Finance Association meetings; Paris Spring Corporate Finance Conference; SFS Finance Cavalcade Festival

Discussant

- American Finance Association; European Finance Association; French Finance Association; Western Finance Association; Paris Spring Corporate Finance Conference

Referee

My research focuses on the pricing, hedging, and risk-management of derivatives. Specifically, in a series of papers I show that interest rate and commodity derivatives are driven by risk factors that cannot be hedged by trading in the underlying assets. I also show that market participants require significant compensation for exposure to these risk factors. More recently, I have studied how to infer interbank risk from traded interest rate derivatives and how to decompose interbank risk into counterparty and liquidity risk. I am currently engaged in research on the extent to which liquidity risk affects the pricing of credit derivatives, and on the impact of repo market liquidity on the pricing of European sovereign bonds.

**KEYWORDS**

Derivatives, term structure of interest rates, commodities, interbank risk, liquidity risk.

**CURRENT PHD STUDENTS**

- Benjamin Junge
- Ilya Kolpakov

**PUBLICATIONS**


BOOK CHAPTERS AND BOOKS


AWARDS

2009 – present Swiss Finance Institute Junior Chair

INVITED TALKS (selected examples)

2012 Young Researchers Workshop on Finance, University of Tokyo
2009 Energy Finance Conference, Norway
2009 Madrid Finance Workshop, IE Business School

GRANTS

2013 – 2016 Swiss Finance Institute Research Grant
Project title: CDS Market Liquidity
Budget: CHF 240’000
2009 – 2013 NCCR FINRISK (Swiss National Science Foundation)
Project title: Dynamic Asset Pricing [Co-Principal Investigator]
Budget: CHF 600’000
2007 – 2009 Danish Social Science Research Council
Postdoctoral fellowship
Budget: CHF 250’000 [approx.]

TEACHING ACTITIES

EPFL
• Advanced derivatives [MFE, 4 ECTS, 2009 – present]
• Investments [MFE, 6 ECTS, 2011 – present]

PROFESSIONAL SERVICES AND ACTIVITIES

EPFL
• Organizer of the joint EPFL-UNIL finance seminar series, 2010 – 2012 [invitation and coordination of approximately 30 speakers per year]
• Member of MFE admission committee, 2009 – present
• Member of MFE teaching committee, 2011 – present
• Member of PhD Program in Finance committee, 2009 – 2011
PART C: STUDENT AND ALUMNI SURVEYS
SWISS FINANCE INSTITUTE @ EPFL
INTRODUCTION

This document compiles the results of an online survey conducted to obtain feedback from current and former students concerning the quality of SFI@EPFL’s two teaching programs – the Master in Financial Engineering (MFE) and the Doctoral Program in Finance (EDFI). We were also interested in acquiring information regarding the graduates’ employability and placement in the labor market.

To meet these objectives, we developed four slightly different questionnaires for our four target groups:

• Current MFE students
• MFE alumni
• Current PhD students
• PhD alumni.

All questionnaires consisted of four parts. While parts one and two were designed to gather basic information about the participants and their educational background, the third part contained questions to obtain information about their employment (if respondents were alumni) or internship experience (if respondents were students). Questions in part four focused on participants’ perceptions of the quality and relevance of the training provided by SFI@EPFL’s teaching programs.

Invitations to participate in our online surveys were emailed to 87 current and former students with a response deadline of one month. Two reminders were sent at two-week intervals to increase the response rate. We received a total of 51 replies (Table 1). The participation level was highest among MFE alumni (85%) and lowest among current MFE students (44%). Being a very young program, the EDFI doctoral program comprises only four alumni, two of whom filled out our questionnaire. We are aware that information gathered from such a small group is not significant and does not permit conclusions. However, since we still consider it interesting information we decided to include it in the report.

<table>
<thead>
<tr>
<th>Type of survey</th>
<th>Number of persons contacted</th>
<th>Of which</th>
<th>Number of respondents</th>
<th>Of which</th>
<th>Response Rate</th>
<th>Of which</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFE Students</td>
<td>50</td>
<td>41</td>
<td>22</td>
<td>17</td>
<td>44%</td>
<td>77%</td>
</tr>
<tr>
<td>PhD Students</td>
<td>13</td>
<td>12</td>
<td>10</td>
<td>9</td>
<td>77%</td>
<td>90%</td>
</tr>
<tr>
<td>MFE Alumni</td>
<td>20</td>
<td>17</td>
<td>17</td>
<td>14</td>
<td>85%</td>
<td>82%</td>
</tr>
<tr>
<td>PhD Alumni</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>50%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Given the high male-to-female ratio in our teaching programs, it is no surprise that the majority of respondents were male (Table 1, page 94). The birth years of survey respondents ranged from 1974 to 1980, with an average of 1985-1986 (Figure 1). The "oldest" respondents were the two PhD alumni (1974 and 1979) and an MFE Alumnus (1978).

Our two teaching programs attract students from all around the world (Figure 2). The students and alumni who responded to our surveys represent 23 countries, with Switzerland (10 respondents), Italy (7 respondents), China (6 respondents) and France (5 respondents) the most strongly represented. Nations less represented were Brazil, Chile, Cyprus, Germany, Greece, Iran, Israel, Lebanon, Lithuania, Morocco, Romania, Russia, Salvador, Singapore, Thailand, Tunisia, Turkey, USA, or Vietnam.
2. EDUCATIONAL BACKGROUND OF RESPONDENTS

According to our surveys, 15% of current MFE students and around 30% of MFE alumni have a Bachelor degree from EPFL, while 20% of current EDFI students have a Master degree from EPFL. The majority of respondents studied at other universities, usually in their native countries, before enrolling in an SFI@EPFL teaching program (Figure 3). In accordance with the strict admission guidelines and quality standards of our Master and PhD programs, they are all top-rated educational institutions, among them Shanghai University of Finance and Economics, Supelec, Politecnico di Milano, Michigan State University, Pierre and Marie Curie University, Technion, Ecole Centrale Nantes, ETH Zurich, Bocconi, University of Lausanne, or University Paris 1 Panthéon-Sorbonne.

While on the whole the students and alumni responding to our survey have quite diverse academic backgrounds, the majority of respondents did studies in mathematics, finance or engineering before enrolling in one of our teaching programs, MFE or EDFI (Figure 4). This is no surprise since both programs require a strong background in mathematics.

Six MFE alumni mention a background in computer science and communication. Given that programming and the development of financial models seem to be an important job requirement [see Type of activities in part 3] in this particular case a Bachelor degree in computer science is definitely an asset.

Figure 3: Respondents who earned an EPFL Bachelor degree (for MFE students and alumni) or EPFL Master degree (for PhD students and alumni)

Figure 4: Background of respondents before enrolling in Master and PhD studies at SFI@EPFL
The third part of this survey provides information concerning the professional situation of SFI@EPFL alumni and the internship placements of current students. We requested the following information from survey participants:

- Whether they are employed or not
- If employed, how long have they been in their current position
- What is the size and name of "their" company and where is it located
- What is this company’s main area of activity
- What is their main function and level of responsibility
- What is their salary
- How satisfied are they with their current job

The responses are interesting in their raw form, but are even more relevant if we analyze, combine and compare job and internship situations.

### JOB LOCATION

Surprisingly, the majority of alumni or intern respondents work in Switzerland, which for most of them is not their native country. Only two MFE alumni respondents are working abroad (one in Lebanon and the other in Morocco). Since the SFI@EPFL alumni are still young, they might see Switzerland as a career booster at the beginning but choose to move abroad as soon as they gain experience and seniority. Both PhD alumni respondents are continuing their academic career abroad (one in France at HEC Paris and one in the USA at Boston University School of Management).

### CURRENT EMPLOYER OR INTERNSHIP PLACEMENT

Compiling current employer data for both alumni (real positions) and students (internships) allows us to follow trends of professional choices from university to job market.

According to Figure 5, the majority of respondents opted for a job or internship in a bank or consulting firm. None of the intern respondents mention working in hedge funds or insurance companies.

We know however that some interns have chosen these fields, but they are probably among those who did not participate in the survey. One MFE alumnus created his/her own company.

More than 60% of respondents report working for a large company (Figure 6). Usually, young graduates or students see large companies as a career booster due to their high reputation. Since the MFE program is still young, the compiled data presented in Figure 6 were totally expected and confirm this inclination.

![Figure 5: Employer category](image)

![Figure 6: Employer size](image)
While all alumni declare themselves fairly or very satisfied with their current position, over 80% of interns are satisfied with their internship (Figures 8 and 9), which, given the small sample size, means in fact that only two persons declare themselves unsatisfied. This is a very positive result and we can therefore consider that the MFE at EPFL offers its graduates job opportunities (or internships) that fulfill their expectations.

TYPE OF ACTIVITIES

Survey participants were also asked to indicate the activities they perform in their current job or internship and could mark as many choices as appropriate. Figure 7 gives an overview of the seven activities most related to the MFE program.

With the exception of corporate finance, the activities proposed in the questionnaires were in fact the ones that respondents perform. 71% of the alumni respondents perform portfolio management activities. Alumni and intern respondents mention performing alternative investment, risk management and control, product development and trading support activities. 21% of the alumni and 39% of the interns also mention performing academic research activities.

The other activities (Figure 7), concerning 23% of students and 29% of alumni, are mainly programming. Since several respondents hold a Bachelor degree in computer science, they certainly benefit from the computer skills acquired during their Bachelor alongside their financial techniques in the labor market.

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GENERAL USEFULNESS OF THE DIPLOMA

In the majority of cases (85% of MFE alumni and 100% of PhD respondents), their diploma was required to obtain the position they currently occupy. Since the PhD alumni respondents are all assistant professors, it may be assumed that such a position requires a PhD.

MFE alumni also often occupy strong technical positions that correspond to a high level of education.
Figure 7: Activities performed by alumni or interns

Figure 8 and 9: Satisfaction with current internship or employment position

Figure 10: Requirement to hold a Master (for MFE alumni) or a PhD degree (for PhD alumni) in their current job
We are pleased to see that the salary conditions of SFI@EPFL graduates for their first positions are even better than those of the average EPFL engineer in 2009. Although we realize that comparing 2009 and 2012 dates is not totally accurate, since salaries levels have not significantly changed in the last 3 years this provides us with useful information.

SPECFICITY OF THE PHD ALUMNI

Since only two PhD alumni responded to the survey, it is more appropriate to present their answers directly instead of compiled data. Both PhD alumni are pursuing an academic career, one at Boston University School of Management and the other at HEC Paris, where they perform academic research and teaching activities and are satisfied with their current positions. One has a salary in the range of CHF 150,000 – 199,999 and the other superior at CHF 200’000. They claim their doctoral studies at EPFL have prepared them well for their current positions, which, being academic, require a PhD degree. Placement of the PhD graduates in the academic job market is really important for evaluating the reputation of a doctoral program. We are delighted to see that the PhD alumni have found strong academic positions in reputed institutions.
4. ASSESSMENT OF THE SFI@EPFL MASTER AND PHD PROGRAMS

MASTER IN FINANCIAL ENGINEERING (MFE)

Since alumni and student responses are very similar, we have often compiled them together to obtain a larger sample for the purpose of analysis. More than 90% of MFE alumni and students rate the quality of the MFE program as excellent or good (Figures 13 and 14). While all MFE alumni respondents declare themselves very satisfied or satisfied with the level of expertise they acquired during their MFE studies (Figures 15 and 16), only two students claim not to be satisfied and rate the MFE as fair or poor.

Figures 13 and 14: Quality of the MFE

Figures 15 and 16: Level of expertise in the field acquired during MFE studies
Considering that two persons is a very low number (almost incompressible), we can conclude the MFE@EPFL meets the expectations that students had before joining this program. 74% of alumni and students would choose the MFE at EPFL if they could start over (Figure 17). This question is very important in the framework of MFE assessment and the outcomes are quite encouraging and demonstrate the overall quality of the curriculum. However these results could probably be improved slightly in the future to obtain more than 80%. In addition, 96% of MFE interns and alumni respondents affirm that their MFE studies prepared them very well or adequately for their current positions (Figure 18). Thanks to the MFE, alumni seem confident of their ability to accomplish their everyday work.

The questionnaires also asked students and alumni how they feel about the impact of their MFE studies on the development of designated hard and soft skills. More than half of the respondents are satisfied or very satisfied with the impact of the MFE education on these skills. Surprisingly, although the MFE program curriculum is mainly built on the development of hard skills, the percentage of satisfaction is on average quite similar for both sets of skills, soft and hard (Figures 19 and 20).

Figure 17: If they could start over, would MFE students and alumni choose the MFE at EPFL?

Figure 18: How MFE studies prepare alumni or interns for their current position
Figure 19: Student opinion regarding impact of their MFE studies on development of listed skills

Figure 20: Alumni opinion regarding impact of their MFE studies on development of listed skills
The MFE comprises three semesters of coursework followed by a 25-week internship in a financial industry. MFE questionnaires ask whether respondents perceive this internship as useful. More than 95% find it useful or very useful to do an internship during the 4th semester of the MFE (Figures 21 and 22), confirming the importance of maintaining internships in the curriculum. Internships allow students to put their knowledge into practice and are also a good way to develop professional skills and acquire job market search techniques. 79% of MFE students and alumni respondents are willing to supervise an internship student (Figure 23), indicating also that respondents would like to retain a link with their studies at EPFL. The SFI@EPFL should take advantage of this desire on the part of alumni by placing internship students or developing a strong alumni network. As mentioned earlier, respondents also express their confidence in the high quality of the program and by accommodating an MFE intern, they probably also expect to find a young new talent for subsequent recruitment.

Figures 21 and 22: Usefulness of MFE mandatory internship

Figure 23: Willingness to supervise an internship student
PHD PROGRAM

As for the MFE, the compiled outcomes of the PhD program assessment indicate the high quality of the program. Since the number of PhD students and alumni respondents is quite low, we have combined the results of both surveys.

83% of respondents rate PhD supervision as excellent and 17% as good. No respondents considered this supervision as average, fair or poor (Figure 24). In line with the MFE results, PhD students and alumni are all satisfied with the level of expertise acquired during their PhD studies. This factor is fundamental for their future academic career since PhD studies teach students useful methods and skills for subsequently producing strong publications.

In addition to the quantitative results and due to the small number of PhD student and alumni respondents, it was interesting to also do a qualitative analysis. To do so, the PhD surveys were designed with a large number of blank fields in which respondents were invited to note personal comments. During their PhD studies, respondents mention being closely followed by their supervisor, who made them aware of relevant topics and helped with technical difficulties. Moreover, they appreciate the stimulating and insightful working environment, the international exposure, and the level of expertise of faculty members. They also appreciate the excellent working and financing conditions.

In answer to the question what do you like least about the PhD, some respondents report tensions between professors from different institutions, some find too much pressure during the first year and some would like to have more advanced courses in the second year. To improve the quality of the PhD program curriculum, some respondents would place more emphasis on methodological courses in econometrics, micro and macroeconomics, others would increase the number of advanced PhD courses, and some wish to do research sooner in the program. They would also like to have a local faculty member with extensive expertise in mechanism design, game theory or contract theory. Increasing faculty size in general is another recommendation. Most respondents see the fact that EDFI includes several universities as an advantage since it increases visibility on the job market and offers more opportunities to share knowledge and research.
While 92% of PhD students and alumni state they would select the same doctoral program if they could start over, 0% would not and just one respondent is not sure of they would select it again (Figure 26). With only one person not sure about selecting the EDFI again, we can consider that the PhD program gives full satisfaction to the students.

83% of PhD students and alumni report that in their opinion an EPFL PhD degree is recognized on the international job market in finance (Figure 27). Although the PhD program is still young, respondents are confident of its international reputation. SFI@EPFL professors contribute to this prestige by publishing in the top academic financial journals.

**Figure 26:** If they could start over, would PhD students and alumni choose the same program?

**Figure 27:** Recognition of EPFL PhD on international job market in finance
The four online surveys carried out in June 2012 were successful in terms of participation with an average response rate of 64%. Although this rate is quite high, the overall number of respondents (22 MFE students, 10 PhD students, 17 MFE alumni and 2 PhD alumni) is still low due to the recent creation of the programs.

However, analysis of the results has provided interesting and useful information to the SFI@EPFL in terms of student and alumni profiles, employment and program assessments. The most significant outcome lies in the high level of satisfaction of respondents with all programs. Overall more than 90% of respondents find their EPFL program either good or excellent, more than 86% are satisfied with the level of expertise attained at the end of their studies and more than 74% would choose the same program if they could start over. Respondents rate the quality of PhD supervision as either excellent or good.

Regarding job placements, the survey results demonstrate that SFI@EPFL programs rapidly offer interesting job opportunities. More than 84% are satisfied with their position, 85% acknowledge that their education is highly relevant to the needs of the industry and that they develop both hard and soft skills. The MFE alumni survey indicates that they find a job within six months maximum and have an average annual salary of CHF 82,000.

As expected, the results of the questionnaires underline the diversity of SFI@EPFL students as well as the variety of academic backgrounds that enhance intellectual and cultural exchanges in all programs.

Overall, according to the outcomes of these questionnaires, the SFI@EPFL programs meet or exceed student and alumni expectations. They also seem well designed and appropriate to fill job market needs. In the future, the information derived from these questionnaires will allow us to develop a new strategy, better integrating student and alumni needs. We should in particular analyze in detail the impact of MFE on student skills as we rethink the curriculum design.