SWEDISH HOUSE OF FINANCE

Annual report 2017

"The stage 2 evaluation of the Swedish House of Finance is one of the best evaluations we have ever received and it concludes that the center is performing on a world-class level."

Leif Callenholm, Acting Director General of Vinnova

2017 in numbers

- 3 new datasets available through our datacenter
- 7 articles published in the top three finance journals in the world
- 113 presentations at international researcher conferences
- 3 587 visitors to our events

About us

The Swedish House of Finance at the Stockholm School of Economics is Sweden's national research center in financial economics. It provides the infrastructure to ensure world class financial research and development in Sweden.

The Swedish House of Finance serves as an independent platform where academia, private and public financial sector can exchange knowledge and foster new ideas.

The Swedish House of Finance is an equally private and government funded, nonprofit, nonpartisan organization. The center hosts a critical mass of researchers of approximately 70 individuals, consisting of permanent and affiliated professors as well as PhD students.

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Director's commentary



In the seven years since its inception, the Swedish House of Finance has built a thriving ecosystem of financial research that is becoming ever more important for the development of the financial sector. Indeed, the financial industry faces many new challenges that have been reflected in

our research, talks, seminars and conferences. In 2017, we gave special emphasis on sustainable finance, fintech, cryptocurrency, regulation and gender diversity. The questions reveal that financial economics is a broad and complex field, and the need for research and discussion is greater than ever.

But I dare say that we are well prepared for this challenge. Our researchers are world experts within their respective fields — indeed, we count seven publications in the top three finance journals over the last year, placing us shoulder to shoulder with the top business schools in the world. Through our researchers, we acquire and maintain important networks to all other leading scholars in the world which makes it possible to organize talks and conferences at a world class level. Perhaps most importantly, our researchers are also teachers that trains students to learn the most cutting-edge material available. Good researchers ensure that students become independent critical thinkers that can approach new problems more effectively.

The quality of research is therefore a matter of national importance. Here, the Swedish House of Finance has taken the lead to increase the competence in financial economics in Sweden among both academics and policymakers through a number of initiatives: programs aiming to recruit top talent; facilitating the National SSE PhD course program; collecting and distributing new data bases; and, formalizing collaborations with universities in Stockholm (Stockholm University and Royal Institute of Technology), Lund,

Uppsala, Gothenburg, Umeå and Örebro.

We have pursued a strategy of long-term investments into research infrastructure that creates spillovers to the rest of the community. It was therefore particularly gratifying to receive the report from the team of experts evaluating the center on behalf of Vinnova, testifying to our success. Mr. Leif Callenholm, Acting Director General of Vinnova, concluded:

"The stage 2 evaluation of the Swedish House of Finance is one of the best evaluations we have ever received and it concludes that the center is performing on a world-class level."

We are all part of this success: researchers, staff, presenters, discussants and visitors and of course all those who contributed with vital resources during the year. These include the Swedish government (through Vinnova), Handelsbanken, Nordea, Swedbank, the Marianne and Marcus Wallenberg Foundation, Länsförsäkringar, the Annika and Gabriel Urwitz Foundation, as well of course the closely related Foundation for Financial Research, the Hans Dalborg Foundation, and the Jakob Palmstierna Foundation. Our partners also contribute with significant funds, and include Nasdaq, the Bertil Danielsson Foundation, the Jan Wallander and Tom Hedelius Foundation, the Tore Browaldh Foundation, Mistra, the Swedish Central Bank (Riksbanken), the Torsten Söderberg Foundation, the Johan and Jakob Söderberg Foundation, and early stage contributors AFA, Alecta, Kommuninvest, and Landshypotek.

Thank You All! Stockholm, March 2018

Anders Anderson

Director Swedish House of Finance

Background and objectives

The Swedish House of Finance (SHoF) was initiated in 2011 by the Swedish government through Vinnova, the Stockholm School of Economics (SSE) and the Swedish Institute for Financial Research (SIFR) with the objective of creating a national center for financial research that is competitive at the highest international level.

The Swedish House of Finance has a Director and a Management Group with delegated responsibility for various fields of activity, and who report to the Board of Directors composed of representatives from both the Stockholm School of Economics and the Swedish financial sector. Since 2011, the Center hosts the Department of Finance at the Stockholm School of Economics and includes all activities within the non-profit organizations the Swedish House of Finance and the Swedish Institute for Financial Research (SIFR). During 2016, the Swedish House of Finance fully merged with SIFR and has since 2017 acted under the same legal entity.

The Center is financed through support from the Swedish Government (via Vinnova) and companies in the Swedish financial sector. Fundamental objectives of the Swedish House of Finance:

- •To strengthen financial research in Sweden
- •To create impact through achieving a critical mass of world class researchers
- •To share positive externalities with the private, public and academic sectors in Sweden

The overall goal is to place Swedish research in finance among the leading nations in Europe.

The Swedish House of Finance has promised to achieve this by:

- Creating a common physical research infrastructure
- Establishing a national center for financial data
- Launching a doctoral course program in finance available to all doctoral students in Sweden
- Carrying out programs for research interactions: to provide open seminar series, invite guest researchers, and arrange conferences
- Supporting the recruitment of international researchers to Swedish institutions
- Sharing its research infrastructure with researchers in Sweden
- Obtaining research financing from the Swedish financial industry

A brief report is set forth below concerning the Center's operations, which are organized in five fields of activity: Research, Research Infrastructure, Data Center, Outreach and PhD Courses. These activities are financed through cash donations from (i) Vinnova, (ii) the financial sector, as well as indirectly through in-kind contributions through (iii) the Stockholm School of Economics and Swedish financial firms. The in-kind contributions are mainly personnel costs for permanent faculty and staff as well as research grants from external donors who form part of the Stockholm School of Economics, but who are not directly associated with the planning or budget managed by the Swedish House of Finance. We report the in-kind contributions so as to obtain the most comprehensive picture as possible of the Center's activities and financing.

Highlights 2017

Nobel laureate Richard Thaler at Swedish House of Finance

The 2017 Nobel laureate visited on September 18 to talk about choice architecture in pension systems.



FinTech conference

The theme for this years' annual conference was FinTech. Speakers included Campbell Harvey, Duke University, Sanjiv Das, Santa Clara University, Philip Treleaven, University College London and Yazid M. Sharaiha, Norges Bank Investment Management.

The e-krona project

Stefan Ingves, Governor of the Riksbank, visited on December 8 to talk about the role of the Riksbank in a society with no cash.

New datasets available

Our research data center implemented new datasets such as the annual reports archive where all historical annual reports for companies listed at the Stockholm Stock Exchange since 1912 are distributed, PatLink that links patent- and trademark information to organization information and calculated Fama-French factors for the Swedish stock market.



New Head of Strategic Partnerships

Ursula Robertson joined our team as Head of Strategic Partnerships and member of the Management Committee. She focuses on the long-term viability of the center and development of our partner programs.



Research presentations

We were strongly represented at all of the three leading research conferences: American Finance Association (10 papers), Western Finance Association in Utah (4 papers), and European Finance Association in Mannheim (10 papers).

Topics of relevance

In our seminar series during 2017 we gave special emphasis on sustainable finance, fin-tech, cryptocurrency, regulation and gender diversity.



Annamaria Lusardi

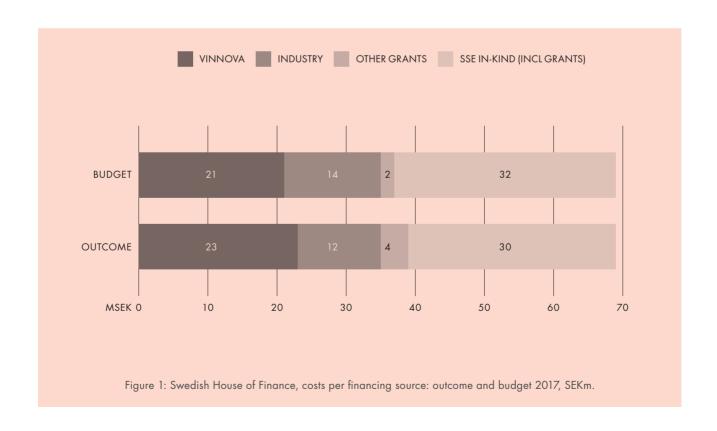
Professor Annamaria Lusardi from George Washington University School of Business visited and gave a presentation about financial literacy and long-term financial security.

Budget and outcome

Total costs including in-kind contributions for 2017 came in close to budget. Total costs amounted to SEK 67,704k compared with budgeted SEK 69,392k. In-kind contributions from the SSE amounted together to SEK 29,605k (including external research grants) compared with the budgeted amount of SEK 31,926k. The in-kind contributions also includes indirect grants from the Swedish financial market in the amount of SEK 4,568k.

Costs that are directly related to the Swedish House of Finance's own activities amounted to SEK 38,099k

(budget 37,714k). These costs were financed by Vinnova (the total 22,759k consists of center grants of 20,256k and individual research grants of 2,502k) and the Swedish financial market (11,788k). The remaining funding of 3,553k consists of a rental contribution from the SSE (2,383k) and research commissioned by support from Riksbanken (1,170k). The part of Vinnova's grant that was drawn over and above the SEK 15,000k paid in during the year was taken from previously built-up reserves.



The Center's total costs are described below, distributed among the Center's five fields of activity. Figure 2 illustrates an historical distribution over the seven years that SHoF has existed, and is commented and compared with last year (in parenthesis) in the text below.

Research infrastructure SEK 15,301k (SEK 13,827k). Costs include offices, administration and materials, of which costs for premises amounted to SEK 7,416 (SEK 6,517) and payroll costs for five permanent employees amounted to SEK 4,588k (3,395k). The total amount includes in-kind contributions from SSE regarding salaries and services amounting in total to SEK 1,753k (2,295k). Rental cost increased during the year as a consequence of renewing the lease for the premises for another five years. The Center housed 26 permanent researchers, 32 doctoral students, 4 database developers, 4 research assistants, 5 administrators, 2 communications officers, 2 part-time project consultant, and 2 senior advisors (of which one full-time). During the year, a total of 43 guest researchers visited the Center.

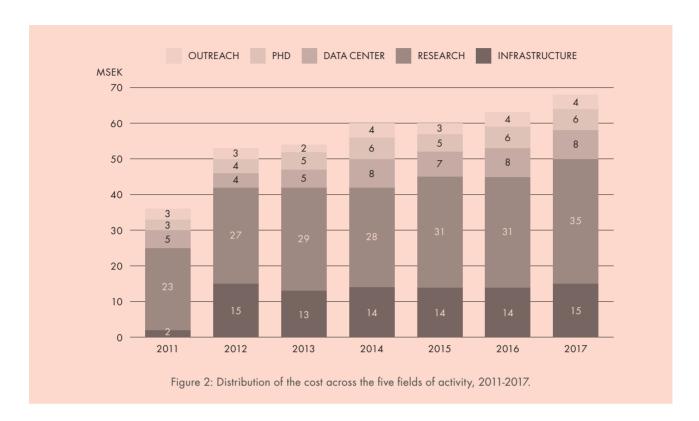
Research SEK 34,745k (SEK 31,005k). A significant share of these costs represent in-kind contributions from SSE in the form of salaries to researchers and related costs, amounting to SEK 19 183k, as well as external financing of doctoral students in the amount of SEK 4,658k. The remaining costs are related to the research incentive programs made possible by the Swedish of Finance: a Fellowship program to attract and retain top talent; a Publication incentive program to award top publications; a Visiting program to encourage research exchange; and a Travel support program to increase researchers' visibility in international conferences. The Center's re-

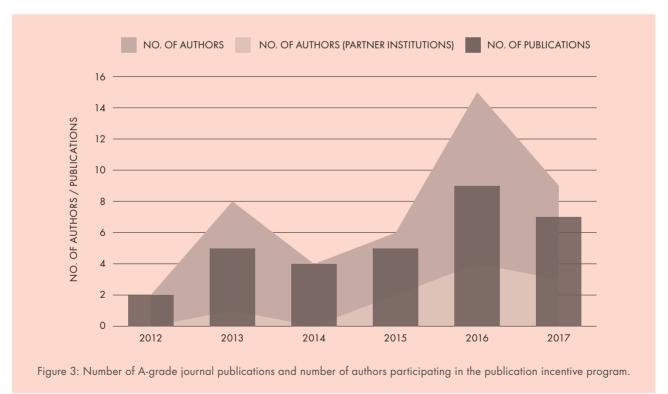
searchers produced 21 (19) publications in international academic journals, of which 7 (9) within the absolute top of the range, known as A-grade journals.

Figure 3 shows the participation in the Publication incentive program since inception in 2012, where we record an upward trend in both the number of top publications and the number of authors from our partner institutions.

Our researchers made 113 (85) presentations at international researcher conferences, and 32 (28) as commentator. We were strongly represented at all of the three leading conferences: American Finance Association in Chicago (10 papers), Western Finance Association in Utah (4 papers), and European Finance Association in Mannheim (10 papers).

Data center SEK 7,723k (SEK 8,066k). The Data Center has two principal tasks: (i) to develop new national databases that are made available to the researcher community in Sweden through our web-based platform, and (ii) to provide requisite international databases and facilitate use of computationally efficient infrastructure so that the Center's researchers can work and compete at the highest level. During the year, we implemented new data sets such as the annual reports archive where all historical annual reports for companies listed at the Stockholm Stock Exchange since 1912 are distributed, PatLink that links patent- and trademark information to organization information and calculated Fama-French factors for the Swedish stock market. The Data Center now manages a total of 7 databases (see Figure 4). In addition, improved functionality has been added to



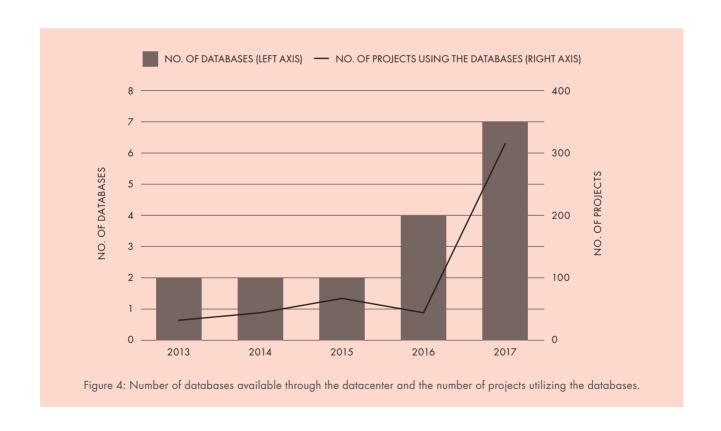


current data sets, which enabled a lot more researchers and PhD students to access the data. In 2016 there were 44 projects based on the centers databases and in 2017 this grew exponentially to 315 projects.

During the year, a large state-of-the-art backdating project entered the final state were we aim to launch adjusted stock price series from the Nordic Stock Exchanges since 1912. We have also closed an agreement with Morningstar to distribute their fund data to the academic community in Sweden.

Costs for external databases and services amounted to SEK 4,486 (4,675k), and personnel costs that are primarily related to the building-up of own databases amounted to SEK 3,237k (3,391k). The Data Center has two full-time employees, three part-time employees, as well as three research assistants whereof two full-time and one part-time.

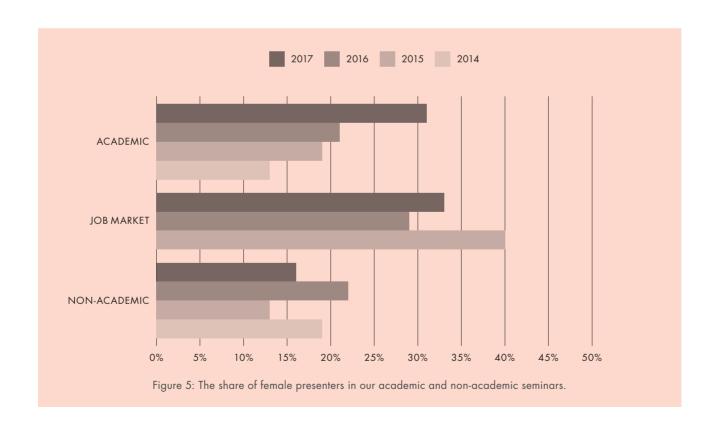
PhD course program SEK 5,785k (SEK 5,558k). A major part of the costs is represented by an in-kind contribution from the Stockholm School of Economics amounting to SEK 4,101k (3,978k). The remaining costs are related to remuneration to teachers and the reimbursement of expenses for course participants from other universities. The Center provides a national course program for doctoral students in financial economics. The five basic courses are the same as the doctoral program at the Stockholm School of Economics, and have been adapted so that they may be read at a distance. A number of mini-courses are also offered each year within various specific fields, where we invite an external specialist who holds a one-week intensive course. In 2017 there were two such courses: Topics in Asset Pricing, given jointly by Professors working at the topic at the Department of Finance, and one course in Household Finance in Lund through a collaboration with the Knut Wicksell Center.



Outreach SEK 4,149k (SEK 4,016k). This field embraces activities aimed at increasing the dialogue between researchers and decision-makers within the private and public sectors. Seminars and conferences are organized with the purpose of spreading research results to private and public players. Researchers at the SSE, Department of Finance, are responsible for our academic seminars, which maintain a very high international standard. A total of 73 (79) seminars were held during the year, of which 53 (54) were academic and 20 (25) on themes targeted towards practitioners active within financial markets. These themes included for example the EU banking union, digital currencies, bank capital require-

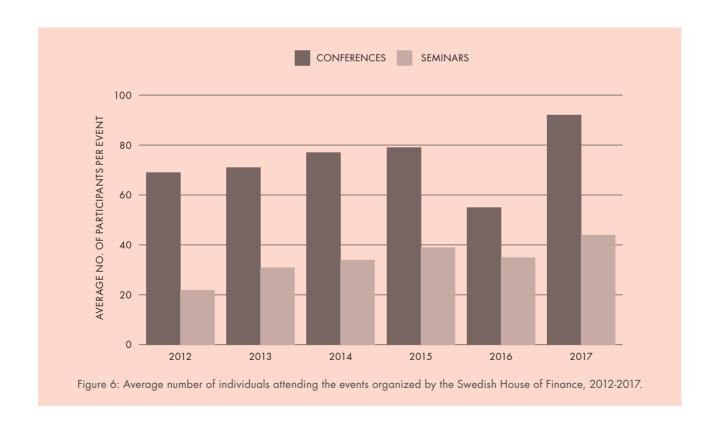
ments, fintech, blockchains, the future of the Eurozone, the Swedish pension system, Central Banking, the U.S. economy, Brexit, corporate governance, financial crisis and financial regulation.

The importance of female representation in our activities is strengthened by the explicit goal to have the share of female presenters at least equal to the share of females in our profession. This share is estimated by the Academic Female Finance Committee AFFECT to lie around 20%. Figure 5 illustrates that we reach this goal in 2017 for our academic and job market seminars, but not for our non-academic practitioner seminars.



Most of the events were held at our premises on Drottninggatan, Stockholm, while nine were arranged in collaboration with the Center for Business Policy Studies (SNS). The Swedish House of Finance hosted two conferences: our annual conference in August on "Fintech", with grateful support from the Torsten Söderberg Foundation; as well as the "Institutional Investors and Corporate Governance symposium". To these two conferences, we can add our annual national conference for

Swedish doctoral students in financial economics that takes place in November each year. We counted a total of 3,587 (3,280) visitors to our seminars and conferences in 2017, almost equally divided between researchers and representatives from the finance sector. Figure 6 displays an almost monotonic upward trend in the average number of people attending both our seminars and conferences over the years.



Revenues: General funding and in-kind contributions

A prevailing trend is that a declining amount of research funding can be used for important investments in overall research infrastructure, and a larger fraction is devoted to individual program areas or individual projects. This has made it increasingly difficult to find financing, for example, for databases, administration, research assistants or research exchange, which in today's environment represent very important components to enable the continuation of a strong cluster.

The Swedish House of Finance fills this gap by building a strong research infrastructure, which also naturally defines the areas of Center support in cooperation with the SSE. Our investment strategy also enables sharing with other researchers, and provides significant positive spillovers to society in general.

The estimation of our in-kind contributions represents a lower bound of the actual costs. For instance, actual costs for the Data Center do not include significant in-kind contributions from Bisnode, Nasdaq, SIX, SME Direkt and Vinge, who provide consultancy services and updates. In the same way, in-kind contributions that would represent salaries for researchers who are guests at the Center, but hold a position at another institution, are not included either.

High quality research is central to providing the highest quality education possible. We are convinced that higher education should be taught by instructors that work successfully on the research frontier so that our students learn the most cutting-edge material available. Good researchers ensure that students become independent critical thinkers that can approach new problems more effectively. The quality of the research is therefore crucial for the survival of financial economics studies at all Swedish universities. This is a matter of critical national importance – through better education we will produce better managers,

specialists, researchers and eventually teachers in the field of finance. The Swedish House of Finance plays a vital role in this, especially in light of growing international competitiveness of the educational marketplace. Since the Bologna Declaration in 2005, all higher education within Europe is divided into a basic level (Undergraduate) and advanced (Graduate) level. The standardization results in greater mobility and much stronger competition for the best students within Europe. Subsequently, the drive to create a strong research cluster in Sweden has become increasingly important.

Financing

The Center has three principal financiers: (i) the Swedish Government (through Vinnova), (ii) the Academy (through the Stockholm School of Economics), and (iii) the private financial sector in Sweden. The private sector contributes directly through annual grants to Swedish House of Finance, but also indirectly through partnerships and grants that finance activities within the Stockholm School of Economics and Swedish House of Finance. The financing from Vinnova contains the condition that the Stockholm School of Economics and the private sector shall match the contribution of SEK 15 million per annum over a ten-year period – making an overall total of at least SEK 450m.

Figure 7 illustrates that the costs for 2017 were financed by Vinnova 33% (23m), the Stockholm School of Economics 38% (25m), and the remaining 29% (19m) through grants and funding from the private sector. The latter includes direct financing to the Swedish House of Finance through agreements with private players representing 11% (SEK 7m). The remaining 18% in contributions from the Swedish financial market concern activities financed through grants to Swedish House of Finance and the Stockholm School of Economics amounting to a total of SEK 11m. In our commitment to Vinnova, the flow from each player shall be at least SEK

15m per annum over a ten-year period – a goal that was achieved by a good margin also in 2017.

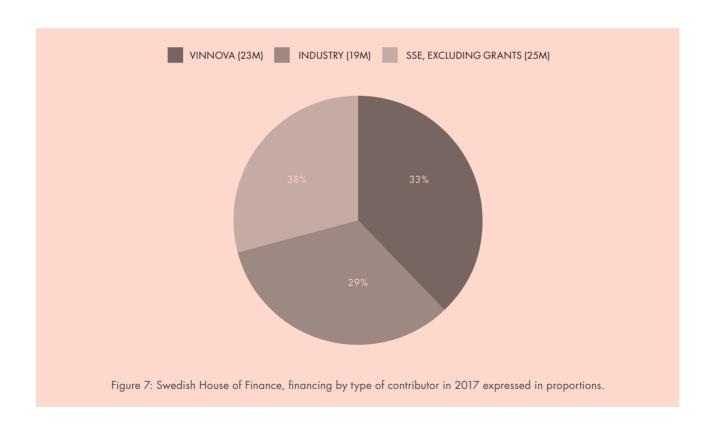
Another condition for our funding agreement is that Vinnova's commitment of SEK 150m be met by an equivalent amount from the Swedish financial sector. During the year, we were granted SEK 16m in new research funding, to be compared to SEK 11m in 2016. We also received a generous funding commitment of SEK 1m from Annika and Gabriel Urwitz Stiftelse that extends their funding commitment up until to 2023.

During the first seven years, the Center has received financing commitments from the private sector amounting in total to SEK 200m, of which SEK 73m in direct support to the Center, as well as indirectly through research grants to SSE (76m), the closely related foundation SFF (The Foundation of Financial Research, 32m), and research grants given directly to the Swedish House of Finance (19m). We have therefore formally achieved our goal of matching the Government's commitment with private funds, although it is important to emphasize that a sizable share of these funds are earmarked to projects which does not allow for general funding of the Center.

Financing

The current financing commitments are deemed sufficient to further pursue the Center's activities at the same level up to and including the year 2020, when Vinnova's commitment expires. In 2017, we prepared for the challenges ahead to renew long-term funding.

With a new organization and a very successful recent external evaluation of the Center, we are very optimistic about the opportunities lying in the years ahead of



Financing

"The stage 2 evaluation of the Swedish House of Finance is one of the best evaluations we have ever received and it concludes that the center is performing on a world-class level. During 2014 to 2017 Swedish House of Finance has achieved an even higher level of research excellence, opening up a data center, set up a dynamic governance structure, made sure to stay relevant to Swedish private and public financial actors and much more. The evaluators also acknowledge that Swedish House of Finance has a very positive effect on other financial market research groups in Sweden through for example its openness to host visiting scholars and its national PhD scheme. The center is also approaching the gender gap in a structured way. Congratulations."

Leif Callenholm, Acting Director General of Vinnova

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Swedish House of Finance researchers and staff outside the office on Drottninggatan.

Board of Directors

The Board of Directors consists of representatives from the Swedish financial industry and Stockholm School of Economics.

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THOMAS BACKTEMAN
Chief Communications Officer,
PostNord

ANNA BREMAN
Chief Economist, Swedbank

HANS DALBORG Ekon Dr

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Deputy General Director,
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LARS ÅGREN
Senior Executive Vice President,
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Scientific Advisory Board

The Scientific Advisory Board assists the management and the board with evaluating the academic activities of the Swedish House of Finance.

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