

Evaluation report 2014 Swedish House of Finance Final version 2014-04-18 Dnr: 2010-02451

**Evaluation of** 

# Swedish House of Finance

A VINNOVA Financial Market Centre at Stockholm School of Economics

Evaluators:

Professor Mary O'Kane, NSW Chief Scientist and Engineer & Executive Chair, O'Kane Associates, <u>mary@okaneassociates.com.au</u> Professor Bauke Visser, Tinbergen Institute, Rotterdam, <u>bvisser@ese.eur.nl</u> Professor Thierry Foucault, HEC Paris, <u>foucault@hec.fr</u> Professor Dr. Jan Pieter Krahnen, Goethe Universität, <u>krahnen@ifk-cfs.de</u> Professor Ernst Maug, University of Mannheim, <u>maug@corporate-finance-</u> <u>mannheim.de</u>

Professor Ludovic Phalippou, SBS, Oxford, Ludovic.Phalippou@sbs.ox.ac.uk

VERKET FÖR INNOVATIONSSYSTEM - SWEDISH GOVERNMENTAL AGENCY FOR INNOVATION SYSTEMS



# 1. Introduction

On 21 March 2014, Chairman of the Centre Board, Yvonne Gustafsson, members of the Board, the Centre Director, Per Strömberg, and his management team, colleagues from Swedish House of Finance, PhD students, and SSE President, Karl-Olof Hammarkvist, had a formal interview with the evaluators of the international evaluation team at VINNOVA to evaluate the Centre's performance in Stage 1. At the formal interview the evaluators, Bauke Visser and Mary O'Kane (generalists), and Thierry Foucault, Jan Pieter Krahnen, Ernst Maug, and Ludovic Phalippou (experts) addressed matters such as research, results and impact, organisation and management, finance, interaction between industry partners and the Centre, educational activities, and long-term sustainability. The evaluation team thanks all members of the Centre and the VINNOVA team for their efforts in providing information for the evaluation.

SHoF is an excellent Centre carrying out world-class research in purposedesigned facilities. It has established a well-structured national PhD program in finance and is building high-quality financial databases. The major challenge for Stage 2 is laying the foundation for long-term financial sustainability of the Centre.

SHoF is a large research Centre in Swedish terms, receiving more than any other Centre funded by VINNOVA. This funding has delivered a good return even over the relatively short period of Stage 1.The director and other members of SHoF were very clear about the difference that VINNOVA money has made to research in finance in Stockholm in particular and in Sweden in general. The following would not have been possible otherwise:

- co-location of researchers on the premises of SHoF, creating critical mass and a vibrant environment for research and discussion, and attracting the interest of outside parties to discuss finance matters at SHoF
- acquisition of commercial databases
- acquisition of firm-level and household-level data and investments in IT support for the development of a large national finance data centre with Swedish data and in the necessary infrastructure to make this data available to researchers in Sweden and Europetre
- top-ups on salaries of new hires, making Stockholm a more competitive place to work
- publication bonuses for fellows of SHoF, helping to retain faculty members
- national PhD program that complements existing programs across Sweden, including high-quality courses and travel money for PhD students.

The evaluators were impressed by the way that VINNOVA money has been put to use.

# 2. Long-term Vision, Mission and Strategy

The Centre aspires to be one of the top five European research groups in finance with international and national impact and outreach; and it deliberately creates an attractive environment in order to recruit and retain researchers. While not proffering formal vision and mission statements as such, the Centre has



established a clear identity and has mapped a way forward that should keep it on track, largely to meet the success criteria for the VINNOVA Financial Market Research Program. However, if the Centre is to achieve sustainability beyond VINNOVA funding, its funding strategy will need adjustment,

# 3. <u>Centre Partners</u>

# **Existing Partner Group Profile**

The SHoF has two types of partners: (a) academic partners and (b) industry partners. Academic partners are (i) the finance group of Stockholm University, (ii) the department of economics at Stockholm University, (iii) the Centre for Finance at Lund University and (iv) the Centre for Finance at Gothenburg University. There are several industry partners; for instance: Riksbanken, Nasdaq OMX, and Finansinspektionen (financial regulator).

## Centre partners (from the point of view of research contribution)

Researchers of the SHoF collaborate with researchers from a wide range of institutions around the world. The SHoF Academic Partner Program aims to support recruiting and retention of faculty at Swedish finance departments outside of the SSE. In addition, a SHoF Academic Partner is eligible for the SHoF Fellowship and Publication Bonus programs, and is offered SHoF affiliations for their faculty, which in turn means access to unique and well-maintained financial data sets. However it is noted that license restrictions on commercial databases are such that VINNOVA had funded independent purchases for the centres in Lund and Gothenburg.

The national PhD program also improves collaboration between research centres and represents a de facto partnership between different academic centres. Finally, it is worth mentioning that SHoF has joined a number of larger research networks, such as The Global Corporate Finance Colloquia, and the Nordic Finance Network (NFN). Importantly, several SHoF researchers are affiliated with leading international research networks, which only admit researchers that are widely recognized as leaders in financial economics such as the Centre for Economic Policy Research (CEPR), the European Corporate Governance Institute (ECGI), and the National Bureau of Economic Research (NBER).

# **Processes for Needs Identification and Articulation**

There are many ways in which SHoF interacts with both private and public financial actors. One way is via seminars. There are both open seminars, to which anyone with an interest in financial issues can participate, and closed seminars with specially invited, well-defined target groups. The more closed seminars target top-level executives, such as CEOs, CFOs, chairpersons of the board and high-level executives in the public sector, as well as experts chosen to debate a particular topic. There is also a policy oriented seminar series called "Finanspanelen", in which top practitioners participate, as well as brown-bag lunches, in which practitioners meet with selected SHoF researchers. In these seminars, practitioners can discuss what they are working on, the challenges they face, and get feedback from academic experts. These seminars also give researchers exposure to real-world problems and allow them to develop new research ideas. In addition to these seminars there are also a number of conferences are ideal settings for researchers to identify societal needs in terms



of financial economics research and there seems to be a real exchange happening in terms of ideas and data.

## 4. Scientific Quality and Productivity

## **Research area, Competence Profile and Critical Size:**

The research area of SHoF is financial economics. The SHoF is organised around 5 main research areas: (a) Corporate and Entrepreneurial Finance, (b) Asset Pricing, (c) Corporate governance, (d) Household Finance, and (e) Banking and Financial Intermediation. The SHoF has both young and more seasoned researchers working in each of these areas, with a strong expertise in Corporate Finance and Governance.

Compared to most top European Finance groups, the group is relatively large (24 permanent researchers, 5 long term visiting researchers and 30 PhD students). As is common in top universities, it has taken a "best-athlete" approach to hiring, meaning that it has sought to hire the best candidate without a priori restricting itself to a specialty. As a result, some areas that are already covered may still lack critical mass (e.g. Household Finance, Asset Pricing and Financial Intermediation).

#### Research program, results and impact

The report contains a very detailed description of the research program and the output in the SHoF in its five research areas. One can expect the SHoF to keep on developing its research agenda in these areas.

In the area of corporate and entrepreneurial finance, the SHoF researchers have focused their effort on the analysis of corporate leverage, the role of rating agencies and the effects of rules (e.g. on investment, listing decisions or short sales), and laws or regulations of various financial markets.

In asset pricing, SHoF researchers analyse determinants (e.g., consumption volatility, jump risk, Markov switching fundamentals with generalised disappointment aversion, macroeconomic risk etc.) of time-variations and cross-sectional variations in risk premia and their implications for the predictability of returns, both in domestic and international contexts.

In the area of corporate governance, SHoF researchers focus on (i) the role of CEOs' expertise and compensation contracts on firm performance, (ii) the role of fiduciary duties and legal investor protection on firm behaviour and the efficiency of the market for corporate control and (iii) real effects of law and financial markets on investment and innovation.

SHoF researchers also make several important contributions to Household Finance. For instance, they analyse the effect of wealth on individual investors' risk taking behavior and how wealth accumulates over generations. They also analyse the determinants of households' investments in financial markets. They benefit from access to unique data about Swedish households due to mandatory collection of data on household wealth and its components. This access gives them an edge compared to other researchers in this area, because obtaining detailed and country-wide data on households financial assets is typically difficult.



Finally, in the area of banking and financial intermediation, SHoF researchers work on bank bailouts, corporate credit markets, and mortgage markets. The financial crisis shows that these are very important research topics. For instance, some researchers of the SHoF have analyzed the role of lenders' market power in foreclosure decisions and how the design of personal bankruptcy laws can affect house prices. Another issue is whether, how, and when governments of distressed countries (such as Greece in Europe) should be bailed out.

Members of the SHoF have already produced several research papers in each of these areas of research, some of them published in top journals in finance or economics (e.g., Econometrica, Journal of Finance, Review of Financial Studies or Journal of Financial Economics). There is clearly an impressive effort of all researchers of the SHoF to produce and publish innovative papers with high impact in each of the research areas that are part of the SHoF research program. The SHoF clearly has already reached a high level of visibility and expertise in main research areas of Financial Economics.

## **International Comparators**

SHoF is at the forefront of international research and has successfully attracted talented researchers on the international job market. In its three years of existence, the SHoF has already published a large number of papers (overall 19 from 2012 to 2014, counting forthcoming papers) in top Finance and Economics journals. In its memorandum of 2011 describing its objectives, the SHoF was planning to establish itself among the top 10 finance research groups in Europe in its first years of existence. This objective has clearly been reached.

Obviously, the exact ranking depends on the criteria chosen (e.g., the number of publications, PhD placement, citations, ...) and on the corrections applied to do apple-to-apple comparisons (e.g. adjusting for part time faculty members, for pooled cross university teams, selection of members etc.). Strong (European) contenders are: LBS, LSE, Oxford, Imperial and Cass in the UK; HEC Paris, Insead, and EDHEC in France, SFI in Switzerland (although it may be more informative to break this down per university and note that it is Zurich, Polytechnic Lausanne and Lugano); then Copenhagen, HoF in Frankfurt, Erasmus, and Tilburg. That is a total of about 15 institutions that are seriously competing to be in the top 5.

## Overall conclusion regarding scientific quality and productivity

The quality of the scientific output of the group is at the highest standard of research in financial economics, as shown by the relatively large number of "A" publications in total and per researcher over the last two years. The productivity of each researcher is also high. It is clear that the group has unambiguously delivered on this front in its two years of existence. There is room for improvement in the placement of PhD students (see below, Section 6).

# 5. Impact on Stakeholders (and others)

There are four stakeholders, or groups of stakeholders: SSE, other universities in Sweden, SIFR and further industry partners, and the Finance Ministry via VINNOVA.



The impact on SSE is probably the largest, as it has gained a significant improvement in visibility and quality of what had been its finance department. According to the University President, the star performer (Finance Department) has further improved its standing. The key achievement is probably the colocation of their researchers with those of SIFR, and the development of a sizable visitors program, plus the hiring of excellent new faculty. The reputational effect of this achievement for SSE can hardly be overrated. The sheer buildup in terms of numbers of additional researchers involved is not that great, because most of the VINNOVA funds were spent in infrastructural investments, like rent for the location, its refurbishment, and the very ambitious data centre development. Also, there was a termination of earlier grants just before the VINNOVA grant arrived (see 2010 application). The infrastructure investment has effectively leveraged the position of SSE in the academic market. The centre set-up (SHoF) has probably enabled closer collaboration with other finance departments in the country, greatly improving their access to data and PhD training.

The effective expansion of the finance activities related to SSE pose some risks too, as the VINNOVA funding is restricted to a ten year period, e.g., tenure-track commitments one day need to be honored, and it thus of great importance for SHoF's long term viability that it finds a strategy to deal with this "fiscal cliff" (see Section 7, below).

Other universities in Sweden, the second group of stakeholders, have also benefitted significantly. They have access to the data centre, provided they have a formal collaboration with SHoF. Furthermore, their doctoral students have full access to the courses in the doctoral program, including funding for their travel and logistical expenses. The course schedule has been adapted in order to minimise the disruption caused by travel. Coursework offerings are scheduled on Mondays and Tuesdays [but see comments on gender issues in Section 6 below]. Finally, faculty members and PhD students of these associated departments are also eligible for the research incentives that exist for all SHoF researchers, namely a retention scheme (fellowships for senior researchers) and a publication bonus program. These additional facilities are likely to improve the hiring potential in, and more generally the attractiveness of, these other places a well, notably Gothenburg and Lund.

The third stakeholder on the list is SIFR and other industry partners, including Riksbanken. For these stakeholders, the main interest seems to be hiring excellent graduates at all levels (BA, MA, MS, PhD). This is what SHoF is contributing to, partly because their research orientation brings excellent economists to SSE, and partly because they are structuring and running an internationally competitive PhD program (see Section 6 for details). Furthermore, the hiring of junior faculty from the international market (all hires in the last few years of assistant professors are non-Swedes) brings international experience in teaching and research to the country, and to the training of students at all levels. This implies, among other things, that knowledge about financial markets in other parts of the world, particularly the US, becomes increasingly available locally. Furthermore, the use of the new data sets about Swedish financial conditions (corporate and household data, and market price data) will produce new insights, which can be used by industry and policy, particularly monetary policy, in



Sweden. The key input in financial economics research, especially in empirical research, is data access. SHoF has significantly innovated on that front in collaborations with a number of industrial partners (e.g. NASDAQ OMX) and academic partners (e.g. HEC Paris). As mentioned above, a key factor for partner participation in innovation and technology transfer is their high degree of involvement in seminars and conferences. The large number of these seminars and conferences as well as their well-defined focus means that there is an intense participation of partners in the innovation process.

Lastly, the Finance Ministry initiated the financial centre grant, which was allocated and monitored by VINNOVA. For this stakeholder, the potential improvement of the public policy debate on banking, corporate governance, and financial markets should be seen as an important contribution to society at large. It is quite natural that after a limited time since project start, the full potential of these public policy externalities have not yet been fully realised.

# 6. Training Personnel of High Competence

## PhD program

The SHoF PhD program in finance continues and improves upon the program previously offered by the SSE. The program benefits from very good coursework over an 18-month period. Students also have access to specialised mini-courses offered by visitors. As noted above, the coursework and mini-courses are also available to PhD students from academic partners. This creation of a national PhD program in finance is an excellent initiative enabled by the VINNOVA funding.

Regarding students specifically attached to the Centre, the SHoF offers PhD students a top-notch environment on all fronts. The stipends offered to students are among the best in Europe. In addition, students can work as teaching assistants, and thus augment their salaries, as well as giving them teaching experience and training. Foremost, they receive an excellent training from permanent faculty members of the SHoF and invited lecturers at the forefront of their field. Students can now work two weeks per year as a research assistant, which also exposes them to top research and is a useful adjunct to their other training. Furthermore, PhD students have a generous research budget, probably comparable to the most generous program such as that of SFI in Switzerland. They are encouraged to present their work at national and international workshops and conferences. Their related travel expenses are usually covered by SHoF. In addition, they benefit from the excellent SHoF infrastructure.

Students also mentioned that faculty members from the SHoF were easily accessible and dedicated. The students are given a structured job-market preparation, including presentations and mock interviews. Checking individual students' job-market files seems to be practiced by some faculty members but not others.

The overall impression is that SHoF faculty members follow international best practice in the implementation of the PhD program. Based on the quality and research output of the teaching faculty of SHoF, teaching in the program is likely to be of the highest quality. Compared to the quality and quantity of the inputs into the teaching and guidance of PhD students, the output in terms of placement



success still leaves significant upside potential. Some placements have been good (e.g., NYU, McGill University), but are infrequent for a program of this size and ambition. The potential of the institution, its ambition to be a top-five European school, and the quality and the infrastructure of SHoF have not yet been translated into regular placement successes and visible output.

To some extent, the current state of affairs seems to reflect the fact that many of the improvements are recent. SHoF has been in existence for only two years and several measures that benefit PhD students (e.g., seminars, access to data, improved structure of courses) are only recent. Since the education of a PhD student takes four to five years, recent improvements in the program will translate into better-educated students only in another two or three years. However, another constraint may be the quality of the intake of students. Top institutions seem to invest more time and resources into advertising the program and into selecting PhD candidates. The evaluators suggest that SHoF could leverage the quality of its environment for PhD studies by advertising it more forcefully.

**Recommendation 1:** That the Centre revisits its strategy for recruiting and placing PhD students and attempts to increase the program's visibility.

The PhD program in finance that is offered in Stockholm is a *national* program. Graduate students in Lund and Gothenburg spoke very positively about it. At the same time, there seems to be little dialogue among the three centres about the program. This is unfortunate, as regularly checking whether all parties involved are still satisfied with the program and making adjustments to it when necessary is probably the better way to guarantee long-term viability.

**Recommendation 2**: That the SHoF interacts on a regular basis with the other Centres on the PhD program.

## **Recruiting People of International Competence and Experience**

As noted above, SHoF had developed a clever package of measures for attracting and retaining faculty, especially junior faculty. An innovative part of this package is the publication bonus, which was praised not only by those associated with SHoF but also those at the affiliate centres in Lund and Gothenburg. Increasing the bonus might be something the Centre needs to consider at some time in order to manage retention against fierce global competition for talented Staff. The Centre is keen to resolve the more vexed question of offering tenure-track positions, a matter that is leading the Centre to consider addressing long-term sustainability at a commendably early stage in the Centre's existence.

#### **Gender perspectives**

The Centre, especially through the work of its Deputy Director, is fully cognisant of the challenges of achieving gender balance in the field of finance research and has taken some steps to address it, including having female chairs of the Steering Committee and the International Scientific Advisory Board and a female Deputy Director who is going to concentrate even more on this matter in her next role.

There is one specific area that could be addressed, however, and this is the



matter of PhD students from the regions travelling to undertake coursework at SHoF. For those responsible for young children (and this disproportionately affects women), being away from home for two full days out of every week is difficult. The evaluators suggest that the option of offering the coursework through very high quality interactive video (using well-tested global classroom techniques so it feels no different to face-to-face interaction and possibly running over Sweden's excellent academic and research network, SUNET, to keep costs down) be explored. While only a small number of students would be affected, anything that improves the gender balance is worth considering in a field such as this where improving gender balance has been something of an intractable problem.

# 7. <u>Strategy, Organisation and Management of the Centre</u> Becoming sustainable

The Centre has identified long-term financial sustainability as its major challenge. The evaluators agree. It would be unfortunate if VINNOVA, having established a Centre of such high quality and international impact, found that it lost momentum over the next few years because it was not able to continue to attract top talent as there will be no way to offer new hires a tenure track position. This is because none of the partner organisations can underwrite potentially permanent appointments at present. As the President of SSE indicated, the University is very supportive of SHoF, but since SSE is relatively small, providing guarantees of permanent positions is not possible without guaranteed long-term funds from other sources. Funding thus will have to come from sources such as 'earmarked' government funding (possibly directly from the Ministry of Finance), from industry or foundations, entrepreneurial activity (including executive education), and/or philanthropy. Developing and then implementing a strategy to secure funding long-term needs to be a high priority over the next three years. This will not be an easy task given current economic conditions but the nature of the Centre's work addressing these challenging conditions could possibly point the way forward to finding long-term funds.

**Recommendation 3:** That the Centre makes developing and implementing an effective strategy for addressing long-term financial sustainability a major priority in Stage 2.

For example, the Centre could ramp up its executive education offerings. There are several important characteristics for the SHoF that could be leveraged for generating funding from executive education:

- i) it is a meeting place/network place for executives working in Finance in Sweden (and more broadly), and has excellent facilities
- ii) some of the faculty members are highly experienced at executive teaching in the every best universities in the world
- iii) the current profile of their financial situation means that it can make fixed costs investments now and a payout horizon of 4-5 years time on is ideal.
- iv) a large number of people working in the financial industries work nearby SHoF facilities.
- SHoF has developed a reputation for serious content and is well connected to senior executives in a large number of financial companies



- vi) there are several high profile teacher/researchers coming to SHoF for seminars or conferences
- vii) part of SHoF mission is to impact practice via superior education.

To us this makes SHoF a natural candidate to create an ambitious executive education program. It could hire specialised professionals to develop executive courses, including fee-paying seminars/conferences. We understand the tension with SHoF sponsors who are already paying for SHoF but we think that it is possible to have a system whereby sponsors get credits/seats to attend a certain number of conferences or executive education days.

In summary, other research centres similar to SHoF have successfully met the sustainability challenge. SHoF could profitably study how they did it.

**Recommendation 4:** That the Centre identifies leading finance research centres that have become sustainable without compromising research quality and impact and study the mechanisms they use to remain sustainable with a view to adapting these to SHoF.

## The Role of the Steering Committee

Building an effective strategy will require continuing strong guidance from the Centre Steering Committee. The Steering Committee should have all key stakeholder groups (and not just the two members, SSE and SIFR, of the nonprofit organisation, SHoF) represented on it so all these groups 'own' the longterm sustainability problem and are drawn in to solving it. The Steering Committee currently comprises an independent Chair, plus two representatives of SSE and two representatives of SIFR. The Centre is fortunate to have such a high-profile and dedicated Chair and other individuals on its current Steering Committee. However there could be benefit in restructuring the Steering Committee more obviously to include explicit external stakeholder representation. Of course this might mean some of the same members remain but are present in a different category than at present.

Another reason to have a good proportion of user-stakeholders on the Steering Committee is that this is an unusually large research Centre in national terms and thus should be seen to be particularly accountable to the wider community concerned with building up Sweden's excellence in finance.

**Recommendation 5:** The Centre should revise its Steering Committee structure retaining the small number (5) of Steering Committee members but changing the composition so that the majority are external stakeholders or independents, one of whom should be the Chair. The primary responsibility of the Board should be strategy (with a focus in Stage 2 on a detailed strategy for achieving long-term sustainability) and oversight of management. The Board should involve and draw on the expertise of the ISAB and the Advisory Board of Practitioners in developing the strategy for long-term sustainability.

At interview the President of SSE informed the evaluators that he was hoping to re-open discussions with KTH and Stockholm University regarding their possible formal involvement in SHoF in some way. These negotiations had been in progress previously but broke down not long before the application for VINNOVA



funding was submitted. Should the renewed negotiations be successful, a predominantly external-member Steering Committee, as outlined in Recommendation 5, will almost certainly be a more acceptable governance structure than the current structure for the new university partners.

## Management Team Structure, Processes and Performance

The Centre has a good management team, which has established effective processes for Centre administration. SHoF has been particularly fortunate in its founding director and Deputy Director. The evaluators note that both are stepping down from these roles shortly and urges the Steering Committee to ensure that their replacements are of equally high calibre. Ideally, SHoF would recruit colleagues with similar enthusiasm and vision into these roles without compromising the time of its best researchers.

#### The International Scientific Advisory Board (ISAB)

The ISAB is well composed and has been of considerable assistance to the Centre in the development phase. In Stage 2 the Centre should look to the ISAB for help with strategy (as indicated above) and for further guidance on visibility and PhD student placement.

#### **Branding, Communication and Promotion**

In a relatively short period of time, SHoF has become home to a group of outstanding researchers in the area of finance in Stockholm. The evaluators also understand that it is emerging as a place where discussions about finance, the financial industry, regulation and policy formation in Sweden take place. This is no doubt thanks to the quality of its academic and support staff and the attractiveness of its premises. The evaluation team believes that to further strengthen its position, the delicate issue of branding has to be addressed. This has at least two related aspects. First, SHoF should work on its brand recognition outside (and possibly also inside) Sweden. Only one of the four finance professors on the evaluation team had heard of SHoF before, but everybody knew SSE and SIFR, the academic founding fathers. This is probably normal given the recent construction of the SHoF and the established positions in the market of the other two institutions. Second, a balance has to be found between each of the three brands (SHoF, SSE and SIFR). It is this issue in particular that is delicate. The issues of low visibility and multiple names may hinder an organised approach to industry, the public sector, academics and prospective students. Moreover, if SHoF considers opening up to other academic institutions in Stockholm, then the issue of multiple names is felt even more strongly.

**Recommendation 6:** The SHoF, in tight collaboration with SSE and SIFR, should form a clear and unambiguous branding and communication strategy.

#### The Report to the Evaluation Team

The Report to the evaluation team was detailed, clear and candid about both Centre strengths and challenges.

#### 8. Long-term development – Stage 2 and beyond

As indicated above, the challenge for the Centre is addressing long-term sustainability effectively.



In summary, our recommendations are:

# 9. <u>Recommendations to Strengthen the Centre</u>

**Recommendation 1:** That the Centre revisits its strategy for recruiting and placing PhD students and attempts to increase the program's visibility **Recommendation 2**: That the SHoF interacts on a regular basis with the other Centres on the PhD program.

**Recommendation 3:** That the Centre makes developing and implementing an effective strategy for addressing long-term financial sustainability a major priority in Stage 2.

**Recommendation 4:** That the Centre identifies leading finance research centres that have become sustainable without compromising research quality and impact and study the mechanisms they use to remain sustainable with a view to adapting these to SHoF.

**Recommendation 5:** The Centre should revise its Steering Committee structure retaining the small number (5) of Steering Committee members but changing the composition so that the majority are external stakeholders or independents, one of whom should be the Chair. The primary responsibility of the Board should be strategy (with a focus in Stage 2 on a detailed strategy for achieving long-term sustainability) and oversight of management. The Board should involve and draw on the expertise of the ISAB and the Advisory Board of Practitioners in developing the strategy for long-term sustainability.

**Recommendation 6:** The SHoF, in tight collaboration with SSE and SIFR, should form a clear and unambiguous branding and communication strategy.

# 10. Recommendations to VINNOVA

VINNOVA should anticipate the need for sustainable funding of its centres, and consider possible solutions in advance. For example, VINNOVA could manage a renewed funding line (e.g. 10 more years), which has enough capacity to support 1 in 3 newly funded institutions. There are examples of longer-term funding models in other countries, which VINNOVA may want to study. The interest of a particular ministry like the Finance Ministry might play a role in the eventual selection of funding renewal.

More recommendations to VINNOVA are included in the overarching report on this program to VINNOVA.

# 11. Conclusion

SHoF has successfully built-up a top-tier finance research culture in Sweden, concentrating efforts at one place, and:

- involving frontier research on various areas of finance
- developing a national PhD program in Finance, and students and researchers from these other finance departments (extent unclear),
- involving the agglomeration of data sets, standard and unique.

As it moves to the next phase, the Centre intends to work more closely with national stakeholders - public and private - in order to understand and deliver more closely on their particular needs. It also understands that a major priority over the next few years is finding a way to be financially sustainable in the long term.