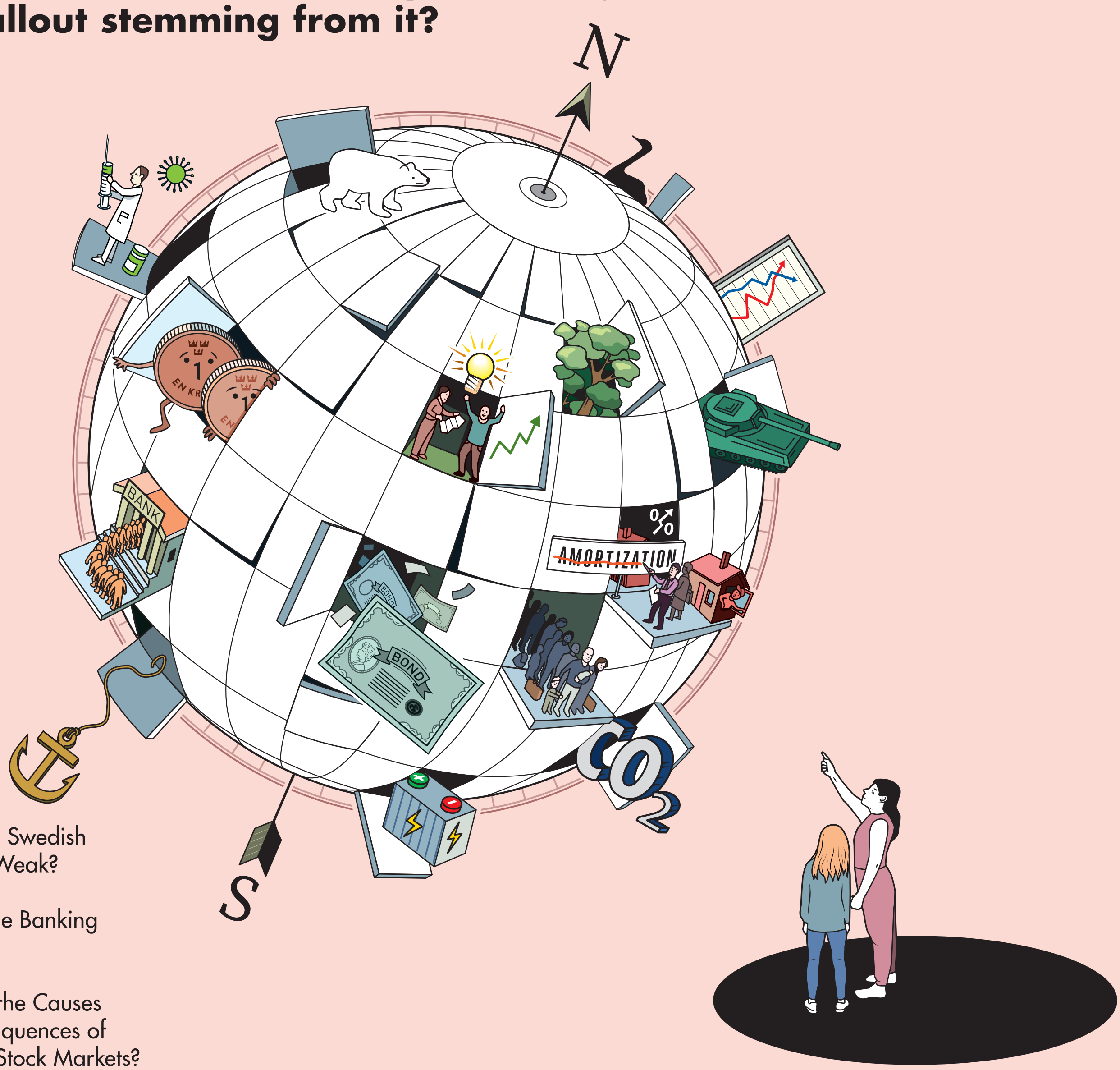
SWEDISH HOUSE OF FINANCE | STOCKHOLM SCHOOL OF ECONOMICS

Annual Report 2023

NAVIGATING GLOBAL RISKS

How to measure uncertainty and mitigate the fallout stemming from it?



SWEDISH HOUSE OF FINANCE

STOCKHOLM SCHOOL OF ECONOMICS

Creating impact through research

Words from the Director

The academic field of Finance is, in a sense, the science of economic risk. And risk is central to financial markets. Risks are first encountered in these markets; there, risks are measured, priced, and shared; and sometimes, when things go poorly, the financial system can create risks.

For the student of economic risks, recent years have produced lots of data. Geopolitics has surged as a key risk for many financial markets, from driving inflation shocks to forcing revisions to the meaning of sustainability. Rising interest rates, both nominal and real, has put pressure on any asset owner or institution with long-dated assets. Long maturity government bonds were affected everywhere, and the stock of developed market government bonds probably lost more value than in any previous episode. Asset losses together with short-dated nominally fixed liabilities, such as bank deposits, turned out to be a combustible mix, and several mid-sized US banks failed after experiencing textbook bank runs. But losses are widespread, and we may hear more about them. A mitigating factor for banks is that their cash flows tend to be solid when rates rise, as interest income responds quickly, interest expenses slowly. This won't last – see for example how German fintech bank Raisin has attracted €50 billion in deposits looking for higher yields on bank deposits. Technology will continue to challenge the value of the deposit franchise.

Of course, at the Swedish House of Finance, while much attention is devoted to current events, most research operates on long timelines. I want to point to three fascinating research areas that are covered in this year's report. Ulrike Malmendier of Berkeley Haas received the Skandia Award, which SHoF co-organizes, for her research on how personal experiences shape financial decision making. Recent generations may not appreciate how inflation will impact their financial situation, for example. Adair Morse, also of Berkeley Haas, co-organized the conference Harnessing Finance for Climate in May. She predicted that the U.S. and EU approaches to climate – let's call it subsidies vs. taxes – will converge. Massive investment decisions in batteries, mining, and manufacturing hang in the balance. The macroeconomic outlook for 2024 is uncertain. If we were to find ourselves in a global recession, the work of Alexander Ljungqvist of Stockholm School of Economics and Swedish House of Finance and his collaborator Daniel Bias of Vanderbilt University points to a silver lining – startups with recession experience are more resilient and tend to perform better in the long run.

Many thanks to all our stakeholders, collaborators and supporters for participating in another year of financial research, dialogue, and discovery.

BO BECKER
Director, Swedish House of Finance

Cevian Capital Professor of Finance and Head of Department of Finance, Stockholm School of Economics

About the Swedish House of Finance

The Swedish House of Finance at the Stockholm School of Economics is Sweden's national research center for financial economics. It hosts internationally distinguished researchers and enables financial research and development of the highest quality.

The Swedish House of Finance (SHoF) provides an independent platform for dialogue, open to everyone with an interest in finance. The center generates daily contact between academia, the public, and the private financial sectors, which in turn leads to new research, new private initiatives, and a basis for better decisions and meaningful regulation of the financial sector. SHoF is a vital part of the research and development that is necessary to continue to develop Sweden as one of the leading financial centers in Europe and to support the development of a strong Swedish economy and rate of innovation.

SHoF has succeeded in attracting world-class academic researchers, as well as top-tier students. It has built an ecosystem for financial research and development. This provides decision-makers in Sweden with access to the world's collective expertise in finance.

SHoF provides a platform for:

- Creating a 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 academic institutions.
- Sharing its research infrastructure with researchers in Sweden.
- Obtaining research financing from the Swedish financial industry.

A National Mandate

1. **National PhD Program:** Highest standards. Open to all Swedish universities.
2. **Data Center:** Both international databases and databases on exclusive Swedish data developed by the in-house data center available to all researchers in Sweden.
3. **Research:** Fellowship program, publication incentives, support for travel and recruitment.
4. **Infrastructure:** Offices, lectures, conferences, seminars and a researcher visiting program.
5. **Outreach:** Seminars, conferences and research communication aimed at both academics and decision makers within the private and public financial sector.

In this Issue

High levels of uncertainty can slow down growth and lead to recession, so measuring it is really a way of predicting what’s to come

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Navigating Global Risks

In 2023, the World Health Organization finally ended its global health emergency status from the COVID-19 pandemic. However, the world's troubles were far from over. The war in Ukraine persisted, and the Israeli-Palestinian conflict escalated, resulting in the loss of thousands of lives. Meanwhile, devastating natural disasters, including earthquakes in Afghanistan, Morocco, Turkey, and Syria, claimed tens of thousands more. Amid these crises, central banks worldwide maintained their course of raising interest rates, affecting both financial institutions and households.

Against this backdrop, the Swedish House of Finance (SHoF) gathered researchers, policymakers, and practitioners from around the world to discuss these risks and their impact on supply chains, financial markets, and businesses during its annual conference. The center also organized seminars about how personal experiences, especially during times of crises, impact individual financial decision-making and another seminar on the weak Swedish krona.

SHoF researchers continued to engage the media and public about these important issues. This section features their insights on matters spanning from household risks in times of financial stress to the reasons behind the collapses of American regional banks. It also features a study examining whether recessions present a good time to start new businesses.

Measuring and Mitigating Geopolitical Risks

Marked by pandemics, wars, and geopolitical tensions, the world has witnessed a surge in uncertainty over the last few years. The Swedish House of Finance (SHoF) hosted the annual conference "The Effects of New Geopolitical Risks on Financial Markets and Firms", gathering researchers, practitioners, and policymakers to discuss new geopolitical risks and their impact on supply chains, financial markets, and businesses.

Pandemics, climate risks, wars, and sanctions have increased the relevance of geopolitical risks. Over the next few years, these shocks will have effects on international currencies, supply chains, financial markets, and the macroeconomy. SHoF interviewed some of the conference participants on the current state of global uncertainty, how to measure these uncertainties and mitigate the fallout stemming from them.

How do we measure uncertainty?

Nicholas Bloom is the Stanford University professor behind the World Uncertainty Index which measures and tracks uncertainty across the globe by text mining the country reports of the Economist Intelligence Unit. According to Bloom, uncertainty "right now, globally, and for Sweden, we are about twice the long-run average."

Russell Wermers from the University of Maryland measures economic policy uncertainty by analyzing text in the news, which is much more timely.

"You can get month-by-month, or even day-by-day changes in economic policy uncertainty that don't come out in macro variables for a long, long, time," he says.

"High levels of uncertainty can slow down growth and lead to recession, so measuring it is really a way of predicting what's going to come ahead."

—NICHOLAS BLOOM, Stanford University

"It's not the level of uncertainty, it's the increases in uncertainty in a particular country that compel a portfolio manager to pull money from that country."

—RUSSELL WERMERS, University of Maryland

Dario Caldara from the Division of International Finance at the Federal Reserve Board measures geopolitical risk. Like Bloom and Wermers, he and his colleagues examine text in newspaper articles that discuss geopolitical risk related to wars, terrorist attacks, or tensions across countries, and measures the intensity by looking at the frequency of articles published on the topic. They found that geopolitical risks can cause inflation.

Destruction of human capital, expansionary fiscal policy to offset those adverse events, higher commodity prices, they all push the general price index up and can cause persistent inflation."

—DARIO CALDARA, Division of International Finance, Federal Reserve Board

Jens Henriksson said that during his four years as CEO at Swedbank, he has already faced four different crises: an anti-money laundering crisis, COVID-19, war in Ukraine, a cost-of-living crisis, and talked about the importance of understanding risks for financial Institutions.

Understanding the risks of your exposures means that you are in a much better shape now facing crises going forward."

—JENS HENRIKSSON, Swedbank

How do global supply chain disruptions impact firms?

Discussions about disruptions to global supply chains were high on the agenda during the conference.

Marion Jansen, Director of the Trade and Agriculture Directorate at the Organisation for Economic Co-operation and Development (OECD), discussed how despite an increase in trade shocks in the past years, supply chains are coping well.

"All these shocks on a global level, trade is doing fine," she said, stressing that companies must now deal with a new threat: policy changes that come from geopolitics and climate uncertainty that have turned to law, like the Chips Act, forced labour regulation, Inflation Reduction Act in the US and EU Carbon Border Adjustment Mechanism.

The trade world is exposed to a lot of policy shocks right now but maybe they're not coming from trade policies but other policies... these shocks have been increasing in frequency over the past years."

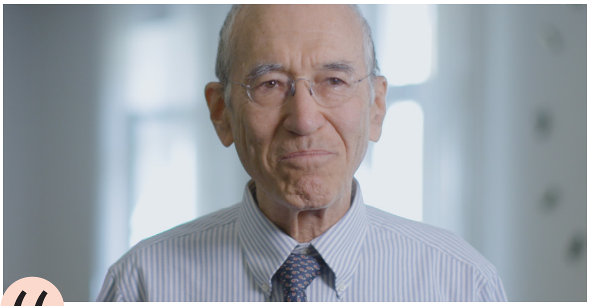
—MARION JANSEN, OECD

Gordon Phillips from Tuck School of Business discussed how global supply chain disruptions impact firms. He says that companies are spending to diversify their supply chains as a safeguard against geopolitical shocks.

Firms are spending more to diversify their supply chains. They don't want to have exposure to one country anymore, and that's costly, to diversify your supply chain."

—GORDON PHILLIPS, Tuck School of Business

Yakov Amihud from the Stern School of Business meanwhile, stressed the importance of hedging operational risk on top of financial risk.



We in finance focus on financial risk, but there are also operational risks. The company has a commitment to pay off its debt, but it also has a commitment to deliver to its customer. If it doesn't, there is a penalty: it loses customers, it loses franchise value, and so on."

—YAKOV AMIHUD, Stern School of Business

The war in Ukraine was also top of mind among the participants. Steven Ongena, Professor of Banking at the University of Zurich, and Torbjörn Becker, Director at the Stockholm Institute of Transition Economics, examined Russian banks' responses to economic sanctions and their impact on Russia's economy. Becker discussed sanctions' mechanisms and their effectiveness, while Ongena talked about how Russian banks responded to sanctions.

Ongena explained that when debt sanctions were imposed, unsanctioned banks, especially state-owned or politically connected ones, increased their debt issuance, taking advantage of foreign investors' willingness to buy. On the other hand, asset sanctions prompted an overreaction, leading to the selling of foreign assets. This highlighted a clear distinction between the two types of sanctions.

The more intense the political connections, the more intense these types of balance sheet adjustments are going to be."

—STEVEN ONGENA, University of Zurich

In the Media

- "Uncertainty has risen over 20 years", Realtid, August 24. (Nicholas Bloom)
- "The situation for world trade - new figures from the OECD", Sveriges Radio, August 22. (Marion Jansen and Torbjörn Becker)
- "We must have better control of our risks", Realtid, August 23. (Jens Henriksson)

Becker meanwhile said that future growth in Russia will be challenging.

Productivity (in Russia) is down, lots of capital leaving, and then we know how many people's lives are destroyed in the war, a lot of Russian men have left the country, so basically my take is that future growth in Russia is going to be very, very challenging."

—TORBJÖRN BECKER, Stockholm Institute of Transition Economics

Monetary policy

The participants also discussed monetary policy. Sebnem Kalemli-Özcan from the University of Maryland talked about how US monetary policy influences the decisions of foreign central banks.

US monetary policy impacts both cost of capital worldwide, and also exchange rates worldwide as the US dollar is the dominant currency both in international trade and international finance."

—SEBNEM KALEMLI-ÖZCAN, University of Maryland

Former Riksbank governor and SHoF Senior Fellow Stefan Ingves said that small and open economies like Sweden must be proactive when it comes to navigating new geopolitical risks.

(For) a small, open economy like Sweden... it's like sailing on an ocean in a small boat – you better know how to sail. If you don't you will end up with a problem sooner or later, one way or the other." ♦

—STEFAN INGVES, Former governor of Riksbanken

Stefan Ingves Appointed Senior Fellow

Former Riksbank governor Stefan Ingves has been appointed as Senior Fellow at the Swedish House of Finance. Ingves, who served as the head of Sveriges riksbank for 17 years, officially began his assignment on November 1. Ingves' role as Senior Fellow includes teaching as well as advising in topics intersecting monetary policy, macroeconomics, and finance.

Watch presentations and interviews

Why is the Swedish Krona so Weak?

During a seminar hosted by SNS and the Swedish House of Finance (SHoF), experts discussed the challenges of assessing the performance of the Swedish krona. They suggest that the currency may be undervalued and would strengthen in the longer term.

Erik Thedéen, Governor of Sveriges riksbank, Kristin Magnusson Bernard, CEO of Första AP-fonden (AP1), and Per Krusell, Professor of Economics at the Institute for International Economic Studies (IIES) at Stockholm University, discussed the Swedish krona, which has been on a multi-year decline, reaching record lows against the Euro.

They discussed the challenges of gauging the Swedish krona's value, particularly if it is undervalued, and identified factors contributing to its weakness. These include limited interest from financial actors, who are the primary traders of the krona, and Swedish investors' preference for foreign assets and currencies.

SNS/SHoF Finance panel with Erik Thedéen (Riksbanken), Kristin Magnusson Bernard (AP1), and Per Krusell (IIES/Stockholm University).

Difficulty in evaluating the value of SEK

As a floating exchange rate, the Swedish krona has no "fundamental value", unlike commodities like gold or financial instruments like stocks, the speakers said. "The fundamental value of the krona does not exist. It's not a stock, where the fundamental value consists of the right to a company's profits. Historically, currencies were anchored to precious metals and the like," said Krusell.

Like Krusell, Magnusson Bernard emphasized that exchange rates can be likened to a "relationship" lacking an inherent intrinsic value, in contrast to, for example, a gold reserve that backs a currency. Instead, the value of exchange rates hinges on the perception of households, companies, and investors regarding their suitability for transactions and savings.

Financial actors account for majority of SEK Trading

Over 90% of the trading in the krona takes place between different financial actors in large financial centers abroad, said Thedéen.

"The consequence is that trading with the krona is largely driven by purposes that do not necessarily attach much importance to the krona's fundamental value. During periods, the krona's exchange rate can therefore vary in a way that is difficult to explain with macroeconomic developments," Thedéen said in his speech.

Magnusson Bernard, who as CEO of one of Sweden's largest pension funds manages around SEK 440 billion, said that swedes tend to have investments abroad.

"Swedish companies are mainly acting outside the Swedish market with income and expenses in dollars or euros," she said.

When asked to give advice to Riksbanken on how to get foreign investors interested in Sweden again, Magnusson Bernard said that the central bank needs to produce clear and easy-to-understand documents that show how they think and work. The financial market trades on information and therefore it needs to be easier for foreign investors to understand the central bank's strategy.

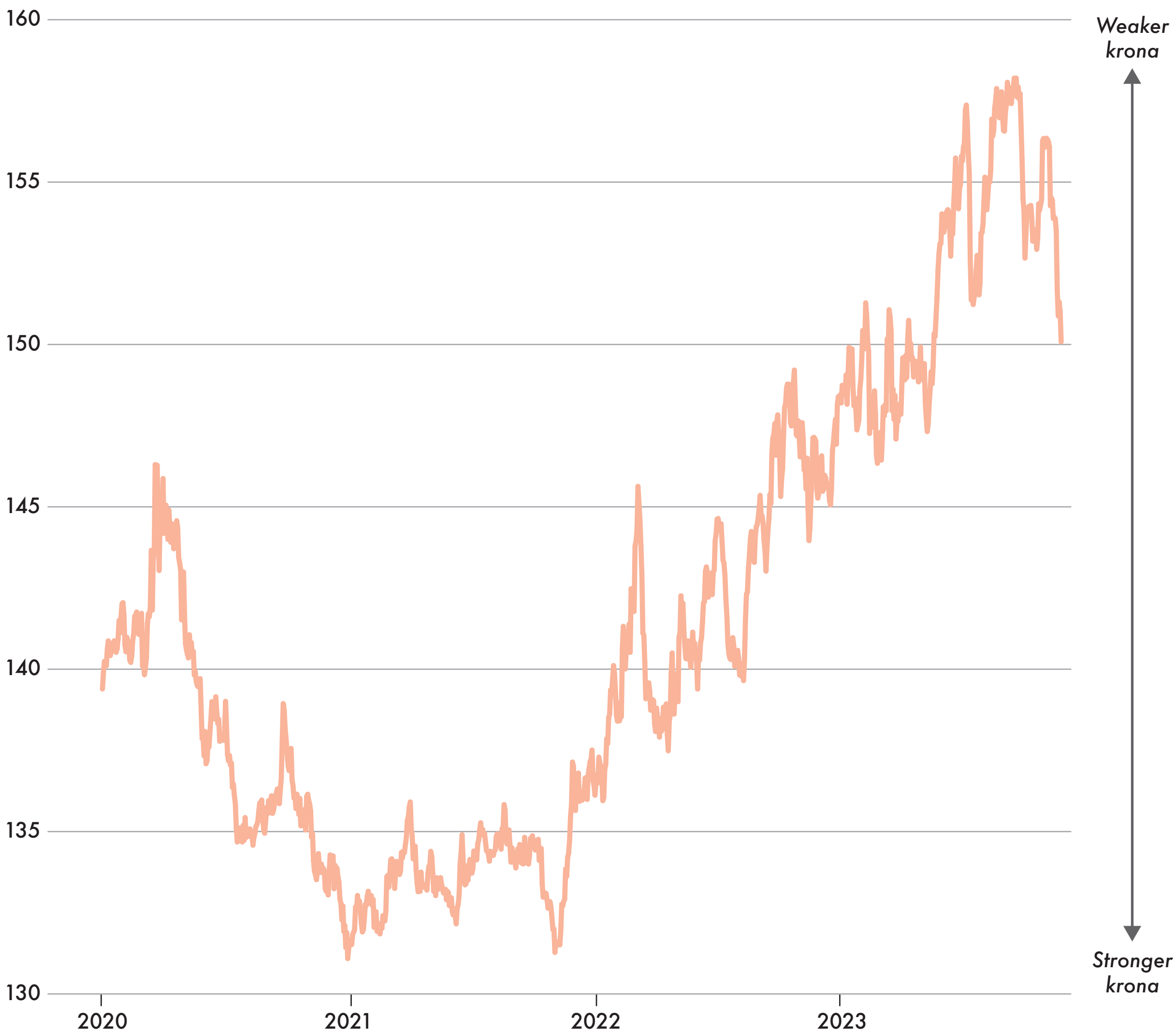
"How do you work with the speeches? How do you work with the monetary policy reports? How do you work with the translations? It is especially important to communicate clearly when there is now a major change in strategy," she said.

SEK undervalued, should become stronger in the future

Citing the International Monetary Fund, Thedéen said that the Swedish Krona is undervalued compared to what is justified by the country's economic fundamentals.

"Many, including the Riksbank, assess that the krona is currently undervalued if compared to what is justified by fundamentals, i.e. the economic development in Sweden compared to that in the rest of the world," he said.

KIX4-weighted exchange rate



Note: Index, 18 November 1992 = 100. The currencies are EUR, USD, NOK and GBP.
Source: The Riksbank

> Economic fundamentals therefore suggest that the krona should strengthen in the slightly longer term, in real terms but also nominally."
>
> —**ERIK THEDÉEN, Sveriges riksbank**

Economic fundamentals therefore suggest that the krona should strengthen in the slightly longer term, in real terms but also nominally."

Riksbanken had earlier announced that it would hedge about a quarter of its reserves to protect itself from losses should the krona strengthen.

Magnusson Bernard meanwhile, said that the krona may get a longer-term boost from households who have their investments in foreign currencies:

"Swedish households actually assemble a fairly large net worth. And it is concentrated in households that are soon leaving working life. You can expect them to take some of these savings home, and this could lead to a strengthening of the krona." ♦

Watch the seminar

In the Media

- "Riksbank Governor: The krona will be strengthened", Dagens Nyheter, September 22
- "Riksbank Governor Says Investors Could Emulate Krona Hedging", Bloomberg, September 22
- "Swedish currency to strengthen in long run", Riksbank chief says, Reuters, September 22
- Thedéen: The krona undervalued – will strengthen, Dagens industri, September 22
- Thedéen: The krona will strengthen in the long run, Riksbanken, September 22

Personal Experiences and Financial Decision Making

Ulrike Malmendier (Berkeley Haas) is the recipient of the 2023 Skandia Research Award on Long-Term Savings.

Professor Ulrike Malmendier presented her research showing how inflation experiences have long-lasting effects on individual behavior. The extent of the impact depends on the duration and severity of the experience.

> I think that's very relevant to policymaking. If there is a recent spike in inflation, if something is happening in mortgage rates, who will be most affected? Will it be older people who have their mortgages already, or will there be a missing generation of homeowners who are unwilling to go for a mortgage or vice versa: a generation that is too bullish about real estate prices continuing to rise forever, who are overleveraging, taking up additional loans, etc."
>
> —**ULRIKE MALMENDIER, Berkeley Haas**

Watch the seminar and interview

Understanding Asset Managers' Expectations and Their Impact on Portfolios

Understanding investors' expectations is crucial in shaping investment decisions and portfolio strategies. A new study by Swedish House of Finance's Magnus Dahlquist, from Stockholm School of Economics, and Markus Ibert, from Copenhagen Business School, explored equity return expectations among major asset management firms to understand their impact on investment portfolios.

The study analyzed return expectations from major asset management firms like BlackRock, J.P. Morgan, Morningstar, State Street, and Vanguard. It discovered that their equity premium expectations are opposite to retail investors: increasing with low equity valuation ratios and decreasing with high ratios. However, asset managers' expectations effect on portfolios is moderated by "investment mandates," rules set by regulations or clients that limit their investment options for client funds.

> Understanding the origins of investment mandates and their relation to expectations seems central to understanding long-run asset prices."
>
> **—Magnus Dahlquist, Stockholm School of Economics**

Asset managers' equity premium expectations are countercyclical

Unlike retail investors, asset managers' expectations for future stock market returns follow a different pattern. They tend to be lower when stock valuations are high and higher when valuations are low.

Linking expectations to portfolios

The study investigated whether asset managers' investment decisions align with their expectations. The authors used the asset managers' allocation funds to analyze this.

Their findings showed that asset managers' expectations do influence their investment choices. For example, when asset managers expect higher long-term returns from US equities, they tend to allocate more funds (around two to four percentage points more) to US equities in their portfolios. This sensitivity to expectations is stronger than what is observed in studies of regular retail investors.

However, the impact of asset managers' expectations on portfolios is still muted, as other factors, like investment mandates, can influence portfolio decisions. These mandates set specific rules on portfolio allocations (e.g., a preset 60% equity allocation). Taking these mandates into account, the portfolios' sensitivity to expectations decreases.

Asset managers vs. CFOs and other professional forecasters

Comparing asset managers with Chief Financial Officers (CFOs) and professional forecasters, the study found that asset managers' expectations focus more on long-term returns. Asset managers' expectations consistently demonstrate a negative correlation with stock market valuations, setting them apart from CFOs and professional forecasters. ♦

Household Risks in Times of Financial Stress

Swedish House of Finance researchers discuss how rising interest rates, high inflation, and low growth affect the financial health of households, and how the current economic climate may impact wealth inequality as a whole.

Labor market effects of credit market information may impact households for years to come

By Marieke Bos, Deputy Director, Swedish House of Finance

In Sweden, information on outstanding claims can be collected from The Enforcement Authority (Kronofogden), and private credit bureaus that gather information from actors in the economy that signed a contract with consumers. This includes among others the tax authority, banks, telecommunications providers, and credit institutions.

Even after consumers have repaid their outstanding claim, a negative flag on their credit records will impact their economy for several years. In Sweden, past defaults can be remembered for three years from the day that the consumer repaid an outstanding claim. In countries like the United States, for example, it is seven years. The impact of having a negative flag on your credit record has increased as more and more actors in the economy, like landlords, insurance companies and telecommunication firms use credit information to decide who to have as clients. Even employers use credit records to decide who to hire.

In our paper (Bos, Breza and Liberman, 2018) we investigate the impact of a negative flag on the consumer labor market in Sweden. We estimate that one additional year of negative credit information reduces employment by 3 percentage points. Wage earnings fall by SEK 10,600 (US $1,019) while the decrease in credit is only one-fourth as large. Negative credit information also causes an increase in self-employment and a decrease in the ability to relocate.

More than 400,000 individuals are currently registered with outstanding debts managed by the Swedish Enforcement Authority (SEA, Kronofogdemyndigheten). Over the last years, the total registered debt amount has reached an all-time high in the history of the authority (SvD, 2024).

Lessons from the COVID-19 pandemic: existing buffers may not be enough to protect the most vulnerable households

By Paula Roth, Postdoc Fellow, Swedish House of Finance

The pandemic hit the Swedish labor market hard, leading to an increase in unemployment of 1.5% in 2020. Unemployment is one of the most common causes of financial distress.

During the pandemic there was also a slight increase in individual insolvencies. Between 2019 and 2020, the number of unpaid debt claims received by the Swedish Enforcement Authority increased by 3.3%. Among young adults (aged 18-25), who were particularly hurt by the worsened labor market, the increase was almost 6%. Most applications considered individuals who were already financially distressed, leading to a marginal increase in applications but an almost 18% increase in the total debt amount.

There was also a significant increase in applications for debt restructuring, rising by 38% compared to the average yearly change of 12% since 2007. This indicates that the pandemic made the financial burden overwhelming for many individuals.

Individual insolvency is most often caused by economic shocks, such as unemployment, sickness, and divorce, and is rarely about large debts. The median debt amount in 2020 was 6,000 SEK and 90% of all claims are less than 100,000 SEK. This implies that the existing buffers like unemployment insurance and benefits were not enough to protect the most vulnerable households. Even though several measures were taken to compensate for income losses, post-tax inequality increased by almost 4% during this period. This was mainly driven by a decrease in average earnings among low-income groups.

In a working paper, I show that inequality increases the risk of individual insolvency, partly explained by an increased pressure to consume above your means. This is supported by the fact that 75% of all claims come from consumption related debts.

Swedish banks' exposure to households is highest in Europe, which is worrying in times of stress

By Anastasia Girshina, Assistant Professor, Stockholm School of Economics

With interest rates rising during this past year, questions about sustainability of household balance sheets and their capacity to service mortgages have naturally arisen. According to the European Systemic Risk Board (ESRB) latest report (November 2022), Swedish banks' exposure to the household sector is among the highest in Europe. What perhaps is even more worrisome are the levels of debt compared to the levels of household income. In Sweden, the overall household debt is almost twice as large as their gross income, with only Denmark, Netherlands, and Luxembourg being around similar levels.

At the same time however, Sweden has been on the forefront of implementing borrower-based measures aimed to ensure adequate capacity of households to service their debt. For example, since 2010, loan-to-value (LTV) ratio of new mortgages in Sweden should not be more than 85%. In comparison, in Denmark, home buyers are generally required to make a 5% down payment when purchasing a home; whereas in the Netherlands or Luxembourg the LTV limit is set to 100% - that is, no cash is required as an initial payment for the house.

It is also important to note that rising levels of debt in Sweden have been accompanied by both low lending margins and a strong property market, with house prices growing steadily since the early 1990s. And although some models would indicate that the Swedish housing market is overvalued, it may be a hard exercise to make this call given that our rental market is heavily regulated, and thus we do not have reliable data on rental yields.

When it comes to Sweden, the main unknown is the overall level of financial well-being of the Swedish households. And what I mean by this is the basic understanding of the level of financial and real estate assets as well as leverage together, at the level of individual households or at least within socio-demographic groups. And it is here that Sweden finds itself at a disadvantaged position compared to other countries lacking both comprehensive administrative data on all balance sheet items and survey data, such as the EU Household Finance and Consumption Survey (HFCS), available in other European countries. It is of utmost importance that Sweden takes steps in the direction of detailed data collection and documentation to allow both researchers and policy makers to build a better understanding of how resilient our economy is, and which households are potentially the most affected by the current economic conditions.

Financial mistakes may widen wealth gap

By Paolo Sodini, Professor of Finance, Stockholm School of Economics

In our paper called "Fight or Flight: Portfolio Rebalancing by Individual Investors," we found that households, on average, rebalance their portfolio in times of stress. Rebalancing means precisely buying in when the market goes down and we show people on average rebalance 50% of the drops.

On average, we see that people who have higher education, are wealthier and save in private pension, tend to rebalance more. In this way they take more advantage of the risk premium that can be earned in risky financial markets, as they tend to buy when stocks are cheap, and sell when stocks are expensive.

We have also found in our paper “Down or Out: Assessing the Welfare Costs of Household Investment Mistakes,” that financially savvy households with better diversification earn similar returns to less sophisticated ones but with lower risk.

However, these trends contribute to wealth inequality over time, with less affluent and less financially literate households falling behind due to their financial mistakes.

That said, when we take a look at the very rich, those at the top of the wealth distribution, the picture is dramatically different. They often have most of their wealth in risky assets, limiting their ability to rebalance. Moreover, their wealth tends to be concentrated in the enterprises that made them rich, making them vulnerable to economic downturns, which can actually help drive social mobility.

Unlike the rich who have less ability to rebalance due to their circumstances, poorer households lag behind due to financial mistakes. This raises a critical question: Are financial markets supporting households in making the right decisions? ♦

Review of Sweden's Macroprudential Regulations

In the spring, the Swedish Ministry of Finance commissioned a committee, chaired by Swedish House of Finance's Peter Englund, from Stockholm School of Economics to analyze how measures such as mortgage ceilings and amortization requirements have worked so far, and how they can be redesigned to manage macroeconomic risks and consumer protection in a more effective manner.

Under current amortization rules, mortgage borrowers must repay 2% of their loans annually on loans that are larger than 70% of the value of the home, and 1% annually on loans larger than 50% of the value. In addition, an extra percentage point must be paid off annually by those that take out loans larger than 4.5 times their annual income.

What are the committee's main concerns?

The current regulations were implemented with the aim of restricting individuals' home loan debts, mitigating the risk of excessive debt in relation to their home values or incomes. The task of the committee is twofold: to evaluate the current measures and to make proposals for the future.

"This involves weighing the possible benefits in terms of improved financial stability against the costs in terms of limiting the ability of household to financed consumption and housing investments," Englund says. "Young households with limited financial resources risk being locked out from the housing market."

What suggestions have been brought up?

There are various ways in which the current regulations can be tweaked, Englund says.

For instance, instead of limiting how much money someone can borrow based on the value of the home, this limit can be tied to a person's income.

Another way is to tie the regulation to the models bank use for credit evaluations. These models typically test if a household could handle a significant increase in interest rates without drastically reducing their spending. The interest rate applied in these calculations could be regulated, Englund says.

"In general, more flexible rules should be beneficial. Instead of putting a strict limit on each borrower, the banks may be allowed to make exceptions from the limit for, say, 5% of all mortgages," Englund says.

What are the risks associated with tightening restrictions on the broader financial system and economy?

The most direct effect of tighter restrictions would probably be the dampening of the housing market.

"Fewer households would be able to finance a housing purchase," Englund says. "And today this would come when the housing market is already depressed due to lower real wages and higher interest rates."

The committee will finalize their investigations by October 31, 2024. ♦

Timeline of Mortgage Ceilings and Amortization Requirements in Sweden

- **Mortgage Ceiling (2010):** People could borrow up to 85% of the home's value, using the home itself as collateral.
- **First Amortization Requirement (2016):** The new mortgage is to be amortized down to 50% of the debt at rates of 1 and 2 percent per year, depending on whether the loan-to-value ratio is below or above 70%.
- **Second Amortization Requirement (2018):** New mortgage borrowers with loans that exceed 4.5 times the gross annual income must start paying off at least 1% of their debt every year.

Stress in the Banking Sector

The year 2023 saw growing stress in the banking sector with the collapses of Silicon Valley Bank, Signature Bank, and a last-minute rescue of Credit Suisse. Swedish House of Finance's Bo Becker explains what triggered the crisis and if European and Swedish banks are at risk.

What Happened at Silicon Valley Bank?

By Bo Becker, Cevian Capital Professor of Finance at Stockholm School of Economics

Silicon Valley Bank (SVB) grew a lot in the last few years as much of venture capital fundraising ended up as deposits. This was peculiar for a few reasons, most importantly because it made SVB very exposed to a single industry, and because the deposits were large, meaning in excess of the $250,000 deposit insurance limit. When rates went up in 2022 and venture capitalist flows dried up, the growth of deposits ceased.

Meanwhile, the deposit inflows were such that SVB did not have lending opportunities. They invested in securities, and mostly treasury securities and mortgage-backed securities (MBS). All this is low credit risk – the future cash flows are safe – but had very high interest rate exposure. Because the bonds had long maturity, they lose a lot of value when rates rise. Apparently the average duration of the mark-to-market bonds of SVB was six years, indicating very high sensitivity to interest rate changes.

Small deposit outflows forced SVB to realize losses on the securities. This raised more questions about the bank, creating pressure on the share price, and then Friday morning (March 10), depositors tried to withdraw $42 billion. This was a quarter of SVB's de-posits, and very few banks could manage that kind of balance sheet shrinkage in a day.

SVB was taken over by the regulator (the Federal Deposit Insurance Corporation, or FDIC), which guaranteed all deposits (including the big ones), and which is now selling the assets of SVB while a 'bridge bank' serves depositors."

Shouldn't SVB have hedged the interest rate risk?

Short answer: yes. Apparently, SVB lacked a chief risk officer for most of 2022. According to the Financial Times, SVB hired BlackRock to assess their fixed income risk and discovered that BlackRock had cautioned SVB about their risk controls being significantly lower than those of their peers, as early as January 2022. SVB received a "gentleman's C" rating, not a good grade. Despite BlackRock's offer to assist in strengthening risk controls, SVB declined.

Furthermore, SVB used to hedge rate risk with swaps but stopped. The swaps they had were unwound in 2022. According to their 2022 Q2 financial reports, they were then "shifting focus to managing downrate sensitivity." So, it looks like they wanted a huge one-way bet.

Are European and Swedish banks at risk?

Very few banks in the U.S. or anywhere else have the combination of high interest exposure in securities portfolio and uninsured deposits. So that particular scenario is unlikely.

For Swedish banks, interest rates could squeeze profits if they have funded fixed rate mortgages with deposits (which are getting more expensive). But much of the mortgages are funded with covered bonds with fixed coupons, or are hedged with swaps.

That said, rising rates cause losses of market value in (long maturity) fixed income portfolios. Insurance companies, central banks, and pension funds are sitting on large losses. Most of the time the situation is fine as long as this is not in banks – no one will run on a pension fund. In addition, right now, given the bank stress, interest rates are falling, and inflationary pressures are easing up. So currently, interest rate-related pressures are easing.

Did regulators mess up?

The stress tests run by banks at the best of the Federal Reserve included higher rates, but not as high as they actually went in 2022. Mistake? Maybe – did you know rates would hit rise above 4% last fall? I was concerned about inflation but did not make that prediction. Still, it was probably a shame that no regulator asked about the swaps that were being dropped. Mistake or poorly designed regulation. I predict reforms are coming for mid-sized banks. ♦

In the Media

- "Experts: Fear of unrealized losses contributes to bank panic", Dagens industri, March 10. (Bo Becker)
- "Professors: the American bank crisis will not turn into a new financial crisis", Aftonbladet, March 13. (Bo Becker)
- "Professor: Slight risk of this spreading to Sweden", SVT, March 13. (Bo Becker)
- "Crisis - but not a repeat of the financial crash", TT News Agency vis SvD, March 13. (Per Strömberg)
- "Should you be worried about the banks?", March 28. (Bo Becker)

What Makes a Bank "Too Big to Fail?"

Per Strömberg spoke to Kapitalet, a Swedish financial economics podcast, about the concept "too big to fail" and lessons learned from the global financial crisis which refers to banks and companies that are so large and interconnected that their failure could have negative consequences for the entire economy.

Strömberg delves into the financial interconnectedness of the banking sector, moral hazard, and lessons learned from the global financial crisis. He reasons around the statement that there are two types of factors that cause a bank to be "too big to fail", depending partly on fundamental financial reasons and partly on psychological reasons.

The basics for a bank to work is that short-term savings must be able to be channeled into long-term investments.

"It becomes problematic when there are very long chains of financial transactions that are difficult to overview. On the other hand, all the financial transactions that are made are the lubricant of the financial system which is about getting savings to go to productive investments."

—**PER STRÖMBERG, Stockholm School of Economics**

Read more

Are Recessions a Good Time to Start a Business?

Recessions are often seen as a bad environment for startups but new research suggests that economic downturns can positively impact the survival and growth prospects of innovative ventures. What fuels these counter-cyclical effects?

Recessions and economic downturns are often associated with funding constraints, retrenchment, and risk aversion. Yet many superstar firms have been born in bad times, from Microsoft, born during a recession caused by an oil embargo in the 1970s, to the likes of Airbnb, WhatsApp, and Uber, which are all products of the global financial crisis in 2007-2009.

In a recent working paper, Swedish House of Finance's Alexander Ljungqvist from the Stockholm School of Economics and Daniel Bias from Vanderbilt University look into the Great Recession of 2007-2009 to study how economic downturns affect the growth, survival, and innovation of startups.

Their findings challenge the prevailing notion that recessions result in funding constraints and long-lasting negative effects on new firms, instead highlighting that startups born during recessions excel in talent retention, exhibit greater innovation, enjoy better survival rates, and have an improved ability to go public.

"We find that recession startup experience better long-term outcomes in terms of employment and sales growth (both driven by lower mortality) and future inventiveness."
—ALEXANDER LJUNGQVIST, Stockholm School of Economics

Recession startups survive longer and grow faster in the long run

The Great Recession had significant and positive long-term effects for innovative startups. The authors show that startups born during the Great Recession are 12.1% more likely to survive to their seventh anniversary compared to startups born in other years between 2002 and 2012. Moreover, over their first 7 years of operation, recession startups experienced higher employment and sales growth, outpacing expansion startups by 35.2 and 35.7 percentage points, respectively.

They also reveal however, that the positive impact of the Great Recession on growth rates diminishes as growth levels increase. Startups with lower initial growth rates benefit more from the recession, while those already experiencing high growth rates do not exhibit significant differences in growth compared to non-recession periods.

Recession startups are more innovative

While the Great Recession had no impact on the quantity of follow-on innovations produced by startups after their first patent, it did lead to more original and pathbreaking inventions compared to companies born during periods of expansion.

Recession startups retain talent better

Startups born during the Great Recession were more successful at retaining their founding inventors compared to those started during expansion times, the study finds. On average, there is a 43% chance of inventors leaving a startup within three years of patent approval. The departure rate at recession startups is less than half that rate. An improved retention rate among recession startups can be attributed to limited job opportunities during an economic downturn.

The study also indicates that startups with a higher rate of inventor retention early on tend to perform better in the long run. These startups also experience faster growth in their research and development (R&D) teams and hire more productive R&D workers. This advantage may arise from reduced demand for R&D workers in other industries, or because retaining founding inventors with a record of winning at least one patent makes them a more attractive place for external hires to join.

Recession startups grow their R&D teams significantly more compared to expansion startups, the study found. This growth can explain why recession startups tend to outperform expansion startups, as they were able to retain their inventors and build strong R&D teams during the economic downturn.

Recession impact on startup funding

While there is evidence of short-term financial stress for recession startups, such as delayed payments to suppliers, the study finds no adverse effects on funding availability in the short or long term: recession startups are not hindered in raising funding through private placements, venture capitalists, or loans secured against their patent portfolio. The study even finds that recession startups have a higher likelihood of raising funding from the stock market compared to expansion startups.

Recession startups are less likely to sell their patents, prioritizing long-term value over short-term financial gain. As selling patents at a discount to their anticipated future cash flows would diminish the startup's value, this approach may have contributed to the superior performance of recession startups compared to those born in other periods. ♦

Rising Business Insolvencies

In 2023, the number of bankruptcies in Sweden hit a decade-high, as almost 5,500 businesses declared bankruptcy from January to August. This marked a 35% increase compared to the previous year, with the construction sector taking the biggest hit, official data shows.

Swedish House of Finance (SHoF) researchers, Gustav Martinsson from Stockholm University and Christian Thomann from Royal Institute of Technology (KTH) brought to attention the sharp rise of bankruptcies in Sweden in February and warned about how firms are facing pressure from having to start repaying state-backed loans that were introduced during the COVID-19 pandemic.

"At some point the deferred taxes need to be repaid. This can lead to debt overhang problems and prolong the economic downturn. Furthermore, other lenders may be reluctant to lend to firms that have high priority loans from the government," Thomann and Martinsson say.

SHoF director Bo Becker, Head of Department of Finance at Stockholm School of Economics, who has done extensive research on corporate insolvencies and distress, said that a post-pandemic recession created stress for European insolvency systems:

"When many firms close at the same time, displaced workers may struggle to find alternative employment. Second, the banking system may suffer losses which reduce their supply of credit to firms and households, exacerbating a downturn. And third, formal procedures for insolvency often liquidate firms which could be profitably restructured. In this, the European insolvency system lags that of the US, with negative implications for bank lending and bond markets and for the wider economy. European reform efforts are definitely pushing in the right direction."

Read more

Markets could complement regulation in achieving climate goals... as long as investors and customers are informed

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Harnessing Finance for Climate

Securing substantial investments in new businesses, renewable energy systems, and the development of innovative technologies is crucial to protect the Earth's climate. Policymakers around the world are actively exploring various strategies to accelerate climate action, including public-private partnerships, taxation, subsidies, and increased investment in research and technology.

In 2023, sustainable finance remained an important research area for the Swedish House of Finance. Collaborating with Berkeley Haas and Trill Impact, the center hosted a "Harnessing Finance for Climate" Conference in May to discuss how policy measures, such as taxation, capital requirements, and subsidies, contribute to the mobilization of climate-aligned investments to combat climate change. Participants also talked about reporting, certification, and evaluation systems that are required for effective sustainable finance, and for measuring performance on companies' climate commitments.

This section features research about the discrepancy between European banks' public declarations and their actual lending practices. It also highlights an interview with Berkeley Haas of Business' Adair Morse, who spoke about "impact investing," its potential growth prospects, and the differing approaches taken in the United States and Europe.

The Gap between European Banks' Sustainability Disclosures and Lending Strategies

Banks provide a great deal of information about their environmental initiatives in their sustainability and annual reports. But do the disclosures say anything about their actual lending practices? Stressing the crucial role of regulation, a new study suggests there's a discrepancy between public commitment and the lending activities of European banks.

Swedish House of Finance's Mariassunta Giannetti, together with Martina Jasova from Columbia University, Maria Loumioti from the University of Texas at Dallas, and Caterina Mendicino from the European Central Bank analyze commercial loans from 553 banks in 2014-2020 and review bank reports for "climate-related" keywords, exploring the link between banks' environmental disclosures and lending practices. Their study, also featured in the Financial Times, reveals that many banks overstate their dedication to climate goals while continuing to finance high-polluting sectors. It also shows that banks in countries with strong environmental awareness and activism disclose more about their green efforts, probably to attract investors and customers who prioritize sustainability.

More lending to "brown" industries...

Banks that publicly emphasize their environmental responsibility actually lend 3.6% more to environmentally harmful industries ("brown" industries) than less vocal banks. They also lend about 30% more to high-emission firms, often choosing smaller firms to minimize the risk of reputational damage due to less transparency.

Keynote presentation at ECB

Giannetti presented insights from the study during a keynote speech at the Annual ECB Banking Supervision Research Conference.

Watch the presentation

"Regulating the content of bank disclosures appears to be crucial."

—MARIASSUNTA GIANNETTI, Stockholm School of Economics

... but not to those transitioning towards green technology

The study also found that banks who say that they focused on the environment are less likely to lend to "brown" sectors making significant research and development (R&D) investments or support young, innovative companies in these industries.

Business as usual

There was no evidence that banks use loan terms to push "brown" industry borrowers towards environmental compliance. There's no sign of higher interest rates or stricter conditions for loans from banks with strong environmental claims. Despite some efforts to reduce new loans to "brown" borrowers, banks showed a clear hesitation to cut off existing relationships with these sectors. ♦

Harnessing Finance for Climate: A Conversation on Impact Investing

Climate scientists, policymakers, and environmentalists say that major measures must be taken to protect Earth's climate. Policymakers around the world are exploring avenues for accelerating climate action through public-private partnerships, taxes and subsidies, investment in research and technology development, and other policy tools. Banks, asset managers, and owners of capital have made large investment commitments to support the transition to a net zero consistent economy. The Swedish House of Finance (SHoF), together with Berkeley Haas, hosted a conference on Sustainable Finance to examine the implications of these developments.

During the conference, SHoF's Jan Starmans interviewed Adair Morse, a leading expert on impact investing and former Deputy Assistant Secretary of Capital Access, US Treasury, about the areas where impact investing could thrive and the role of public-private partnerships in the climate transition.

Morse emphasized how solutions for the climate are no longer just a government matter as the climate transition brings new opportunities for private capital. In this transition, she sees opportunities in sustainable practices in key sectors like waste management and agriculture. Sustainable materials is also another sector where private investors can thrive, she says.

Morse also highlighted the differing approaches on the two sides of the Atlantic, emphasizing European "policy being on the regulatory front," and a US strategy that "provides carrots" - both important in combating climate change.

“ As we move forward... I think it will become less politicized and we can see how the regulatory environment really matters... at that point then, the US and the European policy will start to converge a bit and we're able to line up on the regulation of the things that matter."

—ADAIR MORSE, Berkeley Haas

Watch the interview

Trading helps to reallocate ownership in an economy and that hopefully helps in governance of capital

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The Rise of Private Equity and Decline of Stock Markets

A prolonged period of low interest rates in recent decades has made private equity an appealing option for companies to raise funds. Apart from the availability of capital, the ability to take a longer-term view without the scrutiny of public shareholders adds to its appeal. Changes in regulations and financial reforms in public markets have also led to fewer companies choosing to go public.

However, the landscape is evolving. Increasing interest rates are making borrowing more challenging, and policymakers in both the United States and Europe are considering new regulations for private equity markets. What does this mean for the industry?

In April, the Swedish House of Finance (SHoF) gathered representatives from academia, Nasdaq US, the Swedish Finance Ministry, and investment banking to discuss equity market development. This section highlights their discussions on the factors behind trends in private equity and public markets, as well as the implications for businesses and the broader economy.

Additionally, it includes insights from SHoF guest researchers who delve into the historical rise in equity value and anticipate future trends in private equity amid market uncertainty. It also showcases research on the retail investment boom and the costs associated with trading small stocks.

Causes and Consequences of Shrinking Stock Markets

Trading plays a vital role in determining share values and fostering competition. But what happens when fewer companies go public, and how does this impact the broader economy?

From London to New York, stock markets around the world are getting smaller. Fewer companies are choosing to go public as more find it easier to raise funds from private markets through venture capital and private equity.

At a Swedish House of Finance seminar entitled "How to Develop Equity Capital Markets in the EU and the US," Alexander Ljungqvist, a finance professor at the Stockholm School of Economics, discussed the reasons behind this trend and what this means for stock exchanges, companies, and the wider economy.

Why do we have stock markets?

Stock markets serve as platforms for companies to raise equity capital. They facilitate share trading, providing liquidity for investors to buy or sell shares and diversify portfolios based on their preferences.

Importantly, stock markets oversee listing standards that protect public interests, Ljungqvist said.

“Trading helps to reallocate ownership in an economy and that hopefully helps in governance of capital.”

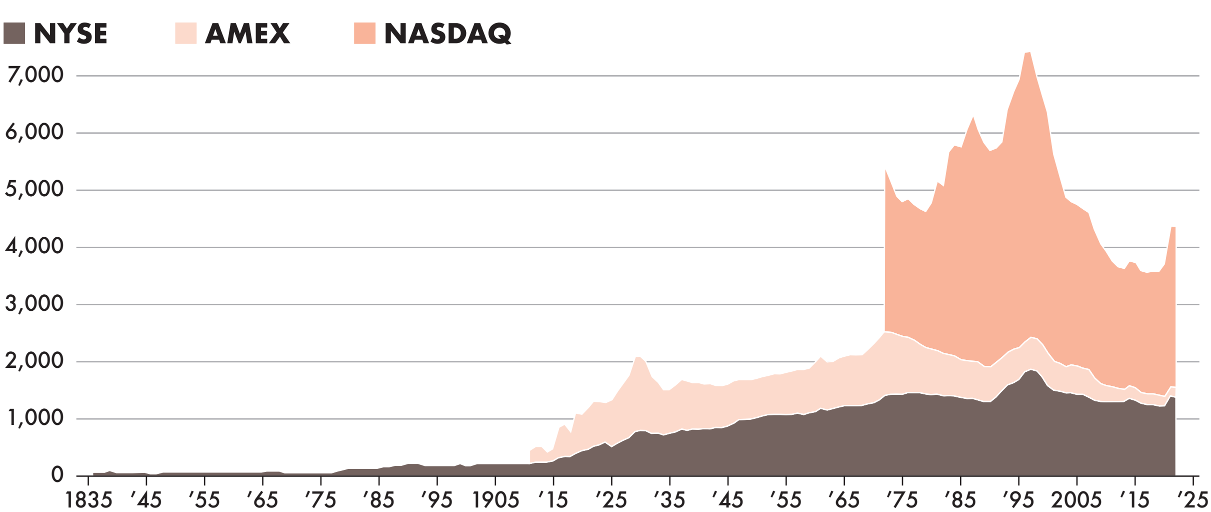
Stock markets are shrinking

Despite the importance of stock markets, there are concerns about the health of the listing market.

In 2018, Nasdaq sounded the alarm in the United States (US), highlighting a decline in the number of listed firms rather than their market value. This concern is not unique to the US.

“We see the same debate on this side of the Atlantic,” Ljungqvist said.

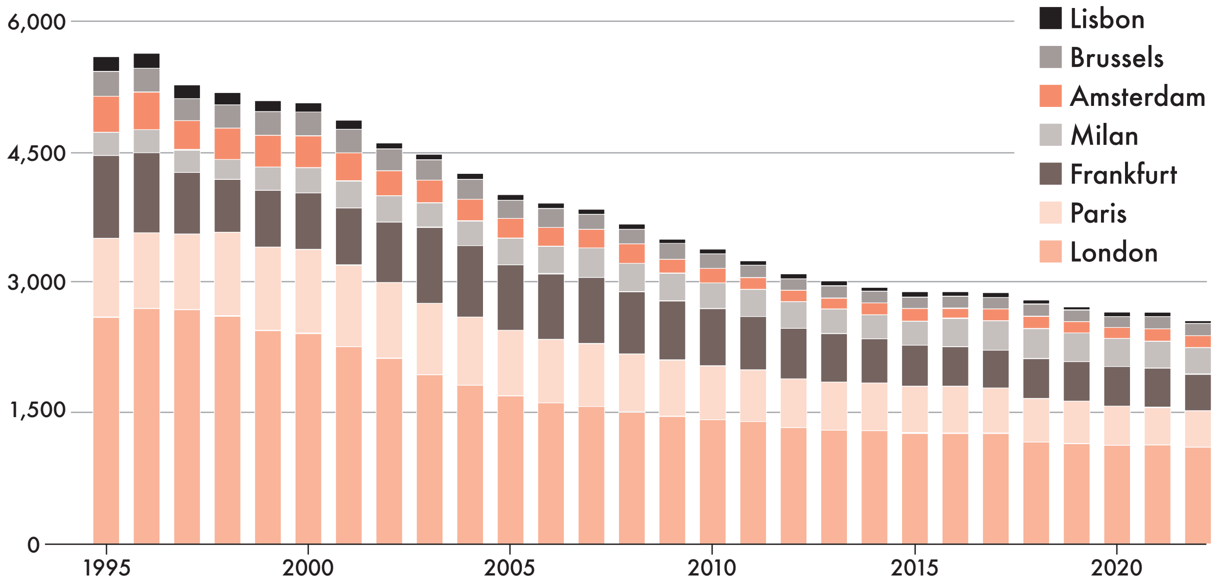
Listings in the U.S.



Source: Alexander Ljungqvist

Analyzing historical data on US listed firms from 1841 to 2022 reveals a peak in 1997, followed by a 40% decline. Ljungqvist acknowledged that the situation in Europe, in general, seems no better and possibly worse, although Sweden is an exception with a rising trend in listed firms.

Listings in Europe



Source: Alexander Ljungqvist

Why are public markets becoming less popular?

Many experts and economists argue that the costs of being a public company have risen due to increased regulations and the growing influence of shareholder activism simultaneously, the cost of staying private or avoiding an initial public offering has decreased with the growth of private markets, venture capital, and private equity in the past two decades.

A prominent example of a company that chooses to remain private, Ljungqvist pointed out, is Swedish battery maker, Northvolt.

“Northvolt has managed to raise US $7 billion since its founding in 2016 in the private market,” Ljungqvist said. “Private capital markets are much more liquid these days.”

“A perfect storm”

However, there is more to consider when analyzing the decline of public markets. As Ljungqvist points out, "There is also almost a perfect storm here, as several mega trends have collided."

Besides the 20-year private equity boom, stock markets have been affected by several factors. These include a surge in algorithmic trading and High-Frequency Trading (HFT); the fragmentation of equity markets, which has increased competition for liquidity; the rise of indexing at the expense of smaller-cap firms; and the increasing importance of Intellectual Property.

“This is less well-researched, but I think it’s worth thinking about these issues,” he said.

What does this mean for the broader economy?

While having fewer companies choosing to go public may allow stock exchanges, companies, and investors to make privately optimal decisions, this does not mean that it is socially optimal for the wider economy, Ljungqvist warns.

“By not listing, companies can impose negative externalities on others,” he said. Those negative externalities, or unintended undesirable consequences for society, include reduced price discovery, reduced competition and innovation, and reduced access to investment opportunities.

“You let yourself be acquired by an incumbent firm instead of going public and competing with the incumbent,” Ljungqvist said. “By staying private, startups would deprive the man on the street of access to investment opportunities, contributing to an increase in wealth inequality.” ♦

Watch the seminar

Private Equity in the Spotlight

The Swedish House of Finance (SHoF) interviewed research experts in private equity. During their visit to Stockholm, they delved into the dynamics of the private equity sector, discussing its past performance and anticipating its future amid global challenges.

What drives the rise in equity value, and where is it headed?

Professor Sydney Ludvigson from New York University shared her insights about the drivers of equity value growth, the risks associated with high valuations and rising interest rates, and how policymakers and investors can mitigate those risks.

Valuations remain high by historical standards, even though markets declined about 20% last year. This is because the run-up in equity values even in the last five years prior to these declines had been so rapid that stocks are still high relative to where they have been historically.”

What is ahead for the private equity industry?

In a discussion with SHoF’s Per Strömberg from Stockholm School of Economics, Professor Steven Kaplan from Chicago Booth talks about the evolution of private equity research and shares his insights on the future of the private equity industry.

The big question on ESG going forward is what is value increasing and what is not, and whether is value increasing for society or value increasing for individual companies."

Private Equity amid Market Uncertainty

Professor Tim Jenkinson from Saïd Business School discussed the growth, regulation, and current trends in private equity within today's uncertain market conditions.

In these sorts of times, I think the main thing I’m seeing with some private equity firms is that they’re increasingly focusing on investing in private debt rather than private equity... That makes sense because debt investing is becoming much more profitable now, if you’ve got base rates of 5% and you can charge another 5, 6, 7% on top of that."

See all interviews

The Retail Investment Boom and the Cost of Trading Small Stocks

At first blush, stock trading is dirt cheap. But in addition to the fees presented at the broker's execution reports, retail traders typically pay the bid-ask spread. For small stocks, this implicit cost is on average more than double the commission fee.

Swedish House of Finance affiliated researcher Björn Hagströmer from Stockholm Business School discusses why small stocks are expensive to trade, the implications for traders, and how the market structure can be changed to reduce the costs.

In particular, he points out that the implicit cost of trading small stocks, the bid-ask spread, is almost ten times higher than for large stocks, and more than double the commission charged by online stock brokers.

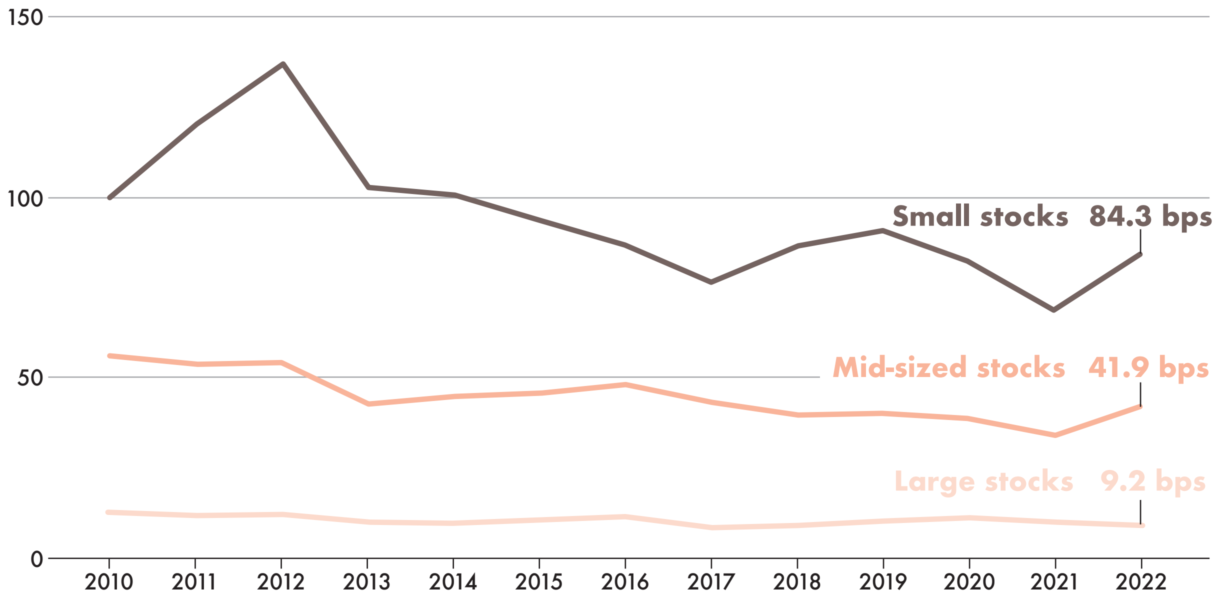
Although the bid-ask spreads have fallen over time, the wedge between large and small stocks persists. To address this issue and promote fairer trading conditions, Hagströmer highlights that it is essential that exchanges and regulators consider ways to boost liquidity of small stocks. ♦

He draws upon two decades of data from SHoF's NASDAQ HFT database, available free of charge to all researchers and students in Sweden.

"In today's complex trading environment, it is really hard to foresee the consequences of regulatory changes without deeper insight into the underlying mechanics."

—**BJÖRN HAGSTRÖMER, Stockholm Business School**

Bid-Ask Spreads at Nasdaq Nordic, 2010 - 2022



Note: The bid-ask spread is the difference between the best ask and bid prices, divided by their midpoint. The figure shows annual averages, reported in basis points. The data for 2010 excludes January, and the data for the 2022 includes January only. Source: Nasdaq HFT, Swedish House of Finance.

19% of tenure-track positions in the top financial departments are held by women

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Women in Finance

To highlight the underrepresentation of female researchers in finance, the Swedish House of Finance (SHoF) has collected data on the number of female researchers at 133 research institutions. SHoF will regularly update the data and continue its mission to provide reliable information. In November 2022, 22% of the finance researchers at these research institutions were women.

SHoF unveiled a short film about the female underrepresentation called "Sidelined in Science". The film explores the challenges women in finance academia encounter and offers policy recommendations. This section offers insights from a workshop conducted in conjunction with the film's release, focusing on the establishment of concrete actions to promote diversity in financial economics at universities and research institutes.

This section also features a study investigating the reasons behind why women earn lower returns from their real estate investments compared to men.

Why are Women Earning Lower Returns from their Real Estate Investments than Men?

The gender real estate returns gap can be attributed to lower participation in the professional real estate market and fewer renovations among women, a new study shows. Once these differences are accounted for, the gender gap disappears.

Like other economic gender disparities such as income and representation in top jobs, the gender gap in real estate returns is sometimes attributed to the perceived differences in assertiveness and negotiation skills between men and women.

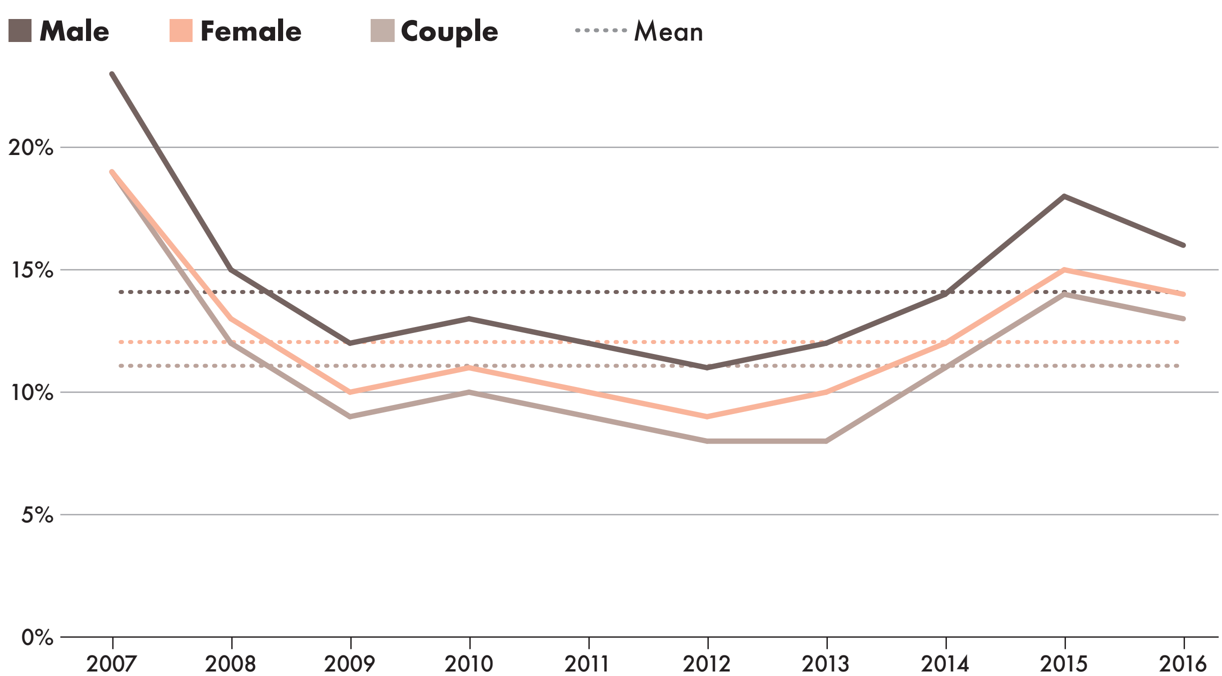
In a recent study conducted by Swedish House of Finance's Anastasia Girshina and Paolo Sodini from Stockholm School of Economics, and Laurent Bach from ESSEC Business School, the researchers examined the gender disparity in real estate returns using apartment sales data in Sweden. They discovered that this gap can be attributed to women engaging in fewer renovations, having lower involvement in the professional real estate market, and possessing less construction-related experience. Notably, once these distinctions are considered, the gender gap vanishes.

Their findings challenge the notion that women get lower returns due to being less assertive in housing bargaining, as their lower listing prices are compensated by higher final sale prices.

The data

The authors use a dataset of apartment transactions in Sweden from 2007 to 2016. This dataset is comprehensive as it comes from the tax registry, where all apartment sales must be reported for capital gains

Annualized real estate returns over time



Source: Bach, Girshina, and Sodini (2023) taxes. The tax forms provide important information such as acquisition price, date, as well as expenses for maintenance and renovation.

Men earn higher returns compared to women and couples...

The study shows that throughout the sample period, men consistently achieved higher returns compared to women and couples. Although yearly returns vary, ranging from around 11% to over 20% for men, the gender gap remains relatively stable. On average, men earn approximately 15% more than women and 25% more than couples annually between 2007 and 2016.

... and also renovate more

Men appear to renovate substantially more than both women and couples, the study found.

Over the sample period, men's annualized renovations are approximately 40% higher than others', suggesting that the gender gap, as previously estimated in research that did not consider renovations, is overestimated.

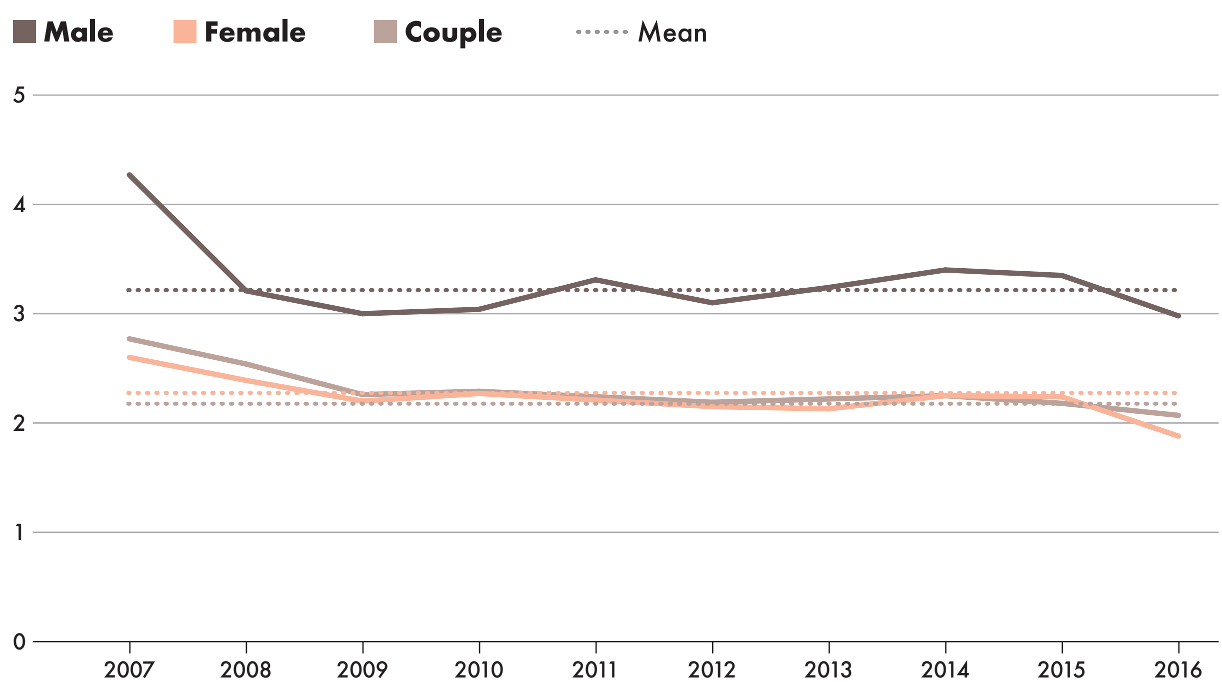
The difference in returns between men and women is larger when properties are sold relatively quickly. The study revealed that as the holding period decreases, the influence of renovation adjustments on returns becomes more pronounced. Considering that men typically engage in tran-sactions with shorter holding periods, the gender gap in real estate returns becomes even more substantial.

To investigate the factors influencing gender differences in renovations within non-professionals in the real estate market, researchers looked into detailed information on sellers from registry data. They examined various potential explanations for the gender gap, including income, financial literacy, cons-truction work knowledge, family background, high school grades, and even IQ levels.

Women who sell their homes tend to earn lower incomes and may face greater financial constraints when it comes to making home improvements. Additionally, they often purchase houses that are in better condition and, consequently, come with higher price tags. However, even after considering these factors, along with various other potential explanations, the renovation gap decreases only by 10%.

When comparing renovation intensity between siblings within the same family however, the study discovered that the difference in renovation intensity between brothers and sisters was insignificant, suggesting that the decision to renovate is influenced more by family-specific, rather than gender-specific factors.

Annualized renovation expenses over time



Source: Bach, Girshina, and Sodini (2023)

There are fewer women professionals in real estate

Real estate professionals represent a very small share of the real estate market in terms of holdings but are substantial when it comes to overall transactions; the study found that there are significantly more men than women who work as real estate professionals.

In the professional real estate market segment, single males conducted over half of all transactions, while women accounted for only 18%. In contrast, the composition of non-professional real estate transactions was rather gender balanced. The study also showed that female real estate professionals perform on par with their male counterparts.

Professionals in the real estate market achieve returns nearly double those of non-professionals, the study showed. They also reported significantly higher renovation expenditures, which are almost three times higher and exhibit faster turnaround times by almost a year, with an average of 3.7 years compared to 4.5 years for non-professionals.

Short-term professional transactions are largely responsible for real estate returns on the overall market, and the stark gender disparity in the real estate profession strongly contribute the gender gap in real estate returns, the authors say.

Retirement status

Unlike the case with real estate market professionals, the retired are over-represented by women: 46% of the retired sellers are females compared to only 25% of males.

This is significant as retirees earn lower returns, renovate less, and hold apartments longer on average. This may further fuel the observed gender gap in real estate, the authors say, especially when women constitute a large part of the socio-demographic group that fair relatively worse on the real estate market.

The role of location and market timing

The study also looked at specific transaction characteristics and found that the share of transactions done by men and women changed depending on how profitable the market timing was. These top transactions were often carried out by professionals, who are predominantly men, involved significant renovations, and had shorter holding periods.

> “We have found no evidence supporting the explanation that women are unwilling to bargain for housing as aggressively as men, since the lower listing price that women advertise on average reflects lower investment in renovations and is further compensated by a higher premium from the final price."

Negotiation skills between the genders

The researchers also explored if differences in negotiation strategies might explain the gender gap in real estate returns. Women tended to sell at slightly lower prices and pay higher premiums when purchasing compared to men, suggesting they might be less aggressive negotiators.

However, after factoring in renovations, this gap disappears. Women, as sellers, recoup their initial lower starting point in negotiations by receiving a significantly higher premium between the final sale price and the listing price.

Although women initially listed their properties at lower prices, the study found that the market compensated by offering a higher premium in the final transaction. Based on this evidence, the researchers conclude that women do not receive lower returns despite being perceived as "soft negotiators”. ♦

The Data

The authors use a dataset of apartment transactions in Sweden from 2007 to 2016. This dataset is comprehensive as it comes from the tax registry, where all apartment sales must be reported for capital gains taxes. The tax forms provide important information such as acquisition price, date, as well as expenses for maintenance and renovation.

The Science Behind the Roadblocks to Women's Academic Careers in Financial Economics

> "It is especially concerning that there is relatively slow or no progression over time compared to other social sciences and STEM fields."

—MARIEKE BOS, Swedish House of Finance

Female representation in academia, particularly in financial economics, shows significant gender inequality. SHoF Women in Finance database indicates that 19% of tenure-track positions in the top 132 financial departments are held by women (November 2022). This representation is increasing among junior positions, where women represent 27% of all the assistant professors, 20% of the associate and 13% of the full professors.

With the objective of addressing this complex issue from a fresh perspective, SHoF has produced two videos. The first movie captures academic evidence of obstacles that women face during their academic careers. The second movie gathers solutions that can help overcome some of the hurdles. These films served as the catalyst to guide collective efforts during a workshop towards a practical action plan. ♦

Watch the movies

Workshop: Sidelined in Science

The aim of this initiative is to establish tangible measures that will enhance diversity at universities and research institutes in financial economics. The workshop brought together researchers leading the top Finance departments in Europe, and it took place at the Stockholm School of Economics.

Participating researchers in the workshop:

- Lieven Baele (Tilburg University)
- Bo Becker (Stockholm School of Economics)
- Lara Cathcart (Imperial College London)
- Olivier Dessaint (INSEAD)
- Theodosios Dimopoulos (Lausanne University)
- Jean Edouard Colliard (HEC Paris)
- Nickolay Gantchev (Warwick Business School)
- Sebastian Gryglewicz (Erasmus University)
- Tomislav Ladika (University of Amsterdam)
- Kasper Meisner Nielsen (Copenhagen Business School)
- Øyvind Norli (BI Norwegian Business School)
- Nicolas Serrano-Velarde (Bocconi University)
- Marno Verbeek (Erasmus University)
- Felix von Meyerinck (Zurich University)

Organization

Research Team

The international research team at the Swedish House of Finance (SHoF) and the Department of Finance at the Stockholm School of Economics ranks #6 in Europe and #40 in the world, according to the Olin Business School CFAR Ranking by the Washington University which measures publications in top academic journals in the last five years.

Data Center

Access to high-quality financial data for research purposes stimulates academic research and contributes to higher education. SHoF Research Data Center has a national mission to develop and distribute valuable datasets to the benefit of the academic community. By providing this data to researchers and students free of charge, SHoF Research Data Center lowers the barriers to empirical research.

National PhD Program and Academic Seminars

The National PhD Program in Finance is open to all doctoral students in finance at Swedish universities. It gives PhD students the opportunity to participate in top-quality graduate level courses in finance. Leading researchers from around the world are invited to discuss their latest work at weekly academic seminars.

Governance

The Swedish House of Finance at the Stockholm School of Economics is Sweden's national research center in financial economics. It serves as an independent platform where academia, the private and public financial sector can exchange knowledge and gain access to a global network of leading researchers in finance.

Partners

Funding is provided both by the Swedish government and the Swedish private financial sector. Our partners support independent, high-quality research in all areas of financial economics. SHoF collaborates with a range of academic institutions in Sweden and abroad. Our Swedish Academic Partner Program supports faculty recruiting and retention at finance departments and institutions in Sweden.

Resident researchers

The Swedish House of Finance hosts approximately 65 researchers. This includes 25 research fellows, 15 research assistants and 25 PhD students in the field of finance. In addition, many researchers visit the center for a few days or up to several months, every year.

ANDERS ANDERSON, Associate Professor

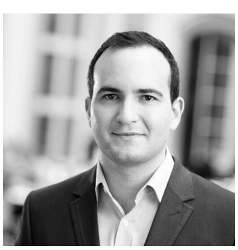
Anderson's research focuses on **behavioral and consumer finance**, as well as trading behavior of individual and institutional investors. He is currently interested in the relationship between knowledge, confidence and choices, particularly in the area of sustainable investment.

Read: Financial Literacy in the Age of Green Investment

GUALTIERO AZZALINI, Assistant Professor

Azzalini's research lies in the intersection of **macroeconomics** and **household finance**, with a focus on income risk and its consequences for agents' choices, inequality, and the macroeconomy.

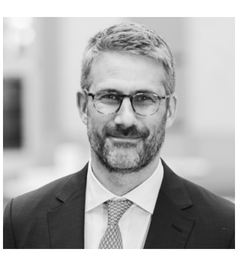
Read: Preference Heterogeneity and Portfolio Choices over the Wealth Distribution



RAMIN BAGHAI, Associate Professor

Baghai's research focuses on **corporate finance**. His latest work explores how mergers affect the **mental health** of employees; how **credit ratings** are used in the delegated management of **fixed income assets** to limit risk taking; and whether the provision of **wage and employment insurance** by firms differs for men and women.

Read: How Do Mergers Affect the Mental Health of Employees?



BO BECKER, Cevian Capital Professor of Finance

Becker's research is on **corporate finance**, especially **corporate credit markets, credit cycles and corporate governance**. Recent topics include how corporate debt contract features can improve investment efficiency, zombie lending to distressed borrowers in the Euro area, the design of delegated asset management in fixed income, and the optimal design of insolvency systems.

Read: Disruption and Credit Markets

CLAS BERGSTRÖM, Professor Emeritus in Finance and Law

Bergström's research areas include corporate finance, **corporate and securities law.**

MARIEKE BOS, Docent and Deputy Director

Bos' research lies in the field of **household finance** and **empirical banking.** Her current research focuses on how acquisitions affect the mental health of employees; the economic consequence of a **mental health** diagnosis; intergenerational transmission of financial distress; and **consumer debt** resolution.

Read: Impulsive Consumption and Financial Well-Being: Evidence from an Increase in the Availability of Alcohol

ALVIN CHEN, Assistant Professor

Chen's research focuses on **corporate finance**, **contract theory**, and **information economics**. He is currently studying how **broad-based equity pay** compensation may encourage **employee engagement** despite the inherent free-rider problem faced by lower-level employees at large firms.

Read: Encouraging Employee Engagement: The Role of Equity Pay

MAGNUS DAHLQUIST, Peter Wallenberg Professor of Finance

Dahlquist's research interests lie in **asset management, asset pricing,** and **international finance.** He currently focuses on the **investment behavior** of individuals' and institutions'; **pension plan** design; **trading strategies** in the bond and currency markets; and performance evaluation.

Read: International Capital Markets and Wealth Transfers

ADRIEN d'AVERNAS, Assistant Professor

D'Avernas' main research focuses on financial markets and the macroeconomy with emphasis on **financial intermediation, monetary policy,** and **digital money.** Recent topics are disruptions in the money market; the impact of shortages of Treasury bills on the pricing of short-term assets; and the stability of stablecoins.

Read: Central Banking with Shadow Banks

MEHRAN EBRAHIMIAN, Assistant Professor

Ebrahimian's research interests include **household finance**, **macro-finance**, and **human capital**. He uses empirical and theoretical approaches to study the impact of finance on the real economy, especially as it relates to inequality. Eva and Mats Qviberg Research Fellow.

Read: Student Loans and Social Mobility

PETER ENGLUND, Professor Emeritus

Englund's research areas include **real estate finance,** banking and **financial stability.** He is currently interested in taxation and other housing market policies as well as **macro-prudential policy.**

Read: Financial regulation and macroeconomic stability in the Nordics

MARIASSUNTA GIANNETTI, Katarina Martinson Professor of Finance

Giannetti has broad research interests in the areas of **corporate finance** and **financial intermediation**. In her most recent research, she shows that firms with extensive multinational supply chains and firms with fewer suppliers face greater supply chain risks. To mitigate this, firms establish relationships with domestic suppliers that are industry leaders, and by vertically integrating.

Read: Supply Chain Risk: Changes in Supplier Composition and Vertical Integration

ANASTASIA GIRSHINA, Assistant Professor

Girshina's research focuses on the fields of **household finance** and **real estate finance.** Some of the topics she has been working on lately include the role of education and gender for saving decisions, portfolio choices, and wealth accumulation. Deputy Director of MiDA - the Institute for Micro Data.

Read: Why Women Earn Lower Real Estate Returns

PAUL HUEBNER, Assistant Professor

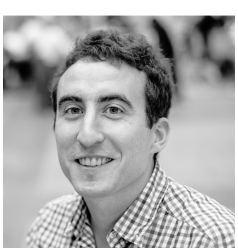
Huebner's research focuses on **asset pricing** and **macro-finance.** His work centers on understanding institutional asset demand and its impact on **asset prices** and the broader economy.

Read: The Making of Momentum: A Demand-System Perspective

ALEXANDER LJUNGQVIST, Professor, Stefan Persson Family Chair in Entrepreneurial Finance

Ljungqvist's research covers the areas of **corporate finance, governance,** and **taxation,** investment banking, **IPOs,** entrepreneurial finance, private equity, venture capital, **asset pricing, market microstructure, innovation,** and patents.

Read: What is a patent worth? Evidence from the U.S. patent 'lottery'



VINCENT MAURIN, Associate Professor

Maurin's research interests lie in **financial contracting, intermediation,** and market structure. His most recent research focuses on the design of **central clearing counterparties,** as a means to mitigate risk in financial markets and liquidity risk in private equity.

Read: A Theory of Liquidity in Private Equity

DIOGO MENDES, Assistant Professor

Mendes' research focuses on **empirical corporate finance**, **financial economics** and **development economics**. He is currently working on projects on **zombie-firms**, **financial literacy programs** and **labor markets**.

Read: The Impact of Financial Education of Executives on Financial Practices of Medium and Large Enterprises

OLGA OBIZHAEVA, Assistant Professor

Obizhaeva is working in the areas of **institutional asset management** and **market micro-structure**. Her most recent work analyzes the impact of **search engine technology** on financial markets.

Read: "OK Google": Online Visibility and ETF Fund Flows

MARCUS OPP, Professor

Opp's research spans **contract theory** and financial intermediation. His most recent research analyzes the economics of **socially responsible investment** (which won the European Finance Association 2020 best paper prize in responsible finance) and discusses whether and how to integrate **climate change** into financial regulation.

Read: A theory of socially responsible investment

RICCARDO SABBATUCCI, Associate Professor

Sabbatucci's research is focused on **empirical asset pricing**. Lately, he has studied the impact of the pandemic on financial markets and **payout decisions** of companies and the information embedded in high-frequency firm-specific data for **forecasting** purposes.

Read: The Term Structure of Cash Flow Risk

TOBIAS SICHERT, Assistant Professor

Sichert's research focuses on understanding and learning from **asset prices**, as well as **financial econometrics**. He is currently working on applying **machine learning** methods to finance, for example, in order to better understand option returns, and their relation to the return of the underlying stocks.

Read: A Non-Linear Market Model

PAOLO SODINI, Professor

Sodini´s research focuses on **household finance**. He has studied **household savings** and **portfolio choices**, focusing on their determinants as well as their effect on **wealth inequality**. He also has worked on the impact of **homeownership** on household economic outcomes and **gender bias** in real estate markets. He uses big data containing information on the finances of Swedish households to conduct his research. Deputy Director of MiDA.

Read: Identifying the Benefits from Home Ownership: A Swedish Experiment

JAN STARMANS, Assistant Professor

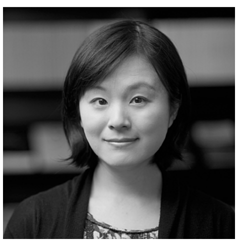
Starmans focuses his research on **corporate finance, sustainable finance**, **contract theory**, and **search theory**. He is currently exploring how quickly socially responsible investors can induce firms to reduce their negative externalities, and which investment practices they can use to have **timely impact.**

Read: The Pace of Change: Socially Responsible Investing in Private Markets

PER STRÖMBERG, SSE Centennial Professor of Finance and Private Equity

Strömberg currently focuses his research on **private equity, angel investing**, and the effects of **carbon pricing** on firm behavior.

Read: Carbon Pricing and Firm-Level CO2 Abatement: Evidence from a Quarter of a Century-Long Panel



DONG YAN, Assistant Professor

Yan's research focuses on **corporate finance**, **M&A**, and the real effects of **financial markets** on corporate investment activities. Her work covers, for example, how financial informationand financial constraints affect corporate production and **inventory management**, as well as the value of callable bonds in facilitating investments and takeovers.

Read: Credit Risk, Debt Overhang, and the Life Cycle of Callable Bonds, Review of Finance

YE ZHANG, Assistant Professor

Zhang's current research focuses on **sustainable finance** and diversity in the **venture capital** industry, as well as on the bargaining process in the **housing market**. She uses various field and lab-in-the-field experiments to conduct her research. Eva and Mats Qviberg Research Fellow.

Read: Impact Investing and Venture Capital Industry: Experimental Evidence

Academic Seminars

Swedish House of Finance (SHoF) arranges weekly academic seminars throughout the year. Every Friday, leading researchers from around the world are invited to discuss their latest work. Meanwhile, SHoF and Stockholm School of Economics research fellows and PhD-students regularly present their ongoing work at informal seminars.

See calendar for upcoming academic seminars

Data Center

The Swedish House of Finance Research Data Center aims to develop and distribute valuable datasets for academics. Offering this data for free reduces barriers to empirical research for researchers and students.

Learn more

Finbas

A high-quality financial database containing daily end-of-day stock price data, corporate actions and fundamentals from the Nordic stock exchanges, MTF's and OTC markets. Data is available for Sweden since 1912, Norway since 1980, Denmark since 1993, and Finland since 1986.

NASDAQ HFT

NASDAQ HFT (High-frequency trading) database contains all messages (orders, cancellations, and trades) sent and received to the Stockholm Stock Exchange matching engine. All datasets are based on the NASDAQ Historical ITCH files.

Serrano

The Serrano Database compiles company-level financial history since 1997 and covers most legal forms in the Swedish business community.

Nordic Compass

Environmental, Social and Governance data (ESG) information on 400+ publicly traded Nordic large and mid-cap companies since 2013. This data is collected from company reports and disclosures by a dedicated team, then organized and standardized. It includes ISIN codes and organization numbers, linking to other datasets.

PAtLink

PAtLink provides a file linking unique patent/trademark IDs with distinct organization IDs. The patent file covers all patents held by Swedish firms since 1990, sourced from Patstat, while organization numbers are pulled from the Serrano database. This pairing enables the connection of patent details with financial data for the corresponding patenting companies.

Fama-French Factor

The Fama-French three-factor model (market, size, value), developed by Eugene Fama and Kenneth French, improves on the traditional CAPM model by explaining a larger fraction of long-term expected return variations. This data set also includes the momentum factor proposed by Mark Carhart.

Historical Archives

The archives include: 1. Annual reports for companies listed at the Stockholm Stock Exchange from 1912 to 1978 2. Official stock lists from the Stockholm Stock Exchange from 1912 to 2007. 3. Weekly Swedish newspaper Affärsvärlden from 1901 to 2017 4. The annual publications of "Owners and Power in Sweden's Listed Companies" from 1985 to 2015.

Nordic Market Quality

The Nordic Market Quality database is derived from Nasdaq HFT data. To provide access to more manageable information, the Nordic Market Quality database offers trade-based and quote-based market quality measures for the selected instrument and time period.

National PhD Program

The aim of the National PhD Program in Finance is to complement existing PhD education in Sweden by offering additional courses, workshops, and opportunities to visit the Swedish House of Finance (SHoF). These courses are available to all PhD students from Swedish universities.

Isaiah Hull
BI Norwegian Business School

Machine Learning

Hull's course covers machine learning methods for economics and finance, including deep learning, tree-based models, clustering, regression, natural language processing, image processing, and more. Emphasis is on programming and research applications.

Johan Waldén
Berkeley Haas

Continuous Time Finance

The development of derivatives markets may be the single most important innovation in financial markets in the last fifty years. Waldén's course focuses on stochastic calculus applied to problems within finance, including the celebrated Black-Scholes formula for pricing plain vanilla options.

Ivo Welch
UCLA Anderson

Informational cascades: Theory and applications

Welch's PhD course on informational cascades explores the dynamics of decision-making in the presence of limited information. It delves into how individuals follow the actions of others, even when they possess private information, leading to cascading behavior.

Ulrike Malmendier
Berkeley Haas

Experience Effects

Malmendier's course on experience effects examines how personal experiences shape decision-making, with a focus on behavioral economics and psychological insights into economic behavior.

PhD Workshop in Finance

The National Workshop in Finance offers students from Swedish academic institutions the possibility to present their research and get feedback from faculty and fellow students. The aim of the workshop is to bring together PhD students and faculty from all over Sweden to share and discuss their work.

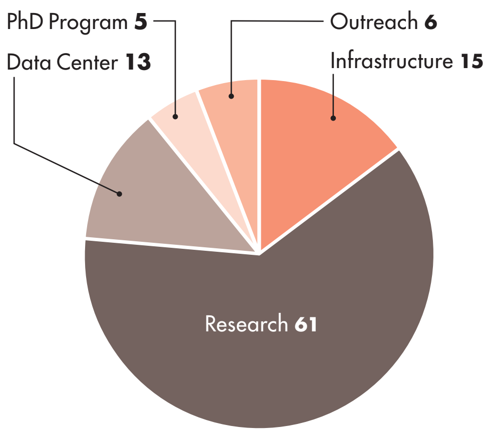
Participants in the 12th workshop included researchers and professors from the Stockholm School of Economics, Lund University, Uppsala University, the Research Institute of Industrial Economics (IFN), the Ins-titute for International Economic Studies (IIES) at Stockholm University, the Norwegian School of Economics, Copenhagen Business School, and the Swedish Riksbank's research division.

Center Financing

We are very grateful to all our partners for their financial support. Part of our success can be attributed to the fact that the Swedish House of Finance (SHoF) is recognized as an independent center of excellence. Mixed funding from government, research foundations and private industry allows for nonpartisan and unbiased research, which is equally important for the researchers themselves as well as those drawing on their competence.

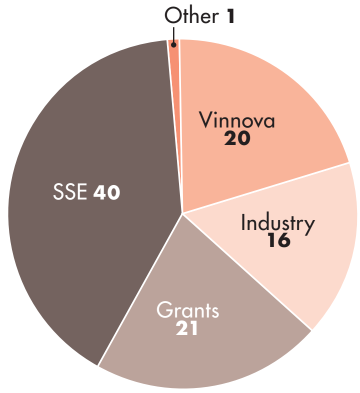
The total costs for 2023 amounted to SEK 98.6 million, compared with SEK 98.2 million for 2022. The center's costs are categorized in terms of five areas of activity:

Cost distribution in 2023



Note: Values are in MSEK

Funding distribution in 2023



Note: Values are in MSEK

Research: Salaries of researchers and funding for PhD students make up a significant part of research costs.

Research Infrastructure: The center aims to provide researchers with necessary research infrastructure, which is often difficult to fund through research grants alone. The core of these operations includes premises, management, and research administration.

Data Center: The Data Center has two principal tasks: (i) to develop national research databases in finance and an infrastructure which facilitates the work of researchers, and (ii) to provide researchers in Sweden with access to international databases in the field of finance.

PhD Courses: The costs are related to the remuneration of teachers for doctoral courses and the reimbursement of expenses for course participants from universities other than SSE.

Outreach: The outreach activities aim to bridge the gap between academia and practice by disseminating research via various channels such as conferences, seminars, press and social media.

Disseminating research in 2023

6	**CFAR ranking of financial research ranks the SSE finance department as number six in Europe**
8	**papers published in top 8 journals in financial economics**
16	**feature articles explaining financial research to practitioners**
38	**press mentions, with potential news reach of 200 million readers**
42	**new videos featuring leading experts**
71	**seminars, conferences and roundtable discussions**
9,195	**users of SHoF Data Center databases by 813 unique users**
23,197	**downloads of Swedish House of Finance research papers on SSRN**

*** Numbers refer to January 1 to December 31, 2023**

Governance

Board of Directors

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

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CEO, AP4

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Swedish National Debt Office

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Head of Large Corporates & Institutions, Nordea

LARS STRANNEGÅRD
President, SSE

LARS ÅGREN
Senior Advisor, SSE

MASIH YAZDI
CFO, SEB

Management Committee

The Management Committee plans, directs, and coordinates the activities at the Swedish House of Finance.

BO BECKER
Director
Head of Department of Finance, SSE

MARIEKE BOS
Deputy Director

MIA CHENNELL
Head of Communications

GÖRAN ROBERTSSON
Executive Director

HENRIK TALBORN
Head of National Data Center

Scientific Advisory Board

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

RENÉE ADAMS
University of Oxford

DAVID ROBINSON
Duke University

INGRID WERNER
Ohio State University

Advisory Board

The Advisory Board has a knowledge sharing mandate. The objective is to create a mutually beneficial knowledge exchange that drives research and development in the financial market. All our corporate partners are eligible to a seat on the Advisory Board.

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Head of Country Management & Strategy, Danske Bank

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Partner,
Adelis Equity

CATHARINA BELFRAGE SAHLSTRAND
Group Head of Sustainability,
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CEO Life and Pensions, Nordea

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Fintech entrepreneur and founder,
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Co-Head Portfolio Monitoring & Development, Triton

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Senior Partner, Cevian

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Founder and chairman,
Segulah AB

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Deputy CEO,
Kommuninvest

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CFO, SEB

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Svensk Värdepappersmarknad
Swedish Securities Markets Association
Swedbank
TRILL IMPACT
Triton
Öhman

"We thank our partners and friends for making the Swedish House of Finance a world-class institution. Without your generous contributions of funds, time, and effort, the center would not be possible. We invite companies, organizations, public institutions, and private donors to collaborate with the Swedish House of Finance in our mission to strengthen the Swedish financial market through frontier-level research and fact-based discussion."

—BO BECKER, Director of the Swedish House of Finance

Contact us if you want to become a partner

SWEDISH HOUSE OF FINANCE | STOCKHOLM SCHOOL OF ECONOMICS

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