

Joint Risk Resilience Partnership



2023 Call for Proposals

Theme: Building Resilience against Systemic Cyber Risk

2023 Call Information

Theme: Building Resilience against Systemic Cyber Risk

The Scope:

- Digitalization has enabled tremendous progresses in economy and society of the past decades. Global connectivity through the internet and underlying network infrastructure has further accelerated this developed. With any advance in technology, risks have evolved as well – in case of digitization in the shape of *cyber risks*.
- Cyber risk manifests itself in our everyday lives. cyber-attacks, espionage, operational errors occur daily, causing loss to the economy at a significant level. Cyber risk, however, also has the potential to generate loss due to large shocks. Globally connected system, single digital points of failure at cloud providers and critical infrastructure being digitized have created the potential to lead to accumulating losses with significant impact to the economy. Examples of such accumulating *cyber events* (e.g., Solarwinds 2020, Moveit, 2023), or of single cyber-attack leading to larger societal impact (e.g. Colonial Pipeline 2021, Costa Rica 2022), have been observed in recent history. Fortunately, a truly large cyber catastrophe has not occurred yet.
- The ***probability of a cyber catastrophe*** events occurring is challenging to predict given the fast-evolving technology, risk landscape, and man-made character. This Call hence asks to take a different perspective and focuses on the *resilience against cyber catastrophes*. It should not address the likelihood of certain larger scenarios occurring or the how such scenarios originate. This Call assumes cyber catastrophes are possible, and when they occur, greater resilience will help reduce the impact and allow for faster recovery.

Direction of work:

- We ask applicants to contribute to increasing our understanding of *economic resilience against cyber catastrophes*. Being resilient may refer to concepts such as being less vulnerable by design (e.g., introduce circuit breakers); reducing negative impact (e.g., increase industry specific support agreements, develop public private partnerships); recovering swiftly (e.g., establish protocols)
- Work *will require choices* around specific cyber catastrophe scenarios (e.g., cyber-caused outages of critical infrastructure, mass malware events, cloud provider outages, impact of the quantum computing), scope of cascading and accumulating impact, considerations about specific industries or regions, assumptions on the origins and motivation of such shock scenarios (political actors, criminals, operational handling, financial gain). These are at the discretion of the submitting parties.
- The *results of the work* need to improve our understanding of where our economy and businesses are most / least resilient against certain scenarios, how could we measure resilience (e.g. stress testing), where additional / different resilience levels may have the largest positive impact, and what means may be adequate to achieve such additional / different levels of resilience.
- Applicants are free to choose *research methods* they deem fit to approach the selected aspects. Given the wide array of possible themes, a focus on selected scenarios, industries, regions, or technologies is appreciated.

Funding Guidelines

The AXA Research Fund / Swiss Re Institute – Risk Resilience Partnership, hereafter referred to as "the Partnership", aims to support top-tier research on systemic risks. Research project proposals should demonstrate their scientific originality and innovative nature and have the potential to contribute to a step change in the Call specified areas.

The proposals are expected to be:

- Scientifically sound
- Create results applicable for risk identification and risk assessment by corporates, and
- Able to inform governments and/or private sector on how to build resilience against systemic risks in the specific Call themes

Target Beneficiaries and Institutional Eligibility

The grant aims at supporting promising researchers or research groups. Funding recipients need to be academic institutions which can either apply as 1) a **Sole Applicant** (one academic institution) or 2) **Consortium Applicant**, (collaboration amongst two or more academic institutions). Project Proposals must always be led by ONE Principal Investigator who is nominated by the institution leading the application process.

Application from academic institutions across the globe are accepted. Academic institutions are the only eligible direct beneficiaries which may receive funding under this call. Private companies, NGOs, governmental bodies, foundations, independent research centers, cultural institutions (such as museums), and hospitals are not eligible as direct beneficiaries. However, due to the applied nature of the funding, it is possible for academic institutions to collaborate and partner with other organizations from public and private sectors. The non-academic institutions can be listed as **associated partners** and may receive part of the funding from the institution, agreed upon within each proposal's own set-ups. **Each academic institution can hand in only ONE PROJECT PROPOSAL. In case of several applications submitted from a single institution, all applications would be disqualified. No change of host institution will be possible after submission of the application.**

Requirements Applicant:

As Sole Applicant: The Principal Investigator (PI), nominated by an institution, should be of the highest caliber and have demonstrated outstanding research achievements, as evidenced by the usual indicators for assessing academic excellence such as research outputs (e.g., publications, citations), research activities (e.g., organizing networks, being involved in communities) and research impact (e.g., policy reports, specific recognition through awards, etc.). The PI needs to be affiliated with an academic institution that has nominated him to be the Principal Investigator of the Project. It is required that the PI brings together a strong team demonstrating expertise and ability to complete the tasks of the proposed project with the best quality. Ideally, the team shall be composed of promising early career researchers, as well as would reflect the principle of diversity (gender and geography).

As Consortium Applicant: The requirement and recommended qualification of the Team Lead of the Project Coordinator (PC, the lead university) are identical to those of the Sole Applicant. In addition, the PC team needs to ensure that all partner academic institutions are chosen based on the best possible match of required expertise, skills, availability, and cost-benefit analysis. The PC remains the main contact between the consortium and the contacts of the Partnership. The institution nominating the PC will represent the consortium as the signee of the contract and will receive the related funding.

Reporting and Engagement:

Key reporting responsibilities for the funded project include:

1. A mid-term activity meeting halfway through the project duration. The meeting will be accompanied by a short mid-term activity report, if the project is > 12 months;

2. A final report (activity and finance), summarizing highlights of the research project, progress, achievements, and outputs versus objectives, impacts of the grant, and research related activities as well as an expenditure overview explaining how the grant has been allocated;
3. Short project result summary (in form of a green / white paper, as appropriate) to be published on the Partnership's websites of AXA Research Fund and Swiss Re Institute;
4. After project completion teams shall commit to sharing their project results and disseminating their research to a broader audience, including speaking engagements with Swiss Re Institute and the AXA Research Fund on the project.

Duration

Proposals with a duration of **9 – 18 months** are considered eligible for this call.

Budget and Eligible Costs

A maximum of three projects will be chosen in this call. A single proposal may be rewarded a maximum amount of **150,000€ in total**. It is the applicant's responsibility to submit a carefully calibrated budget, appropriate for the ambition of the research program and justified in a detailed and coherent manner. The institution to which the PI or the team lead of the PC is associated, has the role of distributing the received funding based on internal agreements.

The eligible costs are:

- Salary of the researcher/s (based on institution internal policy)
- Cost incurred for the collaboration with associated partners
- Equipment/resources (databases, survey costs, consumables, etc.), academic activities (conferences, workshops, fieldwork, etc.)
- Outreach activities (beyond academic audiences).

Any other type of costs not listed above should be justified in the application template. **No overhead costs are eligible.** No additional budget will be granted. Budget reallocation during an ongoing project must be strongly justified.

Payment of the grant is contingent on the launch of the research project. The grant is paid in 2 installments, on the Institution's submission of the relevant call for funds. Calls for funds should be sent at least 1 month before the schedule corresponding due date. On date T + 1 month (T corresponds to the date on which the project starts), payment of 50% of the grant agreement, at the end of the project, payment of last 50% subject to the receipt of the final report defined in the contract.

Ethics

The AXA Research Fund and Swiss Re Institute place high importance on the ethics of the work it supports. Programs are required to comply fully with all relevant ethical review processes and for this compliance to be evidenced. Cases of scientific misconduct (such as fabrication, falsification, plagiarism or inappropriate behavior towards staff or other parties) will be considered as breaches of the ethical principles¹ and will be excluded from funding.

Intellectual Property

The researcher and the host institution remain fully independent to conduct the research project. AXA or Swiss Re will not claim any right to the ownership or use of the results.

Timeline & Application process

The Risk and Resilience Partnership funding evaluation process has been designed to assess project excellence. The evaluations are monitored to ensure transparency, fairness and impartiality in the treatment of proposals.

¹ AXA Group Compliance and Ethics Code, 2019: [Compliance and Ethics Code | AXA](#)

The AXA Research Fund and Swiss Re Institute partner with independent external providers to carry out the peer review process in accordance with criteria defined by the AXA Research Fund and Swiss Re Institute, the results of which are submitted to the Evaluation Panel for final selection. Please note that:

- The complete application must be submitted in English, on time, and online. It must respect the template structure and the page limit.
- The research topic must fall within the scope of the eligible topic focus.

Timeline

Researcher and Research Institution	Step 1 – Research proposal submission <i>On the online project platform. On the ESF-SC platform, our partner organization (online link to be provided on due time)</i>	December 1st, 2023 – February 15th, 2024 12 PM Paris/Zurich time
Evaluation Panel	Step 2 – Selection Process <i>An Evaluation Panel, specifically set up for the cyber theme is responsible for selecting projects to be funded. It will be composed of external scientific researchers and industry research experts.</i>	February 20st, 2024 – April 11th, 2024
AXA Research Fund/ Swiss Re Institute	Results announcement by email to the candidates	Mid April 2024

Projects selected for funding are expected to start between September 2024 and November 2024.

Application process

Step 1 – Registering & Research Proposal Submission

To apply for this call fund, Applicants need to register on via European Science Foundation (ESF)'s [platform for application](#). The platform provides a dedicated proposal template that informs you about all the information required for submission. Generally applicants will have to fill out an online application from providing individual information and contact details (Name, Title, Affiliation) and submit a PDF application containing (the application form duly completed in English; a short CV (2 pages) of the prospective Principal Investigator / Project Coordinator including a link to a detailed CV; short CVs of potential project team members (2 paragraphs each), a list of the top 5 publications, a list of the most recent 5 projects in the relevant field.

After you complete your application, you will receive an email confirming that your Research Proposal has been submitted. If you don't receive the email, please check your spam folder, and, if needed, contact esf-panels@esf.org.

You will be able to edit your Proposal as long as you have not clicked on "Submit". Once submitted, your Proposal can no longer be edited. Following your proposal will be reviewed. You will be informed of the decision pertaining to your application by email.

Applications received after the deadline, by email, or incomplete will not be considered.

Step 2 – Proposal Evaluation

The evaluation of the scientific quality of research proposals is carried out in a fully independent manner by our Evaluation Panel. Each application is reviewed by two relevant experts who will assess the candidate's excellence and the research program's scientific quality.

Step 3 – Selection & Results Publication

The Evaluation Panel selects to fund applications based on strength of scientific excellence, project impact, candidate profile, feasibility and outreach potential. The Swiss Re Institute and AXA Research Fund informs the candidates of the decisions by email. Results will also be made available on the respective website:

Swiss Re Institute Joint Risk Resilience Partnership page: [here](#).

AXA Research Fund Joint Risk Resilience Partnership page: [here](#).

The Evaluation Panel's decision is final and cannot be appealed. It can neither be disputed nor subject to explanations or justifications, no feedbacks will be provided.

Participation in the call for applications implies acceptance of the above-mentioned rules.

Appendix:

Overview of the Partnership and Its Key Theme: Systemic Risks

Systemic risks are associated with cascading impacts that spread within and across systems and sectors (e.g. health, infrastructure, food etc.) via the movements of people, goods, capital and information within and across boundaries (e.g. regions, countries and continents). The spread of these impacts can lead to potentially existential consequence. Increasing system interdependencies, highlight that there is a growing need to better understand cascading impacts, and the possible responses of systemic risks. This includes improving understanding of their root causes, both biophysical, socio-economic, and technical. Addressing systemic risks requires integrating different systems perspectives and fostering system thinking across disciplines and geographies, notably through collaboration and research.

The insurance industry stands at the forefront of protecting our world against adverse developments. Both, AXA and Swiss Re stand out due to their strong relationship to science and their support for risk research. Building on a strong track record of financing scientific and applied research, AXA and Swiss Re commit to establish a Partnership to jointly identify, incentivize and fund independent research and innovation projects with the highest potential to transform our industry and help our society become more resilient.

The aim of this partnership is to bring together scientifically engaged corporates in the insurance and finance industry to jointly fund **top-tier risk research on systemic risks** that will inform private and public decision-making to build societal resilience. More specifically, the Partnership aims to:

- Close shared knowledge gaps within the insurance industry on emerging and aggravating risks that pose serious threats to societal resilience
- Leverage research outcomes to develop business applications and inform public and private decision-making

AXA Research Fund

The AXA Research Fund is AXA Group's global scientific philanthropy initiative, launched in 2008 to address the most important issues facing our planet. It supports human progress by funding research in key areas related to risk and helping inform public and private decision-making based on science.

Swiss Re Institute

Swiss Re Institute, founded in January 2017, is the thought leadership and R&D arm of one of the world's largest reinsurance companies, Swiss Re. We share our risk knowledge in re/insurance through our publications and data sets. We produce and support risk research across Swiss Re and partner organisations.