**National Pension Hub:**
**Funding Proposal Submission Guidelines**

The National Pension Hub (NPH) is a Canadian centre for pension knowledge and research that promotes and funds thought leadership through collaborations with universities and researchers. The NPH strives to provide pension and income security research that will support innovative solutions to pension design, governance, and investment management challenges. Each year, the NPH will award grants for research projects that will make material contributions to the NPH's topics of interest (as detailed in this document). NPH research grants are for new or beginning-stage research projects with a maximum time horizon of two years.

**Award Details**

NPH grants have a duration of one to two years. Funding ranges from CAD$20,000 to CAD$60,000 per year. Funding awards will be determined by the NPH Advisory committee. The maximum allowable overhead per project is 20 percent. Research output from NPH funded projects will be shared with NPH member organizations. Researchers may be invited to present at an event at the conclusion of their work. Distribution of research output does not preclude subsequent publication of the work in a journal of the researcher's choice. Successful applicants will be required to submit bi-annual research reports and annual financial reports.

**Award Requirements**

All project submissions should detail new, original research that is in its beginning stages and practically addresses key aspects of at least one of the NPH's research topics. Research should demonstrate academic rigour, research excellence, and practical applicability. Strong preference will be given to submissions with at least one researcher at a Canadian institution. Proposals from research teams outside of Canada should be highly relevant to the Canadian pension market.

**Submission process**

All submission packages must be sent to nphresearch@globalriskinstitute.org with the subject line "NPH Proposal Submission: *Last Name of Project Lead*". Submission Package must include:

1. **Completed Application Form:** This form should be filled out in a clear and concise manner and should be treated as a standalone document that conveys all requested information.
2. **Detailed Project Proposal:** This should introduce the project, detailing both the scientific and industry-specific motivations for the research. Briefly lay out the proposed methodology, highlight how this work fills existing gaps in the literature, and comment on the expected outcome. The proposal should also include a general timeline for the work. Maximum 8 pages excluding references.
3. **Project budget:** The proposal must include a detailed budget.
4. **CV(s) of lead researcher(s)**

**Application Deadline & Review Process**

The 2020 submission deadline is **Tuesday May 19th, 2020**. The NPH Advisory committee, composed of both practitioners from each NPH member firm and pension researchers, will evaluate all submissions. Applicants will be notified directly as to the final funding decision.

# National Pension Hub:
# Research Agenda

The National Pension Hub is looking to support research that addresses at least one of the following topics:

**1. Private Market Risk Assessment:**

Investments in privately-traded assets like private equity, real estate, infrastructure, and private debt have grown tremendously in recent decades. Despite this growth, little is known about the risks and returns of these investments, the costs and benefits of holding them in a diversified portfolio, and whether they introduce moral hazard or agency issues. Data on NPH members' holdings of private market assets may be available for some topics. Possible topics include, but are not limited to:

*Measurement of private market asset risks and returns*

Measurement of asset risk and return forms the heart of financial economics in theory and in practice. Without market prices to go by, measuring the performance of private market assets is a challenging endeavor. Estimates of private market returns, which are typically based on cash flows, are mixed. Industry-reported returns on private market assets are often substantially higher than public market returns, but many academic studies find that private market assets perform only slightly better than, or worse than the market. Standard cash-flow-based methods like internal rate of return (IRR) and total value paid in capital (TVPI) provide little information about risk, which is of particular interest to the NPH. The NPH seeks research that that develops new methodologies for estimating the risks and returns of private market assets.

*Asset allocation with private market assets*

The illiquidity of private market exposures poses unique risks for pensions, in addition to diversification benefits. How should one construct diversified portfolios that include both publicly and privately-traded assets? How should such portfolios be rebalanced, given that changing holdings of private market assets often entails large transaction costs? The NPH seeks research that develops new methodologies for constructing and rebalancing optimal portfolios that include both publicly and privately-traded assets.

*Agency problems*

Moral hazard and other agency problems play central roles in modern corporate finance. Pensions and other asset managers that hold private market assets typically delegate the management of these investments. How should management contracts for these investments be structured to maximize performance without incentivizing managers to take undue risks? The NPH seeks research on optimal contracting in the management of private market assets.

**2. Impact and Use of Leverage:**

Pension funds are increasingly employing leverage within their portfolios. In Canada, the nation's six biggest pension funds saw an increase in average leverage from 19% in 2009 to 24% in 2017. Common sources of leverage include the use of derivative-based investment strategies and fixed-income investments financed through the repo market, while less common examples include the use of synthetic equity or synthetic credit strategies.

Leverage-based investment strategies, when utilised correctly, can improve pension fund Asset Liability Management (ALM) by reducing or hedging ALM mismatches or improving the risk/return trade off. At the same time, these strategies can increase pension funds' exposure to macroeconomic shocks and consequent fluctuations in available market liquidity.

The NPH is interested in supporting research that investigates the use of leverage across pension plans globally, the role of leverage and how it impacts portfolio construction and risk taking, and whether there is an "optimal" leverage ratio.

**3. Portfolio Construction:**

Pension fund managers face unique portfolio construction and risk management, given the long-term nature of their respective liabilities and the heterogeneity of beneficiaries. The NPH seeks proposals for research that addresses these challenges. There is a broad range of potential topics under this theme including:

*Enhancements to pension portfolio construction*

The NPH seeks research that pushes the frontier of knowledge on pension portfolio construction. Research on this topic could address the use of dynamic vs long term asset allocation; long-term factor-based investing, and the risk and return characteristics and optimal asset allocation decisions for alternative investments including private equity, infrastructure, real-estate, and commodities.

*Risk-appetite and asset allocation*

The NPH seeks research that focuses on best practices for setting risk-tolerances and how to optimally incorporate this into asset allocation decisions. Research on this topic could address questions such as: How should a pension plan's asset allocation and risk tolerance change over the plan's life cycle? How should pension fund managers adjust their asset allocations in response to changes in the health of their balance sheets? How should pension risk-appetite frameworks balance investment risk, contributions and benefits?

**4. Climate Change:**

Climate change is one of the most significant social, economic, and financial issues of our time. As such, pension funds are increasingly looking for ways to assess, measure, manage, and mitigate the risks associated with climate change. The NPH is looking for research that practically addresses the challenges of climate change for long-term institutional investors. Some potential areas of interest include: How do markets price the risks of climate change? What methods can long-term investors use to hedge these risks most effectively? How should climate change be considered when constructing long-term investment portfolios?

**5. Plan Design and Plan Adequacy:**

The "Baby Boom" generation has just entered retirement. Population aging paired with a prolonged low interest rate environment has put the sustainability of pension arrangements in many Western countries under pressure. Moreover, future demographic changes may have a significant impact on capital markets, labor markets, and long-term economic growth. Consequently, sustainable pension plan design that maintains pension income adequacy and meets comfortable retirement income targets is top of mind for the NPH.

The ambition of this theme is to conduct academic research to help better understand the risk factors that drive uncertainties around future pension plan adequacy. This theme aims to provide more detailed and scientific insight on income adequacy both before and during retirement. This will require more adequate modelling of the uncertainties surrounding life expectancy, financial markets, policy changes, and the response of individuals and institutions to each. Given the breadth of this topic, there are numerous possible avenues for research which include, but are not limited to:

*Effects of demographic change on individual consumption and saving behavior*

As lifespans lengthen in the decades to come, populations will age and retirement will last longer. The NPH seeks to better understand future demographic changes and how these changes will affect individuals' saving and consumption patterns. Research on this theme could analyse issues like how individuals deal with uncertainty about future survival probabilities, the impact of aging on household investment portfolios, the effects of increased longevity on retirees' health care needs and the implications for government budgets, and labor market outcomes for older age groups. Moreover, the NPH is interested in projects that address the potential impact of these findings on the pension industry.

*Effects of demographic change on financial markets and macroeconomic outcomes*

How will demographic changes and the impact of these changes on individuals' decisions affect broader financial markets and macroeconomic dynamics? The NPH seeks to understand the implications of demographic changes for asset prices and interest rates, aggregate demand for healthcare and social services, income inequality, as well as other macroeconomic outcomes. Again, the NPH is interested in projects that explore the implications of these findings on pension plan finances, and investment and design decisions.

*Sustainable pension design*

Increased longevity, falling labor force participation, and pension-related policy reforms pose unique challenges for the sustainability of pension funds. The NPH seeks to understand how Canadian pension funds should respond to these challenges. Research on this theme could address inter- and intra-generational redistribution, optimal risk pooling and risk sharing, innovations in pension design like contingent claims and decumulation products, and the impact of various policy reforms on pension sustainability.

In addition to these five main research topics, research focused on the **governance of pension organizations** and the **impact of governance on plan performance** may also be of interest to the NPH.