


ARTICLE

# Financial literacy and knowledge of the retirement income system in Canada

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## Abstract

This paper examines financial literacy in Canada using a dataset from early 2023 that measures the knowledge of middle-aged Canadians regarding their retirement income system. We first document important financial literacy differences across gender, age, education, and labor market status. Using detailed questions on the four main aspects of the retirement income system, we then show a strong correlation between financial literacy and the knowledge of the retirement system in Canada. Finally, we provide evidence that general financial literacy and knowledge of the retirement system matter for retirement preparation, by showing that Canadians with higher financial literacy scores and better knowledge of the retirement system are more likely to have a plan for retirement.

**Keywords:** financial literacy; personal finance; retirement

**JEL Codes:** D14; G53; J26

## 1. Introduction

A good understanding of general financial principles is the bedrock for many major financial tasks in life. For instance, managing a household budget requires a solid understanding of how inflation can affect budget choices as well as how interest rates affect mortgage payments. Further, proper retirement preparation requires, among other things, a good understanding of compound interest on savings, and the importance of portfolio diversity in mitigating risks. In academic research, a relationship has been established in several countries demonstrating the importance of general financial literacy for many individual financial decisions.

There can be serious consequences for the financially illiterate, such as under-saving or over-indebtedness, as well as implications for public/private institutions and policymakers (e.g., financially stressed workers, or retirees that must solely rely on public programs). Individuals who are financially well-informed are less likely to have credit card debt, manage borrowing better, and avoid major and potentially devastating financial mistakes (Lusardi and Tufano 2015). Meager investment returns are often a result of poorly informed decisions (Clark et al. 2017). Further, international evidence shows that certain aspects of financial literacy can be concentrated in certain subgroups of the population, such as among younger generations, women, single persons, as well as those with lower education levels (Lusardi and Mitchell 2011a). Importantly, financial literacy could also

correlate to how individuals understand their retirement income system; in many countries, including Canada, the retirement system is complex and understanding it requires knowledge of income replacement programs and of the tax system.

The measurement of financial literacy in Canada is irregular. Statistics Canada's Financial Capability Survey is occasional (Statistics Canada 2024), with the last edition fielded in 2014. Boisclair et al. (2017) were able to use 2012 data from a Canadian Securities Administrators' survey, a variant of which was then fielded again in 2016, 2017, and 2020 – but never since (CSA 2020). All those surveys included the so-called “Big 3” financial literacy questions, as did a few subnational surveys fielded over the years, like the 2021 one sponsored by the Autorité des marchés financiers (AMF), the financial regulator in the province of Quebec (AMF, 2022).<sup>1</sup> Also, the formal 2021–2026 financial literacy strategy in Canada (FCAC, 2021) – a decentralized federation where provinces are primarily responsible for most education-related issues; see later in this paper – is mainly geared toward promoting changes in the financial literacy *ecosystem* (rather than directly affecting individuals).

In this paper, we use responses from an ongoing annual survey that aims to measure Canadians' knowledge of the four pillars of their retirement system (public basic programs; compulsory public contribution plans; employer plans; and private savings). The particularity of this survey is that in addition to measuring knowledge of the retirement system, we also measure general financial knowledge, including through the “Big 3” questions. This novel feature of the data allows us to investigate the relationship between the level of financial literacy and the knowledge of the retirement system. We use this data to document financial literacy differences across gender, age, and education, and to measure how financial literacy correlates to retirement planning – a correlation that has long been well documented in the literature (e.g., Lusardi and Mitchell 2007, 2014; Yakoboski et al. 2023), including in Canada (Boisclair et al. 2017). As such, this paper provides an update, with more recent data, on both the state of financial literacy for middle-aged Canadians and the relationship between financial literacy and retirement planning.

The paper also aims to be part of the contemporaneous international comparison of financial literacy presented in this journal. To this end, it uses the “Big 3” questions that were included in the survey and which make the data comparable across countries. We therefore attempt to present comparable results, even though the survey's target is a more limited age range than the data sources used in other research. This also impacts the way we treat age in the analyses, as described in Section 3.

We find that the financial literacy results in Canada generally follow the main findings in the international literature. Men tend to score better than women, older Canadians score better than younger ones, and education and employment status have large effects on financial literacy results: the more educated do better, as do the employed (and self-employed). Further, higher inflation in recent years does not seem to have materially increased individuals' understanding of inflation. We find some notable variation in scores across regions, although we cannot conclude that the various curriculum-based efforts to enhance financial literacy in the different provinces are influencing the results.

In accordance with previous studies, we find that Canadians with higher financial literacy scores are more likely to have a plan for retirement (e.g., Boisclair et al. 2017). Our survey allows us to investigate this relationship further in two ways. First, we show that financial literacy and knowledge of the retirement system are highly correlated: the correlation coefficient of the retirement system knowledge score with the number of correctly answered Big 3 questions is 0.5. This correlation is apparent in the subscores on the different pillars of the retirement system. Second, we investigate how knowledge of

<sup>1</sup> This survey succeeded a bi-annual one fielded by that regulator between 2012 and 2018 inclusively.

the retirement system affects retirement planning, conditional on answers to the “Big 3” financial literacy questions. We find an important correlation between the average knowledge of the retirement system and having a plan for retirement, even when we condition on financial literacy. We decompose this effect and show that it is driven by knowledge of the compulsory public contributory plans and of employer plans. To our knowledge, this latter linkage is a distinctive contribution to the literature – one that is put forward by Fornero and Lo Prete (2023), among others, but not shown. It should be of interest to researchers, policymakers, and organizations aiming to promote retirement preparation in the context of a multi-pillar system like Canada’s.

## 2. Data and empirical work

Since late 2018, the Retirement and Savings Institute at HEC Montréal has been fielding an annual online survey to measure the knowledge of middle-aged Canadians regarding their retirement income system. The survey is carried out using the *AskingCanadians* web panel, one of the largest in Canada, under the authority of a university professor; it is presented as an academic research survey, and respondents are specifically asked to avoid using outside assistance to respond. Panel participants in the target age range are randomly selected to receive an electronic invitation to complete the survey, which takes around 10 minutes on average (see the questionnaire in Appendix B). The survey can be filled in more than one session, and it is available in both official languages (English and French). Upon completion, survey respondents receive reward points from a program of their choosing.<sup>2</sup> As is the case with all such panels, sampling is not probabilistic.

The core of the survey consists of 23 knowledge questions about the retirement system as well as 6 standardized questions about general financial knowledge, including the so-called “Big 3” (Lusardi and Mitchell 2011b). For five years at the time of writing, the team has therefore collected annual knowledge measures among approximately 3,000 Canadians aged 35 to 54 years old from all 10 provinces.<sup>3</sup> The main reason for the selected age range is that these individuals are likely both young enough to not have experienced the retirement income system first-hand, yet also old enough that competing financial priorities (should) have begun shifting toward retirement saving and planning.

Table A1 presents the descriptive statistics for the main variables used in the analysis. The first column presents population-level statistics calculated from the 2021 Canadian Census data for comparison (the data is from the Public-Use Microdata Files, a publicly available and random 2.7% sample of the complete population; see further down in this section for more details). The second column presents sample-level statistics calculated from the 2023 RSI Index and weighted using the 2021 Canadian Census data on age, education, gender, and region. In our full sample, there were 3,004 individuals, about equally distributed across age groups from 35 to 54. About 30% of the respondents had a high school education or less, 35.5% had some college, and 34.7% had a bachelor’s degree or more. Our sample has fewer married individuals (about 43.4% compared to 56.3% of the population) and more single individuals (about 30% compared to 17.4%). 38.6% of our sample is from Ontario and 22.8% from Quebec. In terms of employment status, 88.3% were

<sup>2</sup> The consumer platform can be accessed at <https://portal.askingcanadiansprojects.com/>.

<sup>3</sup> Close to half of the respondents in the latest wave of the survey had participated in a previous wave over the years (1,493 respondents out of 3,004) but only 20% have participated in two previous waves or more. Furthermore, basic performance analyses indicate that returning respondents do not perform better on the various scores built from survey answers. In columns (4) and (8) of Table A2, we reproduce our main results on the subsample of first-time respondents and find qualitatively similar results.

employed while 11.7% were not employed. Compared to the population values, we have more individuals who earn less than \$60,000 (24.8% compared to 16%) and fewer individuals from households earning more than \$120,000 (33.6% compared to 49.9%).

While this dataset was originally collected to build the “RSI Index of knowledge of the retirement income system” (or “RSI Index”), which is published annually as a simple average success rate over all knowledge questions, the data can be used for other purposes.<sup>4</sup> In this paper, we mostly use the data from the latest wave – collected in late December 2022 and early January 2023 – to paint an up-to-date picture of general financial knowledge among middle-aged Canadians. In particular, we look at how the respondents perform on the “Big 3” financial literacy questions, taking a closer look at issues linked to inflation – a timely topic in 2023. The text of the questions is reproduced in Frame 1.

**Frame 1:** Financial literacy (“Big 3”) questions

Interest question

Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow during these 5 years?

- 1 More than \$102
- 2 Exactly \$102
- 3 Less than \$102
- 7777777 Don't know
- 8888888 Prefer not to say

Inflation question

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, with the money in this account, would you be able to buy . . .

- 1 More than today
- 2 Exactly the same as today
- 3 Less than today
- 7777777 Don't know
- 8888888 Prefer not to say

Risk diversification question

Do you think the following statements are true or false? [ . . . ]

“Buying a single company’s stock usually provides a safer return than a stock mutual fund.”

- 1 True
- 2 False
- 7777777 Don't know
- 8888888 Prefer not to say

We then explore the correlations between performance and a few other variables available in the survey, namely having a financial plan for retirement and knowledge of the Canadian retirement system. We also examine the results by region and by participation in a pension plan, considering that Canada is a decentralized federation where employers offer a range of differing pension plans. All descriptive statistics presented in this paper use frequency weights built using the 2021 Canadian Census – more

<sup>4</sup> Although the focus is different, this is similar to other annual surveys that measure financial literacy and other financial outcomes such as the TIAA Institute-GFLEC Personal Finance Index (P-Fin Index) in the United States (Yakoboski et al. 2022). See the 2023 RSI Index report (Retirement and Savings Institute 2023) for details.

specifically, 120 cells each representing a combination of age group (3), gender (2), education level (4), and region (5).<sup>5</sup>

The rest of the paper is structured as follows. We start by presenting descriptive results from the RSI Index data on the three key financial literacy questions, overall and by sociodemographic characteristics. We then break down the results by region, as well as by type of pension plan the respondent is enrolled in. Next, we link the results to two key financial outcome variables in the survey: (1) whether the respondent claims to have a financial plan for retirement; and (2) respondents' knowledge of the Canadian retirement income system, as measured by their scores on the related questions. Finally, we briefly discuss what these findings may mean for financial literacy in the Canadian context, and we conclude.

### 3. Results

Table 1 reports the weighted descriptive statistics for all three financial literacy questions. In this section, we highlight differences across groups, but we test for statistical differences in our regression analyses in the next section.

#### a. How financially literate are Canadians?

From the table, it is apparent that results for Canadians aged 35–54 years old at the beginning of 2023 are generally in line with what has recently been found in other industrialized countries (e.g., Lusardi and Streeter 2023, in the United States; Sticha and Sekita 2023, in Japan; or Bottazzi and Oggero 2023, in Italy). These results are comparable to what is found for the general population in the industrialized countries but are closer to those from Northern Europe (Klapper and Lusardi 2020). Notably, they are also quite stable over time (results not shown) and, contrary to Klapper and Lusardi's "major advanced economies" in aggregate, compound interest is the best-understood concept and risk diversification, the worst understood.

Specifically, 47.8% of respondents were able to correctly answer all three questions. Taken separately, 4/5 (81.4%), 2/3 (70.2%), and 3/5 (63.2%) of respondents, respectively, were able to correctly answer the question related to interest, inflation, and risk diversification. Notably, an "inverse" proportion reported "not knowing" the answer to those respective questions, with only 1/10 of respondents (8.9%) not knowing the answer about interest and over 1/3 (37.5%) for the risk diversification question. As well, these results are highly similar to those obtained by Boisclair et al. (2017) among the 25–64 y.o. using 2012 Canadian data, with each measure higher by a few percentage points in 2023 than in 2012 (up to 3.9 points higher for answering all three correctly). They are, however, somewhat better on inflation and risk diversification – by about 8 percentage points – than in the Canadian Securities Administrators' (2020) survey (which, however, surveyed all Canadians aged 18 and over).

#### b. Who knows the least?

As shown in Table 2, results are similar across the age groups as defined here.<sup>6</sup> As well, and as is the case in nearly all financial literacy surveys and data, men score higher than

<sup>5</sup> These weights are built using the Public-Use Microdata Files (a publicly available and random 2.7% sample of the complete population). They are used when producing descriptive statistics but are not used in regression analyses because our empirical model explicitly controls for age, gender, region, and level of education. The frequency weights built and used in this paper differ from the ones used in the RSI Index reports, which were built using the previous, 2016 Census.

<sup>6</sup> These asymmetrical age groups are used in an attempt to make results as comparable as possible with those from other papers in the international comparison exercise, despite our survey's more limited age range.

**Table 1.** Summary statistics on three financial literacy questions among Canadians aged 35–54 y.o, 2023 (in %)

(A) Interest question	
>\$102*	81.4
= \$102	5.4
<\$102	2.9
DK	8.9
RF	1.4
(B) Inflation question	
More	8.1
Exactly the same	6.7
Less*	70.2
DK	13.3
RF	1.7
(C) Risk diversification question	
True	5.2
False*	63.2
DK	30.3
RF	1.4
(D) Cross-question consistency	
Interest and Inflation	64.1
All correct	47.8
None correct	8.9
At least 1 DK	37.5
All DK	6.3
Number of observations	3,004

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from *The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023*.

Notes: Exact wording of the questions is included in the text. Correct answers are marked with an asterisk (\*). Sample consists of 3,004 individuals aged 35–54 y.o. at the time of survey. Proportions are weighted to the corresponding population using Statistics Canada's 2021 Census.

women on average: between 5 and 16 percentage points for individual questions, and over 18 percentage points higher for having answered the three questions correctly. However, as also noted in the literature (Bucher-Koenen et al. 2017, 2021), women's lower average scores seem largely due to a much higher proportion of respondents who report “not knowing” the answer – between 5 and 17 percentage points, depending on the question or set of questions considered.

As also seen in Table 2, educational achievement and employment seem correlated with higher scores on financial literacy questions when considered in isolation. On all questions or measures, those with a higher schooling level do better; and the self-employed do best, while the non-retired, non-employed do worst. The retirees do just as well as the employed, except on interest; their number in our under-55 sample is small, however, so despite weighting, their results as a group should be taken with caution.

**Table 2.** Distribution of responses to financial literacy questions by age, gender, education, and employment status, 2023 (in %)

	Interest		Inflation		Risk diversification		Overall		Sample size
	Correct	DK	Correct	DK	Correct	DK	3	>=1	
							Correct	DK	
<i>Age group</i>									
35–49	81.5	10.3	69.3	15.9	62.9	31.9	47.2	37.7	1,822
50–54	81.0	10.6	73.1	12.4	64.0	31.0	49.6	37.0	1,182
<i>Gender</i>									
Male	84.3	7.7	76.1	11.0	71.1	23.8	56.5	28.2	1,479
Female	78.6	12.9	64.6	18.8	55.6	39.2	39.5	46.4	1,525
<i>Education</i>									
High school or less	74.5	14.8	61.5	21.1	48.1	46.2	30.3	52.9	405
Some College and College degree	78.5	10.6	63.8	17.2	62.6	30.7	44.1	37.5	1,003
Bachelor's or more	90.4	6.2	84.2	7.6	76.7	20.1	66.7	24.3	1,596
<i>Employment status</i>									
Employed	81.9	9.9	71.3	13.8	64.3	30.4	49.0	36.0	2,442
Self-employed	90.2	6.6	75.6	10.8	66.5	26.6	55.5	31.1	239
Not employed	71.6	16.0	57.7	27.7	50.8	46.0	31.8	54.2	253
Retired	78.5	15.1	68.1	17.7	66.4	30.4	48.8	40.1	70
Sample average	81.4	8.9	70.2	13.3	63.2	30.3	47.8	37.5	3,004

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from *The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023*.

Notes: Employment status is self-declared; "self-employed" includes seven individuals who reported being "unpaid workers in a family business." Proportions are weighted to the corresponding population using Statistics Canada's 2021 Census.

### c. Knowledge of inflation

Since the latest wave of this survey is the fifth annual one, it is possible to look at results by sub-group over time. Because of the increasingly inflationary context in Canada since 2021, we do this specifically for the inflation question. Table 3 reports the same information as the third column in Table 2 but adds the results for several years past. After a notable fall between 2020 and 2021, which may be due to some "pandemic effect," all subgroups improved their score by 2023, with most nearly back to their 2020 level or beyond it. Inflation was volatile during the pandemic (see below). In 2020, the consumer price index rose by a meager 0.7%, with gasoline prices falling sharply within the index during this time, yet in 2021, the index began to rise quickly as public health restrictions began to loosen.

Some context is helpful in interpreting these descriptive results. Canada's monetary policy regime has a single mandate to target annual inflation, as measured by the consumer price index (CPI), at 2% annually, with a range from 1 to 3%. This regime has been in place since 1991 – which is earlier than most international peers with similar monetary targets – and it has been renewed by the Government of Canada numerous times

**Table 3.** Distribution of correct responses to the inflation literacy question by age, gender, education, and employment status, 2020–2023 (in %)

Year	2020	2021	2022	2023
<i>Age group</i>				
35–49	66.8	61.8	63.7	69.3
50–54	76.6	67.1	72.9	73.1
<i>Gender</i>				
Male	75.3	69.8	71.2	76.1
Female	63.4	56.7	60.8	64.6
<i>Education</i>				
High school or less	57.2	51.3	52.7	61.5
Some College and College degree	66.4	59.8	63.0	63.8
Bachelor's or more	82.5	76.9	80.2	84.2
<i>Employment status</i>				
Employed	69.8	65.2	68.3	71.3
Self-employed	73.7	65.4	63.1	75.6
Not employed	58.4	48.7	51.9	57.7
Retired	73.1	73.2	68.8	68.1
Sample average	69.2	63.1	65.9	69.3

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from the *RSI Index (2020–2023)* surveys.

Notes: Employment status is self-declared; "self-employed" includes individuals who reported being "unpaid workers in a family business." Unlike in previously disclosed RSI Index reports, where the previous 2016 Census had been used, proportions are weighted for all years to the corresponding population using Statistics Canada's most recent 2021 Census – all results have been reweighted for this table.

since its adoption. In the thirty years following adoption, inflation has been stable at roughly 2% annually.

Recently, CPI's growth slowed to 0.7% from the beginning to end of 2020, then it rose to 3.4% in 2021 and 6.8% in 2022 and has since fallen to around 3.1% up to November 2023. Chen and Tombe (2023) find that most of the increase in inflation in Canada in the post-COVID period is largely because of rising energy prices in energy-intensive goods and services, many of which are imported. Nonetheless, this period is the longest sustained period of inflation above the target since Canada adopted its inflation-targeting regime.

Our survey data cover only those aged 35–54. Hence, even the oldest individuals in our survey would have been in their early 20s – perhaps at the very beginning of their working career, or more likely still in school – the last time a major, sustained period of inflation occurred in Canada. Therefore, as working-age adults, the post-pandemic period is likely one of their first experiences living through a period of significant inflation.

Regressing the knowledge of inflation on those same sociodemographic characteristics for 2023 (Table 4) provides insight on which ones are truly correlated with the former when accounting for all of them together. Unsurprisingly, older individuals answer the inflation question correctly in a significantly higher proportion, as do men (see the negative and significant coefficient on the "female" variable). Higher earners also answer this question better and so do respondents with a bachelor's degree. All else equal, employment status is not associated with knowledge of inflation, as shown by the many non-significant coefficients on the employment status variables.



**Table 4.** Ordinary least squares: Knowledge of inflation and sociodemographic characteristics, 2023

	Inflation correct
Age (35–49 y.o. omitted)	
50–54 y.o.	0.0596*** (0.0150)
Female	–0.1042*** (0.0151)
Education (High school or less omitted)	
College	0.0357 (0.0278)
Bachelor's +	0.2031*** (0.0258)
Income (<\$60,000 omitted)	
\$60,000–\$90,000	0.0425 (0.0271)
\$90,000–\$120,000	0.1014*** (0.0272)
\$120,000 +	0.1210*** (0.0232)
Income n.a.	–0.0516 (0.0373)
Employment (Employed omitted)	
Self-employed	0.0219 (0.0266)
Retired	0.0091 (0.0489)
Not working	–0.0334 (0.0331)
Constant	0.6037*** (0.0308)
Mean of dep. variable	0.760
R <sup>2</sup>	0.101
N	3,004

Source: Authors' calculations using data from The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023.

Notes: The dependent variable is equal to 1 if respondent correctly answered the question on inflation, 0 otherwise. Employment status is self-declared; "self-employed" includes seven individuals who reported being "unpaid workers in a family business." Sample consists of 3,004 individuals aged 35–54 y.o. at the time of survey. Robust standard errors in parentheses; \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ .

#### d. Country-level analysis

##### *Regional variations*

Canada is a federation, quite unique in that subnational (provincial) governments have authority over a wide range of critical programs, such as healthcare and education, and taxation authority. Among Organisation for Economic Co-operation and Development (OECD) countries, Canada has the largest second-level of government: provinces – along with municipalities, their legal creatures – account for roughly twice the share of public spending when compared to the OECD average. Responsibility for retirement and savings programs is also shared between levels of government, sometimes asymmetrically.

Due to sample sizes, Table 5 reports the financial literacy results by *region*, defined by geographical and cultural proximity. The three most populous provinces (Ontario, Quebec, and British Columbia) are shown on their own, and the remaining seven are merged into two groups familiar to Canadians: Prairies – which includes Alberta, Saskatchewan, and Manitoba – and Atlantic – for New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland-and-Labrador. The Atlantic region seems to fare slightly worse than average on most measures, except inflation; British Columbia, at the other end of the country, fares best on all measures. No other clear pattern emerges, however, and comparisons of regional performances with the national average will be blurred because of the large size disparities – Ontario and Quebec alone together account for 2/3 of total population.

Furthermore, composition effects are most likely at work here, which is why we turn to regression analysis in a subsequent section: age composition varies significantly, as does pension plan coverage and various other dimensions. As such, it would be risky to conclude from Table 5 that differences in direct determinants of financial literacy, such as education programs or credit rules or experience, are behind the regional differences.

##### *Pension plan participation*

The survey we use contains data on pension plan participation, so the bottom part of Table 5 also breaks down the success rates to the Big 3 financial literacy questions by plan participation and type of plan. It can be observed that those who report participating in a plan, through contributing or receiving benefits, do better than average on all questions/measures. As well, participants to all plan types shown do better, except for Group TFSA<sup>7</sup> participants on inflation.

## 4. Does financial literacy matter? Financial literacy and financial outcomes

### *Descriptive results*

The survey used for this paper contains an interesting outcome of interest that may be connected to financial literacy: whether respondents have a financial plan for retirement. Boisclair et al. (2017) do find a significant link for Canada between performance on the “Big 3” financial literacy questions and having a plan for retirement. The first two columns of Table 6 report descriptive results for this outcome, showing that respondents who say they have a plan for retirement exhibit better results on all financial literacy measures. More specifically, those with a plan do better on all measures by 6 percentage points or more: each question separately, and proportion who correctly answer on interest and inflation and to all three questions. The number of correct answers is also slightly higher, while the proportion of “don’t know” answers is notably lower.

<sup>7</sup> “Group TFSA (tax-free savings accounts)” are tax-prepaid accounts linked to the employer, similar to Roth 401(k) plans in the U.S. As noted under Table 5, there also exists in Canada a tax-deferred version called “Group RRSPs (registered retirement savings plans),” similar to regular 401(k) plans in the U.S. TFSA and RRSPs also exist in individual, non-group versions.

**Table 5.** Canadian features: Distribution of responses to financial literacy questions by region and pension plan participation by type, 2023 (in %)

Region	Interest		Inflation		Risk diversification		Overall		Sample size
	Correct	DK	Correct	DK	Correct	DK	3 Correct	>=1 DK	
Atlantic	76.8	10.0	70.5	16.7	55.8	38.1	38.4	42.9	190
Québec	78.9	10.9	65.9	18.3	69.2	25.1	47.3	34.6	576
Ontario	81.5	10.5	70.8	14.3	61.9	33.0	49.6	37.3	1324
Prairies	81.9	10.5	71.9	13.0	59.0	35.6	45.8	40.7	516
British Columbia	86.8	9.0	73.1	13.5	65.6	30.5	50.5	36.1	398
"Do you currently contribute to, or receive benefits from (in the form of regular payments), an employer-provided pension plan?"									
Yes	84.0	7.9	72.1	10.9	67.7	26.2	51.1	31.3	1,747
DK or No	78.1	13.4	67.9	20.1	57.5	38.4	43.7	45.2	1,257
<i>Among those who said yes, results based on type of employer plan</i>									
<i>Defined benefit (DB) pension plan</i>									
	89.1	3.8	80.3	6.1	73.4	21.1	60.7	25.4	620
<i>Defined contribution (DC) pension plan</i>									
	88.0	4.1	82.6	4.8	71.9	21.9	59.2	24.8	448
<i>Group RRSP (Registered Retirement Savings Plan)</i>									
	84.4	8.2	71.4	9.9	69.8	24.2	50.6	29.2	699
<i>Group TFSA (Tax-Free Savings Account)</i>									
	83.2	7.3	61.8	5.0	76.5	15.2	48.7	21.4	277
Sample average	81.4	8.9	70.2	13.3	63.2	30.3	47.8	37.5	3,004

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from *The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023*.

Notes: Sample sizes by pension plan type do not add up to the sub-total because respondents can participate in more than one type, and some "other" types (such as hybrid plans) are not shown here. "Group RRSPs" are similar to DC plans, but with fewer restrictions and responsibilities for employers (they are tax-deferred plans, similar to 401(k) plans in the U.S.); "Group TFSAs" are the tax-prepaid version of group RRSPs (similar to Roth 401(k) plans in the U.S.). Proportions are weighted to the corresponding population using Statistics Canada's 2021 Census.

The second interesting feature of the survey we use is that it was primarily intended to measure Canadians' knowledge of their retirement income system.<sup>8</sup> Canada's retirement income system has a multi-pillar design: (1) public, tax-financed basic income programs; (2) compulsory public contribution plans; (3) private employer plans; and (4) private savings, which include individual voluntary tax-sheltered vehicles – the latter two often being treated jointly in official documents and in the less recent retirement saving literature. The first two pillars are financed by either tax revenues or compulsory employee and employer contributions from workplace earnings (including by the self-employed), and they form the basis for many Canadians' standard of living in retirement.

<sup>8</sup> General context about the Canadian retirement income system is available in Boisclair et al. (2017), and under "Sources of retirement income" at <https://www.canada.ca/en/financial-consumer-agency/services/retirement-planning.html>. Note these two sources use the more traditional "3 pillars" view, which lumps together employer plans (what is called here the third pillar) and personal savings (here, the fourth pillar).

**Table 6.** Financial literacy and having a financial plan for retirement, 2023 (in %)

Interest question	“Do you have a financial plan for your retirement?”	
	Have	Don't have
	(“Yes”)	(“No, “Don't know,” or “Prefer not to say”)
Correct	86.5	76.8
DK	7.1	13.3
Inflation question		
Correct	73.0	67.6
DK	10.7	18.9
Risk diversification question		
Correct	70.0	56.9
DK	23.1	39.4
Summary		
Correct: Interest & Inflation	68.8	59.8
Correct: All three	55.2	41.0
Number of correct answers	2.3	2.0

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from *The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023*.

Notes: Sample consists of 3,004 individuals aged 35–54 y.o. at the time of survey. Proportions are weighted to the corresponding population using Statistics Canada's 2021 Census.

The first pillar includes the Old-Age Security (OAS) pension and the Guaranteed Income Supplement (GIS), which are income-tested, tax-financed benefits that aim to ensure all Canadians' most basic needs are met. The second pillar is the Canada Pension Plan (CPP; or the Quebec Pension Plan, or QPP, for Quebec residents), which pays out benefits equal to 25% of average career earnings. The third pillar includes those who take part in employer-based plans, and the fourth and final pillar is a private pillar whereby Canadians may top up their pensions to maintain their standard of living in retirement by saving individually (inside or outside tax-sheltered vehicles). For most Canadians, especially middle- to higher-income earners, the first two pillars will not be sufficient, and they therefore need to accumulate sufficient private savings via employer plans or with contributions to individual savings vehicles.

The survey questionnaire is provided in Appendix B and includes questions on all “pillars” of the retirement income system:

- 6 questions relating to knowledge of tax-sheltered savings plans (RRSPs and TFSAs), part of the fourth pillar in their individual (non-group) form;
- 3 questions relating to third pillar, traditional employer plans (DB and DC);
- 6 questions relating to knowledge of the “second pillar” CPP – or the QPP, depending on the province of residence; and
- 8 questions about the “first pillar” OAS/GIS.

The data therefore allow us to evaluate respondents' knowledge of the Canadian retirement system, as measured by the percentage of questions relating to different parts of the system that they correctly answered in the survey. There are many complex

dimensions to the four-pillar system that require a significant degree of knowledge. For starters, qualification and benefit rules for the first two pillars can have a major impact on financial well-being in retirement. One especially important issue is the age at which people claim their first- and second-pillar benefits, as the penalties for early application and the rewards for delayed claims impact the flow of benefits until death. For the fourth pillar, there are now multiple tax-sheltered savings vehicles available to Canadians. Understanding how the contribution and withdrawal rules of these plans interact with effective marginal tax rates can have a large and material impact on one's financial well-being (Boyer et al. 2022). However, these vehicles are often not well understood and financial literacy affects appropriate usage (Laurin et al. 2023).

The first column of Table 7 presents the average results for the total knowledge score and the four different components of the retirement income system. Note that respondents score poorly, on average, on these questions. The average score across these four sections is 32%, and the results on the individual sections vary from 21% to 39%.<sup>9</sup> This is despite the fact that the individuals in our sample, in principle, are in years of strong asset accumulation in preparation for retirement; younger people often have other financial concerns and priorities. Indeed, results show that respondents are somewhat more knowledgeable on programs close to them, such as those they contribute to individually (RRSPs/TFSA) and those that show up repeatedly on their pay slips and in the media (CPP/QPP).<sup>10</sup> On the other hand, those aged 55 and over are much more likely to know the retirement system closely – through relatives or by being retired themselves – and to be concerned about the issues related to it.

The second column of Table 7 shows how knowledge of the retirement system correlates with the number of correct answers to the “Big 3” questions. Knowledge of the retirement system is positively correlated with all questions, with correlation coefficients varying between 0.32 and 0.49. In the following columns of Table 7, we report the score on the knowledge questions, given whether the respondents know the answer to the “Big 3” or not. It is apparent that the total score on knowledge of the retirement system is correlated nearly equally with all questions, with scores varying between 35% and 40%; this score remains similar among respondents who answered correctly on interest and inflation, but individuals who answered correctly to all three financial literacy questions seem to score modestly higher (at 44%). This pattern also holds for all subscores.

#### *Regression analyses*

To disentangle the various dimensions associated with our outcomes of interest, including financial literacy, we next conduct multivariate regression analyses using a linear probability model estimated with ordinary least squares. We run three specifications, each with a different format for the explanatory variables related to the financial literacy questions:

- (a) A variable equal to 1 if the respondents correctly answered all three questions;
- (b) A variable counting the number of correct answers (from 0 to 3); and
- (c) Three separate dummy variables, each equal to 1 if the respondent answered the specific question correctly.

In columns (1)–(3) of Table 8, we first investigate the determinants of having a retirement plan, using these variables. The dependent variable is a binary variable equal to

<sup>9</sup> This is in line with the results from Boyer et al. (2022) who investigate how financial education can improve the knowledge and utilization of tax-sheltered savings plans in Canada (the “fourth pillar”) using the same RRSP and TFSA knowledge questions.

<sup>10</sup> The 2023 RSI Index report (Retirement and Savings Institute 2023) provides further information on these aspects.

**Table 7.** Financial literacy and RSI Index retirement knowledge score, 2023 (in %)

	Sample average	Correlation with number of correct Big 3 answers	Interest		Inflation		Risk diversification		Overall	
			Correct	DK	Correct	DK	Correct	DK	3 Correct	>= 1 DK
Total RSI Index knowledge score	32	0.50	35	12	38	14	40	17	44	18
RRSP/TFSA score	37	0.49	42	13	44	15	47	20	51	21
Employer plans score	21	0.32	24	04	26	04	27	08	32	08
CPP/QPP score	39	0.39	42	19	44	20	46	24	50	25
OAS/GIS score	27	0.34	30	10	32	11	34	14	37	15

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from *The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023*.

Notes: Sample consists of 3,004 individuals aged 35–54 y.o. at the time of survey. Proportions are weighted to the corresponding population using Statistics Canada's 2021 Census.

**Table 8.** Ordinary least squares estimates: Financial literacy and having a financial plan for retirement

	Plan for retirement				
	(1)	(2)	(3)	(4)	(5)
All correct	0.0472** (0.02)				
# correct		0.0250** (0.01)			
Interest correct			0.0786*** (0.03)	0.0578** (0.03)	0.0580** (0.03)
Inflation correct			-0.0681*** (0.02)	-0.0969*** (0.02)	-0.0934*** (0.02)
Risk diversification correct			0.0749*** (0.02)	0.0359* (0.02)	0.0374* (0.02)
RSI knowledge score				0.2957*** (0.04)	
RRSP/TFSA score					-0.0032 (0.04)
Employer plans score					0.0984*** (0.03)
CPP/QPP score					0.1671*** (0.04)
OAS/GIS score					0.035 (0.04)
Handles HH finances	0.0940*** (0.03)	0.0920*** (0.03)	0.0950*** (0.03)	0.0736** (0.03)	0.0757** (0.03)
Age (35–49 y.o. omitted)					
50–54 y.o.	0.0466*** (0.02)	0.0466*** (0.02)	0.0497*** (0.02)	0.0375** (0.02)	0.0368** (0.02)
Female	0.0135 (0.02)	0.0127 (0.02)	0.0126 (0.02)	0.0142 (0.02)	0.0168 (0.02)
Education (High school or less omitted)					
College	0.0606** (0.03)	0.0612** (0.03)	0.0542** (0.03)	0.0475* (0.03)	0.0490* (0.03)
Bachelor's +	0.0825*** (0.03)	0.0833*** (0.03)	0.0809*** (0.03)	0.0687** (0.03)	0.0720*** (0.03)
Marital status (Married omitted)					
Common law	0.0086 (0.03)	0.008 (0.03)	0.0078 (0.03)	0.0071 (0.03)	0.0062 (0.03)

(Continued)

**Table 8.** (Continued)

	Plan for retirement				
	(1)	(2)	(3)	(4)	(5)
Widowed	0.0432 (0.10)	0.041 (0.10)	0.0575 (0.10)	0.0372 (0.10)	0.0427 (0.10)
Separated	0.038 (0.05)	0.0379 (0.05)	0.0346 (0.05)	0.0326 (0.05)	0.0292 (0.05)
Divorced	0.0195 (0.04)	0.0175 (0.04)	0.0178 (0.04)	0.0218 (0.04)	0.0187 (0.04)
Single	-0.0018 (0.02)	-0.0017 (0.02)	-0.0042 (0.02)	-0.0105 (0.02)	-0.0081 (0.02)
Income (<\$60,000 omitted)					
\$60,000–\$90,000	0.1064*** (0.03)	0.1051*** (0.03)	0.1001*** (0.03)	0.0911*** (0.03)	0.0912*** (0.03)
\$90,000–\$120,000	0.2026*** (0.03)	0.1999*** (0.03)	0.1992*** (0.03)	0.1837*** (0.03)	0.1833*** (0.03)
\$120,000 +	0.3245*** (0.03)	0.3233*** (0.03)	0.3192*** (0.03)	0.2937*** (0.03)	0.2915*** (0.03)
Income n.a.	0.0741* (0.04)	0.0772** (0.04)	0.0783** (0.04)	0.0780** (0.04)	0.0770** (0.04)
Employment (Employed omitted)					
Self-employed	0.0058 (0.03)	0.0049 (0.03)	0.0015 (0.03)	0.0101 (0.03)	0.014 (0.03)
Retired	-0.5062*** (0.02)	-0.5050*** (0.02)	-0.5110*** (0.02)	-0.5387*** (0.02)	-0.5363*** (0.02)
Not working	-0.1485*** (0.03)	-0.1470*** (0.03)	-0.1471*** (0.03)	-0.1368*** (0.03)	-0.1342*** (0.03)
Regions (Ontario omitted)					
Quebec	0.004 (0.02)	0.0043 (0.02)	0.0023 (0.02)	-0.0004 (0.02)	0.0031 (0.02)
British-Colombia	-0.0045 (0.03)	-0.0054 (0.03)	-0.0059 (0.03)	-0.0055 (0.03)	-0.0015 (0.03)
Prairies	0.0296 (0.02)	0.0285 (0.02)	0.0291 (0.02)	0.0261 (0.02)	0.0277 (0.02)
Atlantic	0.0515 (0.04)	0.0501 (0.04)	0.0546 (0.04)	0.0466 (0.04)	0.0462 (0.04)
Constant	0.1428*** (0.04)	0.1149** (0.05)	0.1088** (0.05)	0.1183** (0.05)	0.1090** (0.05)

(Continued)



Table 8. (Continued)

	Plan for retirement				
	(1)	(2)	(3)	(4)	(5)
Mean of dep. variable	0.515	0.515	0.515	0.515	0.515
$R^2$	0.136	0.136	0.142	0.155	0.159
$N$	3,004	3,004	3,004	3,004	3,004

Source: Authors' calculations using data from The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023.

Notes: The dependent variable equals 1 if the respondent has a plan for retirement and 0 otherwise. Employment status is self-declared; "self-employed" includes seven individuals who reported being "unpaid workers in a family business." In column (1), the financial literacy independent variable equals 1 if correct on all 3 financial literacy questions (0 otherwise). In column (2), the financial literacy independent variable is the total count of correct answers to the 3 financial literacy questions. In columns (3)–(5), the financial literacy independent variables equal 1 for each of the 3 financial literacy questions every question answered correctly (0 otherwise). We include region fixed effects in every specification. Sample consists of 3,004 individuals aged 35–54 y.o. at the time of survey. Robust standard errors in parentheses; \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ .

one if the respondent has a plan for retirement, and zero otherwise. 51.5% of respondents report having a plan for retirement. The results show that the significant relationship found in Boisclair et al. (2017) still holds 10 years later – although the wording of the question regarding the presence of a financial plan differs slightly. When controlling for all socio-economic characteristics and for whether the respondent handles their household's finances (alone or with their partner), success on the financial literacy questions is significantly and positively correlated with having a financial plan for retirement. Answering all 3 questions correctly increases the chance of having a financial plan by 4.7 percentage points; each correct answer increases it by 2.5 percentage points; and answering correctly on interest and on risk diversification respectively increases the chance of having a plan by 7.9 and 7.5 percentage points. A puzzling finding relates to inflation: answering that specific question correctly, all else equal, decreases the chance of having a plan by 6.8 percentage points. Given that the mean of the dependent variable analyzed is 51.5%, these effects are economically large.

It may be worth noting that, as is apparent in the table, gender, marital status, and being self-employed are not significantly associated with a higher probability of having a financial plan for retirement, nor do we find any regional effects. Increasing age, educational achievement, and income are positively associated with this outcome, while being retired or not working (self-declared) are negatively associated, relative to being employed.

In columns (4) and (5) of Table 8, we investigate the effect of survey respondents' knowledge of their retirement income system on having a plan for retirement. We reproduce the specification of column (3) and add the total RSI knowledge score as an additional determinant in column (4), and the individual scores to each of the sections in column (5). Interestingly, the coefficients on the “Big 3” financial literacy questions remain mostly unchanged, although the knowledge of the retirement system shows significant effects. In column (4), we note that a 10-percentage point increase in the total RSI knowledge score induces a 2.96 percent point increase in the propensity to have a plan for retirement. In column (5), we disaggregate this effect by the score on the four parts of the RSI Index knowledge score and we find that the score on the employer plan questions, as well as that on the CPP/QPP questions, are driving this effect.

Clearly, these analyses cannot rule out reverse causality or other related concerns. For instance, it may well be the case that having a plan for retirement leads to greater financial literacy, and not the other way around as implied here. Reaching more definitive conclusions about causality would require the use of alternative methods that are unavailable in the context of this paper, such as the use of instrumental variables (IV).

#### *Robustness analyses*

In Table A2, we conduct three robustness analyses for the results presented in Table 4 (on the knowledge of inflation) and Table 8 (on having a retirement plan). In columns (1) and (5), we repeat our baseline results, and we present our robustness checks in columns (2)–(4) and (6)–(8).

*Measure of age.* Our survey only includes respondents aged between 35 and 54 years old, which could limit the comparability of our results to other studies in the international measurement of financial literacy. Because we only have two age groups, in columns (2) and (6), we repeat our main results by using linear age instead of a dummy variable for respondents aged 50–54. We find qualitatively similar results; increasing age by one year has a 0.59 percentage point effect on answering the inflation question correctly and a 0.28 percentage point effect on having a plan for retirement. These effects are 10 times smaller than using a dummy variable for older individuals. Because the dummy variable we use in our main analysis compares age groups that are about 10 years apart on average, we conclude that the effect we capture is essentially linear.

*Dropping retired individuals.* 70 respondents are retired in our sample, which is somewhat unusual (though not surprising or aberrant) for individuals under 55 years old. For this reason, in columns (3) and (7) of Table A2, we reproduce our main regression results dropping these individuals. We find qualitatively similar results. We are therefore confident that our results are not driven by the subsample of respondents who are early retirees.

*Respondents who answered previous waves of the survey.* Close to half of the respondents in this wave of the survey have participated in a previous wave over the years. This could be problematic for our results if these respondents may have learned answers to the financial literacy questions in previous waves. In columns (4) and (8) of Table A2 we therefore reproduce our main results on the subsample of first-time respondents and find qualitatively similar results. We are therefore confident that our results are not driven by the subsample of respondents who have participated in previous waves of the survey.<sup>11</sup>

## 5. Discussion

Our results find that most Canadians are arguably not ready to make the financial decisions that are required of them. Highly educated individuals are most prepared to make key financial decisions. Over time, younger generations of Canadians are much more likely than prior generations to have completed a postsecondary education at higher levels (Statistics Canada 2021). Although this trend toward higher educational attainment, coupled with the fact that young Canadians have high levels of literacy and numeracy when compared to OECD peers – according to the OECD PISA assessments of 15-year-old Canadians<sup>12</sup> – should have an unambiguously positive impact on financial literacy scores, this outcome is not certain and should not be taken for granted. Being older remains strongly correlated with financial literacy, even if all else is equal. This is likely due to older individuals having a longer “real life” experience of the phenomena covered by the Big 3 questions, such as interest compounding and inflation. Another element that may come into play is the relative absence, until fairly recently, of formal financial education in most Canadian provinces, which might have counter-balanced the younger cohorts’ shorter experience. The measurement of any future, longer-term impact of the modern courses on financial literacy, introduced in some provinces over the past 15 years, should be of interest to both researchers and policymakers.

Another implication of the findings relates directly to how financial literacy interacts with financial plans for retirement and knowledge of the retirement system. Canada’s multi-pillar retirement income system is, despite its many benefits, reasonably complex. It has important public pillars that provide a basic income and limited public pension benefits, and it leaves a significant role for private savings for middle- and upper-income Canadians for whom public income supports and pensions will be insufficient to maintain their standard of living in retirement. Navigating complex retirement income systems requires a high degree of financial literacy. Hence, one should not be surprised that the findings show the strength of the relationship between financial literacy and having a retirement plan, or between financial literacy and “retirement literacy.”

The consequence of having a complex multi-pillar retirement income system, which for example requires many households to make tricky decisions with respect to tax-preferred savings vehicles during their working lives (Boyer et al. 2022; Laurin et al. 2023), is that the

<sup>11</sup> Of note, although survey respondents may well look up the correct answers after taking the survey, they never receive them from the survey team (i.e., the correct answers are never indicated within the survey itself nor shared with participants after completion).

<sup>12</sup> See the Council of Ministers of Education for a summary of the PISA results in Canada: [https://www.cmec.ca/712/PISA\\_2022.html](https://www.cmec.ca/712/PISA_2022.html).

required financial literacy for Canadians to navigate this system could potentially be higher than that required in peer countries. At a minimum, policymakers should be aware of how Canada's financial literacy needs may exceed those in other countries due to domestic policy design. Our results speak to this by showing how strongly the knowledge of the retirement system correlates with general financial literacy.

There are some potential advantages to the Canadian context that could help improve financial literacy over time; one is the nature of Canada's decentralized federation, which allows provinces complete jurisdiction over education. This, as it has in other aspects of primary and secondary education, should give the provinces the ability to try different approaches to improving financial literacy, seeing what works, and then sharing those findings with peers in other provinces. This institutional advantage in the Canadian context, relative to more nationally driven education systems, should allow for both experimentation and knowledge sharing.

## **6. Conclusion**

Financial literacy is critically important to the well-being of individuals and broader societies. Individuals must make complex financial decisions regularly, and poor decisions can negatively affect their financial health. Policymakers are becoming increasingly concerned about the level of financial literacy of citizens because of how financial decisions are not only critical for individual financial health, but also how they directly and indirectly affect the finances of public and private institutions – including governments and pension plans. As attention turns toward the international variation in financial literacy results, this article should help to shed light on the Canadian context.

Using the results of an annual RSI Index on retirement knowledge, which includes key questions on financial literacy, we found that 44% of respondents were able to correctly answer all “Big 3” financial knowledge questions. This is in line with the international average. Also like in other countries, being older, male, and more educated seems to have large and significant effects on financial literacy scores. Furthermore, recent years of increasing inflation do not seem to be improving understanding of inflation itself. This result is likely due to a combination of Canada having a long-lasting, successful inflation-targeting monetary regime and because the RSI Index survey only interviews individuals between the ages of 35 and 54. The issue of inflation knowledge will be looked at carefully in the forthcoming waves of the annual survey.

The questionnaire we use allows us to show how having a financial plan for retirement is strongly correlated with greater financial literacy, and that knowledge of the retirement system is also strongly correlated with general financial literacy. It is not clear from our results whether being financially literate is more likely to lead one to create a retirement plan or whether the causation works in the opposite direction. Further research could exploit the subsample of returning respondents in the different waves of the RSI Index survey to analyze how changes in financial literacy correlate with changes in knowledge of the retirement income system and planning for retirement. We nonetheless believe that the complexity of Canada's retirement income system does require rather sophisticated financial knowledge for many individuals. Hence, the strength of that relationship should underscore the importance of the issue for policymakers looking for ways to improve literacy.

Although our results do not allow us to say whether provincial approaches to education are causing differences in financial literacy results between provinces, we nonetheless think that the jurisdictional independence of the provinces in education is a strength for Canada. It creates a collaborative environment that allows policymakers and educators to

engage in discussions of how different approaches to financial education may affect performance and where/how improvements could be made.

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## References

- Autorité des Marchés Financiers. 2022. “New Applied Financial Literacy Index.” Research report, available from <https://lautorite.qc.ca/en/general-public/publications/amf-publications/the-amf-financial-awareness-index>
- Boisclair, D., A. Lusardi, and P.-C. Michaud. 2017. “Financial Literacy and Retirement Planning in Canada.” *Journal of Pension Economics & Finance* 16, no. 3: 277–96.
- Bottazzi, L., and N. Oggero. 2023. “Financial Literacy and Financial Resilience: Evidence from Italy.” *Journal of Financial Literacy and Wellbeing* 1, no. 2: 1–26.
- Boyer, M. M., P. d’Astous, and P.-C. Michaud. 2022. “Tax-Preferred Savings Vehicles: Can Financial Education Improve Asset Location Decisions?” *Review of Economics and Statistics* 104, no. 3: 541–56.
- Bucher-Koenen, T., A. Lusardi, R. Alessie, and M. Van Rooij. 2017. “How Financially Literate are Women? An Overview and New Insights.” *Journal of Consumer Affairs* 51, no. 2: 255–83.
- Bucher-Koenen, T., R.J. Alessie, A. Lusardi, and M. Van Rooij. 2021. “Fearless woman: Financial literacy and stock market participation.” NBER Working Paper No. w28723, National Bureau of Economic Research, Cambridge, MA.
- Canadian Securities Administrators. 2020. “2020 CSA Investor Index. Survey Report by Innovative Research Group, September.” Available (along with previous surveys) from <https://www.securities-administrators.ca/investor-tools/investing-basics/research/>
- Chen, Y., and T. Tombe. 2023. “The Rise (And Fall?) of Inflation in Canada: A Detailed Analysis of Its Post-Pandemic Experience.” *Canadian Journal of Public Policy* 49, no. 2: 197–217.
- Clark, R., A. Lusardi, and O.S. Mitchell. 2017. “Financial Knowledge and 401(k) Investment Performance: A Case Study.” *Journal of Pension Economics & Finance* 16, no. 3: 324–47.
- Financial Consumer Agency of Canada. 2021. “MAKE CHANGE THAT COUNTS: National Financial Literacy Strategy 2021–2026.” Cat. No. FC5-71/2021E-PDF, available from <https://www.canada.ca/en/financial-consumer-agency/programs/financial-literacy/financial-literacy-strategy-2021-2026.html>
- Fornero, E., and A. Lo Prete. 2023. “Financial education: from better personal finance to improved citizenship.” G53 Network Working Paper 2023-3, available at <https://g53network.org/research/>
- Klapper, L., and A. Lusardi. 2020. “Financial Literacy and Financial Resilience: Evidence from around the World.” *Financial Management* 49, no. 3: 589–614.
- Laurin, M., D. Messacar, and P.-C. Michaud. 2023. “Financial Literacy and the Timing of Tax-Preferred Savings Account Withdrawals.” *Journal of Accounting and Public Policy* 42, no. 2: 1–22.
- Lusardi, A., and O.S. Mitchell. 2007. “Financial Literacy and Retirement Preparedness: Evidence and Implications for Financial Education.” *Business Economics* 42, no. 2007: 35–44.
- Lusardi, A., and O.S. Mitchell. 2011a. “Financial Literacy around the World: An Overview.” *Journal of Pension Economics & Finance* 10, no. 4: 497–508.
- Lusardi, A., and O.S. Mitchell. 2011b. “Financial Literacy and Planning: Implications for Retirement Well-being,” in *Financial Literacy. Implications for Retirement Security and the Financial Marketplace*, edited by Olivia S. Mitchell and Annamaria Lusardi, 17–39. Oxford: Oxford University Press.
- Lusardi, A., and O.S. Mitchell. 2014. “The Economic Importance of Financial Literacy: Theory and Evidence.” *Journal of Economic Literature* 52, no. 1: 5–44.
- Lusardi, A., and J.L. Streeter. 2023. “Financial Literacy and Financial Well-Being: Evidence from the US.” *Journal of Financial Literacy and Wellbeing*: 1–30.
- Lusardi, A., and P. Tufano. 2015. “Debt Literacy, Financial Experiences, and Overindebtedness.” *Journal of Pension Economics & Finance* 14(4), 332–368.
- Retirement and Savings Institute. 2023. “The State of Canadians’ Knowledge of Their Retirement Income System – RSI Index 2023,” project report available at <https://ire.hec.ca/en/index/>
- Statistics Canada. 2021. “Study: Youth and education in Canada.” Statistics Canada: The Daily. Ottawa: Statistics Canada. <https://www150.statcan.gc.ca/n1/en/daily-quotidien/211004/dq211004c-eng.pdf?st=IsD12yrj>
- Statistics Canada. 2024. “Canadian Financial Capability Survey.” Survey information, available at <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5159>

- Sticha, A., and S. Sekita. 2023. "The Importance of Financial Literacy: Evidence from Japan." *Journal of Financial Literacy and Wellbeing*: 1–19.
- Yakoboski, P.J., A. Lusardi, and A. Hasler. 2022. "How financial literacy varies among U.S. adults: The 2022 TIAA Institute-GFLEC Personal Finance Index." Report available at <https://gflec.org/initiatives/personal-finance-index/>
- Yakoboski, P.J., A. Lusardi, and A. Hasler. 2023. "Financial Literacy, Longevity Literacy, and Retirement Readiness." TIAA Institute Research Paper Series, available at [https://www.tiaa.org/public/institute/publication/2023/financial\\_literacy\\_longevity\\_literacy\\_and\\_retirement\\_readiness](https://www.tiaa.org/public/institute/publication/2023/financial_literacy_longevity_literacy_and_retirement_readiness). <http://dx.doi.org/10.2139/ssrn.4338957>

## Appendix A. Additional Tables

Table A1. Summary statistics

	Population Mean	Sample Mean
Female (%)	51.1	51.2
Handles hh finances (%)		90.3
Age (%)		
35–39 y.o.	26.4	25.9
40–44 y.o.	25.1	25.5
45–49 y.o.	23.9	24
50–54 y.o.	24.7	24.6
Education (%)		
High School or less	30	29.9
Some College and College degree	35.4	35.5
Bachelor's or more	34.6	34.7
Marital status (%)		
Married	56.3	43.4
Common law	16.1	16.1
Widowed	0.7	0.9
Separated	3.5	3.9
Divorced	5.8	5.5
Single	17.4	30.1
Region (%)		
Ontario	38.5	38.6
Quebec	22.7	22.8
British Columbia	13.7	13.7
Prairies	18.9	18.9
Atlantic	6.2	6

(Continued)

**Table A1.** (Continued)

	Population Mean	Sample Mean
Employment (%)		
Employed	88	88.3
Not employed	11.9	11.7
Income (%)		
<\$60,000	16	24.8
\$60,000-\$90,000	16.3	20.2
\$90,000-\$120,000	17.4	15.1
\$120,000+	49.9	33.6
Income (n.a.)	0.4	6.3
Number of observations	254,474	3,004

Source: Authors' calculations using data from Statistics Canada's 2021 Census and from *The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023*.

Notes: This table presents the descriptive statistics for the main variables used in the analysis. The first column presents population-level statistics calculated from the 2021 Canadian Census using the Public-Use Microdata Files (a publicly available and random 2.7% sample of the complete population). The number of observations for these variables is 254,474. The second column presents sample-level statistics calculated from the 2023 RSI Index and weighted using the 2021 Canadian Census data on age, education, gender, and region. "Handles hh finances" is equal to 1 if respondent selected "I do" or "My partner and I equally do" to the question: "Who would you say primarily handles your household's financial matters?"

**Table A2.** Knowledge of inflation and having a plan for retirement: Robustness

	Inflation correct				Plan for retirement			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Interest correct					0.0578** (0.03)	0.0579** (0.03)	0.0586** (0.03)	0.0525 (0.04)
Inflation correct					-0.0969*** (0.02)	-0.0964*** (0.02)	-0.0977*** (0.02)	-0.1525*** (0.03)
Risk diversification correct					0.0359* (0.02)	0.0354* (0.02)	0.0357* (0.02)	0.0495* (0.03)
Total pension score					0.2957*** (0.04)	0.2939*** (0.04)	0.3040*** (0.05)	0.2989*** (0.06)
Handles HH finances					0.0736** (0.03)	0.0729** (0.03)	0.0717** (0.03)	0.0135 (0.05)
Age		0.0059*** (0.00)				0.0028* (0.00)		
Age (35–49 y.o. omitted)								
50–54 y.o.	0.0596*** (0.02)		0.0619*** (0.02)	0.0437** (0.02)	0.0375** (0.02)		0.0378** (0.02)	0.0059 (0.03)
Female	-0.1042*** (0.02)	-0.1029*** (0.02)	-0.1029*** (0.02)	-0.0928*** (0.02)	0.0142 (0.02)	0.0143 (0.02)	0.0153 (0.02)	-0.0387 (0.02)
Education (High school or less omitted)								
College	0.0357 (0.03)	0.0346 (0.03)	0.0294 (0.03)	0.0284 (0.04)	0.0475* (0.03)	0.0467* (0.03)	0.0519* (0.03)	0.0871** (0.04)
Bachelor's +	0.2031*** (0.03)	0.2045*** (0.03)	0.1956*** (0.03)	0.1594*** (0.04)	0.0687** (0.03)	0.0687** (0.03)	0.0728*** (0.03)	0.0925** (0.04)
Marital status (Married omitted)								
Common law					0.0071 (0.03)	0.0074 (0.03)	0.006 (0.03)	0.0179 (0.03)
Widowed					0.0372 (0.10)	0.0343 (0.10)	0.0371 (0.10)	0.1249 (0.12)
Separated					0.0326 (0.05)	0.0313 (0.05)	0.0315 (0.05)	-0.0075 (0.07)
Divorced					0.0218 (0.04)	0.0216 (0.04)	0.0208 (0.04)	0.0193 (0.05)

(Continued)



Table A2. (Continued)

	Inflation correct				Plan for retirement			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Single					-0.0105 (0.02)	-0.0107 (0.02)	-0.0127 (0.02)	-0.0211 (0.03)
Income (<\$60,000 omitted)								
\$60,000–\$90,000	0.0425 (0.03)	0.0439 (0.03)	0.0432 (0.03)	0.0322 (0.04)	0.0911*** (0.03)	0.0913*** (0.03)	0.0961*** (0.03)	0.0472 (0.04)
\$90,000–\$120,000	0.1014*** (0.03)	0.0999*** (0.03)	0.1024*** (0.03)	0.1103*** (0.04)	0.1837*** (0.03)	0.1826*** (0.03)	0.1899*** (0.03)	0.1968*** (0.04)
\$120,000 +	0.1210*** (0.02)	0.1205*** (0.02)	0.1232*** (0.02)	0.1326*** (0.03)	0.2937*** (0.03)	0.2933*** (0.03)	0.3007*** (0.03)	0.2900*** (0.04)
Income n.a.	-0.0516 (0.04)	-0.0513 (0.04)	-0.0503 (0.04)	-0.0814 (0.06)	0.0780** (0.04)	0.0782** (0.04)	0.0815** (0.04)	0.0539 (0.06)
Employment (Employed omitted)								
Self-employed	0.0219 (0.03)	0.0184 (0.03)	0.0218 (0.03)	0.0065 (0.04)	0.0101 (0.03)	0.0086 (0.03)	0.0113 (0.03)	0.008 (0.04)
Retired	0.0091 (0.05)	0.0039 (0.05)	0 (.)	0.0735 (0.07)	-0.5387*** (0.02)	-0.5384*** (0.02)	0 (.)	-0.5585*** (0.03)
Not working	-0.0334 (0.03)	-0.0354 (0.03)	-0.0344 (0.03)	-0.0489 (0.05)	-0.1368*** (0.03)	-0.1379*** (0.03)	-0.1326*** (0.03)	-0.1050** (0.05)
Constant	0.6037*** (0.03)	0.3545*** (0.07)	0.6071*** (0.03)	0.6323*** (0.04)	0.1183** (0.05)	0.0036 (0.09)	0.1080** (0.05)	0.2416*** (0.07)
Mean of dep. variable	0.760	0.760	0.760	0.760	0.515	0.515	0.515	0.515
R <sup>2</sup>	0.101	0.102	0.1	0.089	0.155	0.155	0.136	0.163
N	3,004	3,004	2,934	1,511	3,004	3,004	2,934	1,511

Source: Authors' calculations using data from The State of Canadians' Knowledge of Their Retirement Income System: RSI Index 2023.

Notes: The dependent variable in columns (1)–(4) is equal to 1 if respondent correctly answered the question on inflation, 0 otherwise. The dependent variable in columns (5)–(8) equals 1 if the respondent has a plan for retirement and 0 otherwise. Employment status is self-declared; "self-employed" includes seven individuals who reported being "unpaid workers in a family business." Sample consists of 3,004 individuals aged 35–54 y.o. at the time of survey. Robust standard errors in parentheses; \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ .

## APPENDIX B. SURVEY QUESTIONNAIRE

### Section 1: Sociodemographics (9 questions, plus screening)

QA What was your sex at birth?

1. Male
2. Female

QA2 What is your gender?

1. Male
2. Female
3. Other – please specify: [PN : ALLOW TEXT BOX HERE]

QB\_1 How old are you?

Please Enter [TERMINATE IF NOT 35-54 INCLUSIVELY]

[PN: MUST ENTER THE 2 CHARACTERS]

QC Which province or territory do you live in?

1. British Columbia
2. Alberta
3. Saskatchewan
4. Manitoba
5. Ontario
6. Quebec
7. New Brunswick
8. Nova Scotia
9. Prince Edward Island
10. Newfoundland and Labrador
11. Northwest Territories [Screen Out]
12. Nunavut [Screen Out]
13. Yukon [Screen Out]
14. None of the above [Screen Out]

\*\*\*\*\*

Q What is the highest degree, certificate, or diploma you have obtained?

1. Less than high school diploma or its equivalent
2. High school diploma or a high school equivalency certificate
3. Trade certificate or diploma
4. College, CEGEP, or other non-university certificate or diploma (other than trades certificates or diplomas)
5. University certificate or diploma below the bachelor's level
6. Bachelor's degree (e.g. B.A., B.Sc., LL.B.)
7. University degree above the bachelor's level

Q What is your marital status?

1. married
2. living common-law
3. widowed
4. separated
5. divorced
6. single, never married

Q Who would you say primarily handles your household's financial matters?

1. I do
2. My partner does [ONLY SHOW IF Q2==1,2]
3. My partner and I equally do [ONLY SHOW IF Q2==1,2]
4. Someone else does, for example, a relative  
8888888 Prefer not to say

Q For 2022, what is your best estimate of the total income received by all members of your household, from all sources, before taxes and deductions?

Numeric (\$0-\$5,000,000)

9999999 Don't know or prefer not to say

IF Q4==9999999

Q4a Is it more than \$60,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

IF Q4a==1

Q4b Is it less than \$120,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

IF Q4b == 1

Q4c Is it more than \$90,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

END IF

ELSE IF Q4a==2

Q4d Is it more than \$30,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

END IF

END IF

Q Which of the following statements best describes your work situation for 2022?

1. Employed (full time, part time, seasonal work)
2. Self-employed
3. Unpaid worker in a family business
4. Retired
5. Did not work but for a reason other than retirement

IF Q5==1,2,3,5

Q5a What is your best estimate of what total income received by all members of your household will be once you are fully retired, as a fraction of your current income?

Numeric (0%-200%)

9999999 Don't know or prefer not to say

IF Q5a==9999999

Q5b Is it more than 50%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

IF Q5b==1

Q5c Is it less than 75%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

IF Q5c == 1  
Q5d Is it more than 62.5%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know  
ELSE IF Q5c == 2  
Q5e Is it less than 87.5%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know  
END IF  
ELSE IF Q5b==2  
Q5f Is it more than 25%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know  
IF Q5f == 1  
Q5d Is it more than 37.5%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know  
ELSE IF Q5f == 2  
Q5e Is it less than 12.5%? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know  
END IF  
END IF  
END IF

Q Do you have a financial plan for your retirement?

1. Yes
2. No

8888888 Prefer not to say  
7777777 Don't know  
END IF

Q6a Which of the following industries best describes the one in which you mostly worked in 2022 (in hours, weeks, or months)?

If you did not work in 2022, please select an answer based on the most recent year during which you worked.  
[PN : POSSIBLE TO USE A DROP-DOWN MENU?]

1. Agriculture, forestry, fishing and hunting
2. Mining, quarrying, and oil and gas extraction
3. Utilities
4. Construction
5. Manufacturing
6. Wholesale trade
7. Retail trade
8. Transportation and warehousing
9. Information and cultural industries
10. Finance and insurance
11. Real estate and rental and leasing
12. Professional, scientific, and technical services
13. Management of companies and enterprises
14. Administrative and support, waste management, and remediation services
15. Educational services
16. Health care and social assistance
17. Arts, entertainment, and recreation
18. Accommodation and food services
19. Other services (except public administration)

20. Public administration

7777777 Don't know

Q Do you currently contribute to, or receive benefits from (in the form of regular payments), an employer-provided pension plan?

[ALLOW MULTI-SELECT FOR ANSWERS 1 AND 2]

1. Yes, I currently contribute
  2. Yes, I currently receive benefits
  3. No
- 7777777 Don't know

IF Q7==1,2

Q7a Among the following plan types, please select the one(s) to which you are **currently** contributing or from which you are **currently** receiving benefits

[MULTI-SELECT]

1. Defined benefit (DB) pension plan
2. Defined contribution (DC) pension plan
3. Hybrid pension plan
4. Group RRSP (Registered Retirement Savings Plan)
5. Group TFSA (Tax-Free Savings Account)
6. Voluntary Retirement Savings Plan, in Quebec, or Pooled Registered Pension Plan, in other provinces

7777777 Don't know

END IF

Q What is your best estimate of how much you have accumulated in **individual** (non-group, i.e. not employer-provided) Registered Retirement Savings Plans (RRSPs)?

Numeric (\$0-\$2,000,000)

9999999 Don't know or prefer not to say

IF Q8==9999999

Q8a Is it more than \$50,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

IF Q8a==1

Q8b Is it less than \$200,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

ELSE IF Q8a==2

Q8c Is it more than \$10,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

END IF

END IF

Q What is your best estimate of how much you have accumulated in **individual** (non-group) Tax-Free Savings Accounts (TFSAs) and other non-employer-provided savings accounts?

Numeric (\$0-\$2,000,000)

9999999 Don't know or prefer not to say

IF Q9==9999999

Q9a Is it more than \$50,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

IF Q9a==1

Q9b Is it less than \$200,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

ELSE IF Q9a==2

Q9c Is it more than \$10,000? 1 Yes 2 No 8888888 Prefer not to say 7777777 Don't know

END IF

END IF

## Section 2: Core Competencies (6 questions)

We would now like to ask you a few questions concerning your familiarity and ease with certain financial concepts. Please answer the questions as best you can.

Q Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow during these 5 years?

1. More than \$102
  2. Exactly \$102
  3. Less than \$102
- 7777777 Don't know  
8888888 Prefer not to say

Q Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, with the money in this account, would you be able to buy ...

1. More than today
  2. Exactly the same as today
  3. Less than today
- 7777777 Don't know  
8888888 Prefer not to say

Q If interest rates rise, what will typically happen to bond prices?

1. They will rise
  2. They will fall
  3. They will stay the same
  4. There is no relationship between bond prices and the interest rate
- 7777777 Don't know  
8888888 Prefer not to say

Q Suppose you owe \$1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?

1. Less than 2 years
  2. At least 2 years but less than 5 years
  3. At least 5 years but less than 10 years
  4. At least 10 years
- 7777777 Don't know  
8888888 Prefer not to say

[SHOW ON A NEW, SEPARATE SCREEN]

Do you think the following statements are true or false?

[SHOW ON A NEW, SEPARATE SCREEN]

Q "Buying a single company's stock usually provides a safer return than a stock mutual fund."

1. True
  2. False
- 7777777 Don't know  
8888888 Prefer not to say

[SHOW ON A NEW, SEPARATE SCREEN]

Q “A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.”

1. True
2. False
- 7777777 Don't know
- 8888888 Prefer not to say

Section 3: Knowledge of Tax-Preferred Saving (6 questions)

The next questions are about Registered Retirement Savings Plans (RRSPs) and Tax-Free Savings Accounts (TFSA), whether group-based or individual.

Q According to you, are the contributions made to an RRSP or to a TFSA deductible from taxable income?

1. Yes, for the RRSP only
2. Yes, for the TFSA only
3. Yes, for both the RRSP and the TFSA
4. No, for neither the RRSP nor the TFSA
- 7777777 Don't know
- 8888888 Prefer not to say

Q According to you, when money is withdrawn from an RRSP or from a TFSA, is it subject to income tax in the year of the withdrawal? Assume the withdrawn amount **is not** used for the Home Buyers' Plan (HBP) or the Lifelong Learning Plan (LLP).

1. Yes, for the RRSP only
2. Yes, for the TFSA only
3. Yes, for both the RRSP and the TFSA
4. No, for neither the RRSP nor the TFSA
- 7777777 Don't know
- 8888888 Prefer not to say

Q Money invested in an RRSP or in a TFSA can generate returns in the form of interest, dividends, or capital gains. According to you, are these returns subject to income tax in the year during which they were generated?

1. Yes, for the RRSP only
2. Yes, for the TFSA only
3. Yes, for both the RRSP and the TFSA
4. No, for neither the RRSP nor the TFSA
- 7777777 Don't know
- 8888888 Prefer not to say

Q According to you, is there a penalty associated with withdrawing money from an RRSP or from a TFSA before retirement? Assume the withdrawn amount **is not** used for the Home Buyers' Plan (HBP) or the Lifelong Learning Plan (LLP).

1. Yes, for the RRSP only
2. Yes, for the TFSA only
3. Yes, for both the RRSP and the TFSA
4. No, for neither the RRSP nor the TFSA
- 7777777 Don't know
- 8888888 Prefer not to say

Q Let's assume you withdraw \$1,000 from an RRSP or from a TFSA. According to you, will this withdrawn amount be added to your future contribution room?

1. Yes, for the RRSP only
  2. Yes, for the TFSA only
  3. Yes, for both the RRSP and the TFSA
  4. No, for neither the RRSP nor the TFSA
- 7777777 Don't know  
8888888 Prefer not to say

Q In your opinion, is there a maximum age at which the funds must be withdrawn from an RRSP or a TFSA?

1. Yes, for the RRSP only
  2. Yes, for the TFSA only
  3. Yes, for both the RRSP and the TFSA
  4. No, there is no maximum age
- 7777777 Don't know  
8888888 Prefer not to say

The following sections include questions about your knowledge of certain pension and retirement programs. Please answer the questions to the best of your knowledge, without any outside assistance. The latter is of utmost importance to reach the research objectives behind this questionnaire.

Section 4: Knowledge of Employer Pensions (3 questions)

We are interested in your general knowledge of employer-sponsored pension plans and associated risks.

Q In which type of pension plan can a worker generally choose how much to contribute?

1. Defined-contribution plans
  2. Defined-benefit plans
  3. Both defined-contribution and defined-benefit plans
  4. None of the above
- 7777777 Don't know  
8888888 Prefer not to say

Q For which type of plan do retirement payments depend on the returns generated on financial markets?

1. Defined-contribution plans
  2. Defined-benefit plans
  3. Both defined-contribution and defined-benefit plans
  4. None of the above
- 7777777 Don't know  
8888888 Prefer not to say

Q Which type of plan offers protection against the risk of living to age 100 without having sufficient savings to pay for expenses?

1. Defined-contribution plans
2. Defined-benefit plans
3. Both defined-contribution and defined-benefit plans



4. None of the above  
7777777 Don't know  
8888888 Prefer not to say

Section 5: Knowledge of CPP/QPP (6 questions)

We are now interested in your knowledge of the Canada Pension Plan (CPP).

Q Retirement benefits from the CPP [RANDOMIZE ORDER OF RESPONSES]:  
[SINGLE SELECT]

1. Are generally a fixed amount per person
2. Depend entirely on the recipient's income in the previous year
3. Are based on a recipient's pensionable career earnings
4. Are based on the value of contributions made to the plan by the recipient, plus a fixed return
5. Are based on the value of contributions made to the plan by the recipient, plus a variable return that depends on financial market returns  
7777777 Don't know  
8888888 Prefer not to say

Q CPP retirement benefits can start being drawn when the would-be recipient reaches:

1. Age 60
2. Age 65
3. Age 70
4. 35 years of contribution  
7777777 Don't know  
8888888 Prefer not to say

Q If someone begins to draw CPP retirement benefits earlier than some "normal age," is there a penalty (a reduction in the amount of the monthly benefit received)?

1. Yes
2. No  
7777777 Don't know  
8888888 Prefer not to say

Q If someone begins to draw CPP retirement benefits later than some "normal age," is there a bonus (an increase in the amount of the monthly benefit received)?

1. Yes
2. No  
7777777 Don't know  
8888888 Prefer not to say

Q CPP benefits are . . .

1. . . . taxable, at the federal level only
2. . . . taxable, at the provincial level only
3. . . . taxable, at both the federal and provincial levels
4. . . . not taxable  
7777777 Don't know  
8888888 Prefer not to say

Q When receiving CPP retirement benefits, you . . .

1. . . . must stop working completely and definitely
  2. . . . must stop working for a period of time, after which you can work again
  3. . . . must reduce your working hours by at least 20% compared to the year prior to your initial benefit claim
  4. . . . can keep working without change or interruption
- 7777777 Don't know  
8888888 Prefer not to say

IF QC==6, use this version of Section 5

We are now interested in your knowledge of the Quebec Pension Plan (QPP).

Q25q Retirement benefits from the QPP [RANDOMIZE ORDER OF RESPONSES]:

[SINGLE SELECT]

1. Are generally a fixed amount per person
  2. Depend entirely on the recipient's income in the previous year
  3. Are based on a recipient's pensionable career earnings
  4. Are based on the value of contributions made to the plan by the recipient, plus a fixed return
  5. Are based on the value of contributions made to the plan by the recipient, plus a variable return that depends on financial market returns
- 7777777 Don't know  
8888888 Prefer not to say

Q26q QPP retirement benefits can start being drawn when the would-be recipient reaches:

1. Age 60
  2. Age 65
  3. Age 70
  4. 35 years of contribution
- 7777777 Don't know  
8888888 Prefer not to say

Q27q If someone begins to draw QPP retirement benefits earlier than some "normal age," is there a penalty (a reduction in the amount of the monthly benefit received)?

1. Yes
  2. No
- 7777777 Don't know  
8888888 Prefer not to say

Q28q If someone begins to draw QPP retirement benefits later than some "normal age," is there a bonus (an increase in the amount of the monthly benefit received)?

1. Yes
  2. No
- 7777777 Don't know  
8888888 Prefer not to say

Q29q QPP benefits are . . .

1. . . . taxable, at the federal level only

2. ... taxable, at the provincial level only
3. ... taxable, at both the federal and provincial levels
4. ... not taxable  
7777777 Don't know  
8888888 Prefer not to say

Q30q When receiving QPP retirement benefits, you...

1. ... must stop working completely and definitely
2. ... must stop working for a period of time, after which you can work again
3. ... must reduce your working hours by at least 20% compared to the year prior to your initial benefit claim
4. ... can keep working without change or interruption  
7777777 Don't know  
8888888 Prefer not to say  
END IF

Section 6: Knowledge of OAS and GIS (8 questions)

Finally, we are interested in your knowledge of Old Age Security (OAS) and the Guaranteed Income Supplement (GIS).

Q OAS benefits [RANDOMIZE ORDER OF RESPONSES]:  
[SINGLE SELECT]

1. Are generally a fixed amount per person
2. Depend entirely on the recipient's income in the previous year
3. Are based on a recipient's career pensionable earnings
4. Are based on the value of contributions made to the plan by the recipient, plus a fixed return
5. Are based on the value of contributions made to the plan by the recipient, plus a variable return that depends on financial market returns  
7777777 Don't know  
8888888 Prefer not to say

Q OAS benefits can start being drawn when the would-be recipient reaches:

1. Age 60
2. Age 65
3. Age 70
4. 35 years of contribution  
7777777 Don't know  
8888888 Prefer not to say

Q Can OAS benefits be reduced if the beneficiary's non-OAS and non-GIS income exceeds a certain threshold?

1. Yes
2. No
3. It depends on the type of income  
7777777 Don't know  
8888888 Prefer not to say

Q OAS benefits are...

1. ... taxable, at the federal level only
2. ... taxable, at the provincial level only

3. ... taxable, at both the federal and provincial levels
4. ... not taxable  
7777777 Don't know  
8888888 Prefer not to say

Q Guaranteed Income Supplement (GIS) benefits [RANDOMIZE ORDER OF RESPONSES]:  
[SINGLE SELECT]

1. Are generally a fixed amount per person
2. Depend entirely on the recipient's income in the previous year
3. Are based on a recipient's career pensionable earnings
4. Are based on the value of contributions made to the plan by the recipient, plus a fixed return
5. Are based on the value of contributions made to the plan by the recipient, plus a variable return that depends on financial market returns  
7777777 Don't know  
8888888 Prefer not to say

Q GIS benefits can start being drawn when the would-be recipient reaches:

1. Age 60
2. Age 65
3. Age 70
4. 35 years of contribution  
7777777 Don't know  
8888888 Prefer not to say

Q Can GIS benefits be reduced if the beneficiary's non-OAS and non-GIS income exceeds a certain threshold?

1. Yes
2. No
3. It depends on the type of income  
7777777 Don't know  
8888888 Prefer not to say

Q GIS benefits are ...

1. ... taxable, at the federal level only
2. ... taxable, at the provincial level only
3. ... taxable, at both the federal and provincial levels
4. ... not taxable  
7777777 Don't know  
8888888 Prefer not to say

**TOTAL: 38 questions**

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