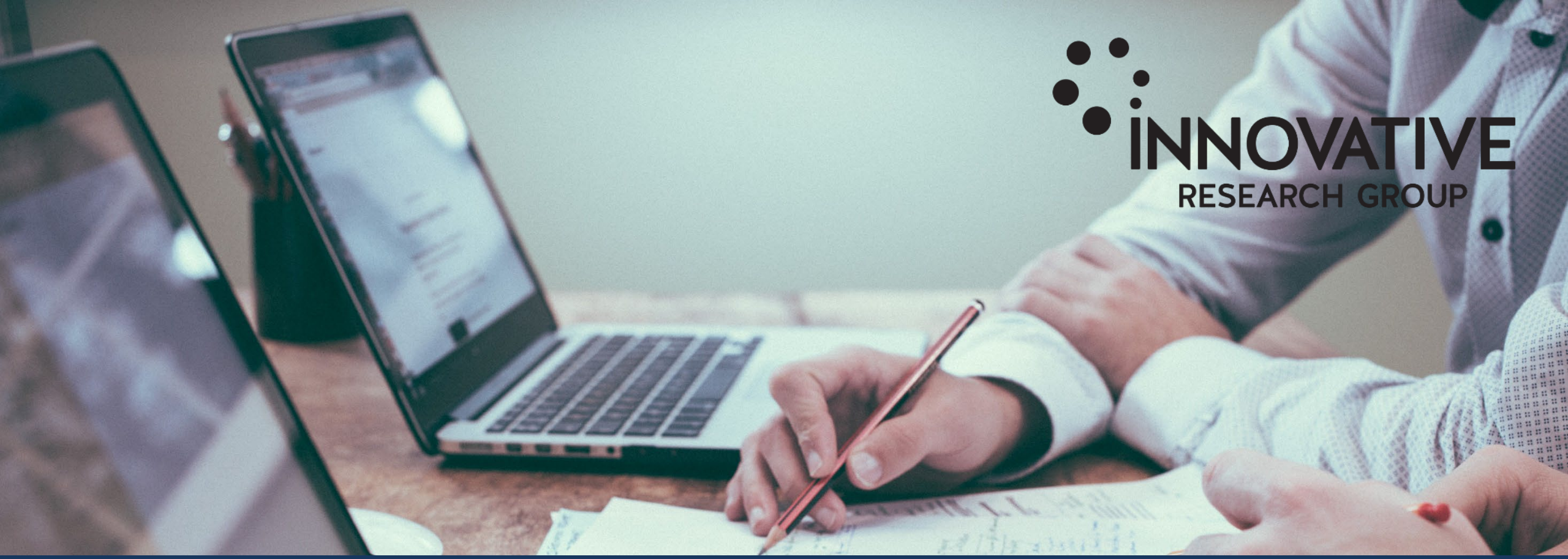

INNOVATIVE RESEARCH GROUP

Ontario Securities Commission

Investor Knowledge Study

OSC ONTARIO SECURITIES COMMISSION | INVESTOR OFFICE

Report: September, 2022

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Introduction

The Importance of Financial Literacy

As individuals take on more responsibility for their own investing, it is essential that they have enough financial knowledge to effectively participate in Canada's capital markets. Investors' knowledge, attitudes, skills, and behaviours are all contributors to having a successful investing journey.

The Investor Office

The Investor Office is a regulatory branch that sets the strategic direction and leads the OSC's efforts in investor engagement, education, outreach and research. The Office develops investor policy; plays a key role in the oversight of the Ombudsman for Banking Services and Investments; and provides leadership at the OSC in the area of behavioural insights and improving the investor experience. Its investor website GetSmarterAboutMoney.ca is one of Canada's most visited financial literacy websites visited by millions of people each year.

Assessing the Level of Financial Literacy of Investors

The Investor Office conducted this research study to assess the financial knowledge of retail investors across a number of areas. The survey includes the widely-used financial knowledge questions currently used across Organization for Economic Co-operation and Development (OECD) jurisdictions to assess financial knowledge (developed by Professor Annamaria Lusardi and Professor Olivia Mitchell of the Wharton School). These questions have been utilized by the Investor Office and the Canadian Securities Administrators (CSA) to assess objective financial knowledge of survey participants. Additional survey questions were developed by the Investor Office to gauge investor knowledge in further areas.

Select Key Findings

1. **There is a broad range of investment knowledge among Canadian investors.** The survey tested 27 financial literacy questions covering a wide range of investment-related topics. On average, investors answered 53% of the questions correctly.
2. **Canada has one of the highest financial literacy rates when compared globally**. We found that Canadians averaged answering 68% of the OECD questions correctly. The 2020 S&P Global Finlit survey found that 68% of Canadians are financially literate.* Other countries with the highest financial literacy rates were Australia, Denmark, Finland, Germany, Israel, the Netherlands, Norway, Sweden and the United Kingdom (55-75%).
3. **Investors have the least knowledge when it comes to investment costs and investor protections.** The fewest correct responses were provided to questions about investment costs (36%) and portfolio protections (44%).
4. **About 3-in-10 Canadian investors self-assessed their financial knowledge too highly.** Comparing those prior self-assessments to investors' actual results reveals that about 3-in-10 (29%) underperformed their expectations, while 14% exceeded their own expectations.
5. **On average, self-directed investors were the most financially-literate.** The average self-directed investor answered 59% of the questions correctly. This compares to 52% for investors with advisors and 49% for investors working with a robo-adviser.
6. **Women were slightly less financially literate than men.** The average woman answered 50% of the questions correctly compared to 56% for the average man.
7. **There are effective ways to reduce overconfidence in some investors (de-biasing).** After going through the survey, 31% of participants lowered their self-assessment after going through the 27 questions. Younger investors (aged 18-34) were more likely to do so (39%).

*Leora Klapper, Annamaria Lusardi, Peter van Oudheusden, Financial Literacy Around the World: Insights from the Standard & Poor's Ratings Services Global Financial Literacy Survey, Financial Management, Vol. 49, Issue 3, 589-614, 2020. The survey used the following four Lusardi questions: diversification, inflation, interest and compound interest and measured a person as financially literate if they scored 3 out of 4 correctly.

Research Objectives

The Investor Office research covers the following **five areas** that are of importance for investors when making -informed investment decisions:

1. OECD Core Questions – the 7 questions used in the CSA Investor Index and used across OECD jurisdictions;

2. Core Investing Principles and Concepts – the broad underlying principles and investing concepts;

3. Investment Costs – the fee characteristics of different investment products and advisory relationships;

4. Registered Accounts – the key features of different registered account types (RRSPs, TFSAs, RESPs); and

5. Protecting Your Portfolio– understanding investor rights & responsibilities.

Themes and Questions

The twenty-seven financial literacy questions are grouped into five categories and represent different ways of measuring financial literacy and the varying areas of knowledge.

OECD Core Questions	Core Investing Principles & Concepts	Investment Costs	Registered Accounts	Protecting Your Portfolio
Compound interest	Time horizon	Link between fees and returns	TFSA	Internal complaint handling
Mortgage amortization	Safety of Canadian securities	Management Expense Ratio (MER) Impact	RRSP	Checking registration
Inflation	Break even calculation	Index funds	RESP	Firm transfers
Investment risk	Past performance	No-load mutual funds		Abnormal returns
Diversification	Products by risk	Products with MERs		External complaint handling
Bond vs. Interest rate	Leveraged investing	Advisor costs		
Mutual fund returns not guaranteed				

Overall Findings

Over the course of the survey, 27 financial literacy questions were broken down into five categories. Our analysis presents both an overall index of respondents score across all 27 items, and then separate indices for their scores on each of the 5 categories. In the following section, a summary of results across both the overall results and results for each category are presented.

Purpose

This report for the OSC Investor Office presents the results of the in-depth survey designed by the OSC's Investor Office on investors' financial literacy across Canada.

The report explores several key questions about the level of financial literacy in Canada:

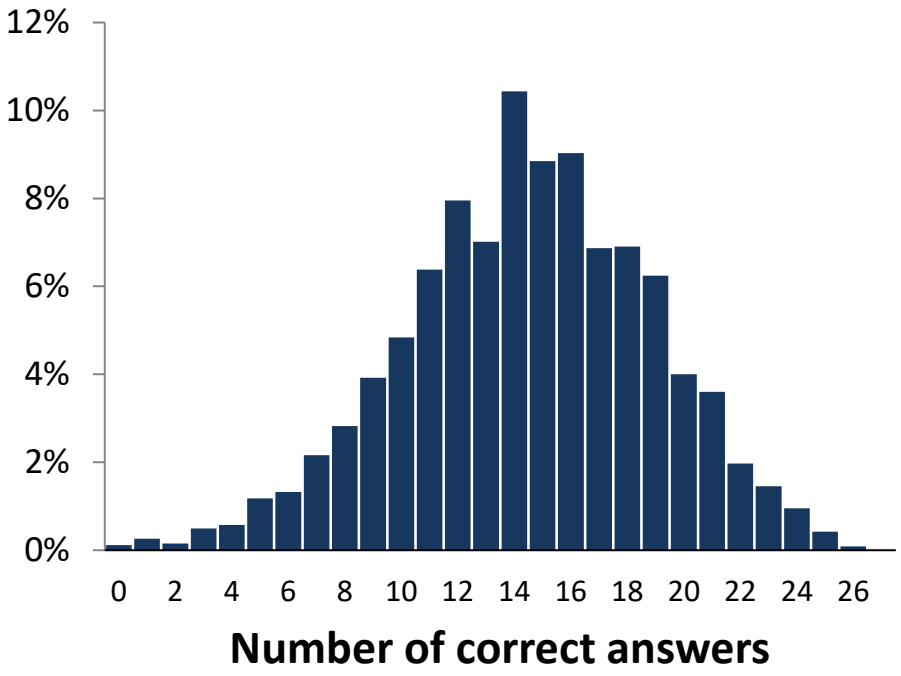
- Overall, how financially literate are investors? Are there important differences in financial literacy across the five categories?
- Are there differences in the kinds of knowledge different groups of Canadian investors have?
- How do Canadian investors' *perceptions* of their financial knowledge compare to their ability to answer questions measuring financial literacy?
- Are there groups of investors who have greater differences between their perceptions of their own financial knowledge and their actual performance?
- Can investors be debiased as to the level of their financial knowledge and if so, who is more likely to be debiased?
- How strongly does cognitive reflection* correlate with real and self-assessed financial knowledge measures?
- How strong is the link between cognitive reflection and the overall results, and with each theme area?

*Throughout the report, we use a "Cognitive Reflection Test" as a measure of cognitive ability. This test is a validated and efficient way to assessing cognitive ability in a survey. For more information see: *Frederick, Shane. 2005. "Cognitive Reflection and Decision Making." Journal of Economic Perspectives, 19 (4): 25-42.DOI: 10.1257/089533005775196732.*

Overall, these 27 questions provide a detailed overview of financial literacy among Canadian investors

Investors have highest knowledge on registered accounts (69%) and OECD core questions (68%), and least knowledge when it comes to portfolio protection (44%) and investment costs (36%).

This "Overall index" summarizes results for all 27 financial literacy questions on the survey across the 5 topics covered.



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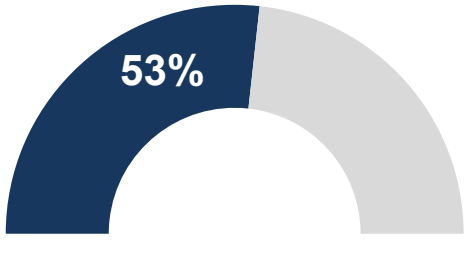
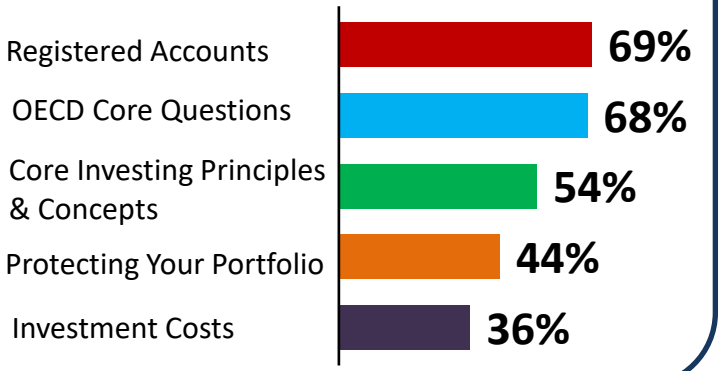
OVERALL FINANCIAL LITERACY INDEX



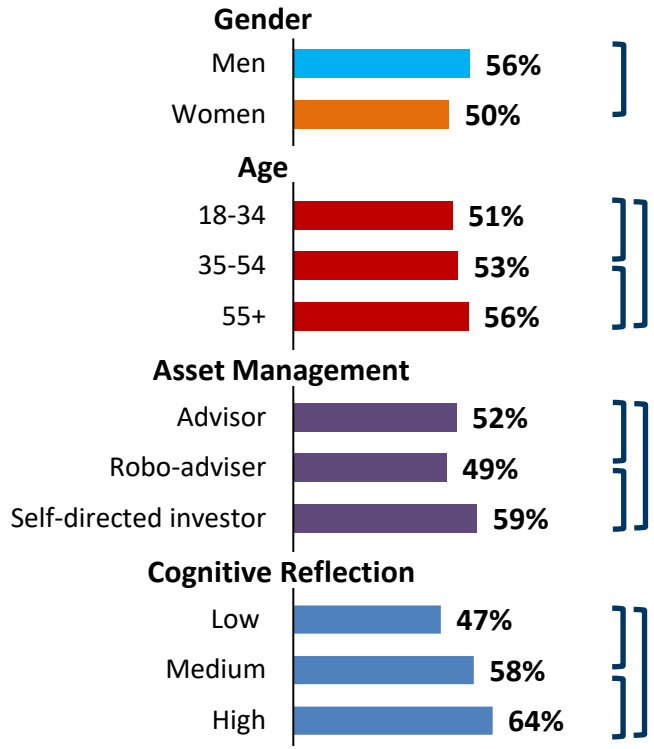
On average, respondents answered 53% (14/27) of the financial literacy questions correctly.

Broken in 5 categories the average scores for each category were:



Segmentation

Overall score in % of correct responses



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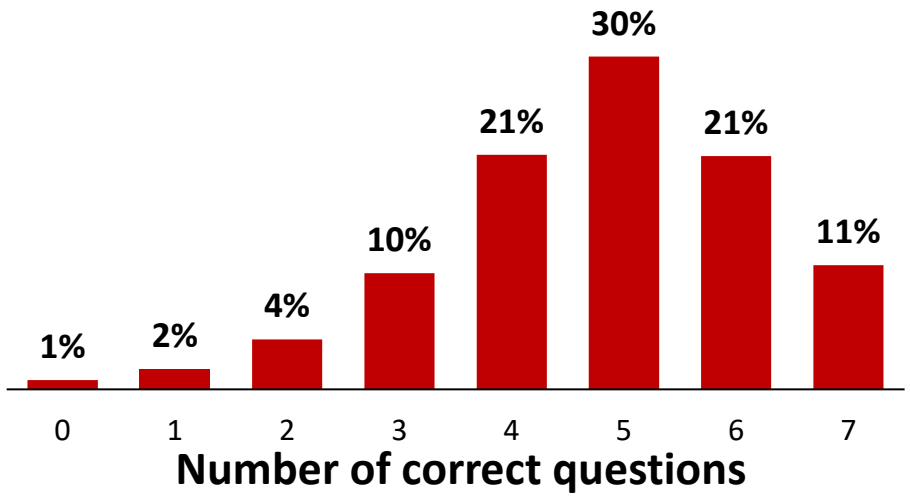
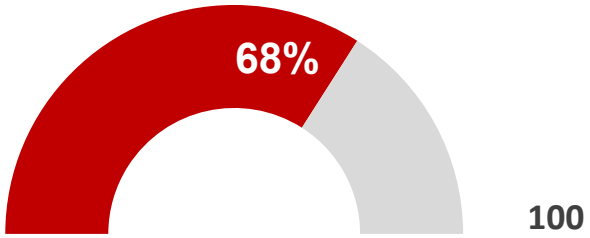
OECD Core Questions: Investors answered 5/7 correctly, with the results skewed by two questions that have fewer correct responses

On these standard financial literacy questions, only a third of investors can answer the "bond vs. interest rates" and "mutual fund" questions correctly, while other questions see higher scores. The overall scores are significantly different across the segmentations tested.

The OECD Core Questions summarizes results for 7 financial literacy questions used across OECD countries including provincial securities regulators in Canada in the CSA Investor Index.



OECD Core Questions

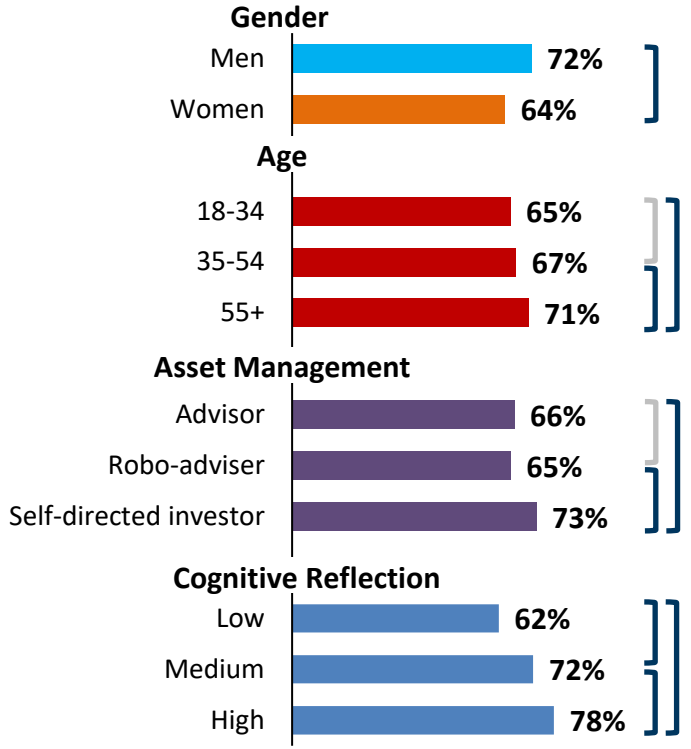


On average, respondents answered 68% (5/7) OECD Core Questions correctly.

The scores for each question were:

Segmentation

OECD Core Questions score in % of correct responses



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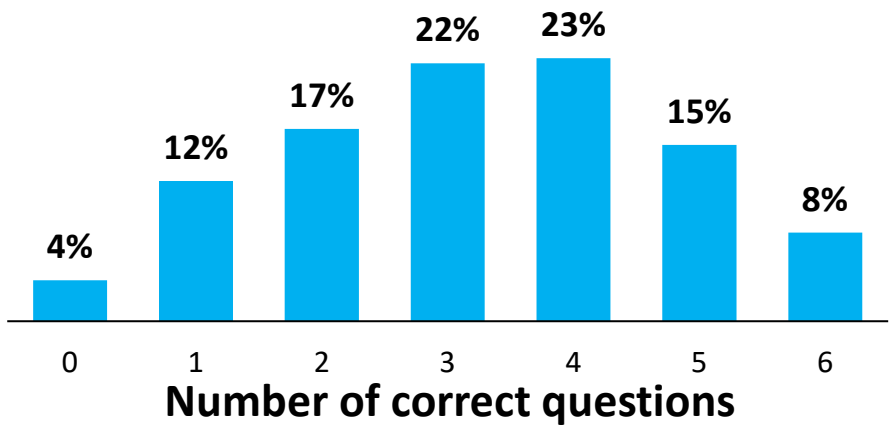
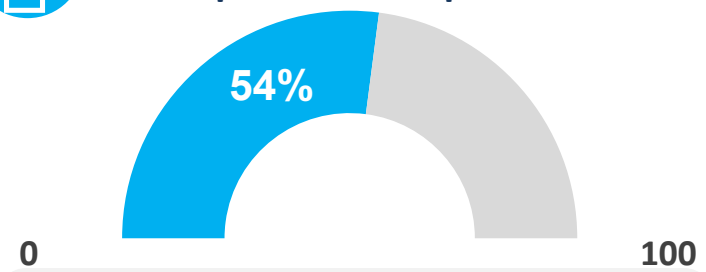
Core Investing Principles & Concepts: The average investor answered half of these questions correctly

On the 6 new financial literacy questions developed for the survey to test core investing principles, investors best understood the relationship between investment time horizon and risk while their understanding of relative product risk, whether past performance is a good indicator of future returns, and leveraged investing was less than 50%.

The Core Investing Principles and Concepts index summarizes results for the 6 new financial literacy questions on the survey focused on investing principles and concepts.

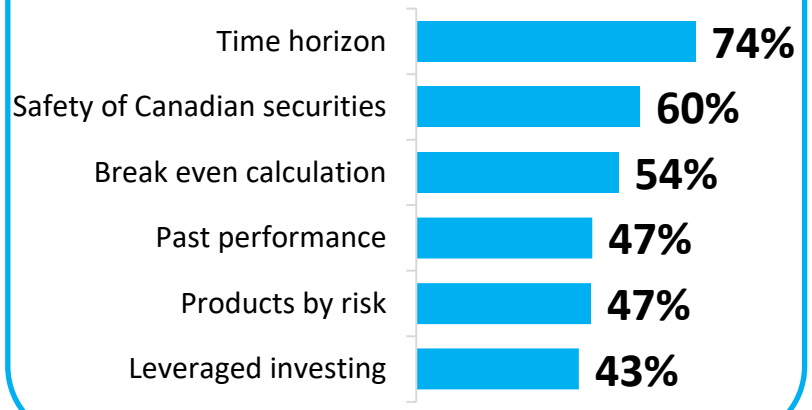


Core Investing Principles & Concepts



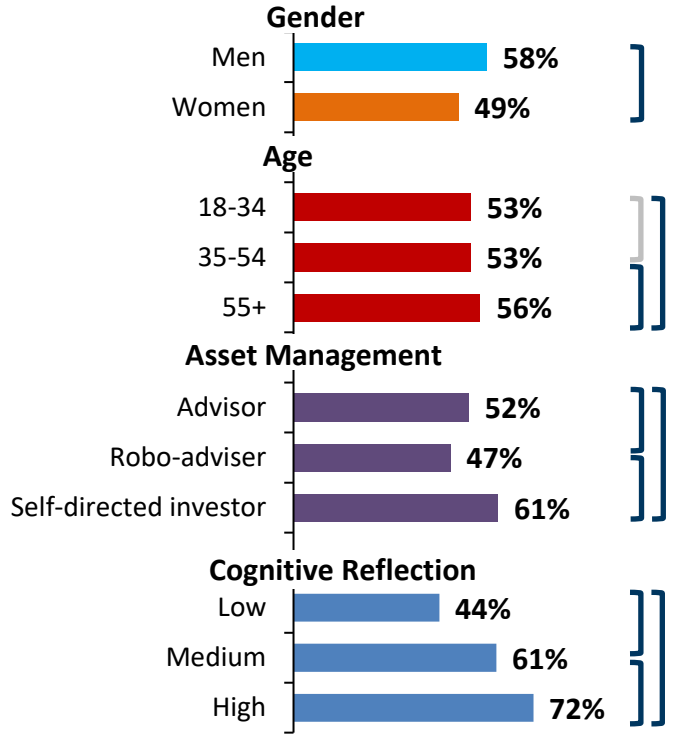
On average, respondents answered 54% (3/6) principles & concepts questions correctly.

The scores for each question were:



Segmentation

Core Investing Principles & concepts score in % of correct responses



*= difference between groups **is not** significant at a 95% confidence level*
*= difference between groups **is** significant at a 95% confidence level*

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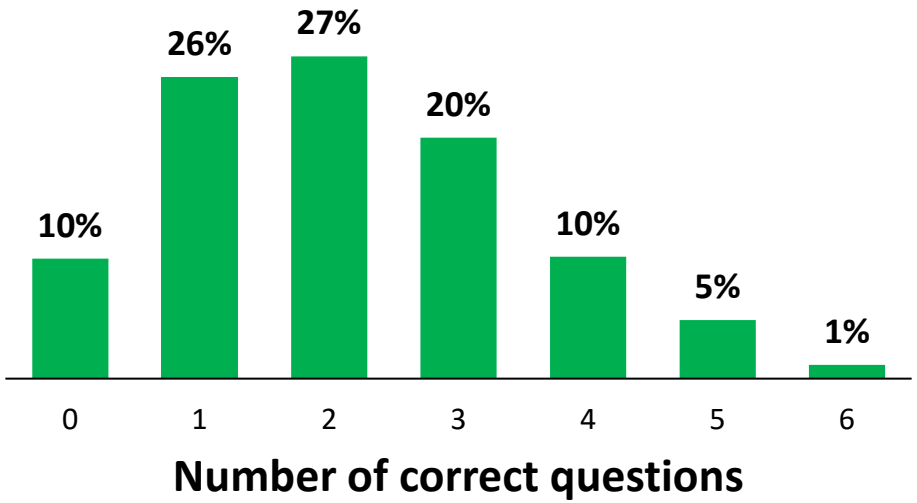
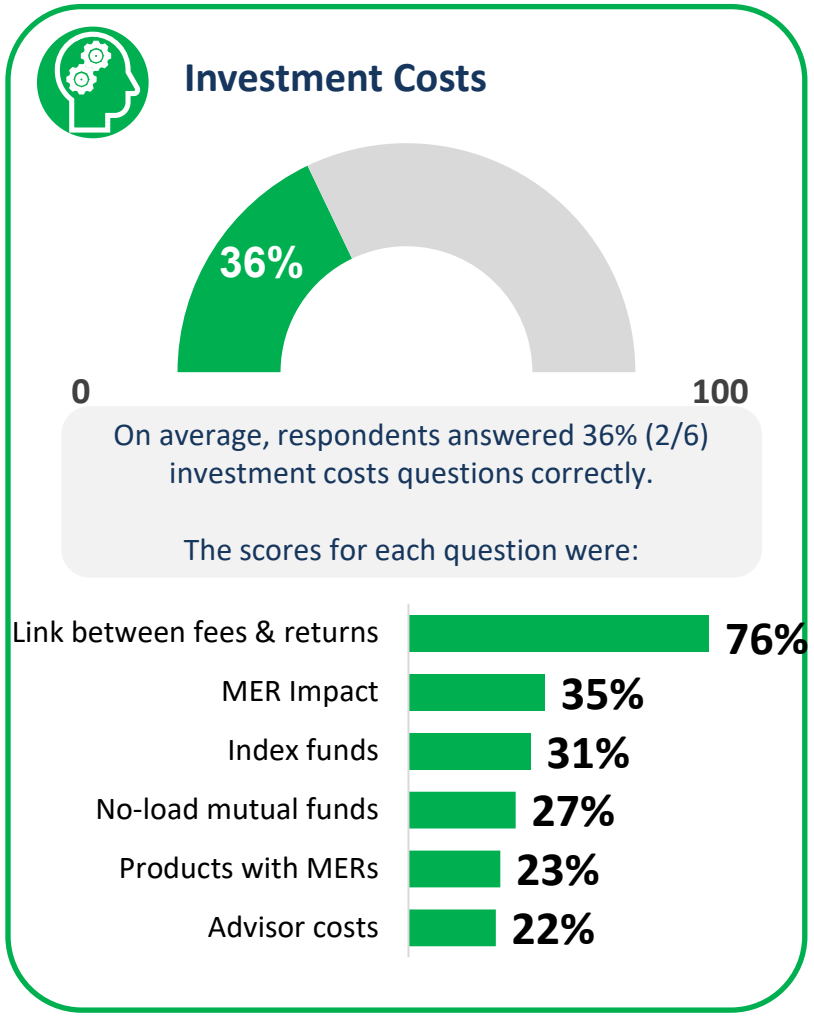
Investment Costs: Performance on investment costs questions were the lowest (36%) compared to other questions sets

Most investors can correctly answer a question about whether fees are linked to returns. However, for all other investment cost questions, no more than 35% of investors answer correctly. Self-directed investors know more than advised investors, and the results are positively correlated with the cognitive reflection test.

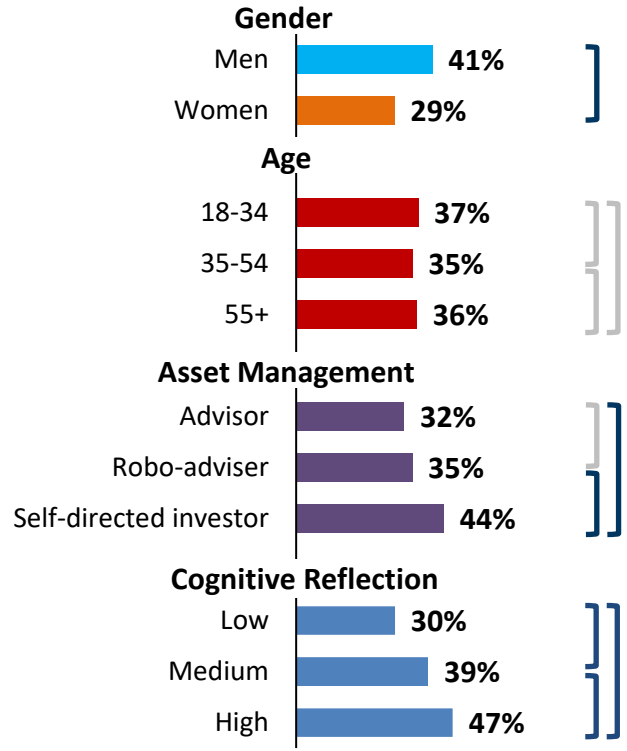
The Investment Costs index summarizes results for the 6 new financial literacy questions on the survey focused on investing costs.





Segmentation

Investment costs score in % of correct responses



*= difference between groups **is not** significant at a 95% confidence level*
*= difference between groups **is** significant at a 95% confidence level*

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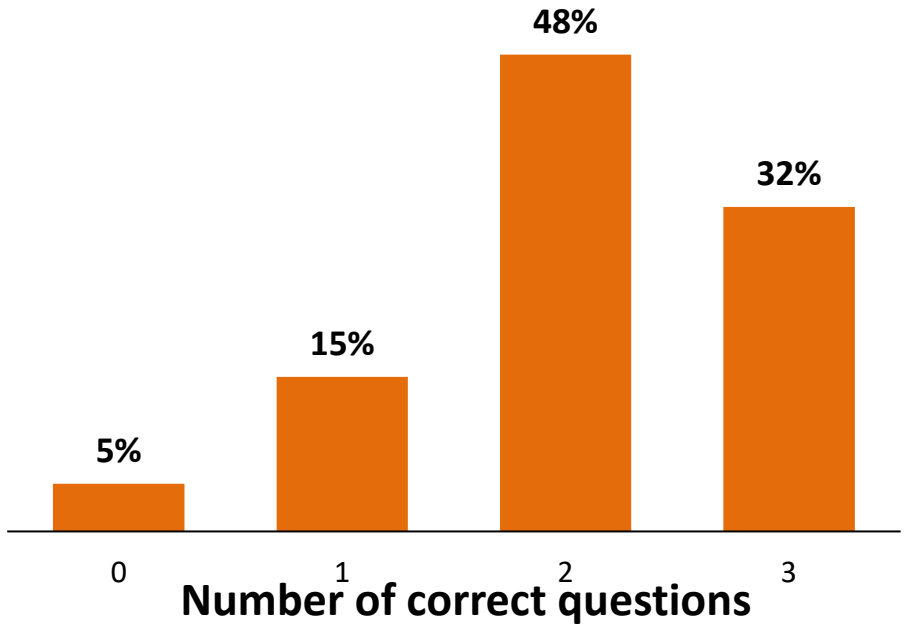
Registered Accounts: Most knew the correct response on TFSAs and RRSPs, while investors struggled with the measure of RESP knowledge

On the three questions about registered accounts, investors struggled with a question about RESPs. Age and the cognitive reflection score both were positively associated with better results.

The Registered Accounts index summarizes results for the 3 new financial literacy questions on the survey focused on understanding registered accounts.



+Weighted score; see slide 71 for full details.

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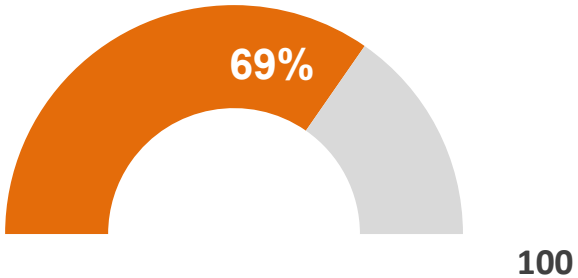
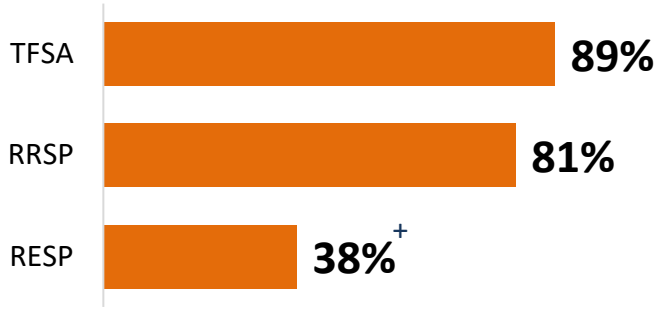
Registered Accounts



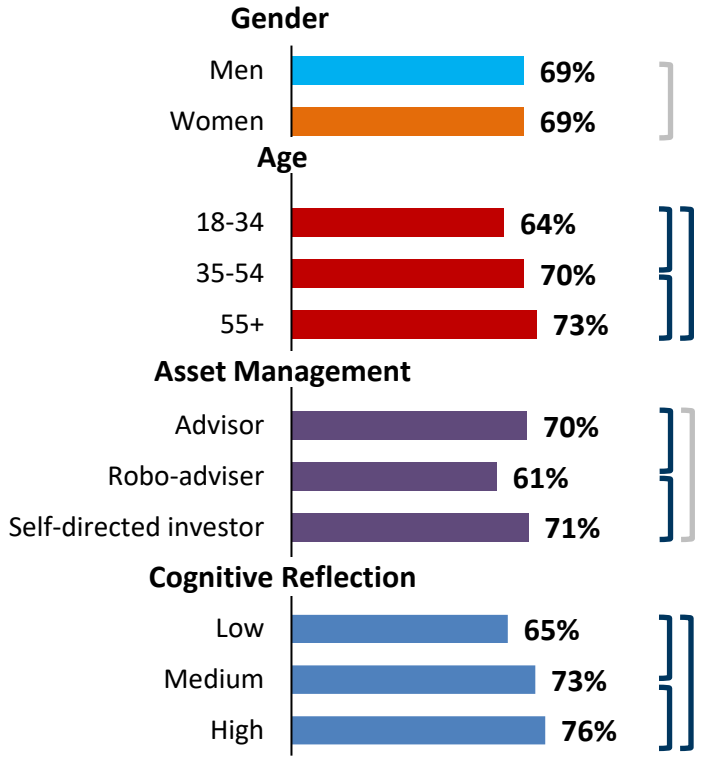
On average, respondents answered 69% (2/3) registered account questions correctly.

The scores for each question were:



Segmentation

Registered accounts score in % of correct responses



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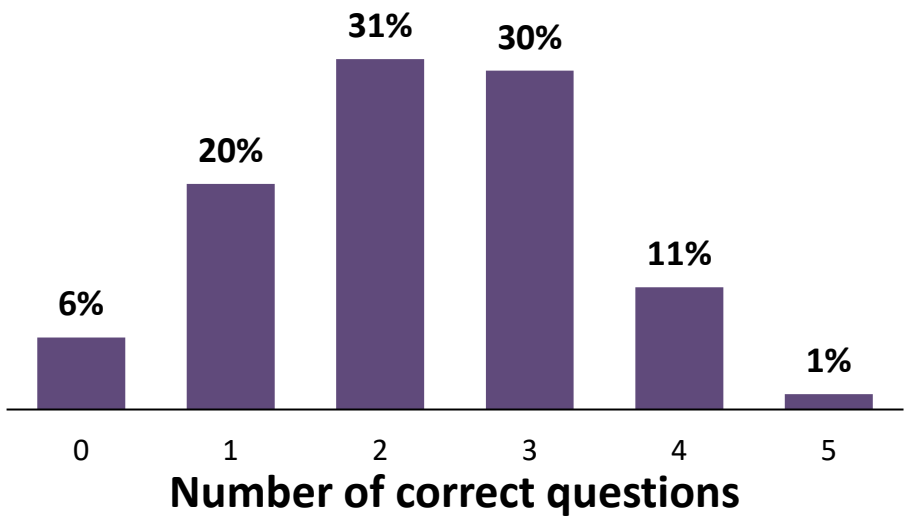
Protecting Your Portfolio: Of the 5 questions about portfolio protection, the average investor answered two correctly

For two of the five questions ("Internal complaint handling" and "Registration check") about two-thirds of investors knew the correct answer. However, for the other 3, no more than 35% were able to answer correctly.

The Protecting Your Portfolio index summarizes results for the 5 new financial literacy questions on the survey focused on awareness and understanding of investor protections.



+Weighted score; see slide 71 for full details.

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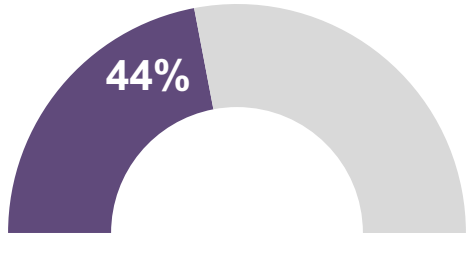
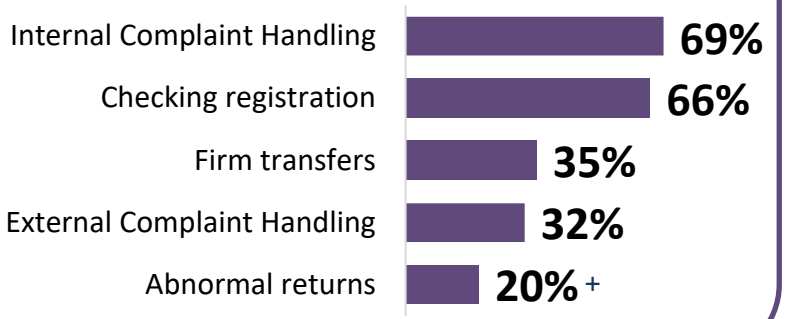
Protecting Your Portfolio



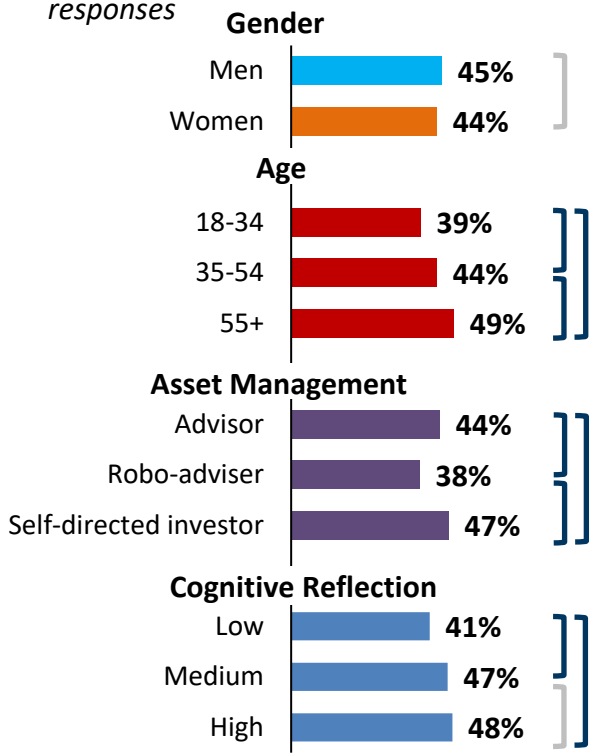
On average, respondents answered 44% (2/5) portfolio questions correctly.

The scores for each question were:



Segmentation

Protecting Your Portfolio score in % of correct responses



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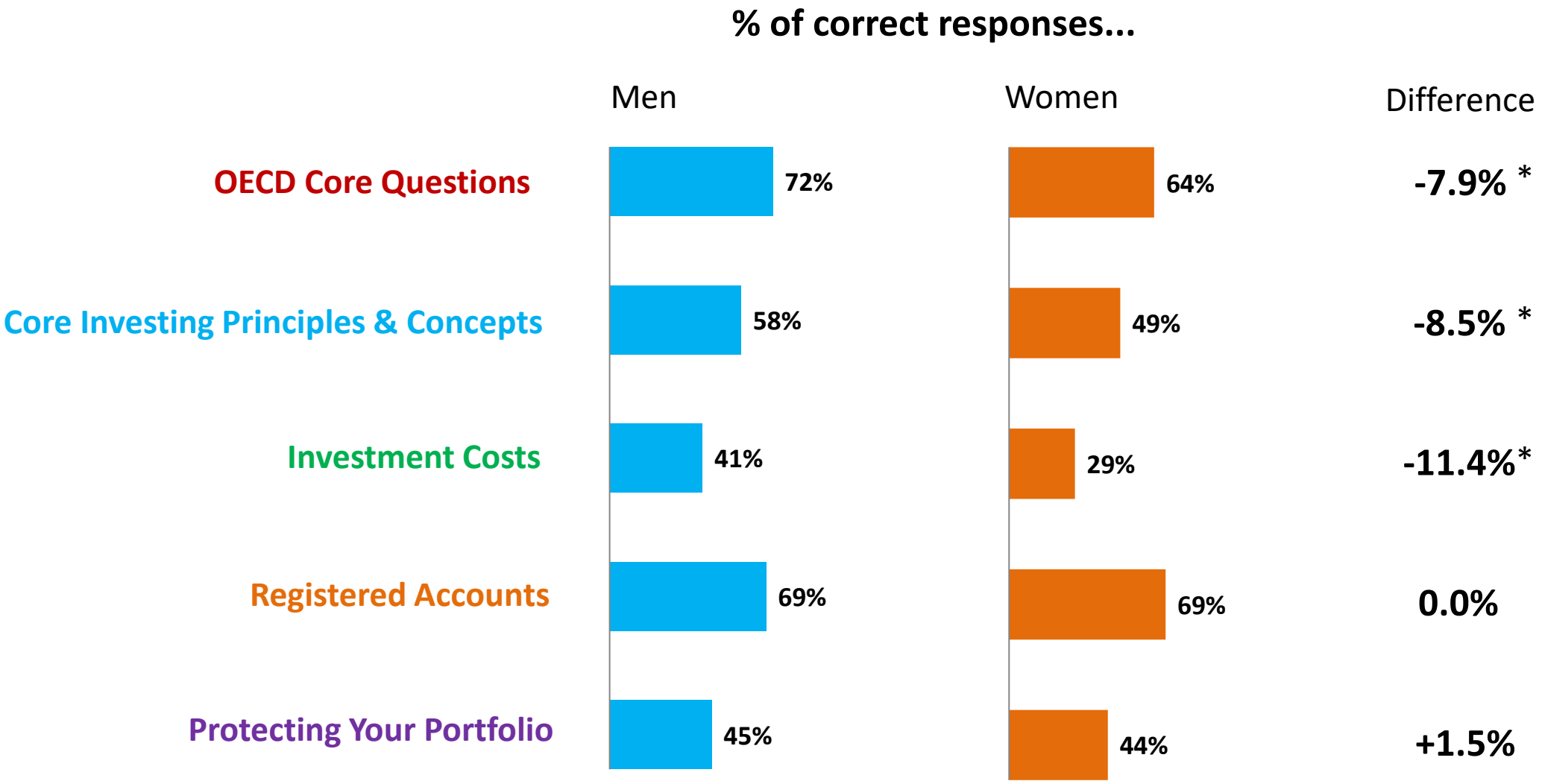
Gender Differences: Women answered fewer questions correctly on both sets of core questions, as well as investment cost questions



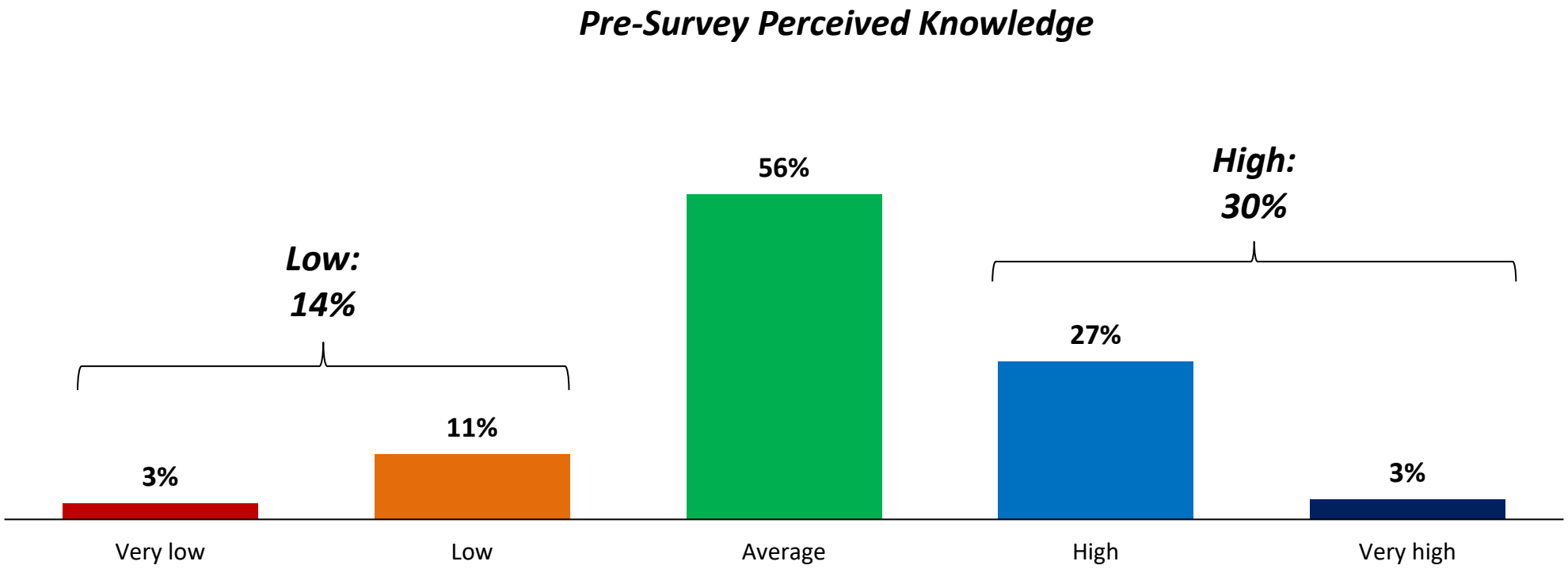
*Difference between Men and Women is significant at a 95% confidence level

Perceived Investment Knowledge vs. Actual Performance

The Better-Than-Average Effect: Investors are more likely to perceive themselves as above average in financial knowledge than below

At the beginning of the survey, respondents were asked to rate their overall knowledge. Most (56%) ranked themselves as average while 30% rated themselves as having “High” or “Very high” knowledge.

Q How would you rate your overall knowledge when it comes to financial matters?
[asked all of respondents; n=2,500]

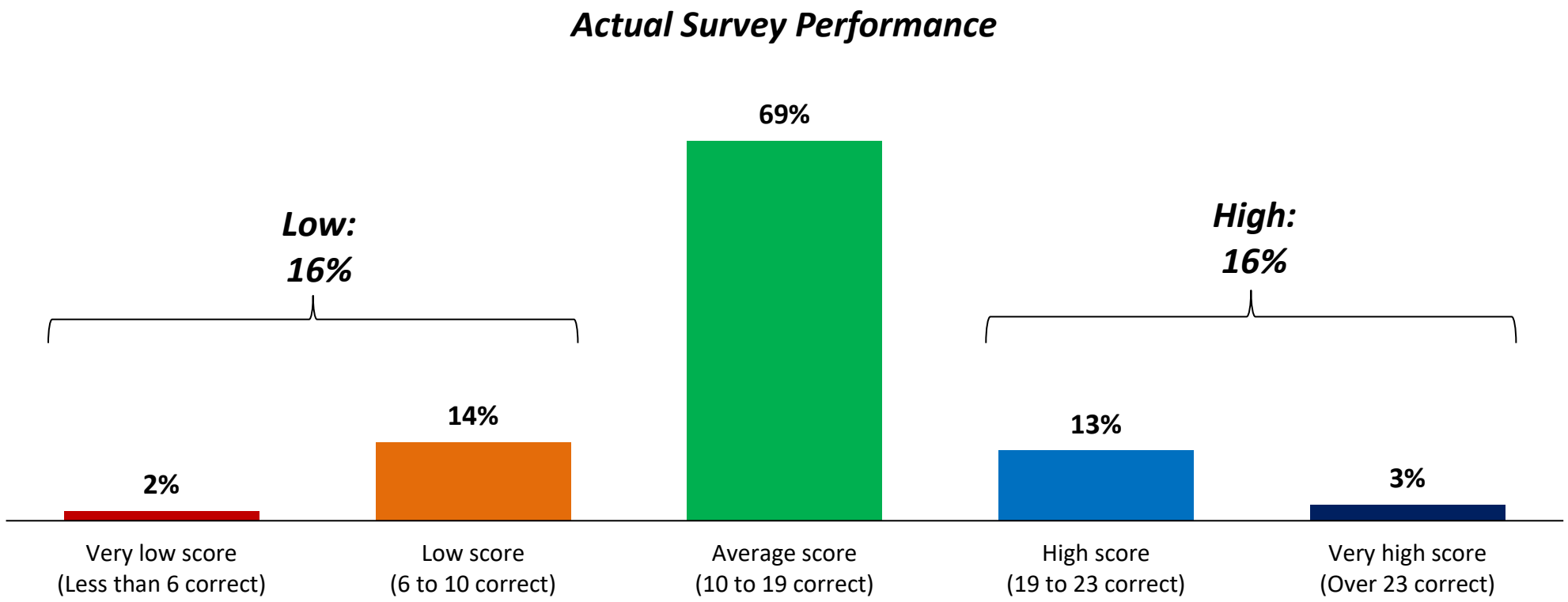


Note: These groups are based on respondents actual scores on the 27 financial literacy questions. A score is counted as a ‘High score’ if it was at least 1 standard deviation above the average score, and ‘Very high score’ if it was 2 standard deviations or more above the average score. Below average was counted using the same rules in reverse.

Actual Performance: On actual performance, as many investors had below average results as had above

On the actual test results, 16% scored at least 1 standard deviation above the average score, with 69% within one standard deviation of the average.

Q How would you rate your overall knowledge when it comes to financial matters?
[asked all of respondents; n=2,500]



Note: These groups are based on respondents' actual scores on the 27 financial literacy questions. A score is counted as a 'High score' if it was at least 1 standard deviation above the average score, and 'Very high score' if it was 2 standard deviations or more above the average score. Below average was counted using the same rules in reverse.

Results vs. Expectations: About 3-in-10 investors (29%) under-performed relative to their expected level of investment knowledge

We created an **Expectation vs. Performance** segmentation to classify respondents into 5 groups based on the comparison of their self-assessed financial knowledge and their actual results on the financial literacy questions.

Met expectations

Results Met High Expectations: Participants whose actual performance and prior self-assessment were both above average.

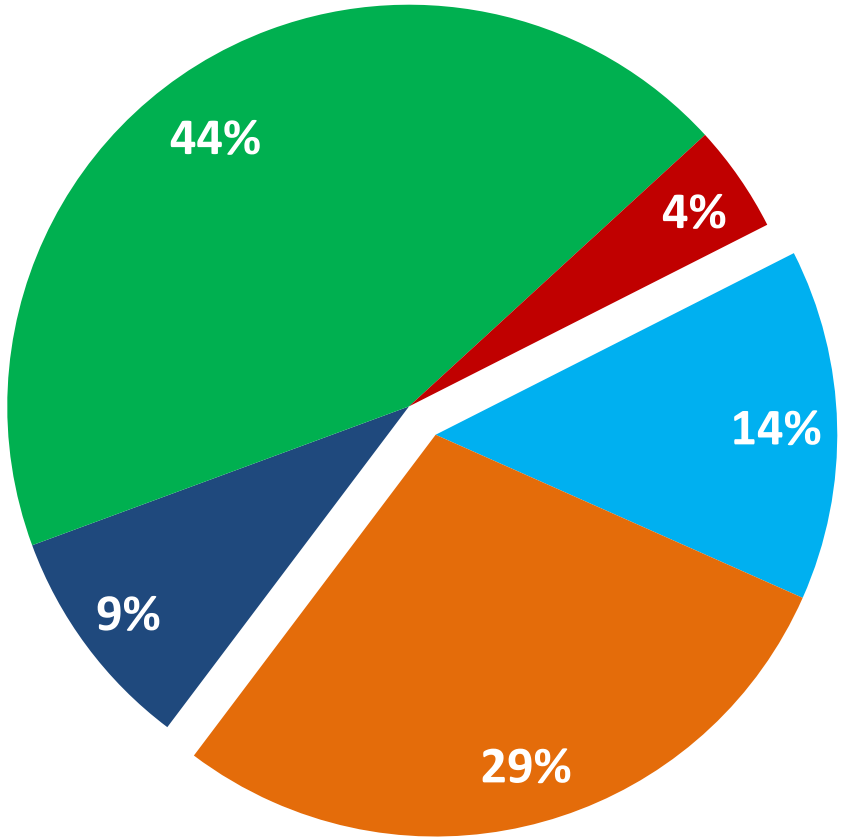
Results Met Average Expectations: Participants whose actual performance and prior self-assessment were both average.

Results Met Low Expectations: Participants whose actual performance and prior self-assessment were both below average.

Did not meet expectations

Overperformed Expectations: Participants whose actual performance was **better** than their prior self-assessment.

Underperformed Expectations: Participants whose actual performance was **worse** than their prior self-assessment.



Met expectations

57%

Did not meet expectations

43%

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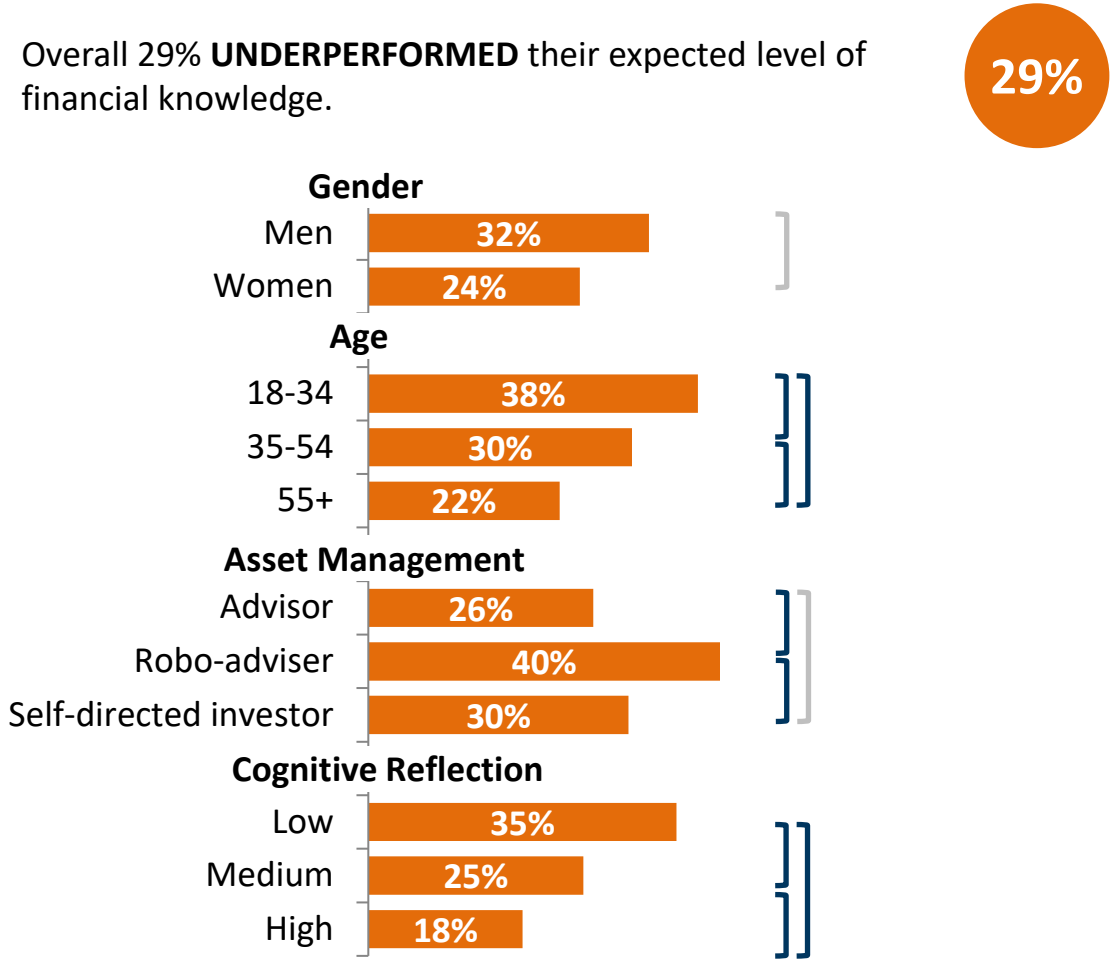
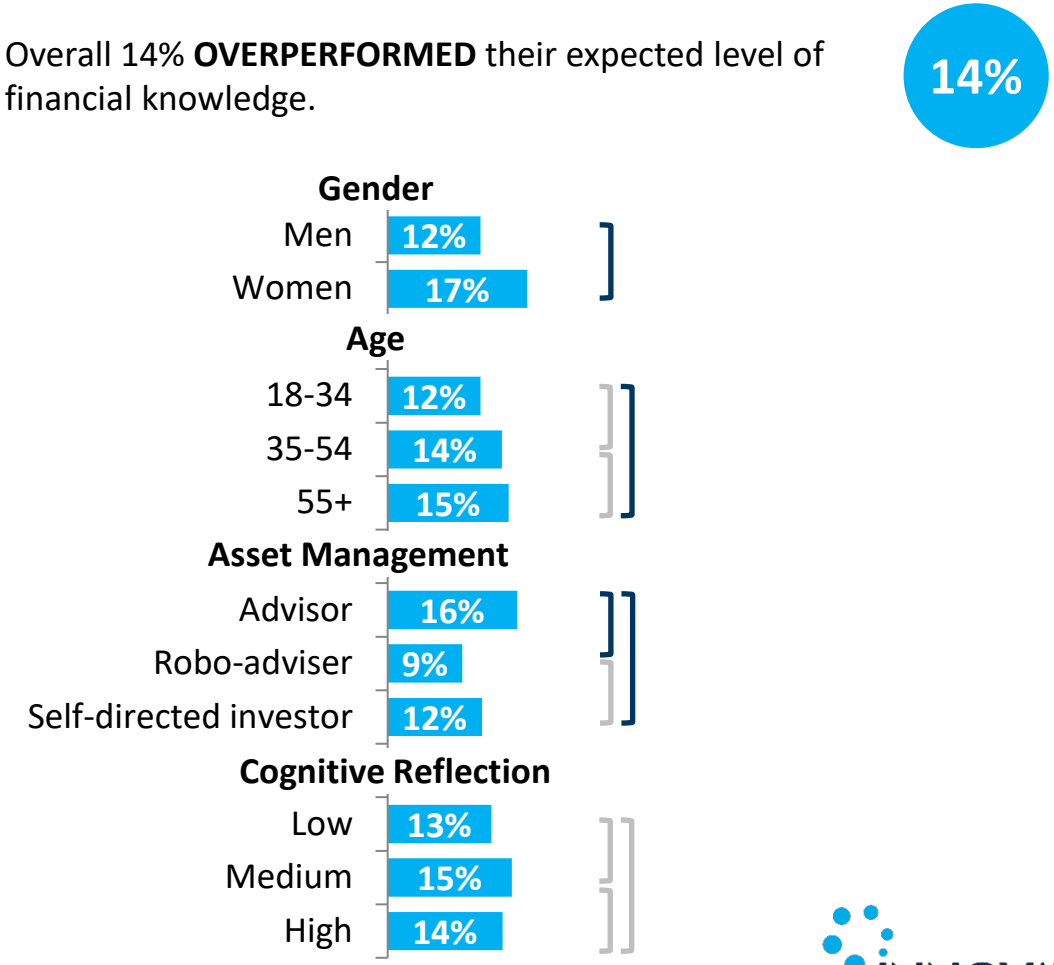
Overconfidence vs. Under-confidence

Overconfidence: investors under 35, investors with a robo-adviser, and those low on cognitive reflection were the most likely to underperform expectations. Under-confidence: women, and investors with an advisor were the most likely to overperform their expectations.

Overall 29% **UNDERPERFORMED** their expected level of financial knowledge.



Overall 14% **OVERPERFORMED** their expected level of financial knowledge.



*= difference between groups **is not** significant at a 95% confidence level*
*= difference between groups **is** significant at a 95% confidence level*

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Perceived Knowledge and the Debiasing Effect

Before the financial literacy questions, we asked respondents to rate their level of financial knowledge. After the questions, they were asked to self-assess how well they did. By comparing the two questions we can understand whether people felt their performance was higher, lower, or about the same as their expectation and their willingness to reassess their abilities.

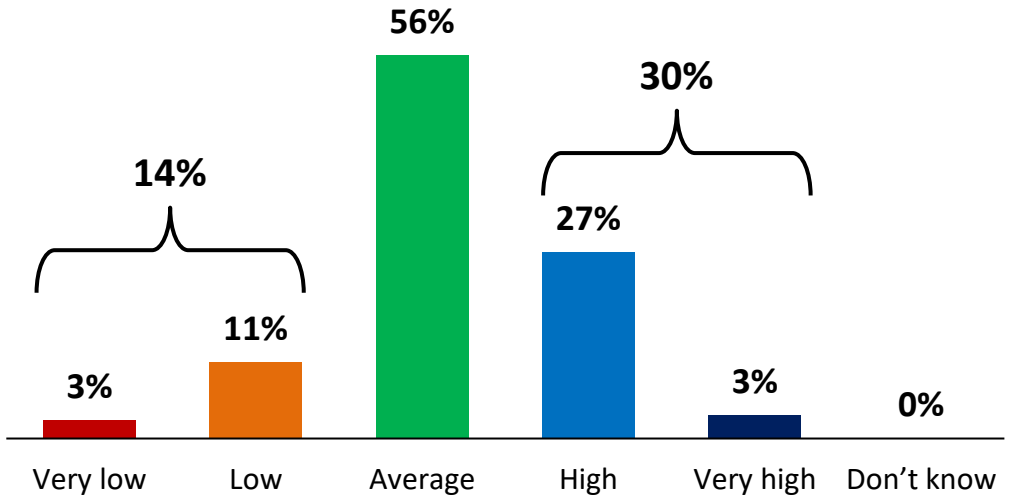
Debiasing Effect: Investors' self-assessed financial knowledge decreased after completing the questions

After going through the survey, nearly twice as many say their results were below average after the questions as rated their knowledge "Low" or "Very low" (and not "Average) at the outset. 24% of investors rated their knowledge as above average after the questions, a 6-points drop from before the start of the survey.

Pre-Survey Perceived Knowledge

Q How would you rate your overall knowledge when it comes to financial matters?

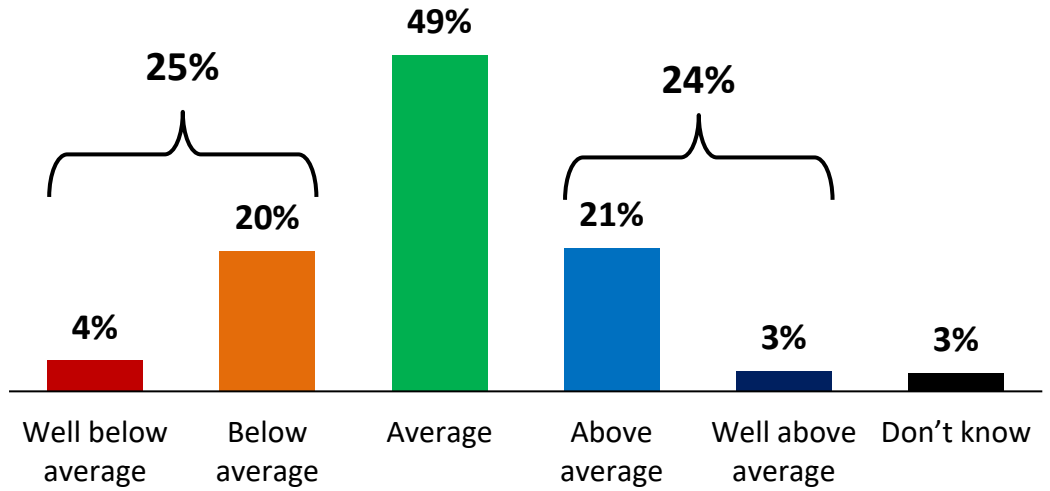
[asked all of respondents; n=2,500]



Post-Survey Perceived Knowledge

Q You just answered 27 questions about finance and investing. Thanks for hanging in there! In terms of correct answers, do you think that you are above or below the average of the other respondents?

[asked all of respondents; n=2,500]



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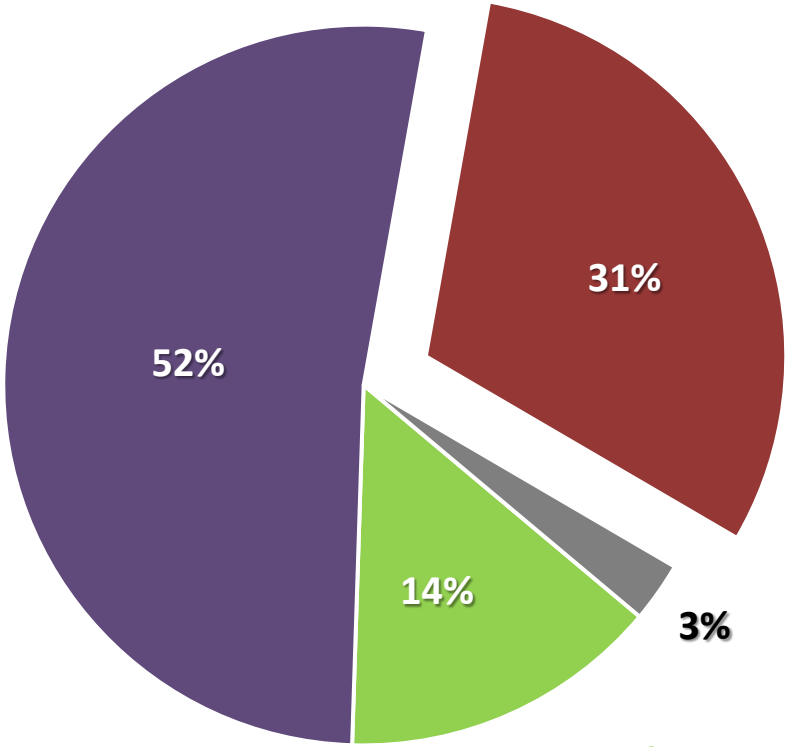
Change in self-assessment: Whether investors perceived knowledge was higher, lower, or unchanged

Some investors respond to efforts to de-bias them as to their level of financial knowledge. After going through the survey, 31% of participants lowered their self-assessment after going through the 27 questions. Younger investors (aged 18-34) were more likely to do so. 52% did not change their self-assessment.

Change in self-assessment



Lowered
Participants who lowered their self-assessment after 27 questions.

Unchanged
Participants who didn't change their self-assessment after 27 questions.

Raised
Participants who raised their self-assessment after 27 questions.

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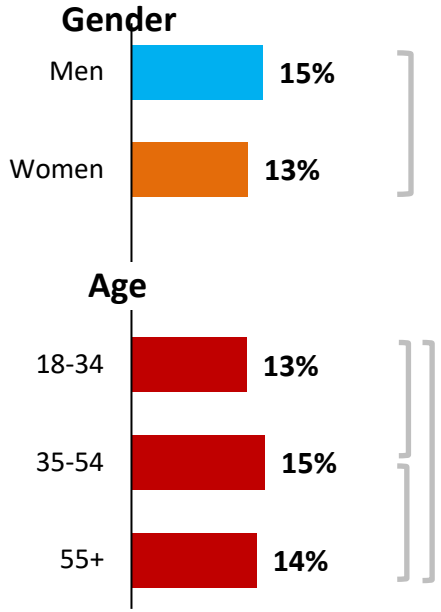
Debiasing Effect: Investors under 35 were the mostly likely to revise their self-assessed financial knowledge downwards

Investors 18-34 were more likely than other age cohorts to revise their performance on the quiz *downwards* from their stated financial knowledge at the outset of the survey. When it came to *raising* their self-assessment, there were no segments that were significantly different from the other.

Overall 14% **RAISED** their belief in their level of knowledge after 27 questions

14%

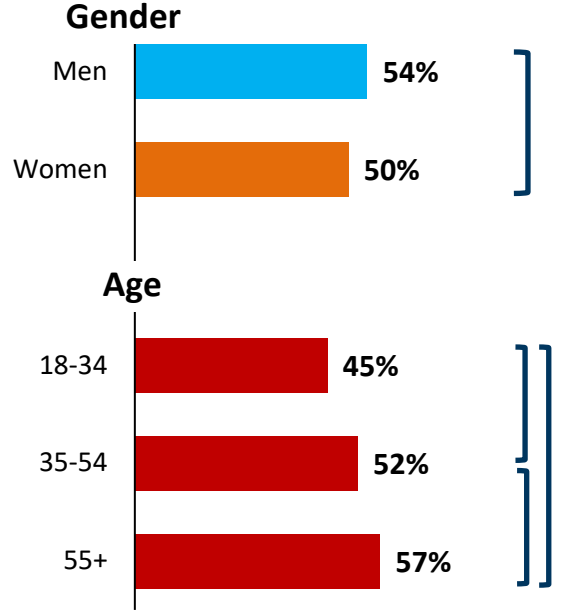
Segmentation:



Overall 52% **DIDN'T CHANGE** their belief in their level of knowledge after 27 questions

52%

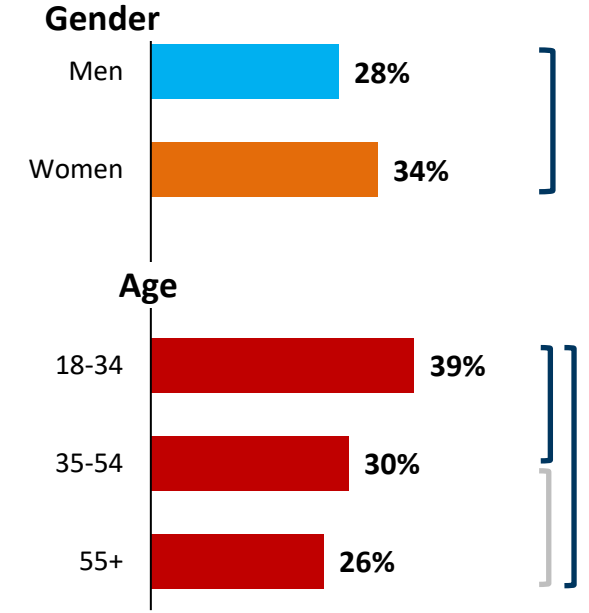
Segmentation:



Overall 31% **LOWERED** their belief in their level of knowledge after 27 questions

31%

Segmentation:



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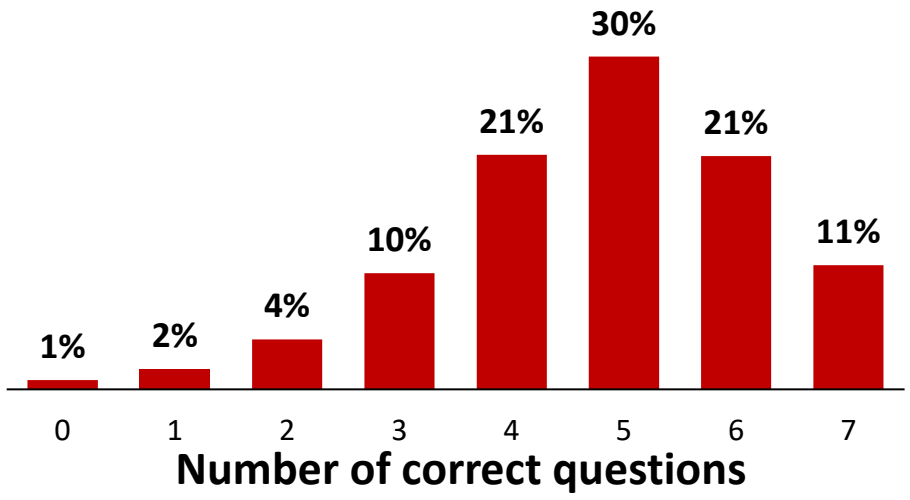
Appendix:
Detailed Results and Methodology

OECD Core Questions

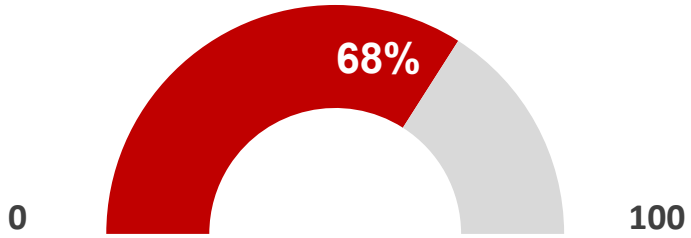
OECD Core Questions: Investors answered 5/7 correctly, with the results skewed by two questions that have fewer correct responses

On these standard financial literacy questions, only a third of investors can answer the "bond vs. interest rates" and "mutual fund" questions correctly, while other questions see higher scores. The overall scores are significantly different across the segmentations tested.

The OECD Core Questions summarizes results for 7 financial literacy questions used across OECD countries including provincial securities regulators in Canada in the CSA Investor Index.

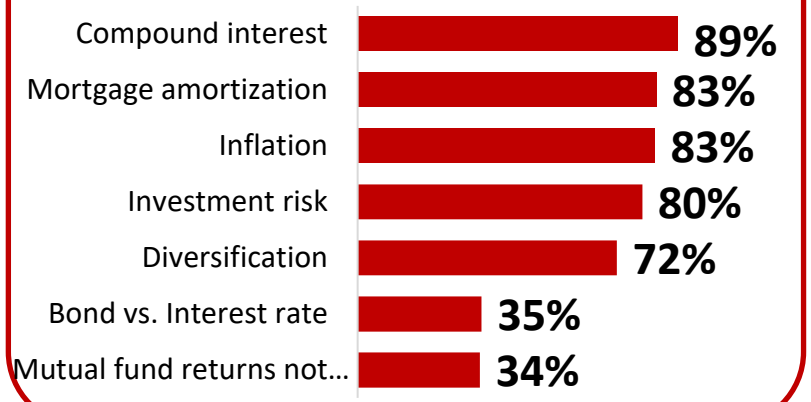


OECD Core Questions



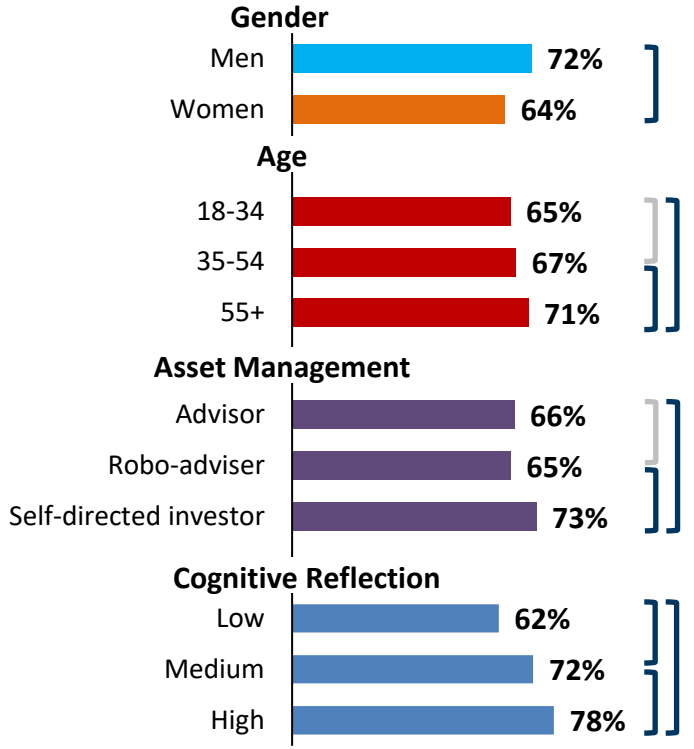
On average, respondents answered 68% (5/7) OECD Core Questions correctly.

The scores for each question were:



Segmentation

OECD Core Questions score in % of correct responses



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INNOVATIVE RESEARCH GROUP

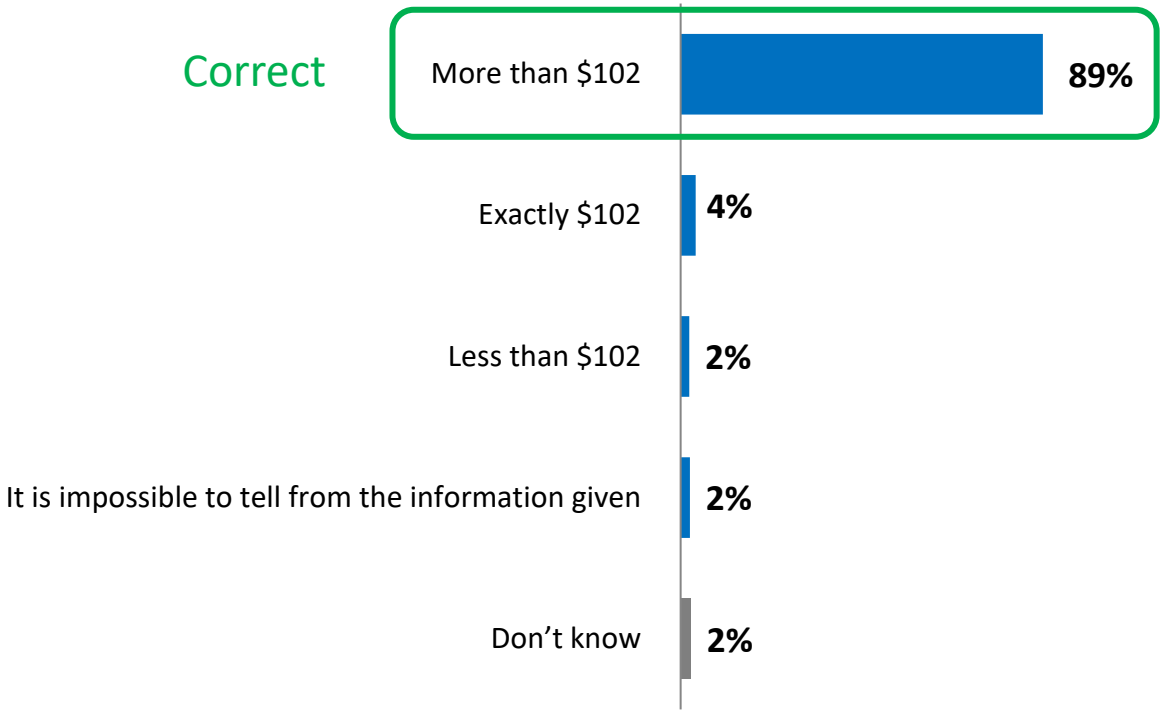
Compound interest: 9-in-10 (89%) knew the compounding effect of interest; including almost all of those with high cognitive reflection (99%)

Most investors, even those who scored low on the CRT test, understand how compound interest works in a savings accounts. Fewer investors understand the more challenging concept of the compounding effect of fees on their returns over time (see slide 50).

Q **Compound Interest**

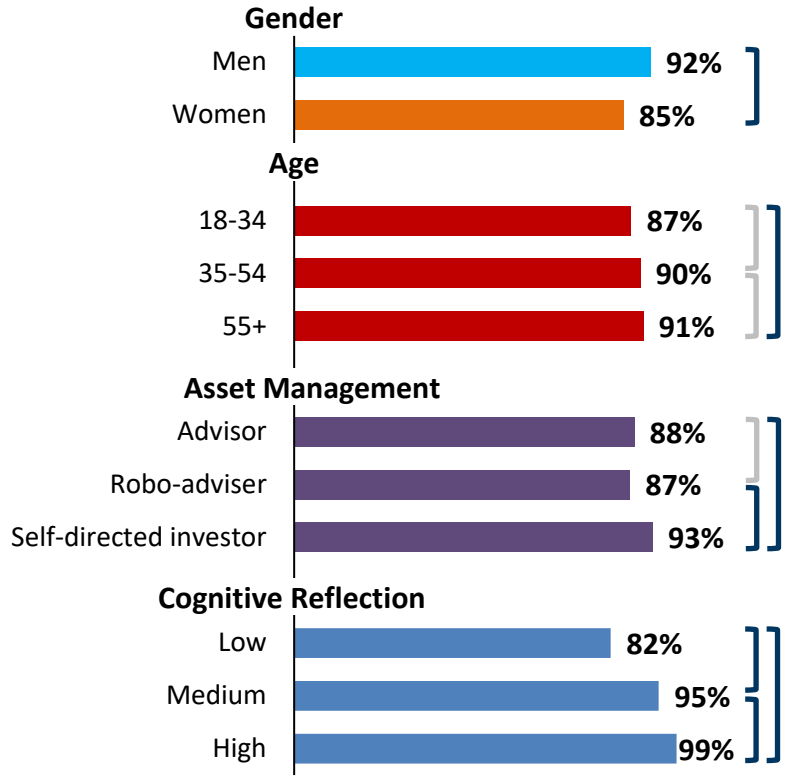
Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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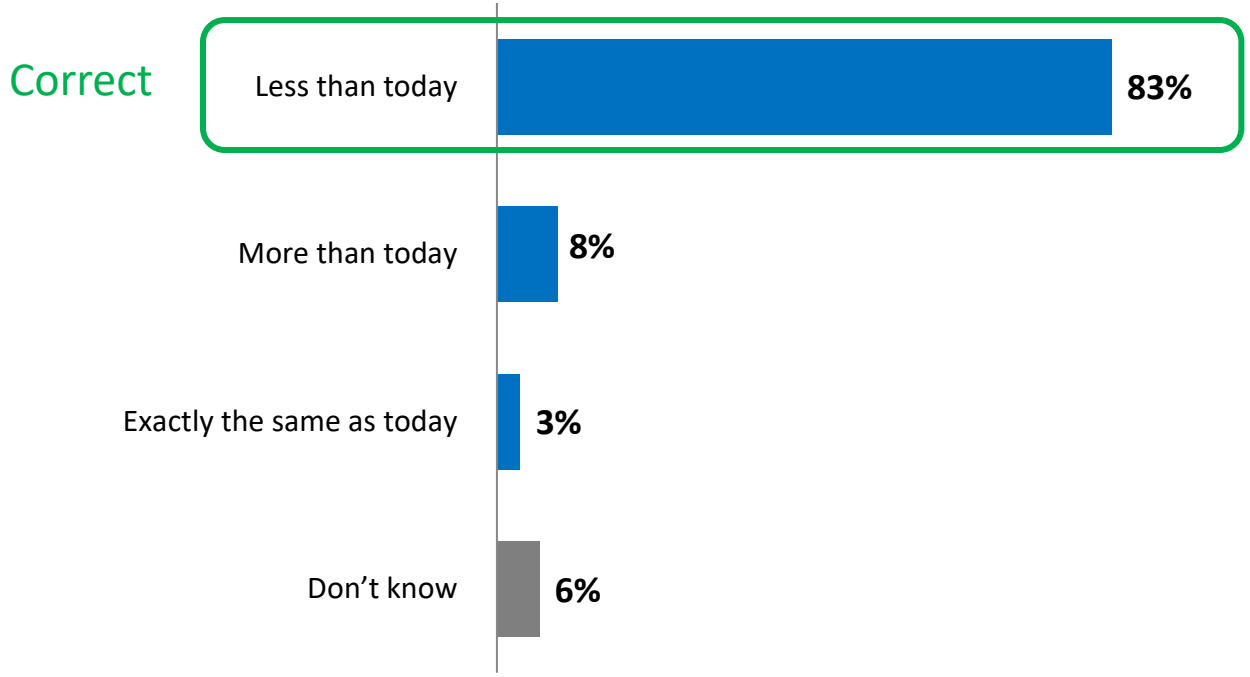
Inflation: Over 4-in-5 (83%) answered correctly about the impact of inflation; highest among those with high Cognitive Reflection (95%)

Older investors in particular have a high understanding of the impact of inflation on their savings over time.

Inflation

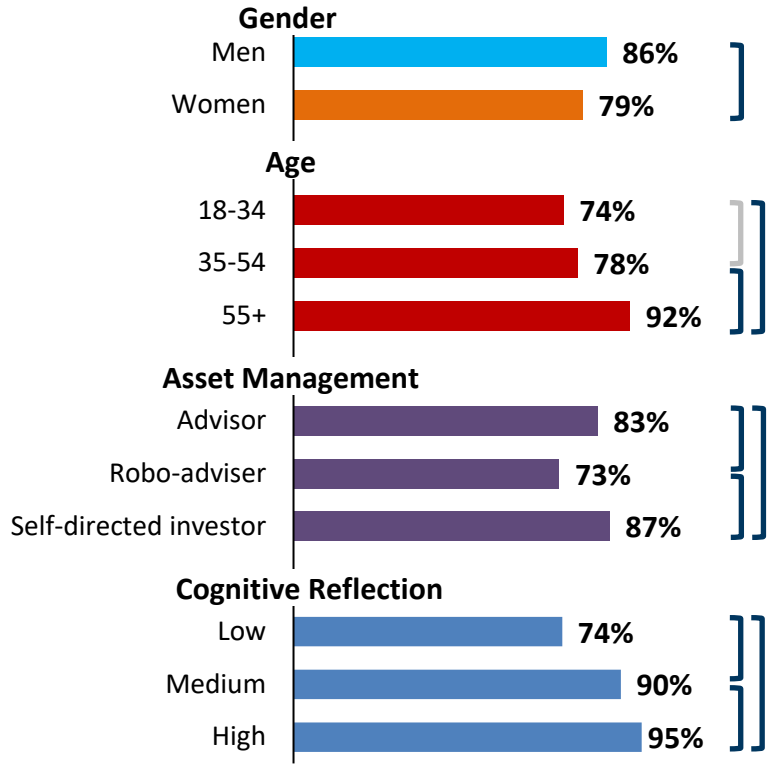
Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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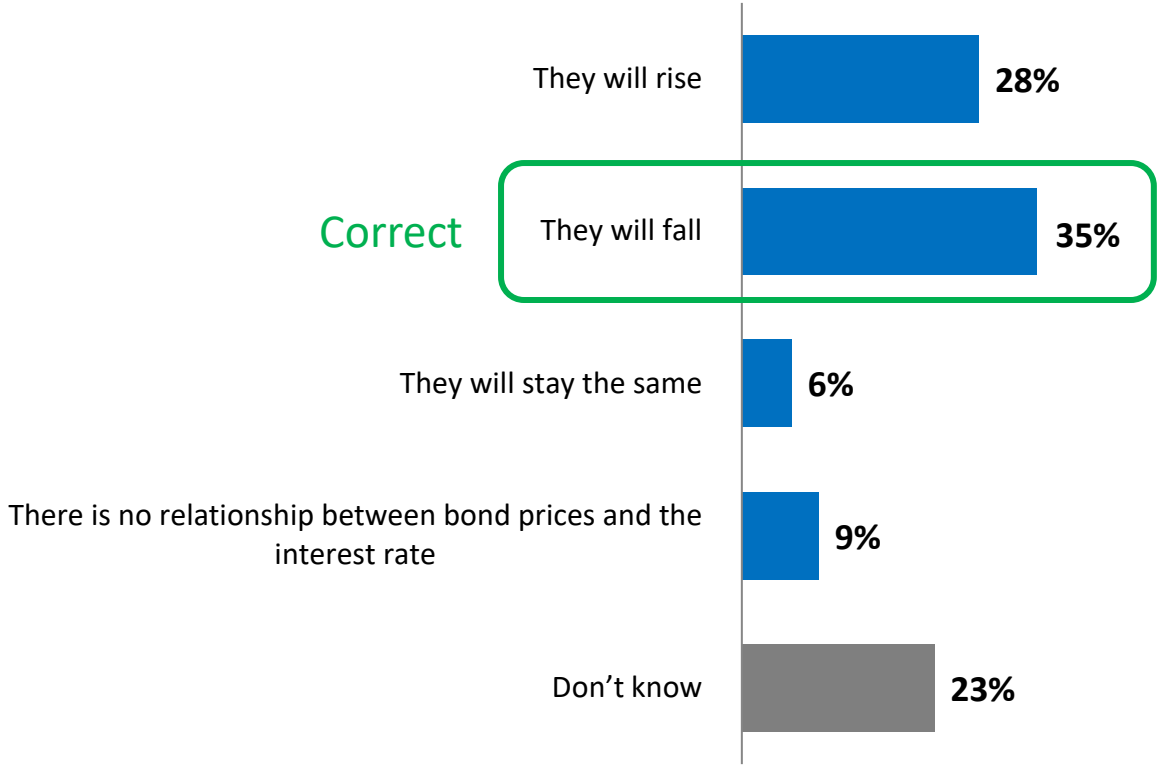
Bond vs. Interest Rate: Only one-third (35%) correctly identified the relationship between bonds and interest rates

This relationship is important for informed investing in bonds. Almost half (45%) of self-directed investors know the relationship between bonds and interest rates compared to 30% of investors with an advisor. Over 2-in-5 men (41%) answer correctly compared to only 27% of women.

Q **Bond vs. Interest rate**

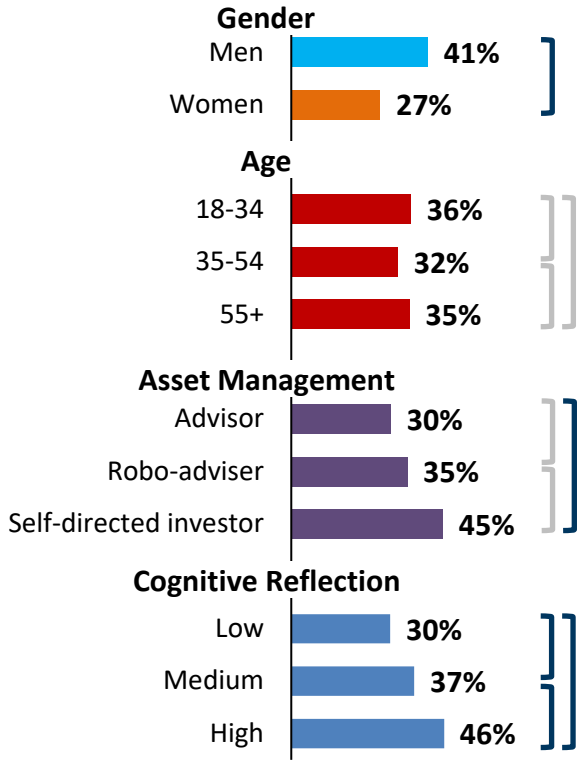
If interest rates rise, what will typically happen to bond prices?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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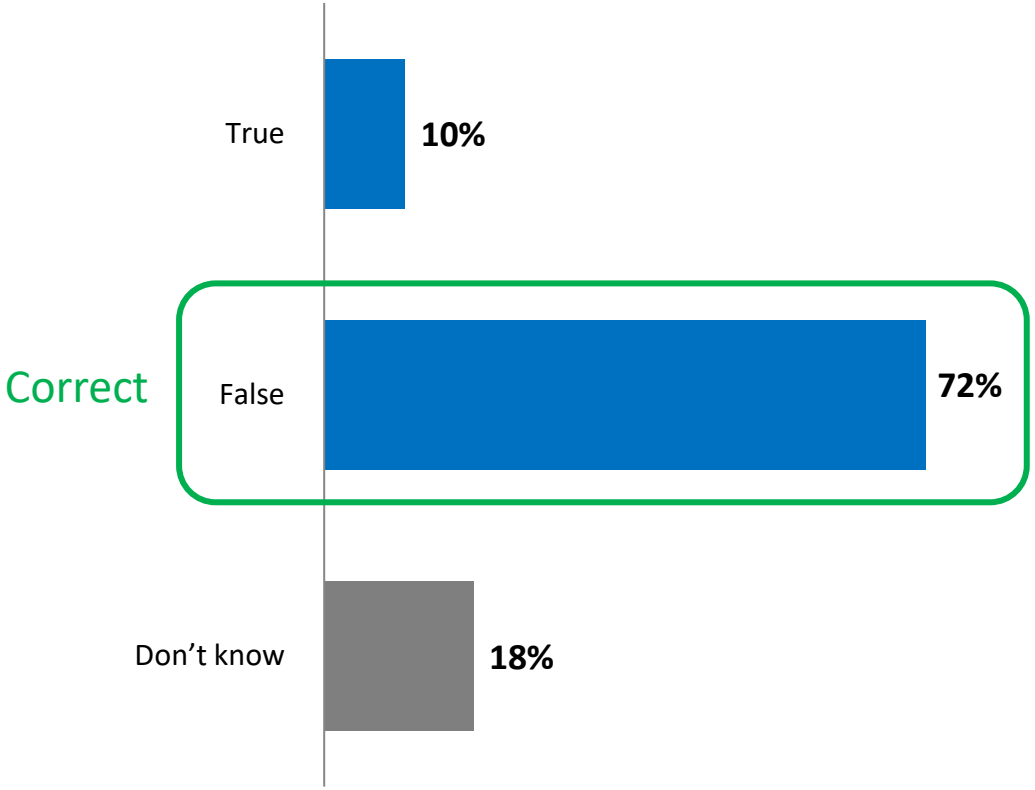
Diversification: 72% knew that a mutual fund provides a safer return than an individual stock; only two-thirds (66%) among women

Reducing risk through diversification is a core investing concept that the majority of investors know but arguably all investors should understand.

Diversification

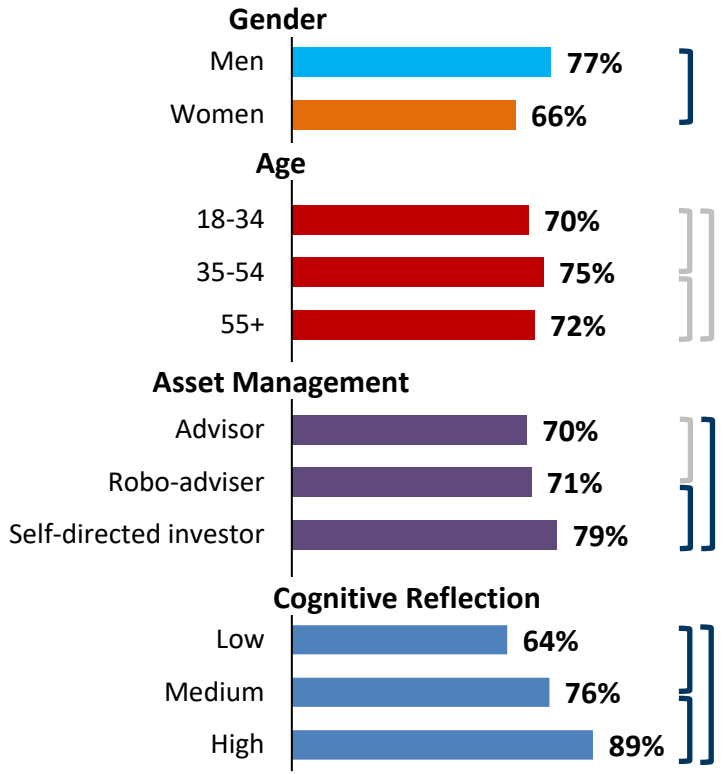
Buying a single company's stock usually provides a safer return than a stock mutual fund.

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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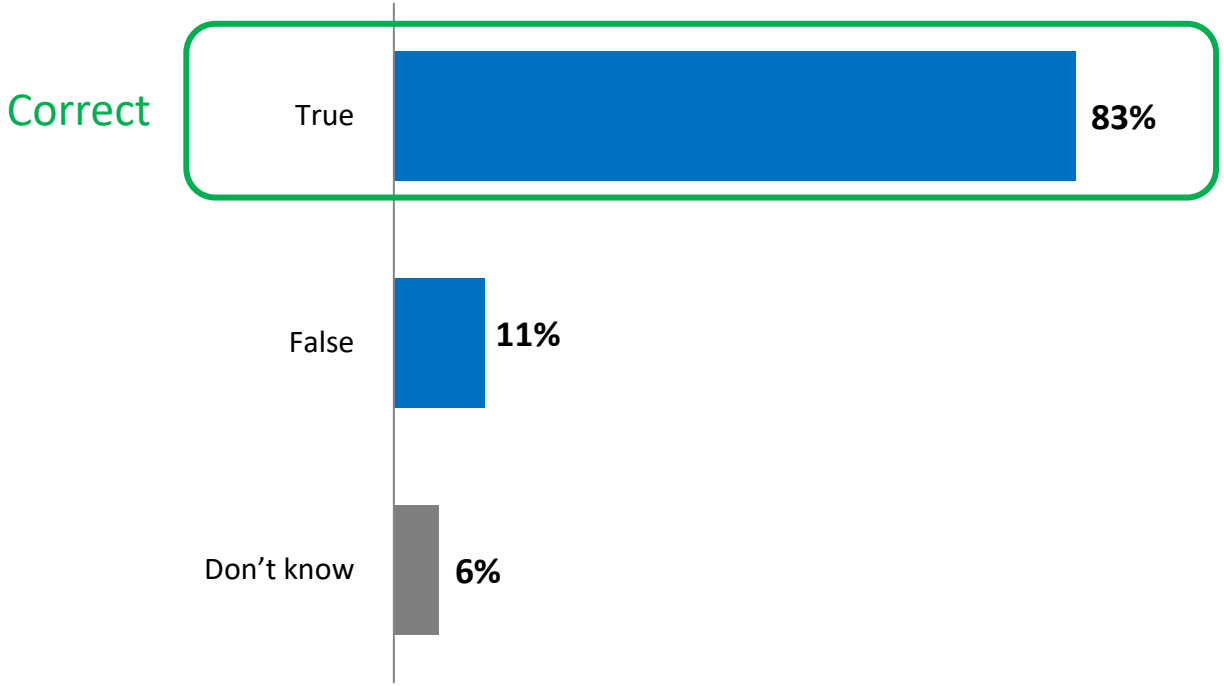
Mortgage amortization: The majority (83%) answered this mortgage interest question correctly

While correct answers on this question were not correlated with age, gender, or working with an advisor, there was a positive correlation with cognitive reflection scores.

Q **Mortgage interest**

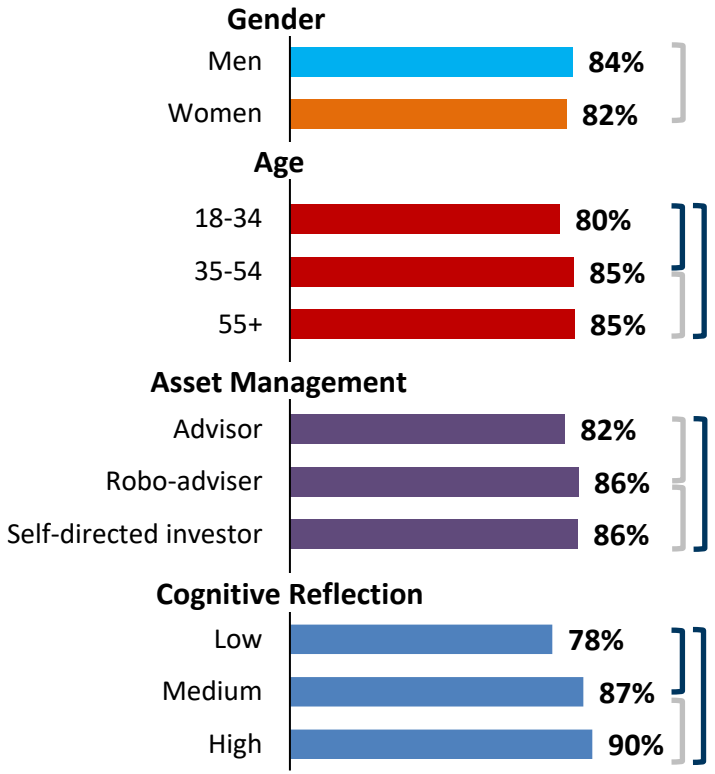
A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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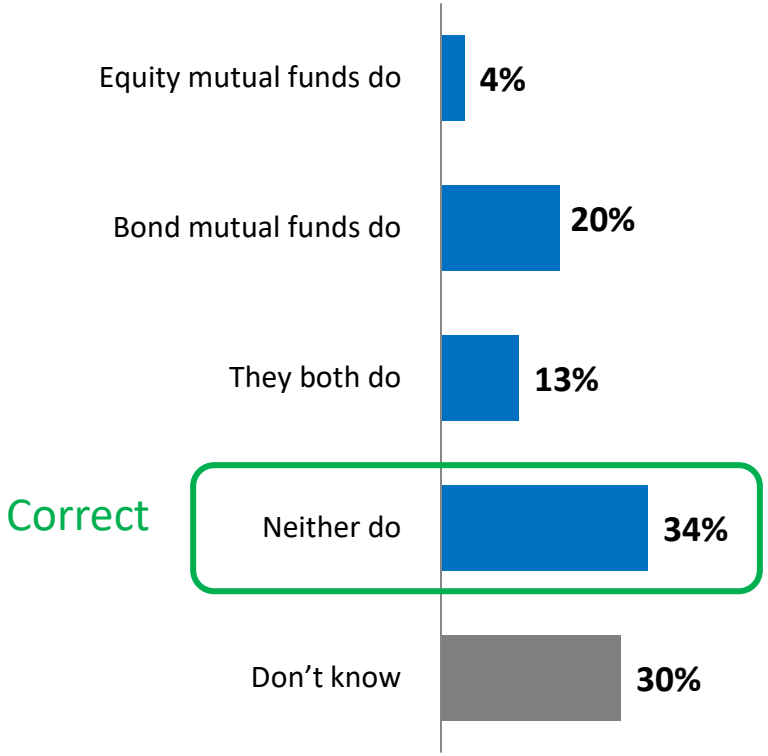
Mutual fund returns not guaranteed: Only 1/3 (34%) of investors knew that neither bond nor equity mutual funds pay a guaranteed rate of return

The fact that mutual funds' returns are not guaranteed and therefore, there is investment risk associated with such investments, is not well understood by the majority of respondents.

Q **Mutual fund returns not guaranteed**

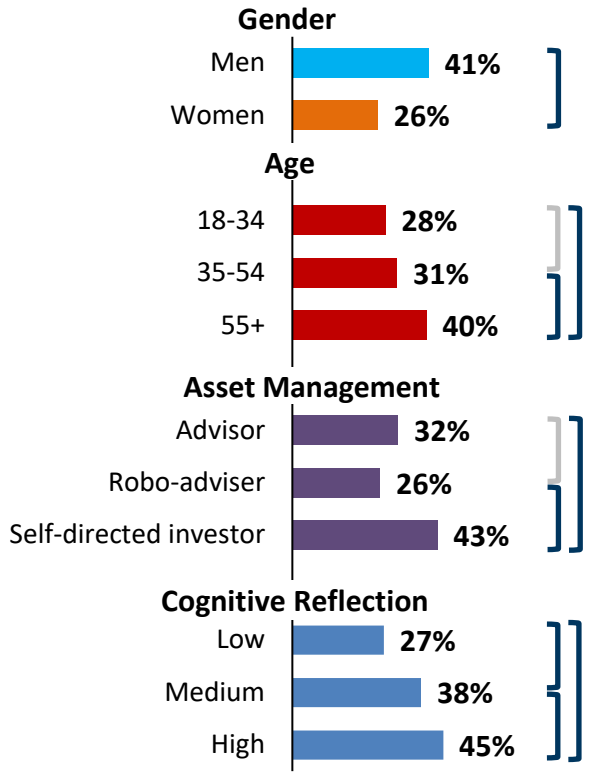
Do equity or bond mutual funds pay a guaranteed rate of return?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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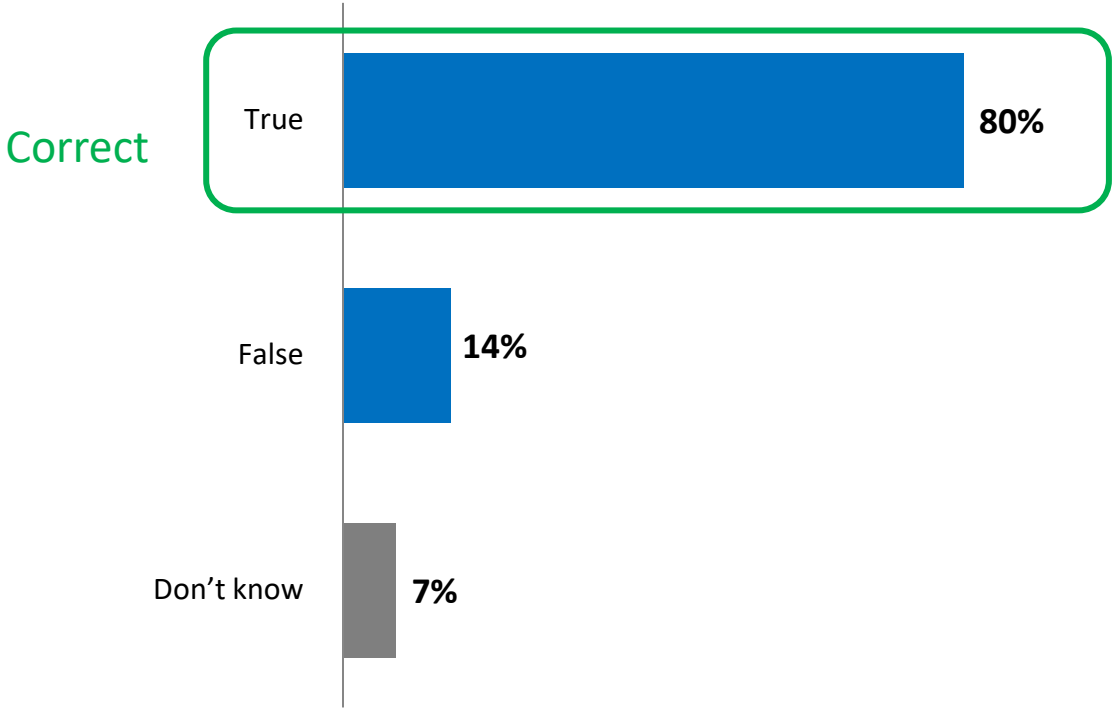
Investment risk: Majority (80%) knew the relationship between risk and return; no significant differences across the key segmentations

While the majority of investors understand the concept of investment risk, less than half of investors correctly ranked the relative risk of different investment products (see Slide 41).

Investment risk

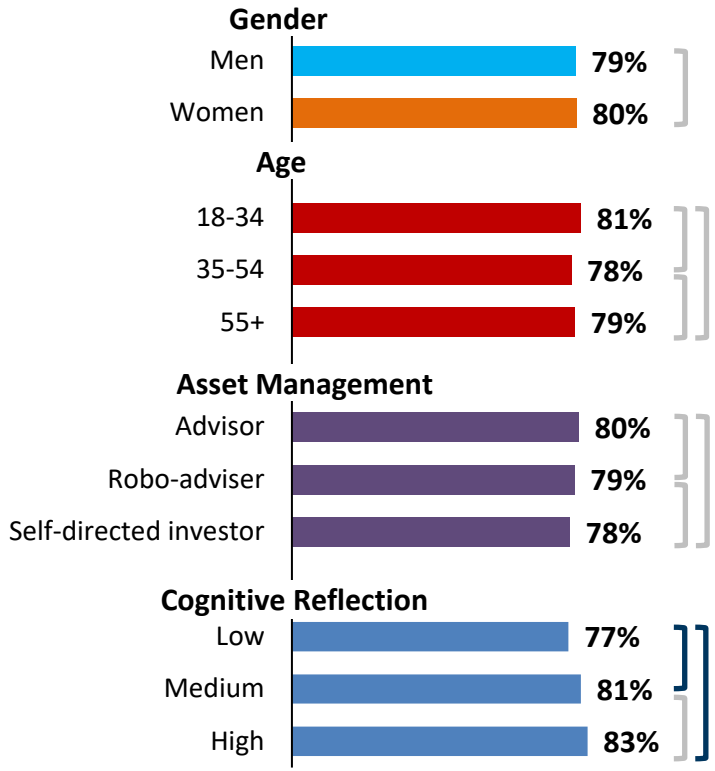
In general, investments that are riskier tend to provide higher returns over time than investments with less risk.

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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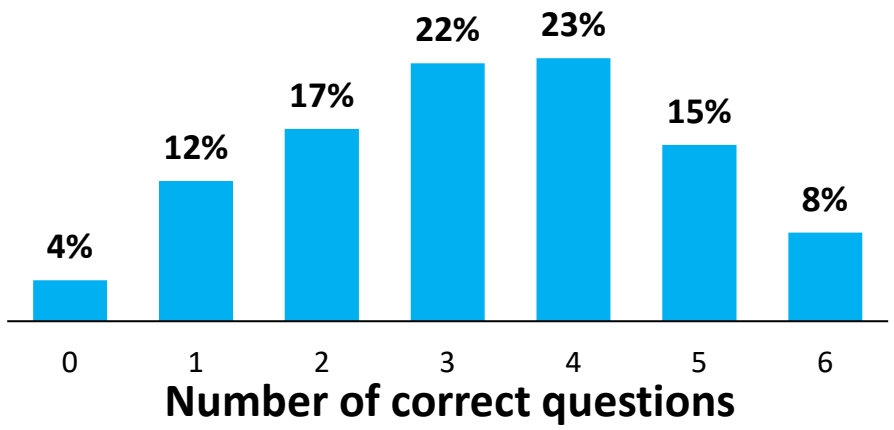
Core Investing Principles & Concepts

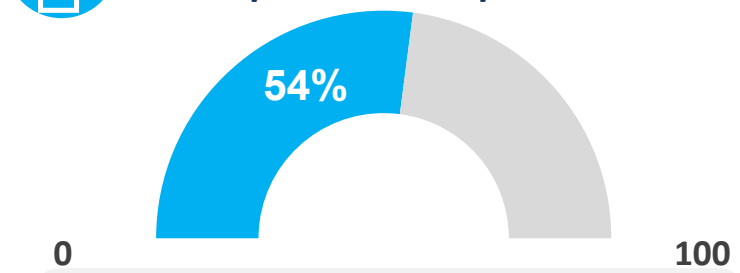
Core Investing Principles & Concepts: The average investor answered half of these questions correctly

On the 6 new financial literacy questions developed for the survey to test core investing principles, investors best understood the relationship between investment time horizon and risk while their understanding of relative product risk, whether past performance is a good indicator of future returns, and leveraged investing was less than 50%.

The Core Investing Principles and Concepts index summarizes results for the 6 new financial literacy questions on the survey focused on investing principles and concepts.

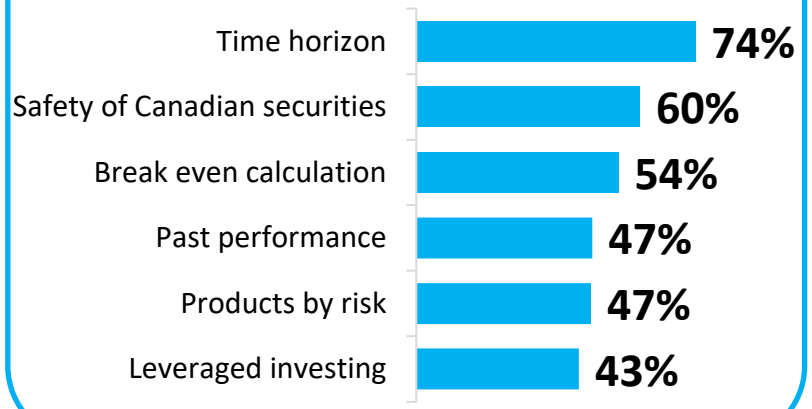


Core Investing Principles & Concepts



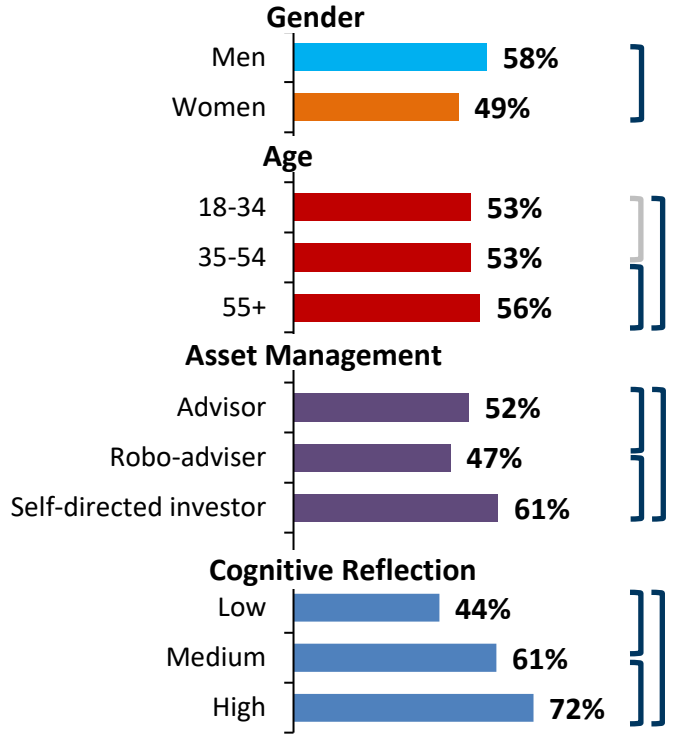
On average, respondents answered 54% (3/6) principles & concepts questions correctly.

The scores for each question were:



Segmentation

Core Investing Principles & concepts score in % of correct responses



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INNOVATIVE RESEARCH GROUP

Canadian Stocks Safer: Overall, 3-in-5 (60%) correctly stated that geographical diversification can reduce risk

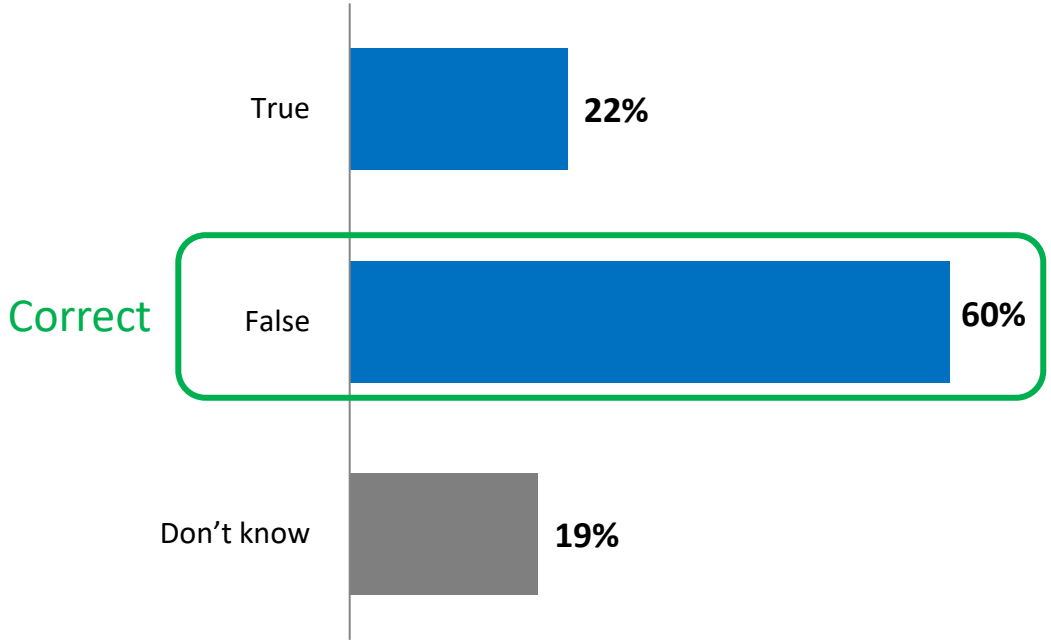
This question saw more correct responses among self-directed investors (67%), investors over 55 (65%), and those with a medium or high cognitive reflection score (64% and 66% respectively).

Q

Safety of Canadian securities

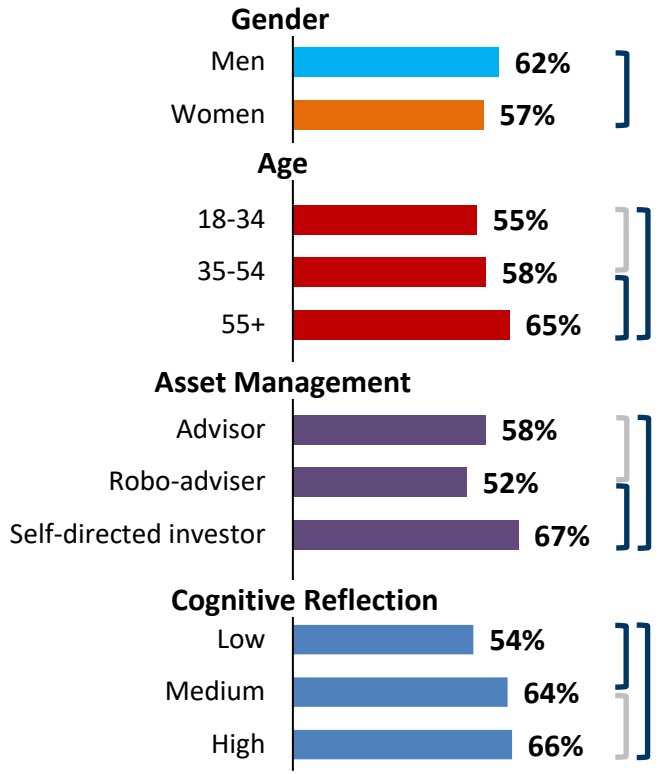
A portfolio made up of stocks from Canada is typically safer than a portfolio made up of stocks from around the world.

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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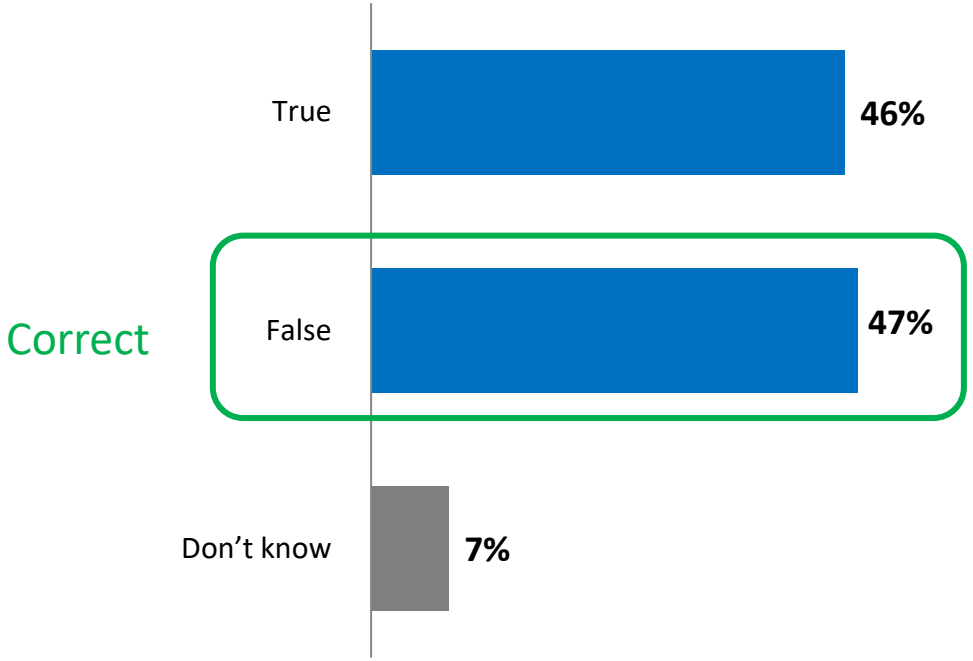
Forecasting: Less than half (47%) correctly stated that past performance is not a good predictor for future returns

This should be a truism but is not for almost half of retail investors. On this question there was a much higher proportion of correct responses among self-directed investors (59%) and those with a high cognitive reflection score (59%). Men also answered correctly 11-points more frequently than women (52% vs. 41%).

Q **Forecasting**

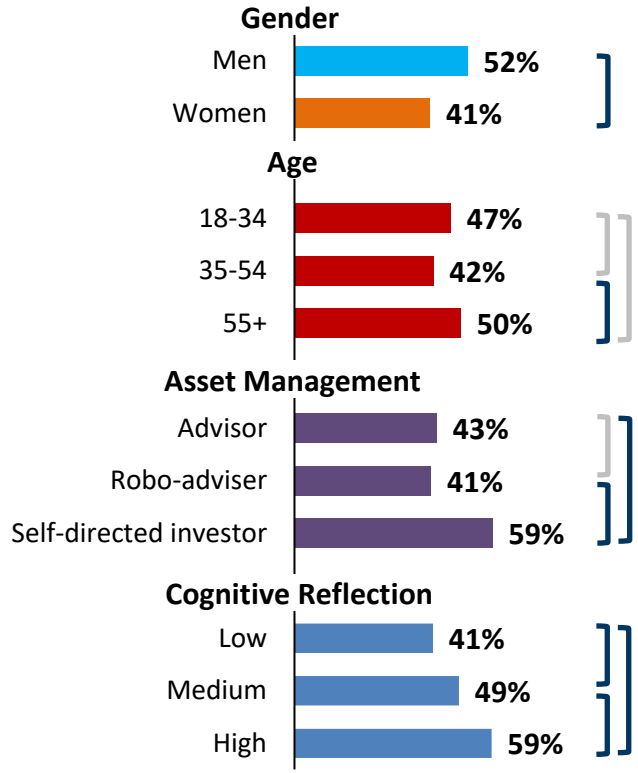
The past performance of an investment is a good indicator of future results.

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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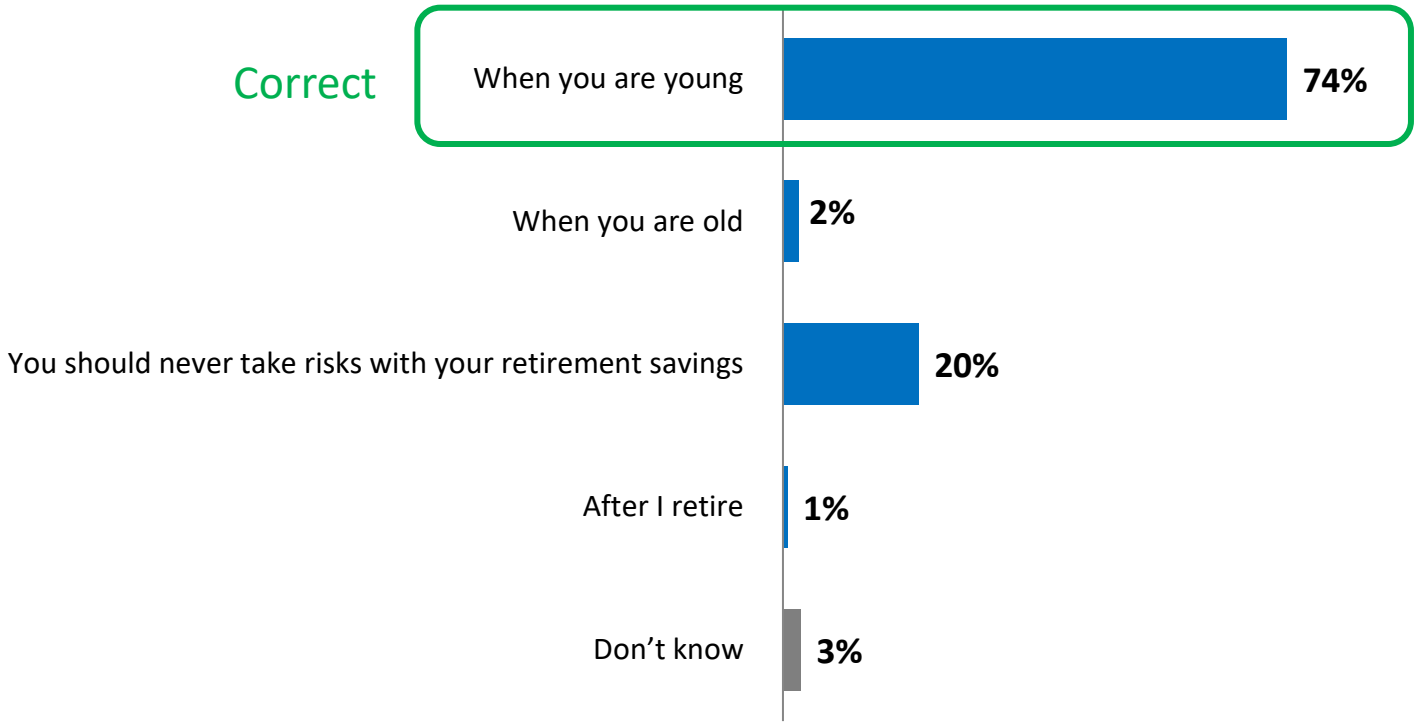
Time Horizon: About 3-in-4 responded correctly identifying the relationship between investment time horizon and risk

Interestingly 20% of investors say you should never take risks with retirement savings. If unwilling to take any risk, investors may see only very modest growth of their retirement savings (before inflation) given low interest rates.

Q **Time Horizon**

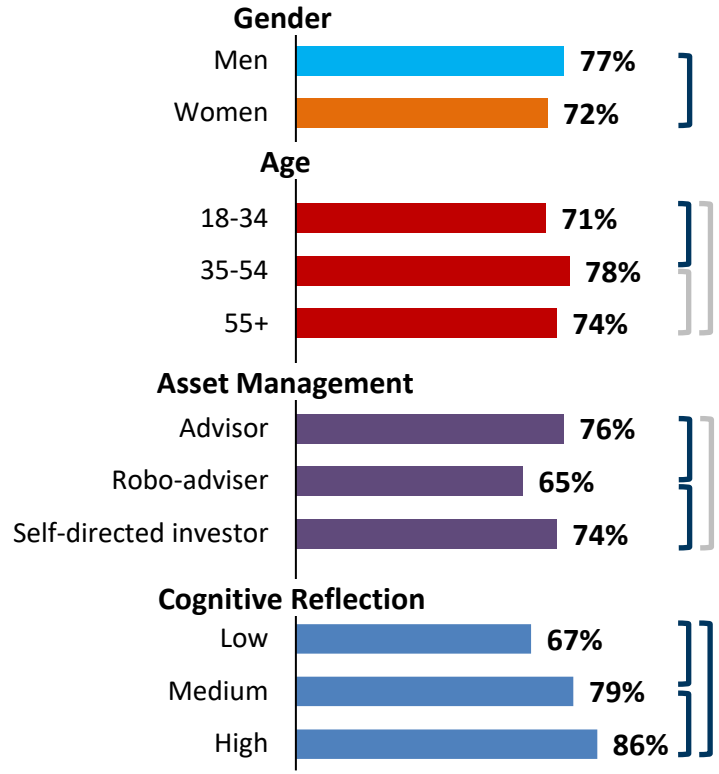
When should you be willing to take the most investment risk with your retirement savings?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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Leveraged Investing: 43% correctly responded to this question about leveraged investing

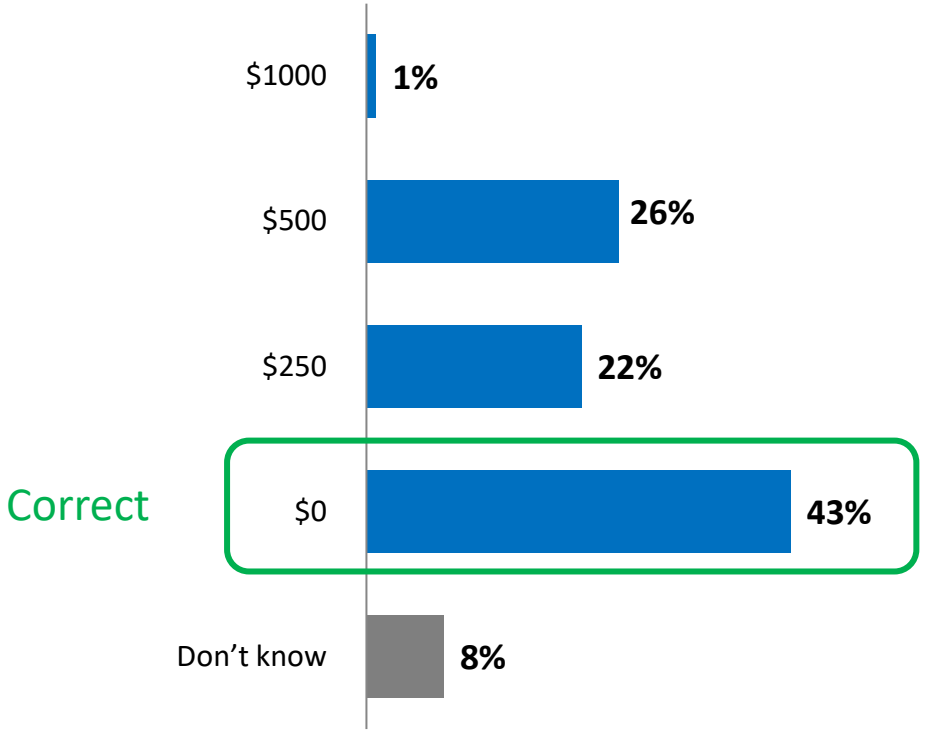
Monthly client debt margin accounts reached new highs in 2021, however, the fact that more than half of investors did not get this answer correct suggests that the math underlying borrowing to invest is difficult for many retail investors. There is a very strong relationship between correct responses to the leveraged investing question and cognitive reflection scores.

Q

Leveraged Investing

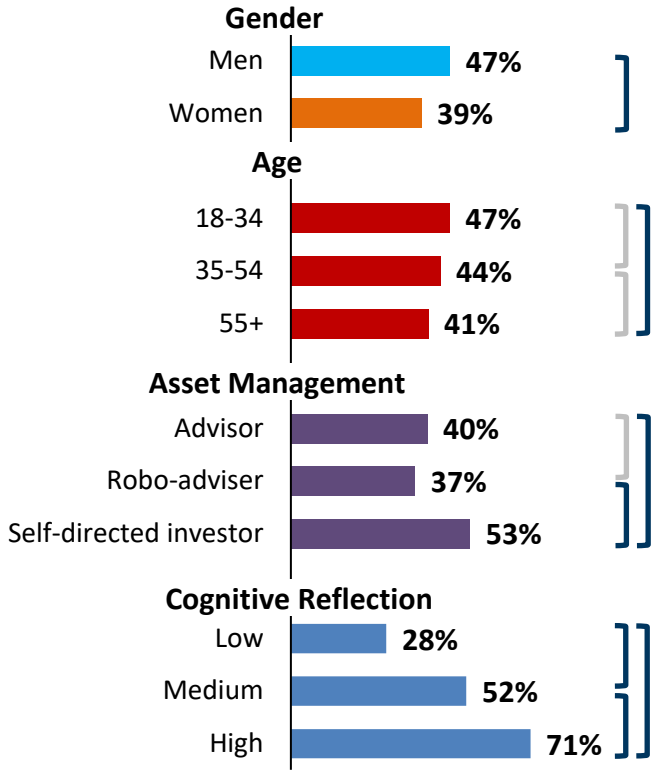
You invest $500 of cash and borrow an additional $500 to buy $1,000 worth of stock. If the value of the stock drops by 50% and you sell it, approximately how much of your $500 in cash are you left with?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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Products By Risk: About half (47%) of respondents were able to rank all 4 financial products correctly from most to least risky

While the majority of investors were able to correctly answer a question on the relationship between investment risk and return (see Slide 34), almost half (47%) correctly used this concept to rank the riskiness of four different types of investments.

Q

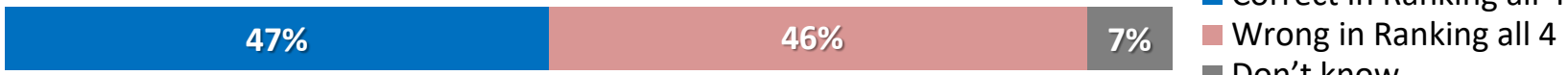
Products by risk

Which of the following types of investments do you consider most to least risky?

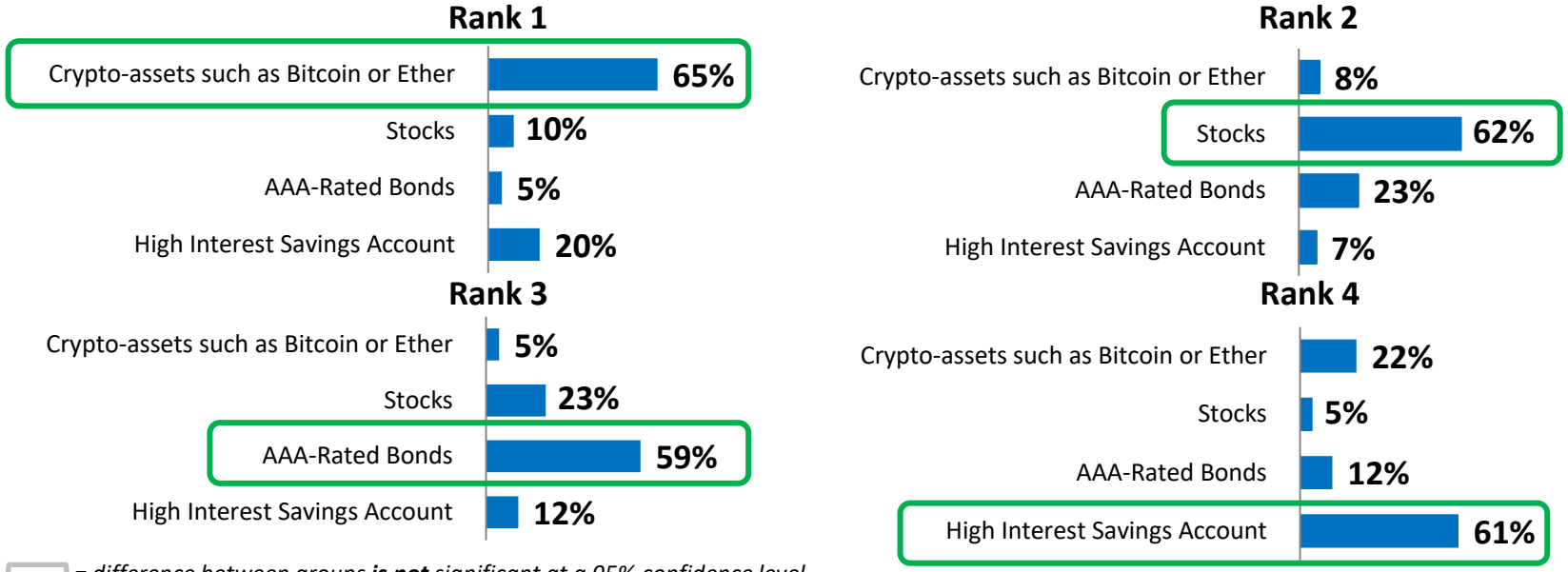
Please rank the following investments from most risky to least risky by dragging and dropping the items from the left column to the right column.

[asked of all respondents; n=2,500]

Overall Score



Breakdown



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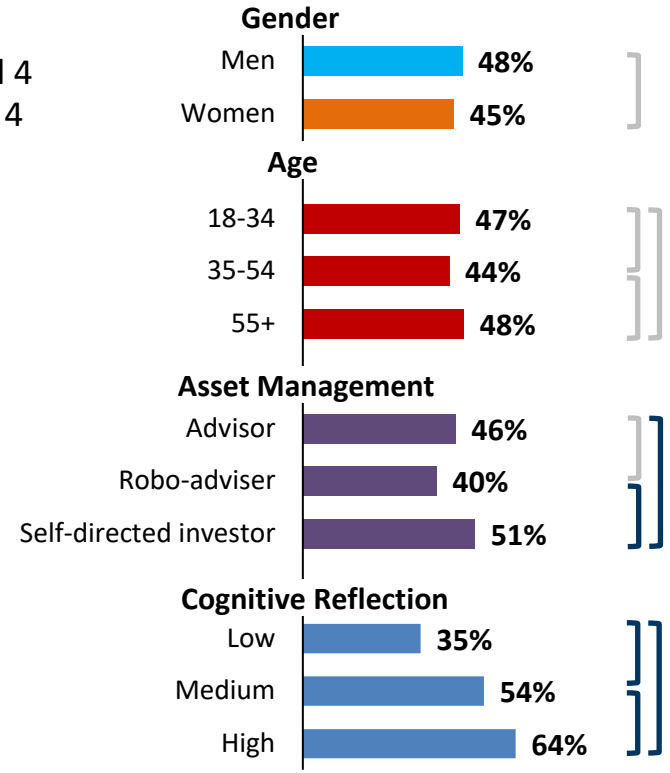
Segmentation

Those who were correct



Break Even Calculation: About half (54%) answered correctly on this question about making back a loss

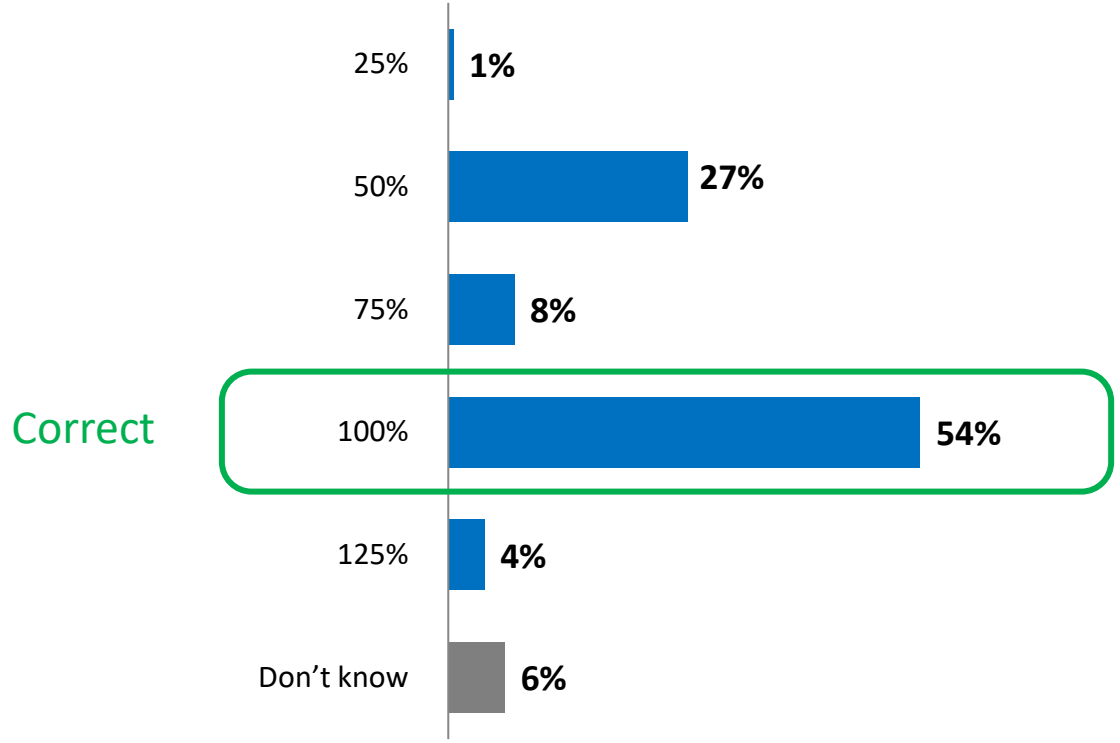
If an investor's investments are volatile, understanding information about percentage gains and losses to make informed decisions is valuable. On this question, women answer correctly much less frequently than men (43% versus 62%) and those with high cognitive reflection scores answer correctly more than twice as often as those with low scores (85% vs. 35%).

Q

Break even calculation

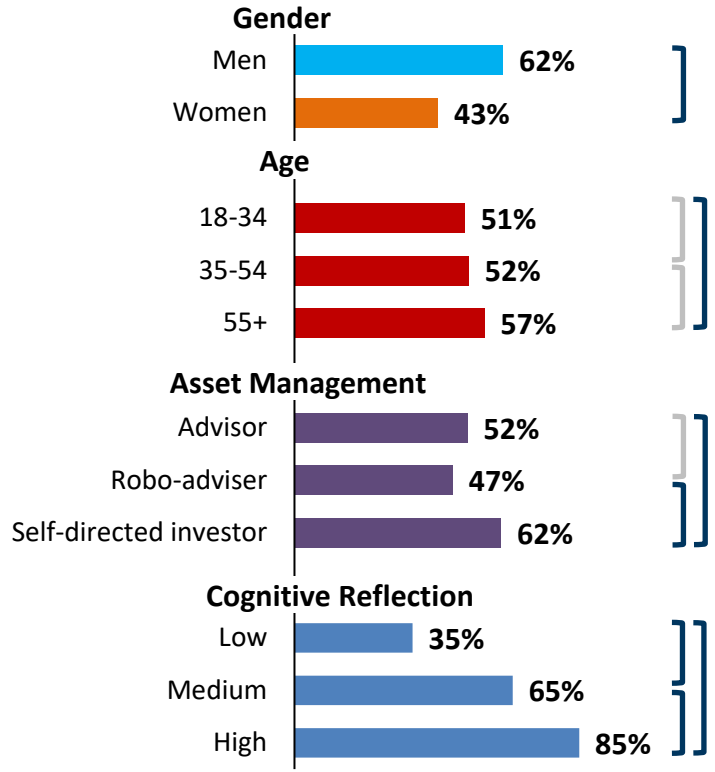
If you invest $1,000 in a stock and its price declines 50%, how much does the price need to go up for you to break even on the investment?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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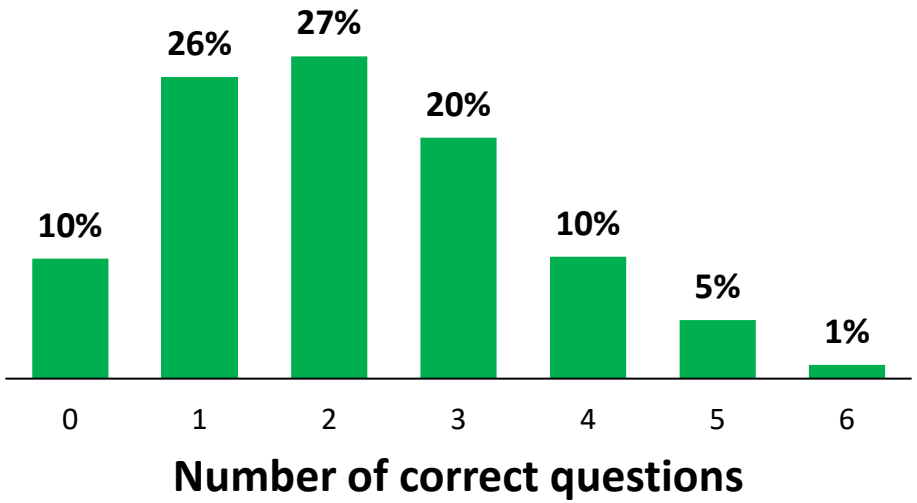
Investment Costs

Investment Costs: Performance on investment costs questions were the lowest (36%) compared to other questions sets

Most investors can correctly answer a question about whether fees are linked to returns. However, for all other investment cost questions, no more than 35% of investors answer correctly. Self-directed investors know more than advised investors, and the results are positively correlated with the cognitive reflection test.

The Investment Costs index summarizes results for the 6 new financial literacy questions on the survey focused on investing costs.



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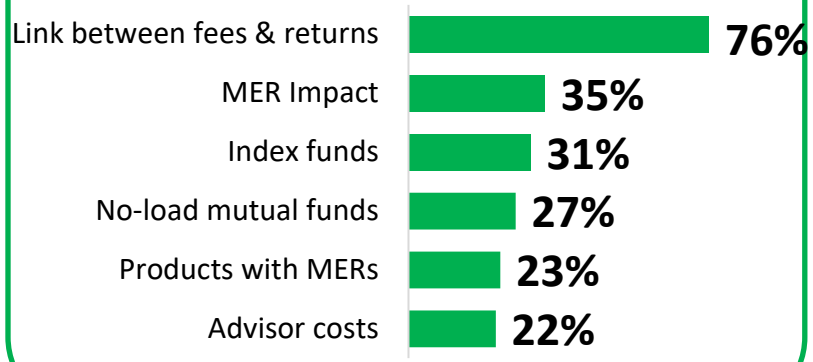
Investment Costs

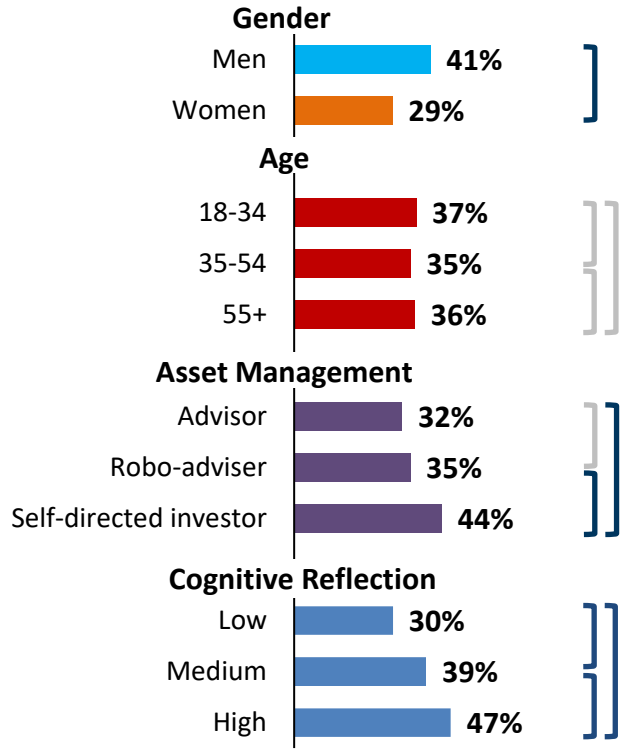
On average, respondents answered 36% (2/6) investment costs questions correctly.

The scores for each question were:



Segmentation

Investment costs score in % of correct responses



INNOVATIVE RESEARCH GROUP

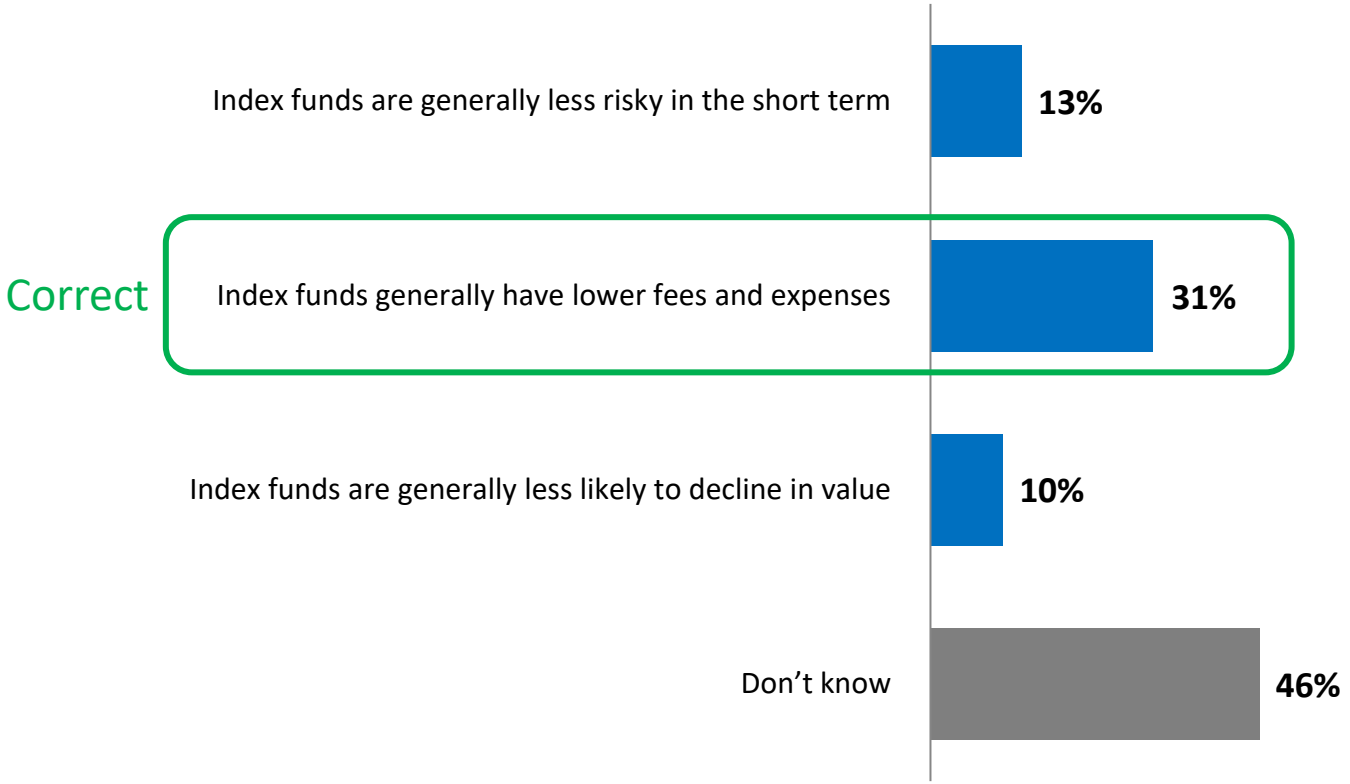
Index Funds: 40% of men correctly identified fees as the main advantage of index funds, compared to only 20% women

Indexed investing is not well understood amongst investors with only one-third (31%) identifying the key advantage of indexed investing.

Q **Index funds**

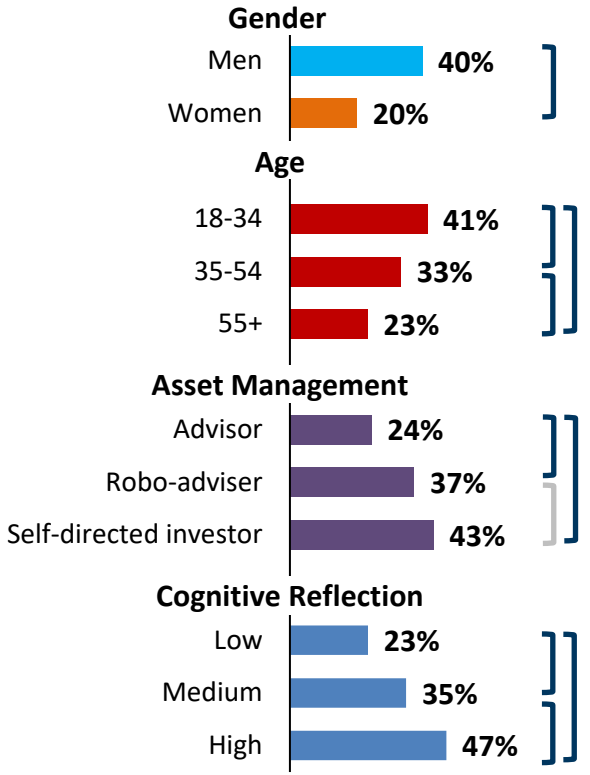
What is the main advantage that index funds have when compared to actively managed funds?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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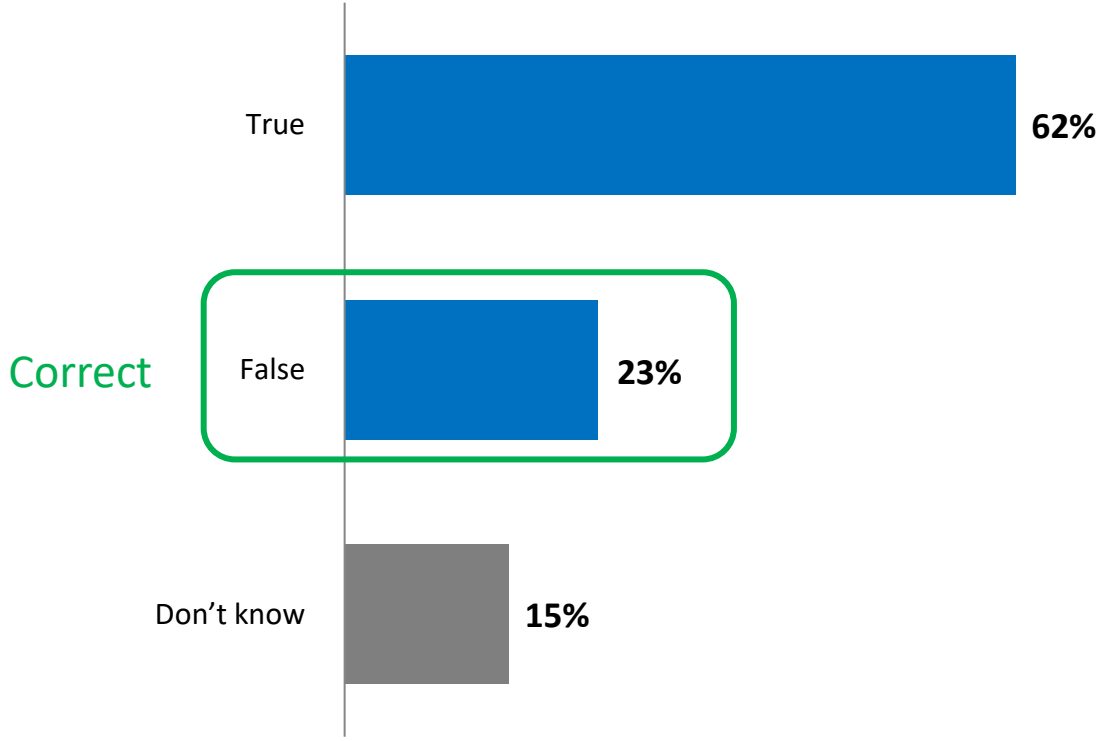
Products with MERs: Only 23% correctly stated that individual stocks do not have management fees while mutual funds and ETFs do

Responses indicate that many investors have a poor understanding of what products do and do not have MERs.

Products with MERs
Individual stocks, mutual funds and exchange traded funds (ETFs) all have management fees (also known as MERs) that reduce investors' returns.
[asked of all respondents; n=2,500]



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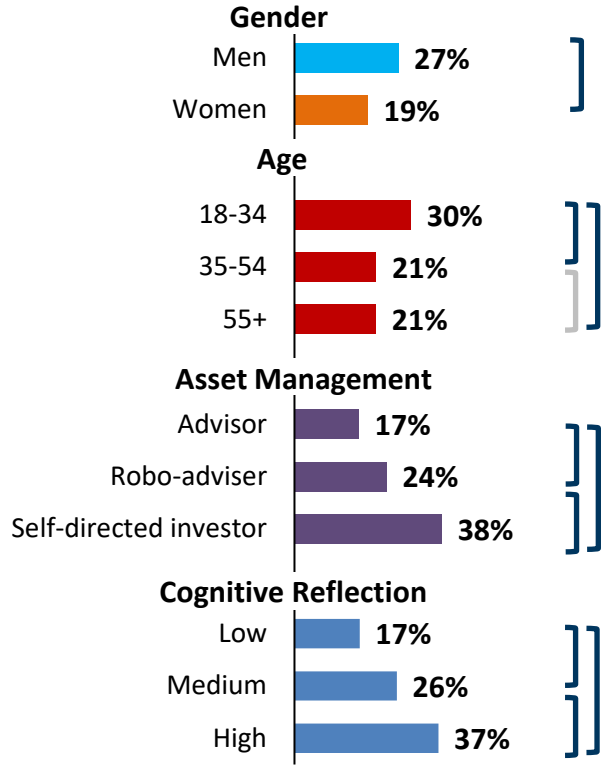
Those who were correct



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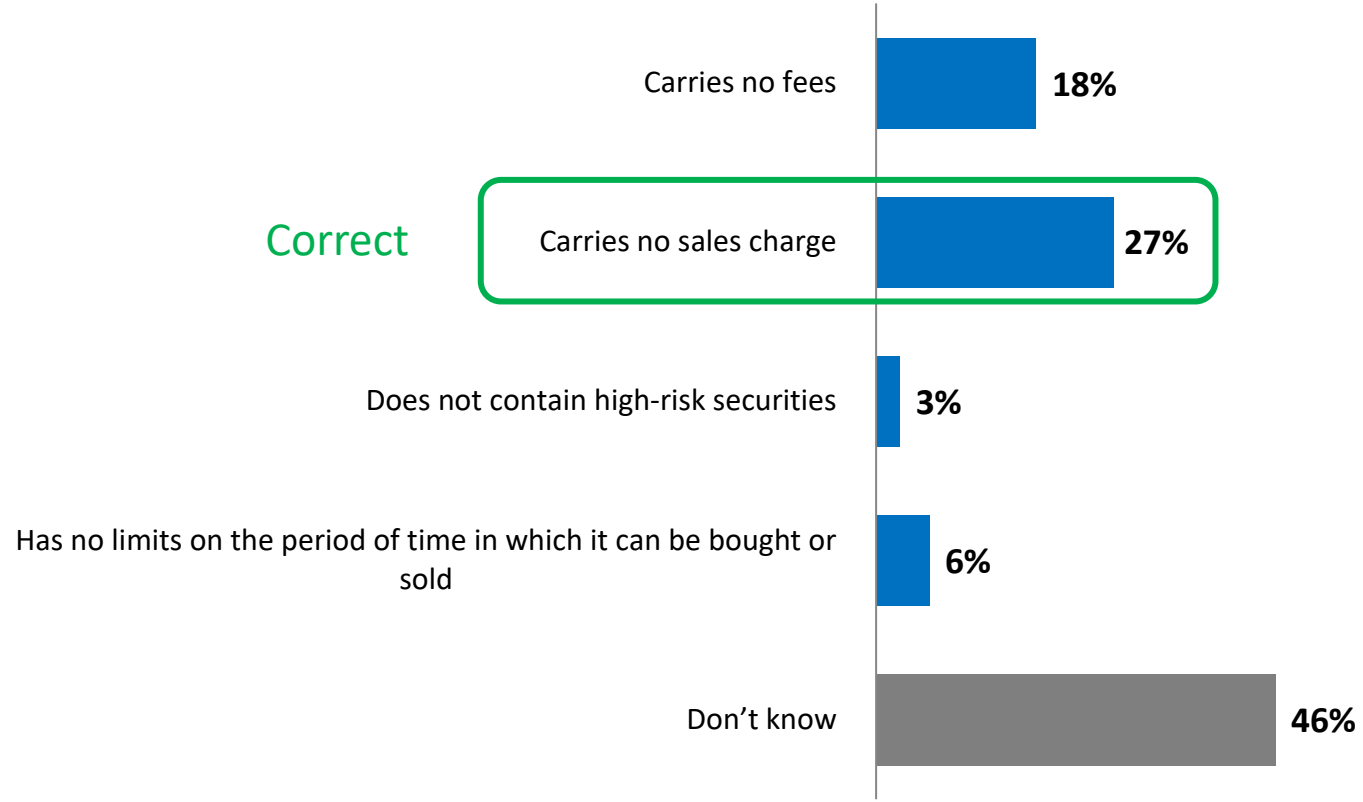
No-load Mutual Fund: Just 1-in-4 (27%) were able to correctly define a no-load mutual fund: almost half say they don't know

Responses indicate that many investors do not understand this term used in the mutual fund industry by some companies.

Q **No-load mutual funds**

A no-load mutual fund charge is one that…

[asked of all respondents; n=2,500]



Segmentation

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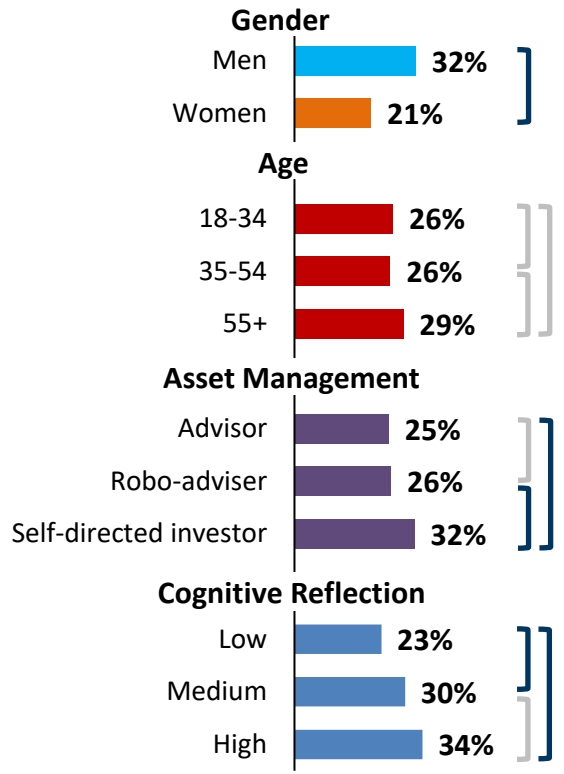

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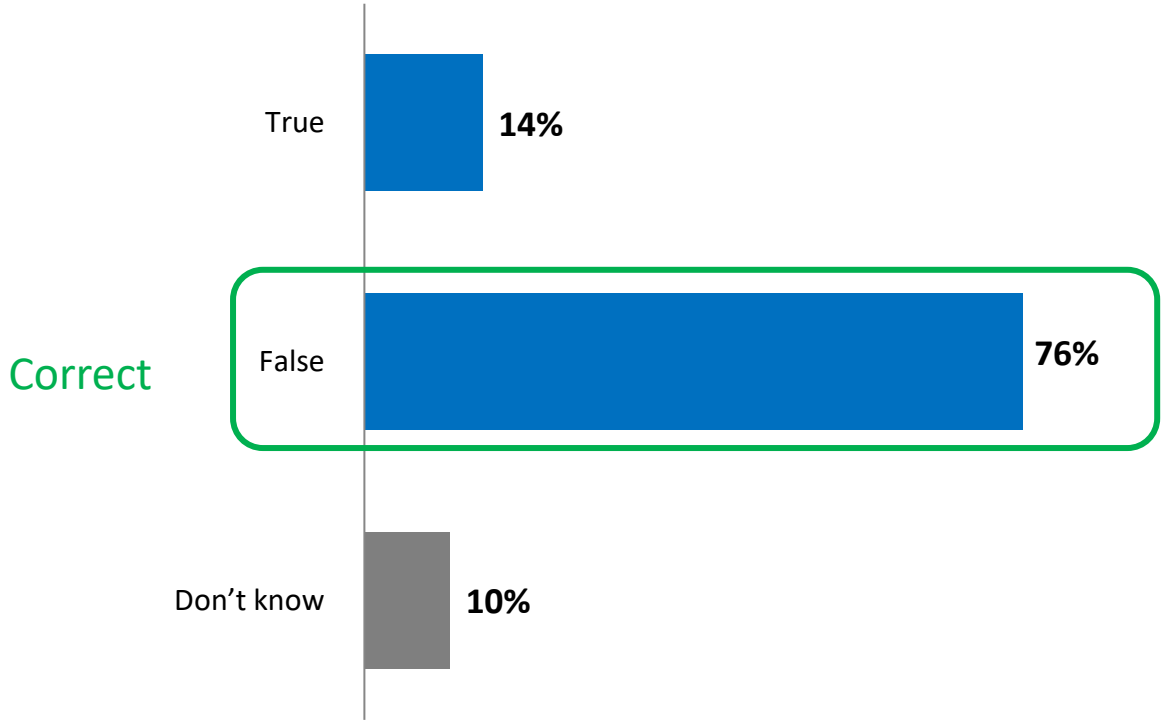
Fees Linked To Returns: Majority (76%) knew that, generally, advisors' fees are not linked to account performance

Nearly all client accounts are not performance based but almost a quarter (24%) of respondents either didn't know (10%) or thought they were (14%).

Q **Link between fees and returns**

Investment advisers will not make money if your investment account doesn't make money.

[asked of all respondents; n=2,500]



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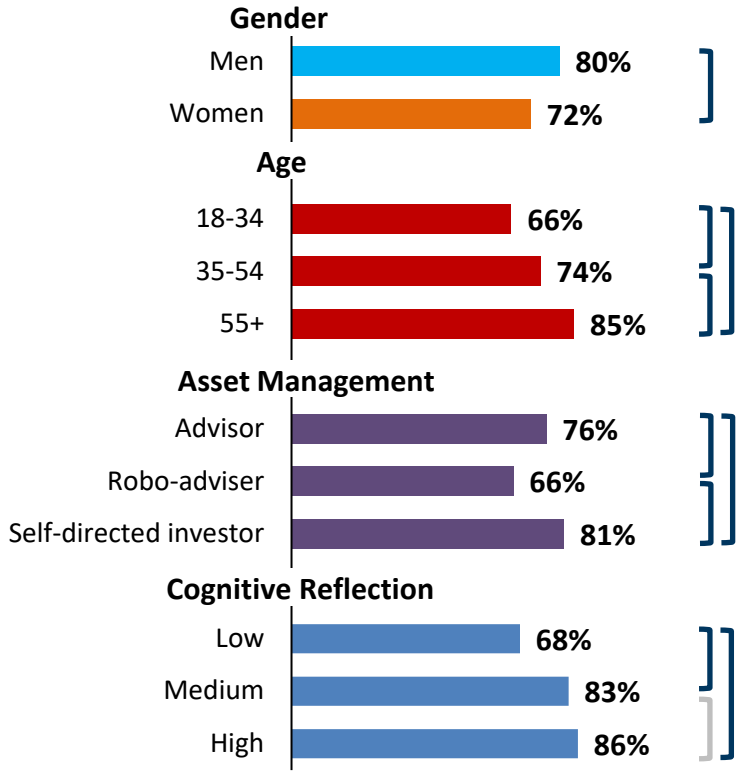

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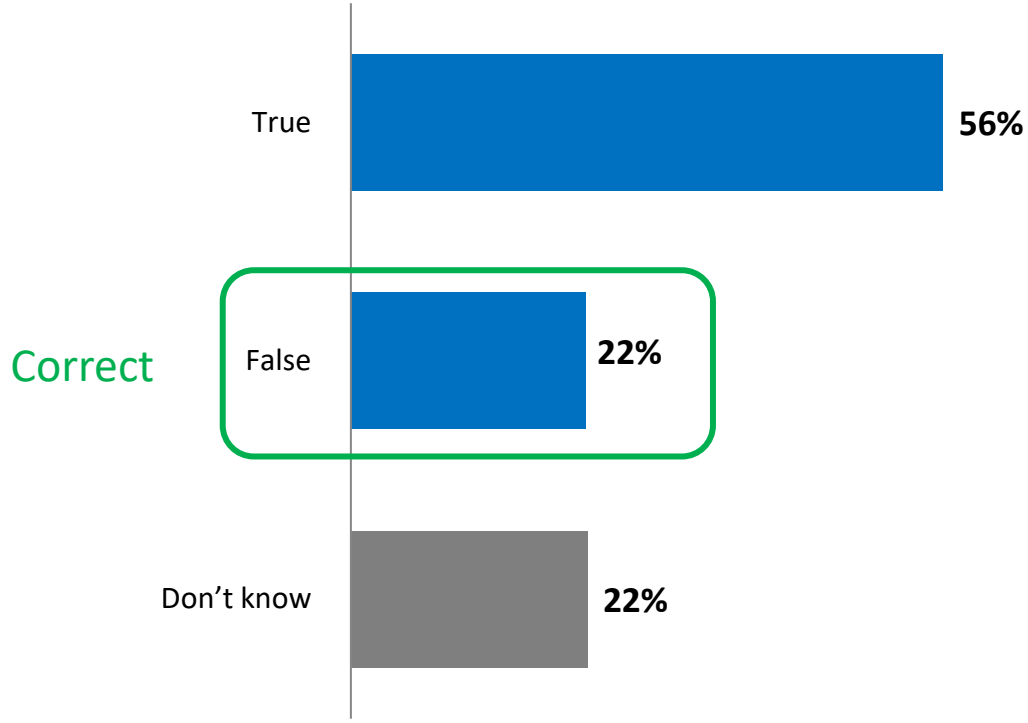
Advisor Costs: Over half (56%) believed it is possible to get advice "without it costing you anything"; 1-in-5 (22%) correctly stated "False"

The term "indirect" appears not to be well understood leading to a poor understanding by many of the fees they are incurring albeit "indirectly" to their advisor and dealer.

Q **Advisor costs**

Advisors and dealers can get paid indirectly so it is possible that you can get advice without it costing you anything.

[asked of all respondents; n=2,500]



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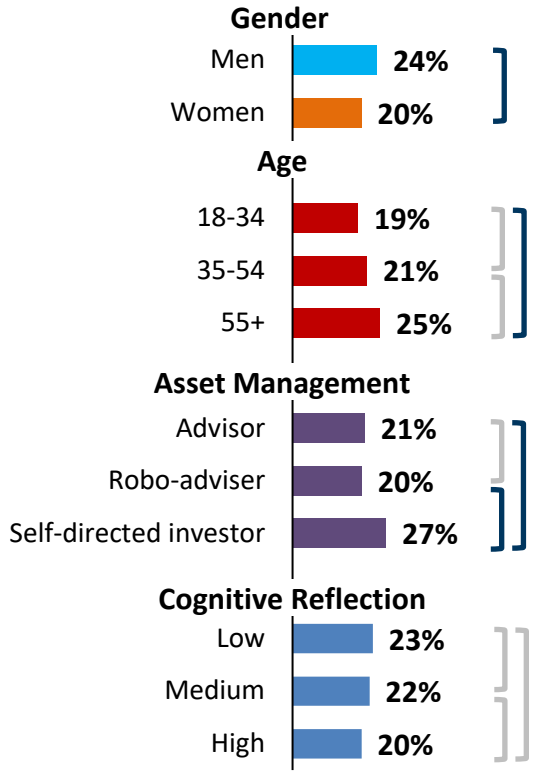

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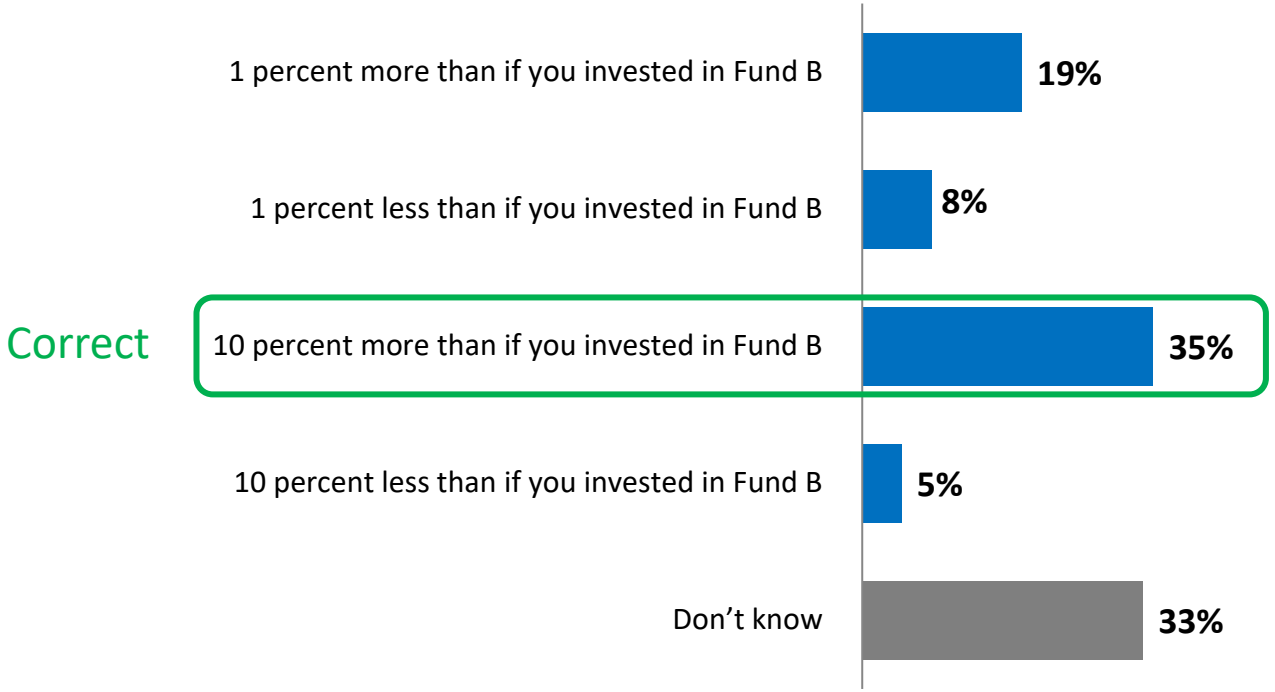
MER's Impact on Returns: About a third correctly identified the compounding impact of fees over time (35%)

Combining across responses, one-third give an incorrect answer (31%) and one-third say they don't know (33%). Correct responses are highest among those with high cognitive reflection (58%). Women (26%) answer correctly less frequently than men (42%).

Q **MER Impact**

You have the choice between two mutual funds that have a total annual return of 5% before paying fees. Fund A has a MER (management expense ratio) of 1% and Fund B has a MER of 2%. If you invest $100,000 in Fund A and hold it for 20 years you will have at least…

[asked of all respondents; n=2,500]



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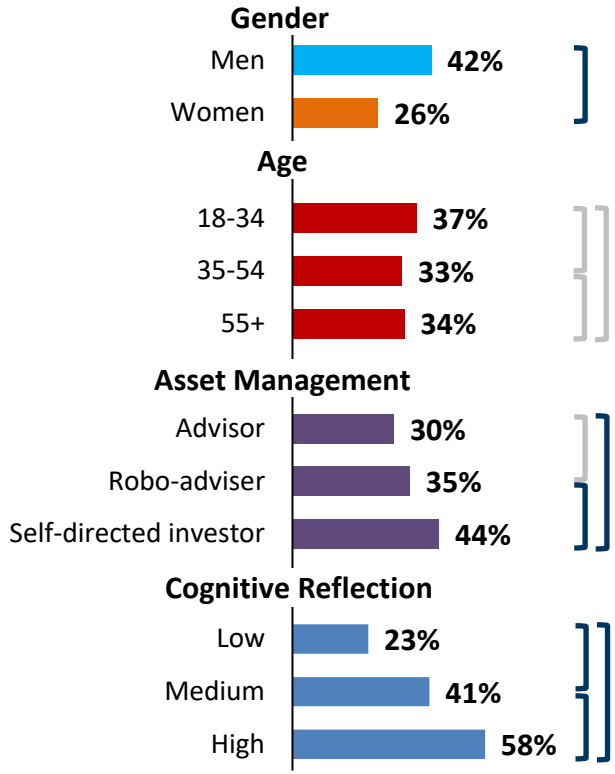

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Registered Accounts

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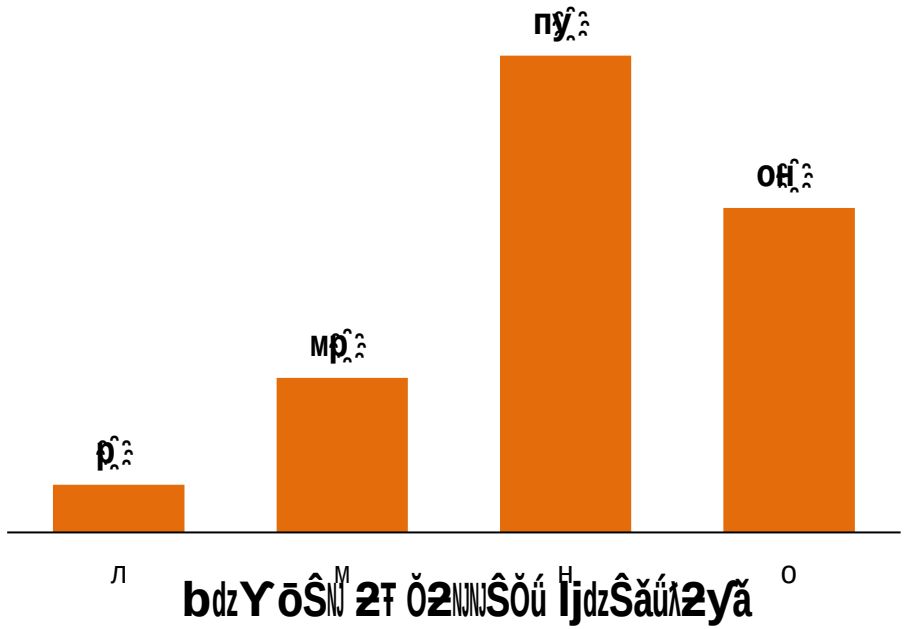

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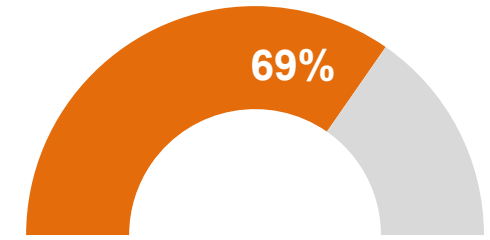

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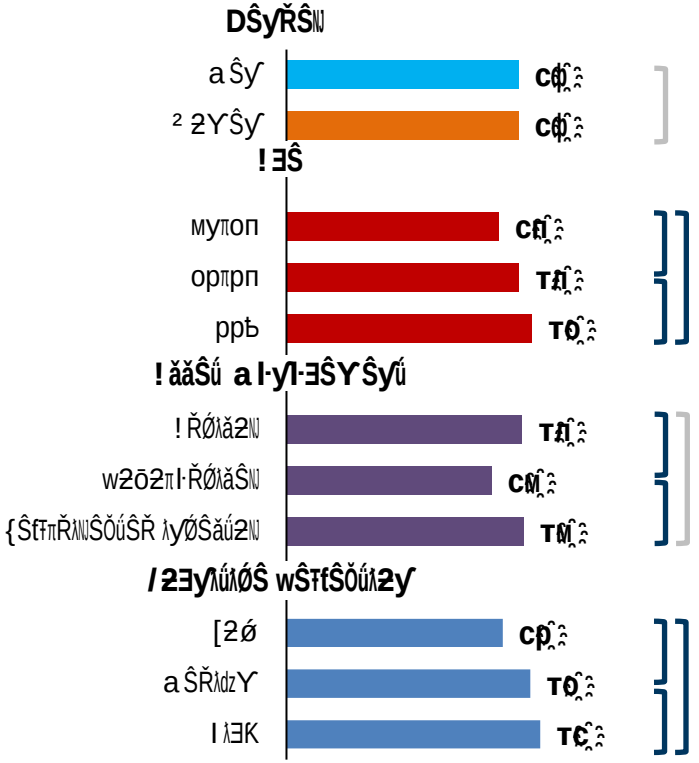


INNOVATIVE RESEARCH GROUP

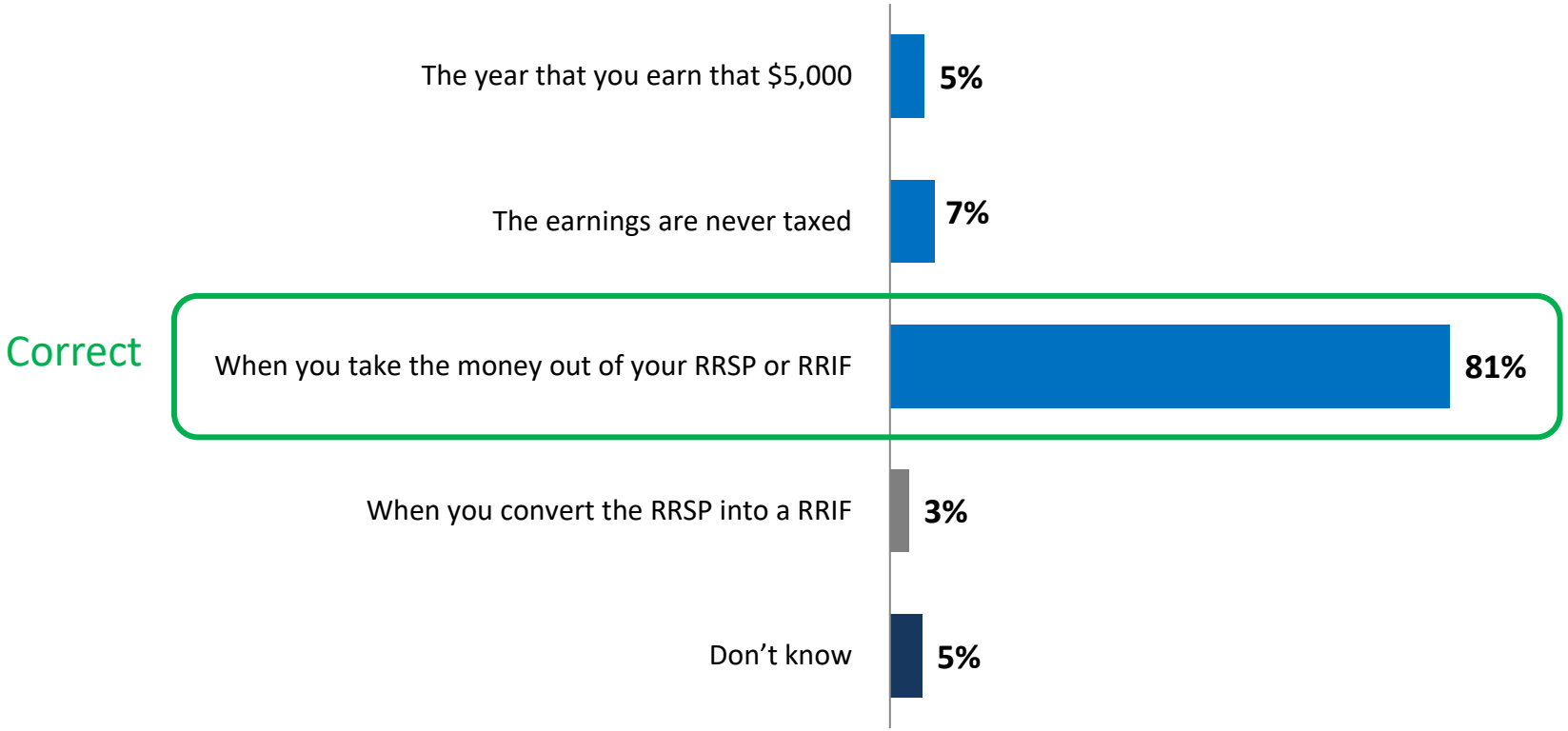
RRSP: 4-in-5 (81%) knew that RRSPs defer tax until the funds are withdrawn; lowest among those who use robo-adviser (67%)

Most retail investors have a good understanding of the tax deferral benefits of holding investments in a RRSP.

Q **RRSP**

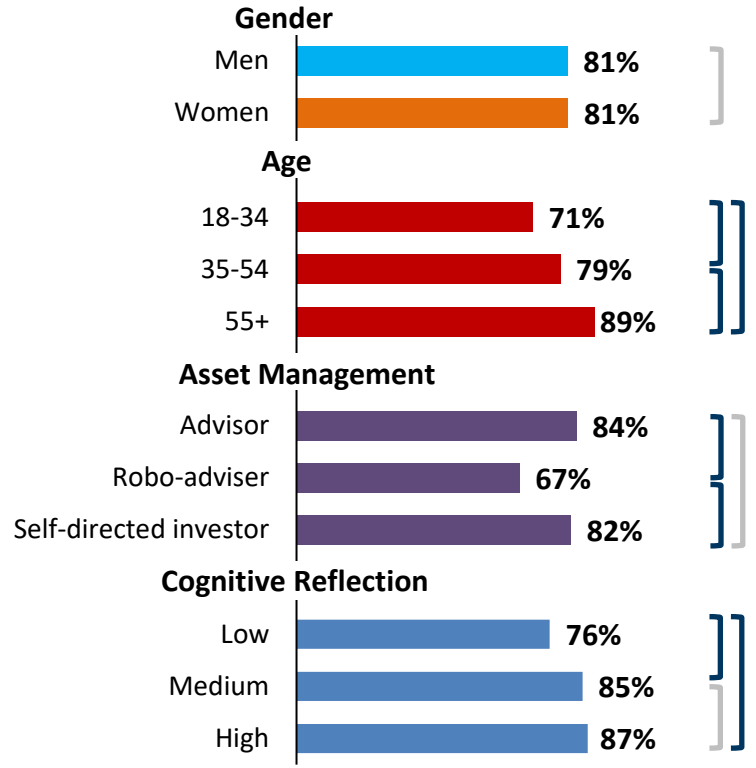
If you earn $5,000 on the investments in your RRSP, when will you pay taxes on these earnings?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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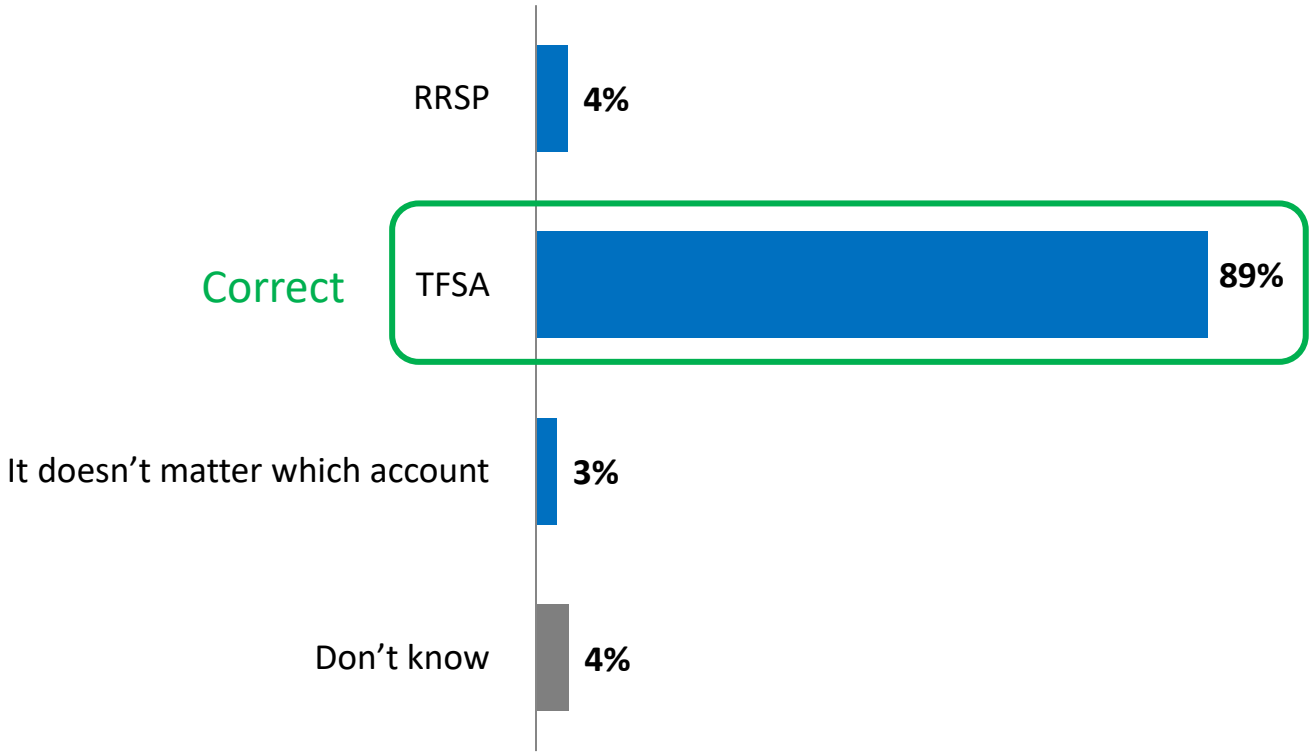
TFSA: Almost 9-in-10 (89%) knew that withdrawing money from a TFSA is best for an emergency expense

Unlike an RRSP, withdrawing money from a TFSA is preferable to withdrawing from an RRSP for an emergency expense because it doesn't result in tax consequences. Nearly all investors know this, highest among those with high cognitive reflection scores (95%) and lowest among those working with a robo-adviser (81%).

Q **TFSA**

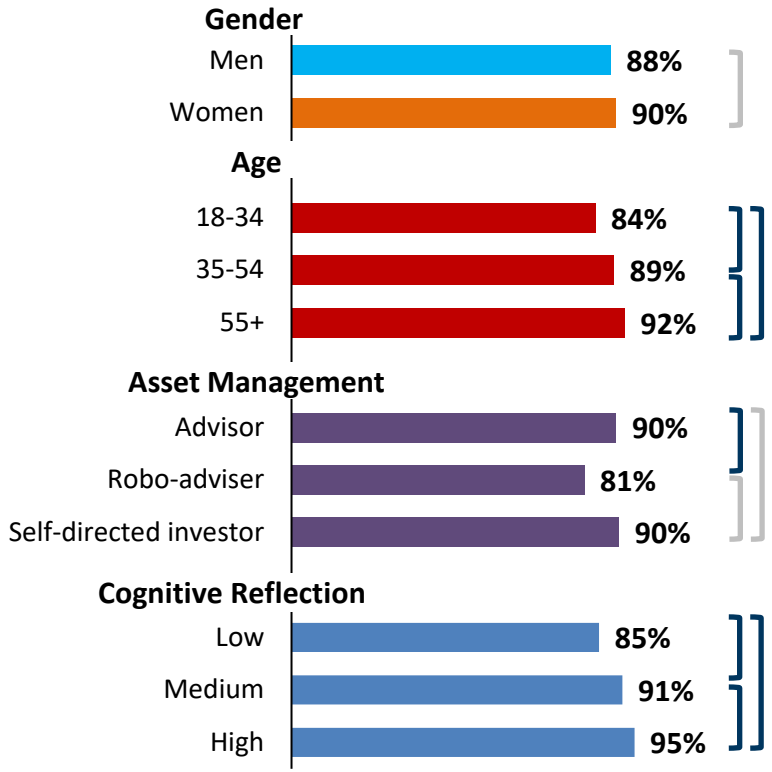
You are making contributions to an RRSP and a TFSA. If you have an emergency $5,000 expense, which account should you take the money from?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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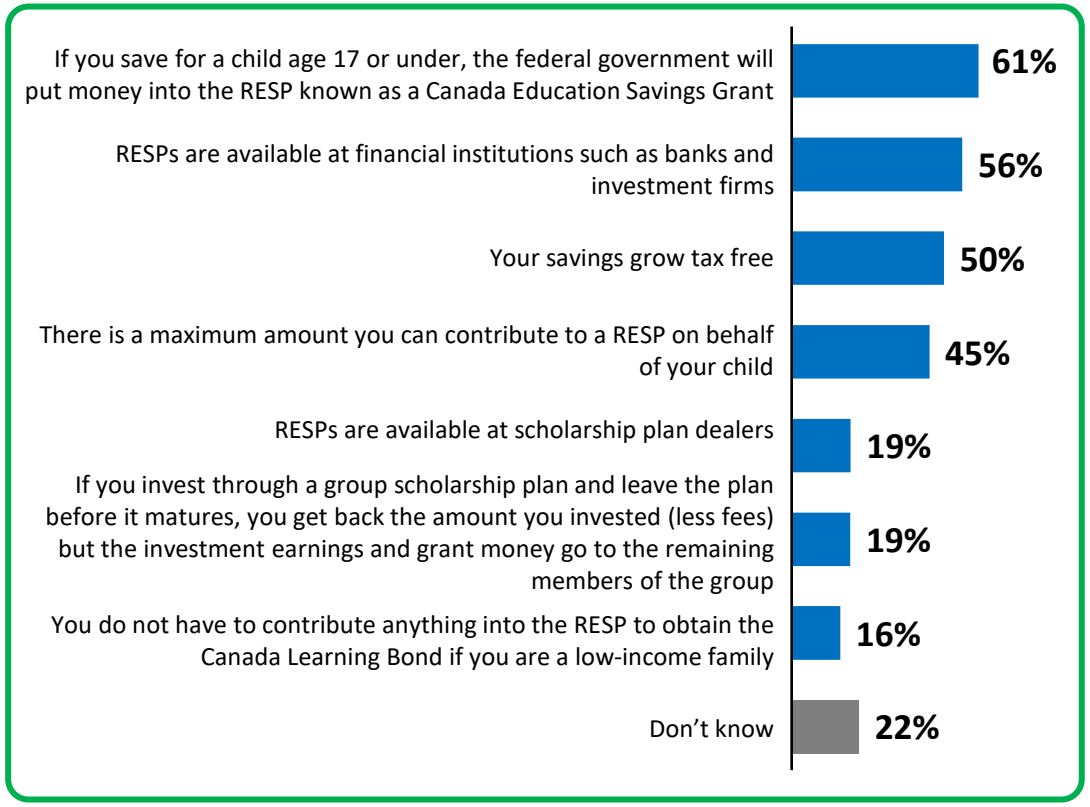
RESP: Over half (55%) of investors have at least a "medium" knowledge of RESPs

This question was challenging as few retail investors will save for their children in both RESP accounts at financial institutions as well as scholarship plan dealers and not all retail investors have children and use this account type. However, those considering opening a RESP should know this information before making an investment decision.

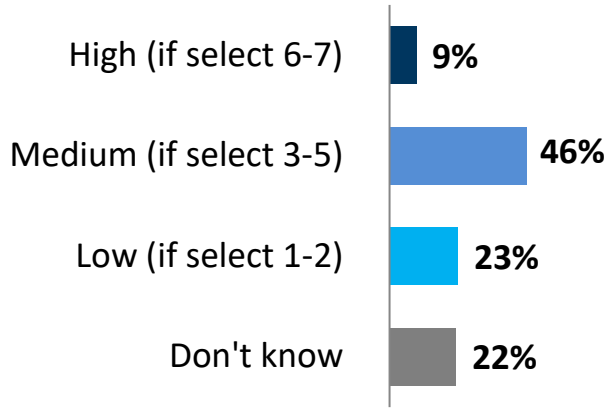
RESP

Please select all that are true. In a Registered Education Savings Plan (RESP)…

[asked of all respondents; n=2,500]



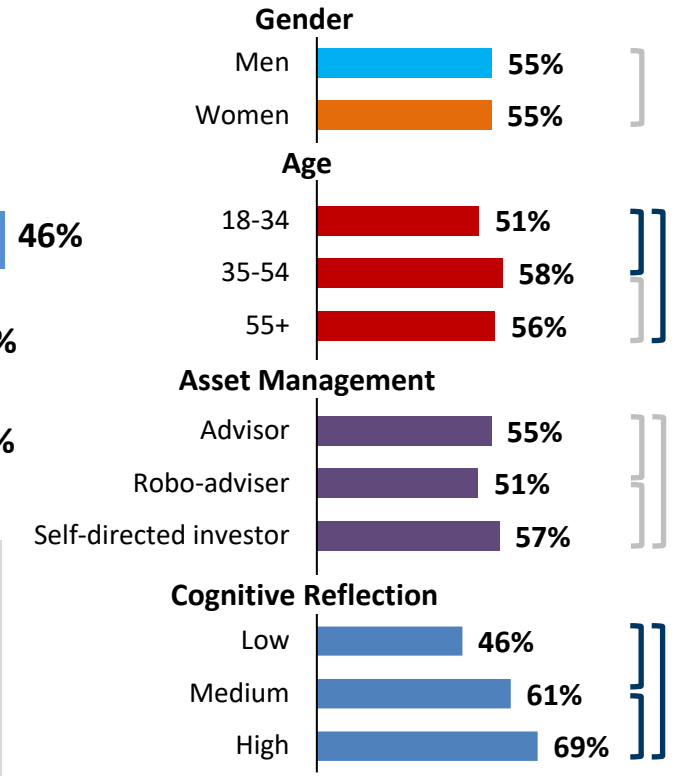
RESP Knowledge level



RESP Question Scoring:
For the index measures, respondents were awarded part marks for each correct response selected. The average respondent received 0.38 points (out of a total of 1). Only 4% correctly selected all 7 responses.

Segmentation

% Receiving at least a "Medium" score



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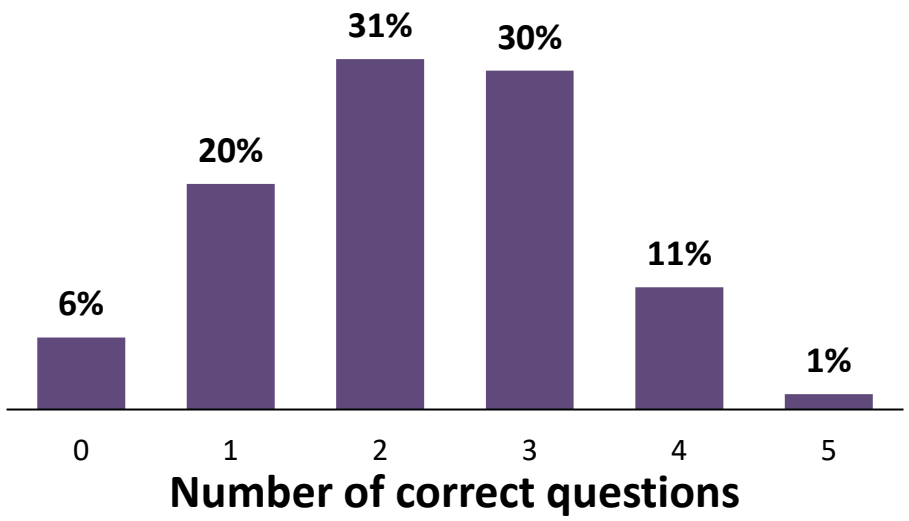
Protecting Your Portfolio

Protecting Your Portfolio: Of the 5 questions about portfolio protection, the average investor answered two correctly

For two of the five questions ("Internal complaint handling" and "Registration check") about two-thirds of investors knew the correct answer. However, for the other 3, no more than 35% were able to answer correctly.

The Protecting Your Portfolio index summarizes results for the 5 new financial literacy questions on the survey focused on awareness and understanding of investor protections.



+Weighted score; see slide 71 for full details.

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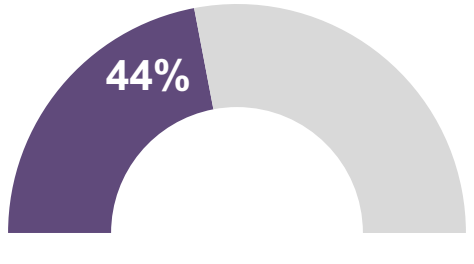
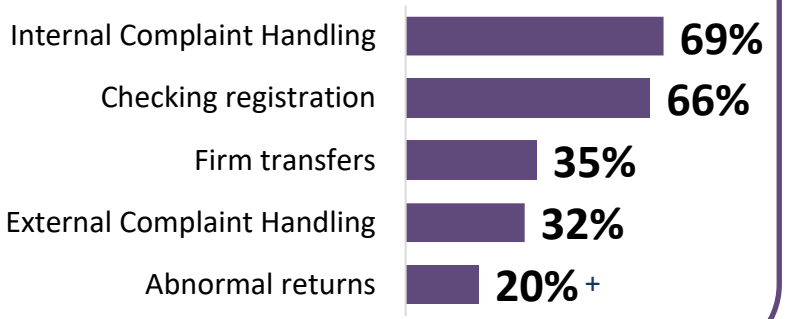
Protecting Your Portfolio



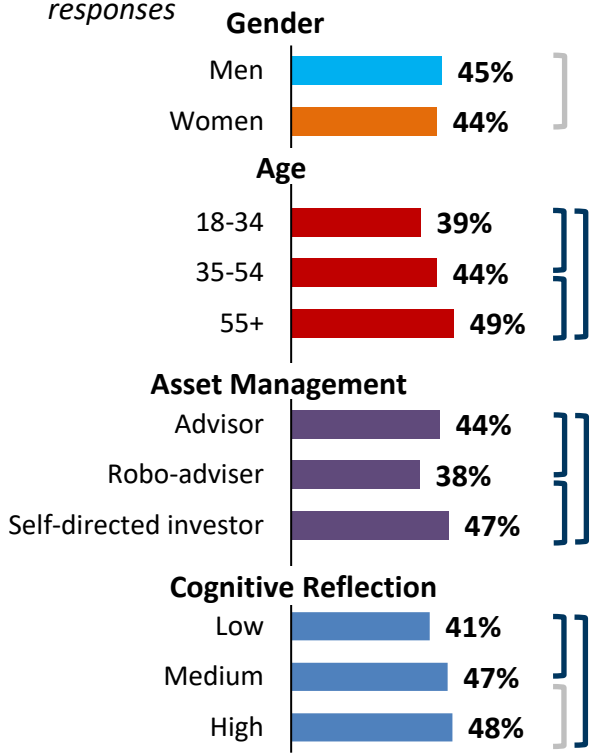
On average, respondents answered 44% (2/5) portfolio questions correctly.

The scores for each question were:



Segmentation

Protecting Your Portfolio score in % of correct responses



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Abnormal Returns: 1-in-5 (20%) avoided the fund with abnormal returns, and 6% said 'Don't know'

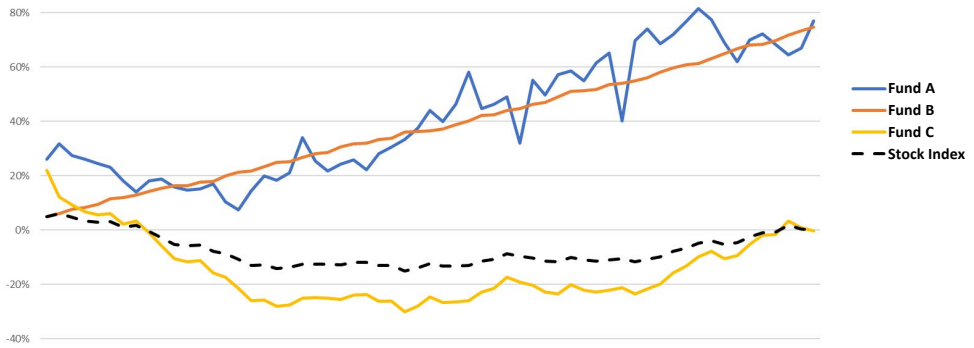
Fund B is the incorrect response because it shows abnormally consistent returns. This is a warning sign of fraud. A majority (74%) do not recognize the potential fraudulent nature of the returns and select Fund B. Correct responses are *highest* among 18-34-year-old investors, and – unlike most other questions – are lower among those with *higher* cognitive reflection scores.

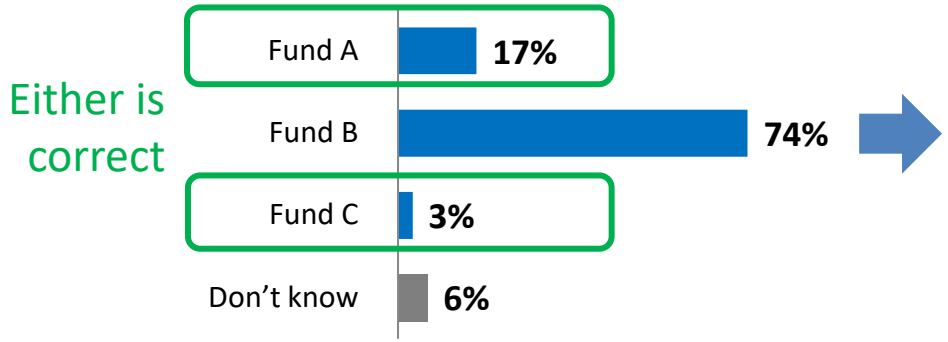
Q

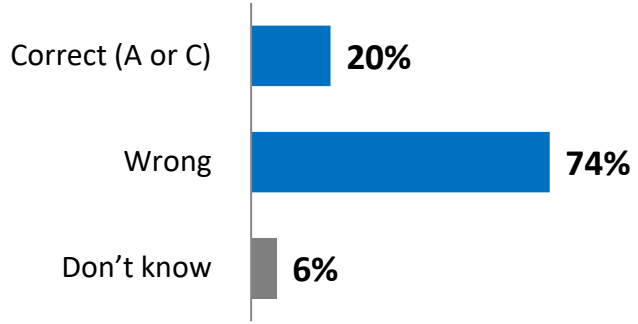
Abnormal returns (a warning sign for investment fraud)

The chart shows the performance of 3 stock mutual funds over the last 5 years. For your reference, there is also a stock market index that shows the performance of the overall stock market for the last 5 years. Which of these funds would you choose to invest in?

[asked of all respondents; n=2,500]

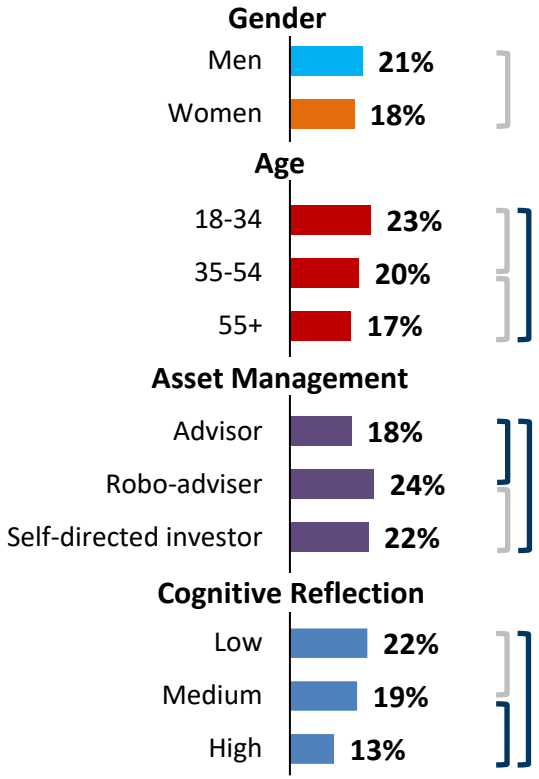






Segmentation

% of correct response



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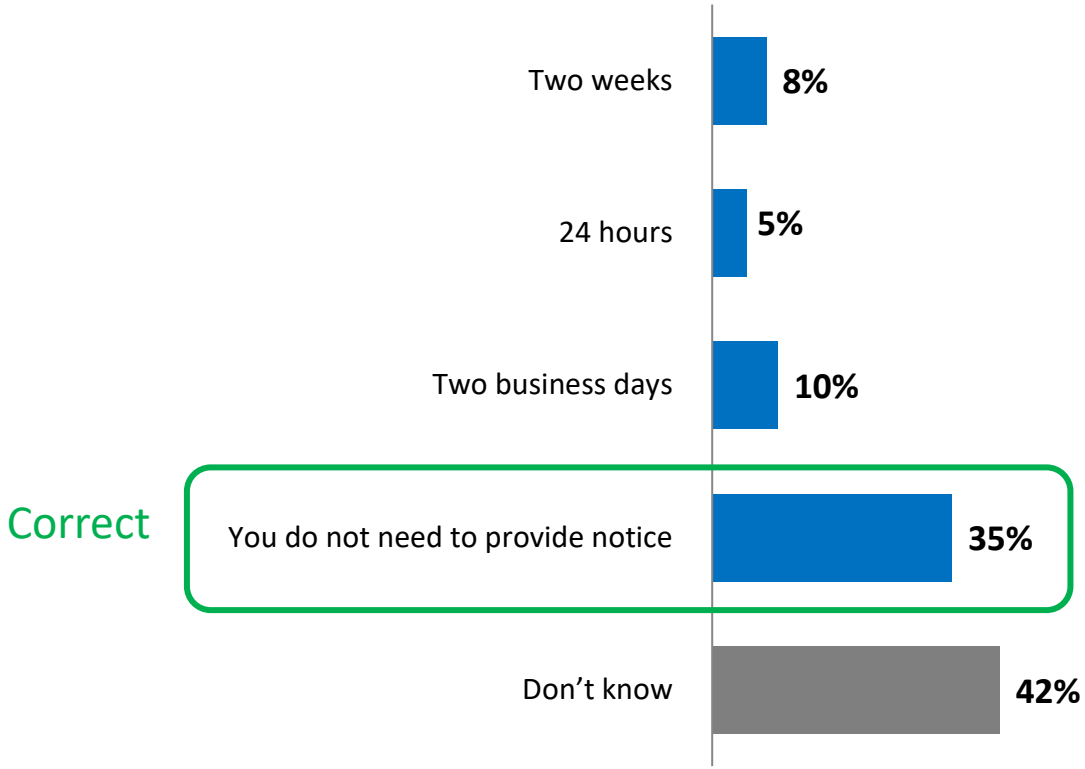
Firm Transfer Notice: Only 1-in-3 (35%) correctly identified that you do not need to provide notice to move to a new firm

More investors said they 'Don't know' (42%) than gave an incorrect response (23%). Respondents under 35 were less likely to answer correctly (26%) and investors who use a robo-advisor (20%) answered correctly less often than self-directed investors (40%) and those with advisors (36%).

Q **Firm transfers**

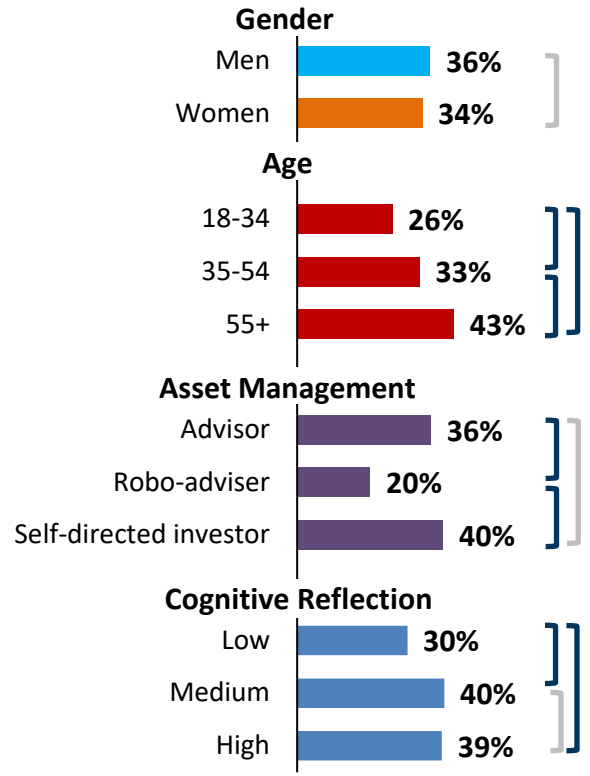
To move your investments from your current firm to a new firm, how much notice do you need to give your current firm that you are leaving?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



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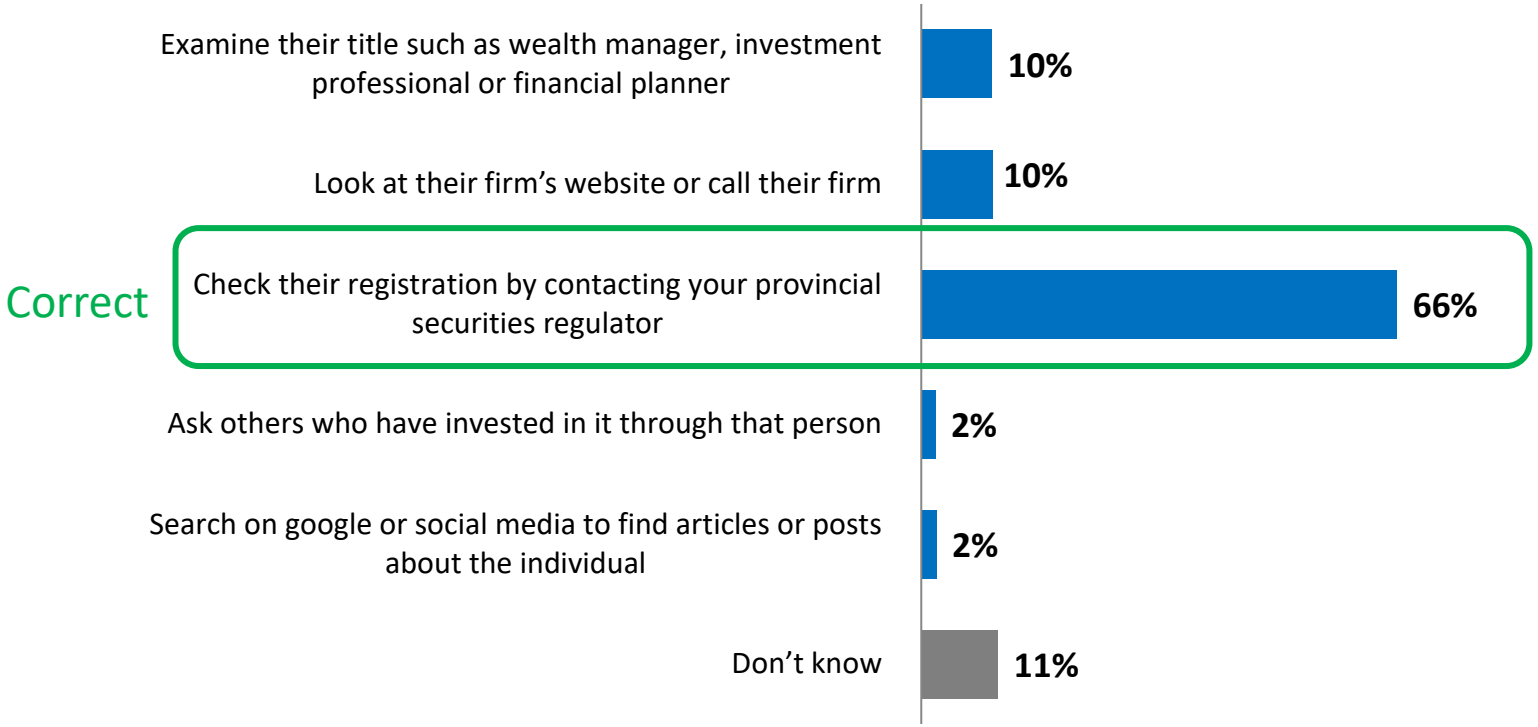
Registration Check: Respondents over 55 were correct most often (76%), while investors aged 18-34 were correct least often (54%)

Checking registration to ensure that the person is legitimately offering an investment is a key method to avoid being defrauded but only two-thirds of investors correctly know to do this.

Q **Checking registration**

If someone approaches you with an investment opportunity, how can you make sure that they are qualified to do so?

[asked of all respondents; n=2,500]



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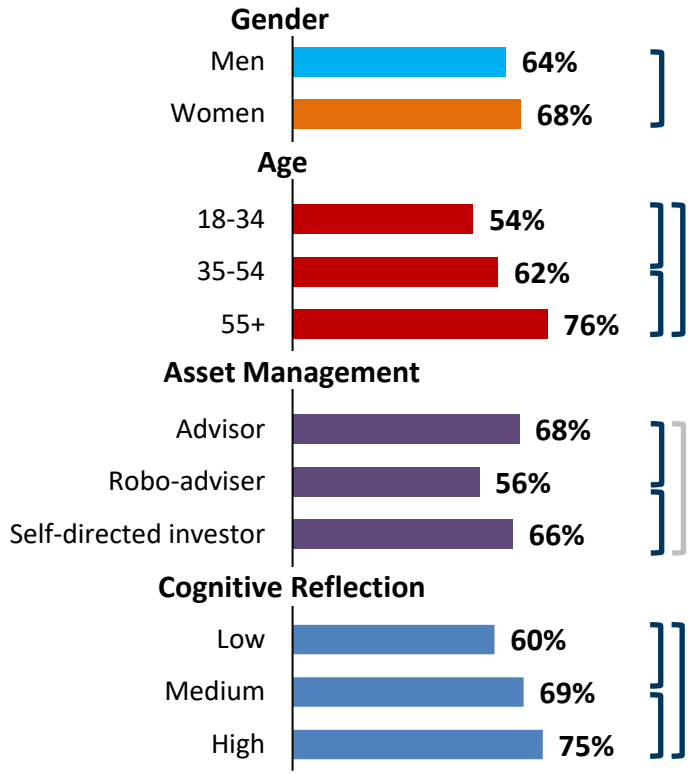
Those who were correct



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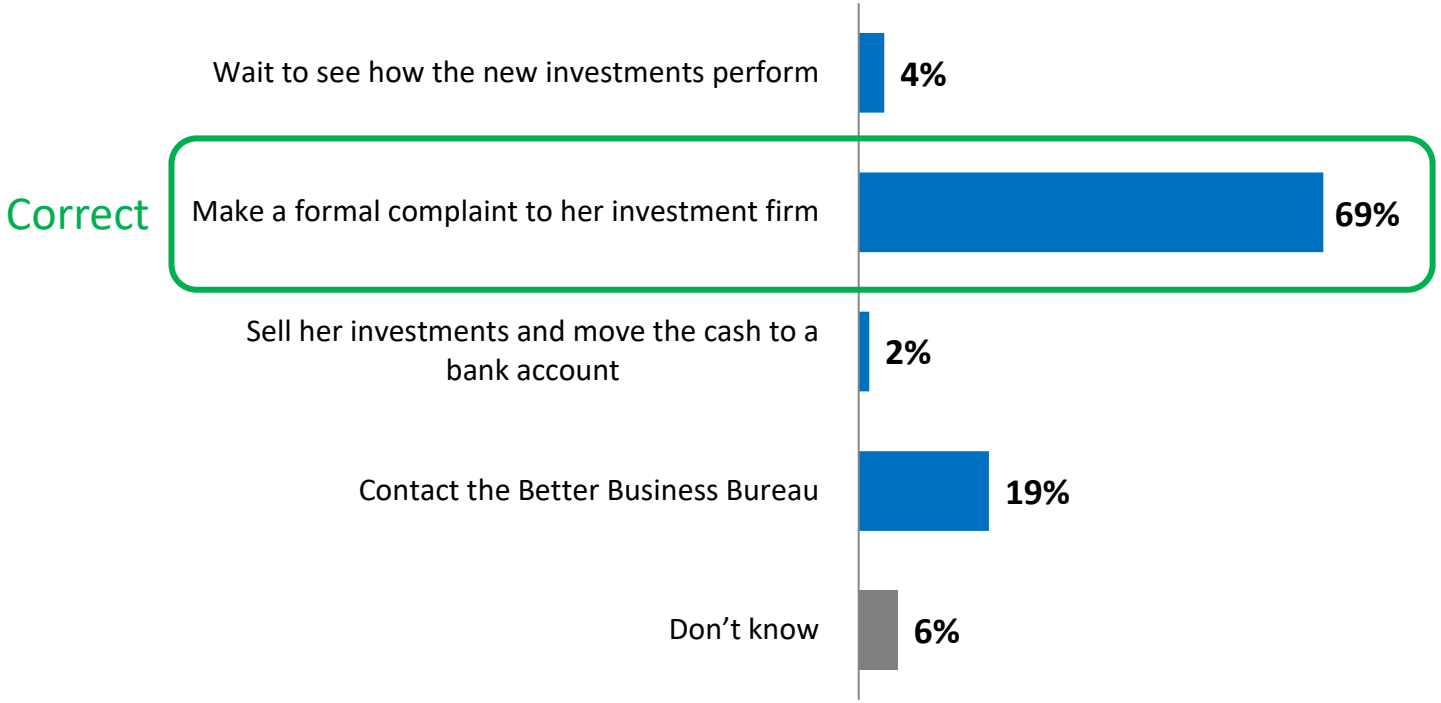
Internal Complaint Handling: 7-in-10 (69%) correctly stated that if unsatisfied they would make a formal complaint to their firm

The majority of retail investors are aware of the need to complain to their firm when they have a complaint – the internal complaint handling process. 2-in-10 (19%) are unaware of this step, as they believe the complainant would need to contact the Better Business Bureau.

Q **Internal Complaint Handling**

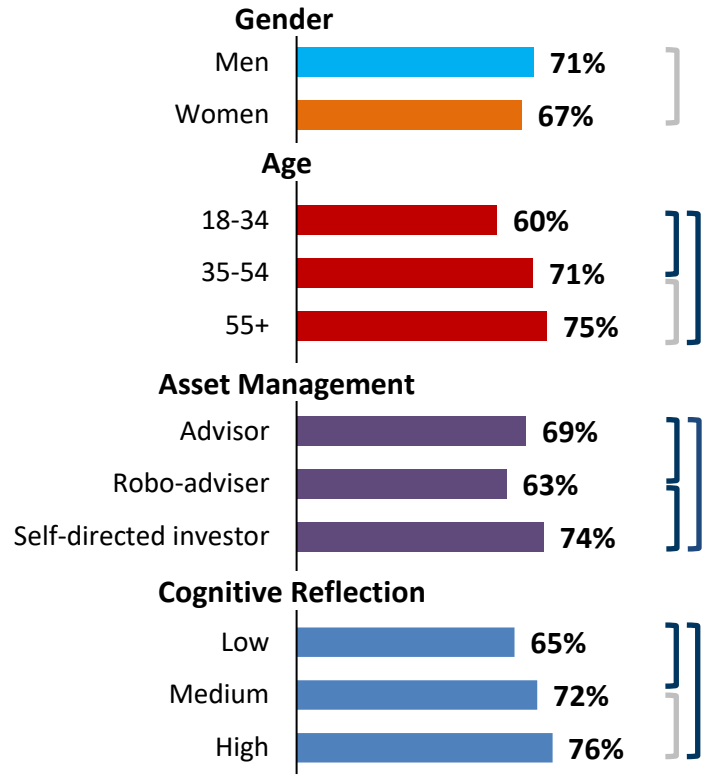
One day Namita checks her account statement and sees that several of her investments have been sold and new investments have been bought without her knowledge or authorization. Her advisor's explanation for this unauthorized trading was unsatisfactory. What should Namita do?

[asked of all respondents; n=2,500]



Segmentation

Those who were correct



*= difference between groups **is not** significant at a 95% confidence level*

*= difference between groups **is** significant at a 95% confidence level*

External Complaint Handling: 68% identified at least one correct place to take their complaint without incorrectly including the CRA

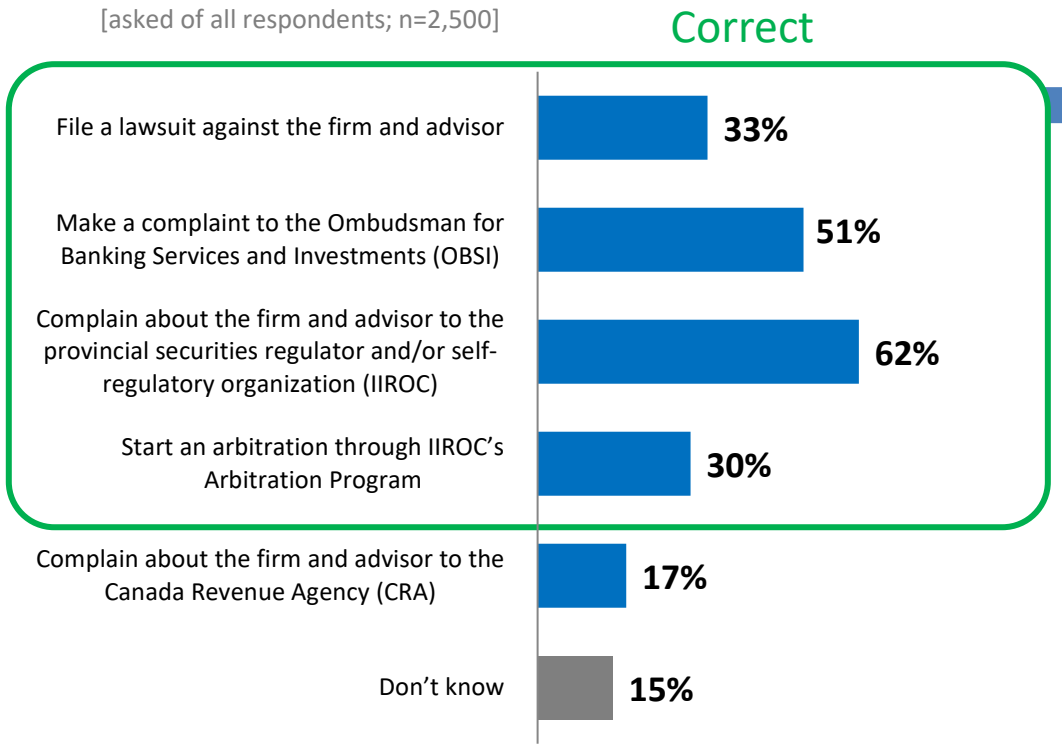
Only 7% of investors knew all 4 of their external complaint handling options with 33% knowing they could file a lawsuit, 51% knowing they could take their complaint to OBSI, 62% knowing they could make a complaint about the firm and advisor to their provincial securities commission and/or self-regulatory organization and 30% knowing they could utilize IIROC's arbitration program.

Q External Complaint Handling

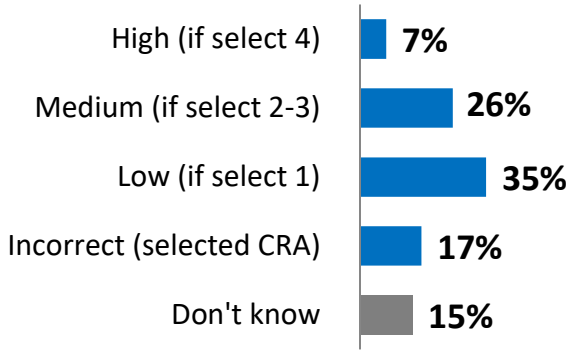
Namita decided to make a formal complaint to her investment firm after realizing that she lost money due to the unauthorized trading. The firm denied her request to compensate her for the losses. Her options are:

Please select all that apply.

[asked of all respondents; n=2,500]



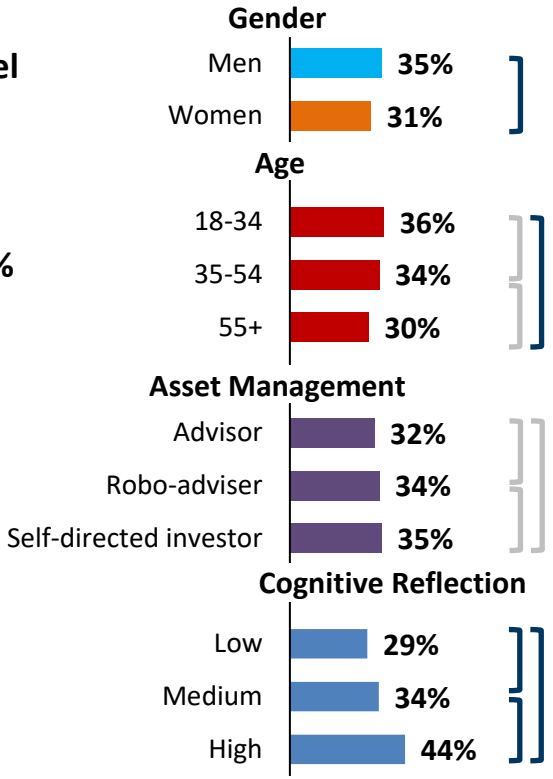
Complaint process Knowledge level



Complaint Process Question Scoring:
For the index measures, respondents were awarded part marks for each correct response selected (0.25 out of 1), *unless they also selected the incorrect response of CRA, in which case they got 0*. The average respondent received 0.32 points (out of a total of 1). Only 7% correctly selected all 4 responses without also selecting the CRA.

Segmentation

% receiving at least a "Medium" Score



*= difference between groups **is not** significant at a 95% confidence level*

*= difference between groups **is** significant at a 95% confidence level*

Cognitive Reflection Test:
Detailed Results

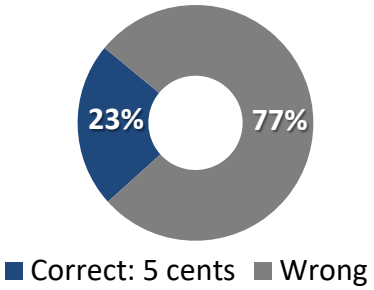
The “Cognitive Reflection Test” is a validated and efficient way to assessing Cognitive Reflection in a survey. The purpose of including this measure was to explore the relationship between investing knowledge and cognitive reflection more generally.

See: Frederick, Shane. 2005. "Cognitive Reflection and Decision Making." Journal of Economic Perspectives, 19 (4): 25-42.DOI: 10.1257/089533005775196732.

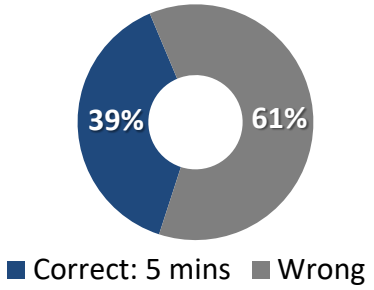
Cognitive Reflection Test: Almost half (47%) answered all three questions wrong

This **Cognitive Reflection Test (CRT)** measures Cognitive Reflection – specifically the ability to suppress an incorrect, intuitive answer and take time to arrive at a more deliberate, correct answer.

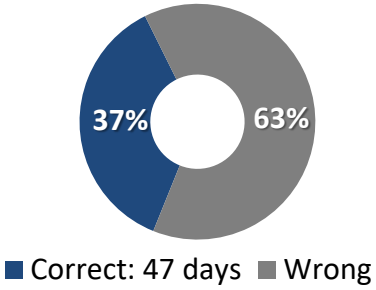
Q A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?
[asked of all respondents; n=2,500]



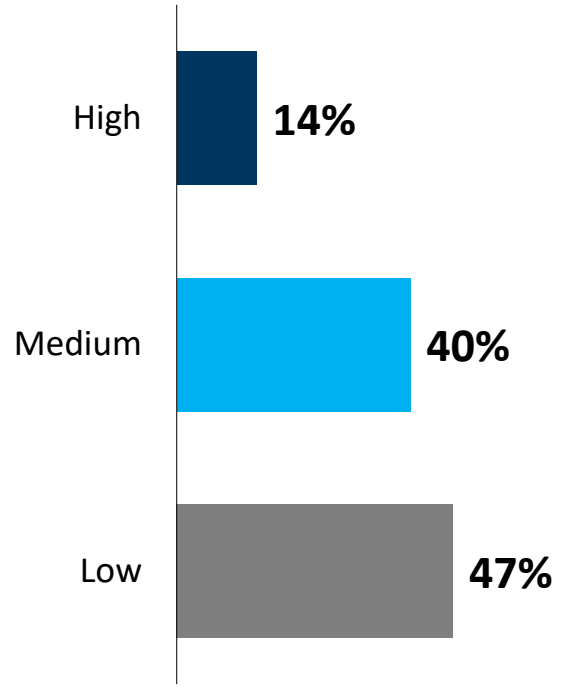
Q If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?
[asked of all respondents; n=2,500]



Q In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?
[asked of all respondents; n=2,500]



Cognitive Reflection



Note: Cognitive Reflection is grouped into three categories: High 3/3, Medium 1-2/3; Low 0/3.

CRT Summary: Overall the CRT showed a strong link with both overall results and each specific index – especially Core Principles and Concepts

The results show that cognitive reflection is correlated with the index overall, and with each component. The weakest correlation is on knowledge about investor protection – which increases only 7 points (from 39% to 46%) as cognitive reflection increases. The largest difference is on the new core investing principles and concepts questions, where the score increases 28 points (from 44% to 72%) as cognitive reflection increases.

	Cognitive Reflection		
% of correct answers	***Low***	***Medium***	***High***
Total	**47%**	**58%**	**64%**
OECD Core Questions	**62%**	**72%**	**78%**
Core Investing Principles & Concepts	**44%**	**61%**	**72%**
Investment Costs	**30%**	**39%**	**47%**
Registered Accounts	**65%**	**73%**	**76%**
Protecting Your Portfolio	**39%**	**44%**	**46%**

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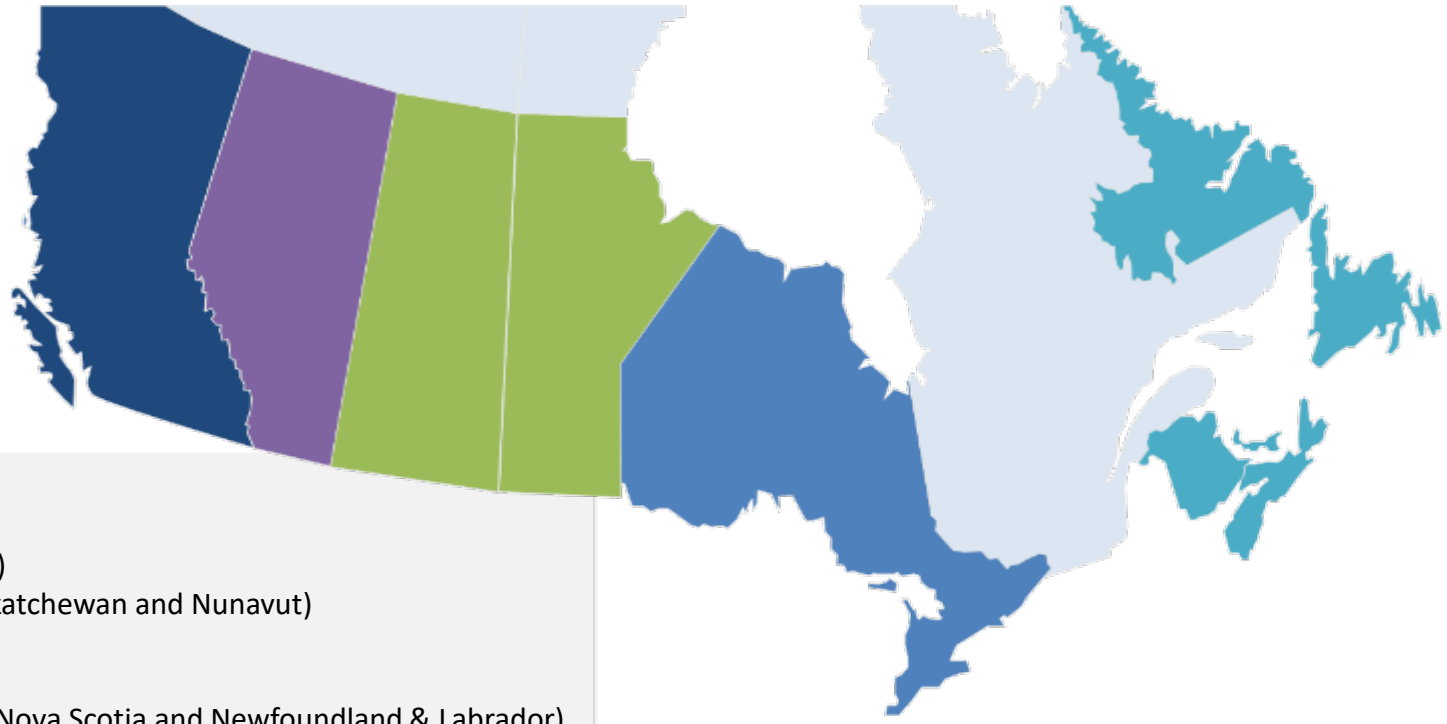
Sample Profile
Demographics and Finances

Throughout the report, results are broken out by investor's age, gender, and their approach to investing. The full demographic and financial profile of investors in the survey sample is summarized in the following section.

Demographics: *Regional Segmentation*

Sample
n=2,500

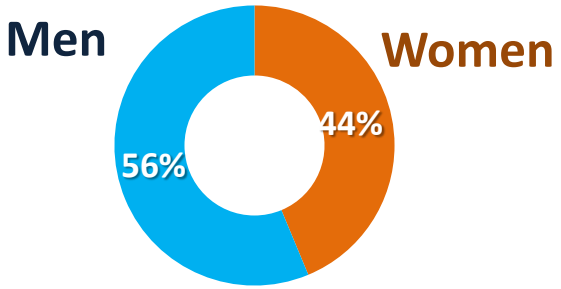


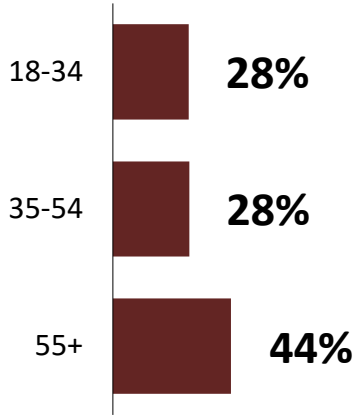
Regional groupings include:
- British Columbia (Yukon)
- Alberta (Northwest Territories)
- Prairie Region (Manitoba, Saskatchewan and Nunavut)
- Ontario
- Quebec
- Atlantic (PEI; New Brunswick; Nova Scotia and Newfoundland & Labrador)

	Total	BC	AB	Prairies	Ontario	Quebec	Atlantic
Unweighted (n)	2,591	362	296	158	975	644	156
Unweighted (%)	100%	14.0%	11.4%	6.1%	37.6%	24.9%	6.0%
Weighted (n)	**2,500**	**362**	**229**	**163**	**949**	**657**	**140**
Weighted (%)	100%	14.5%	9.2%	6.5%	38.0%	26.3%	5.6%

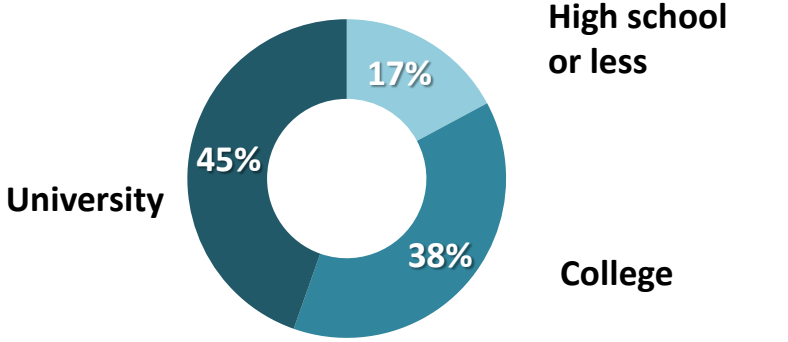
Demographics

Gender & Age



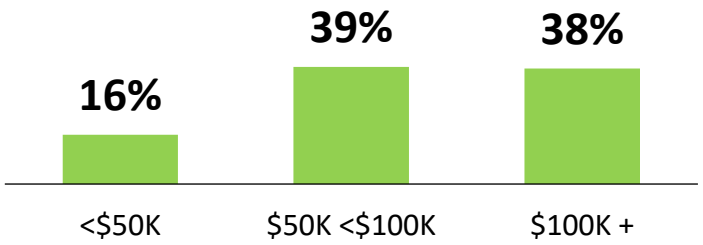


Education

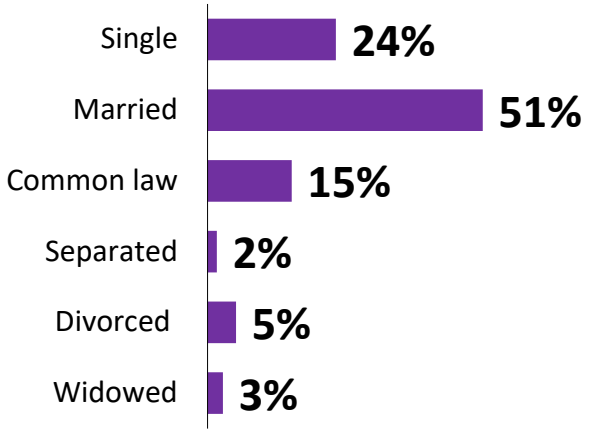


Note: "Don't know" and "Prefer not to say" not shown.

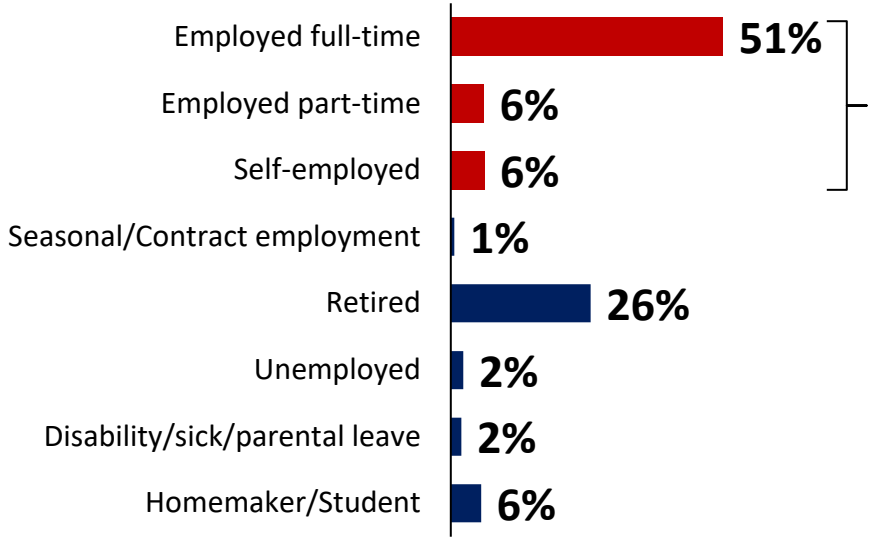
Household Income



Marital Status



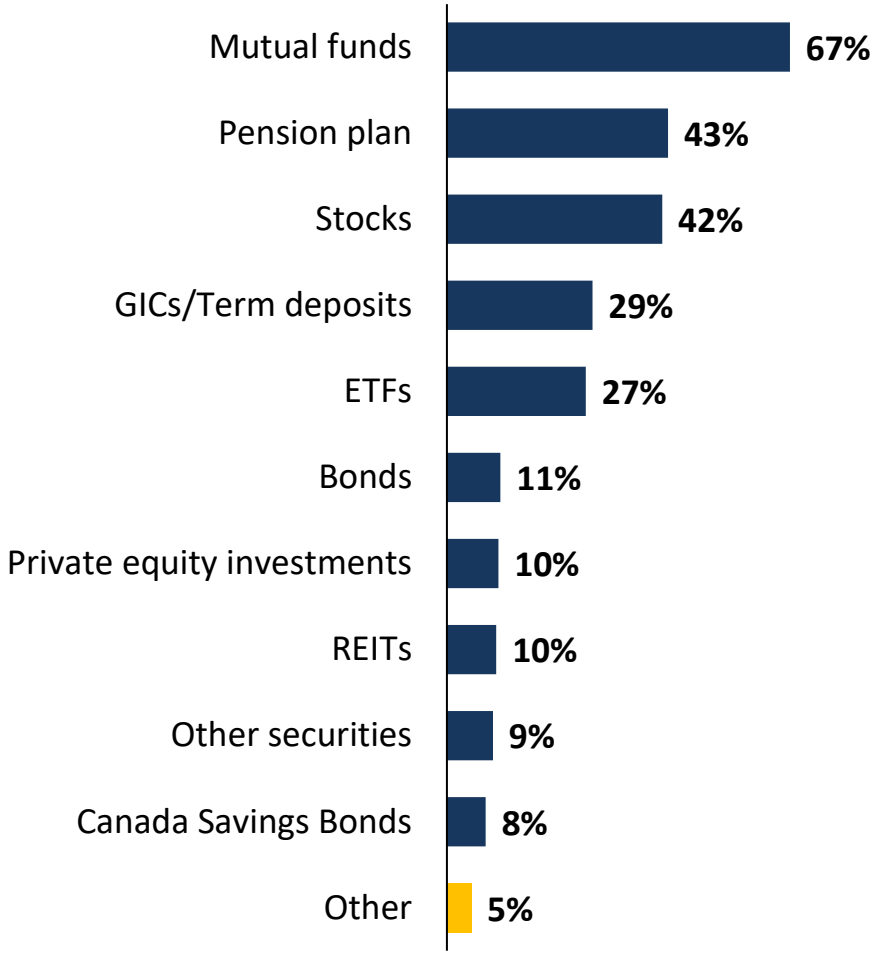
Employment



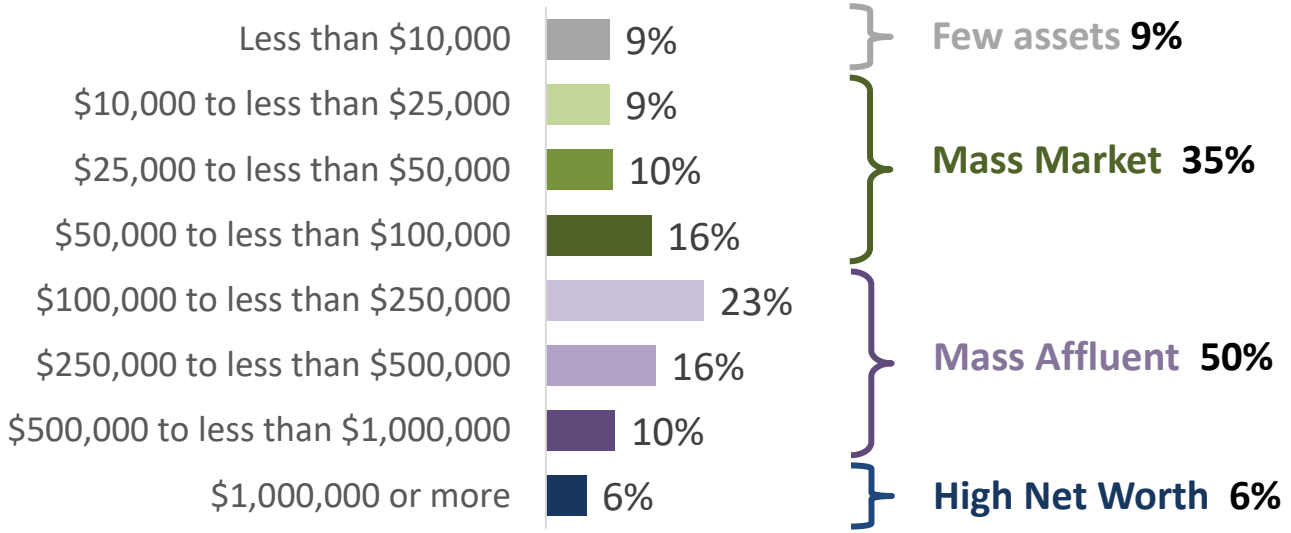
Note: "Don't know" and "Prefer not to say" not shown.

Financial Profile: The majority (60%) have investment advisors; Almost 7-in-10 (67%) invested in mutual funds, followed by pension plan (43%)

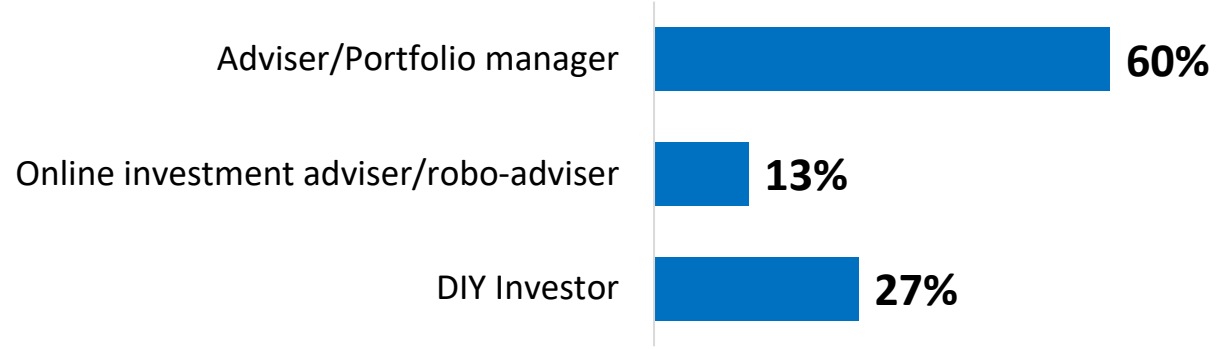
Investment Products



Investable Assets



Investor Type



*See questionnaire for complete question wording

Survey Methodology

Survey Methodology

This study is based on an INNOVATIVE online survey of 2,591 Canadians.

Method: This online survey was conducted using Lucid, a leading provider of online sample. Each survey is administered to a series of randomly selected samples from the panel and weighted to ensure that the overall sample's composition reflects that of the actual Canadian population according to Census data to provide results that are intended to approximate a probability sample.

Sample Size: n=2,591. Weighted to a representative sample of n=2,500 overall.

Field Dates: September 27 to October 4, 2021

Weighting: The survey was weighted by age, gender, education, province, and provincial sub-region for all Canadians based on Statistics Canada Census data. Additionally, respondents were further weighted by investable assets level according Statistics Canada's Survey of Financial Security.

Margin of Error: This is a representative sample. However, traditional margin of error calculations do not apply to most online panels.

Type	Unweighted N	Unweighted %	Weighted N	Weighted %
Men 18-34	419	16.2%	440	17.6%
Men 35-54	489	18.9%	406	16.2%
Men 55+	512	19.8%	562	22.5%
Women 18-34	375	14.5%	260	10.4%
Women 35-54	351	13.6%	301	12.0%
Women 55+	441	17.0%	532	21.3%
Alberta	294	11.3%	227	9.1%
British Columbia	362	14.0%	362	14.5%
Manitoba	84	3.2%	78	3.1%
New Brunswick	42	1.6%	46	1.8%
Newfoundland and Labrador	30	1.2%	20	0.8%
Nova Scotia	74	2.9%	68	2.7%
Ontario	975	37.6%	949	38.0%
Quebec	644	24.9%	657	26.3%
Prince Edward Island	10	0.4%	6	0.3%
Saskatchewan	74	2.9%	84	3.4%
Northwest Territories	2	0.1%	2	0.1%

Note: Graphs may not always total 100% due to rounding values rather than any error in data. Sums are added before rounding numbers.

INNOVATIVE RESEARCH GROUP

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