Article

The financial knowledge of Canadians

by Leslie-Anne Keown

March 8, 2011

Statistics Canada   Statistique Canada

Canada

Standard symbols for Statistics Canada

The following standard symbols are used in Statistics Canada publications:

.   not available for any reference period

..   not available for a specific reference period

…   not applicable

0   true zero or a value rounded to zero

0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded

^{p} preliminary

^{r} revised

x   suppressed to meet the confidentiality requirements of the *Statistics Act*

^{E} use with caution

F   too unreliable to be published

The financial knowledge of Canadians

by Leslie-Anne Keown

Introduction

For optimum control over their financial lives, Canadians need to be knowledgeable about a multitude of financial options and actively engaged in the financial sector. Research, mostly conducted in a non-Canadian context, has shown that the ability to function within this complex system may influence people's capacity to buy a home, retire comfortably or support their children's postsecondary education.[1]

Many things influence how Canadians navigate their way through the many financial options and services available. One of the factors affecting the finances of individuals is their level of financial knowledge.[2] This article uses the objective assessment (quiz) of financial knowledge that was asked as part of the 2009 Canadian Financial Capability Survey (CFCS). It explores, for the first time in a national Canadian context, how financial knowledge is related to sociodemographic characteristics and other financial behaviours like having a budget or investments. In particular, this article looks at two sets of characteristics: individual demographic characteristics such as age, income and sex; and the financial behaviour of individuals. The study includes individuals aged 18 to 64 who responded to the household income question of the CFCS and answered all the questions in the financial knowledge quiz (for more information about the data and concepts see "What you should know about this study").

The financial knowledge test of the CFCS was a multiple-choice quiz comprised of 14 questions compiled and adapted from a variety of

sources.[3] These questions were asked for the first time in a national survey and provide a baseline measure. The quiz included questions on inflation and interest rates, credit reports and credit ratings, stocks and risk, insurance, taxation, debts and loans, and banking fees. The quiz questions and answers appear in Appendix A.

How did Canadians do on the quiz?

Overall, Canadians received a grade of 67% on the quiz. In other words, the average Canadian between 18 and 64, who reported household income in the survey, answered about 9 of the 14 questions correctly. Since this was the first time this group of questions had been asked in a national survey, it is not possible to know if financial knowledge is increasing or decreasing. However, it is possible to determine which characteristics are related to scoring higher or lower than average on the quiz.

The importance of income

Past research, largely done outside Canada, has indicated that income and financial knowledge are related in important ways.[4] Generally, it has been found that people with higher incomes do better on financial knowledge tests. One reason for this may be that people in lower income brackets may not need to use the same financial services as those in higher income brackets. As a result, people in lower income brackets may have less need for some financial services or knowledge and thus less experience in using these services.[5] For instance, limited disposable income or other financial resources may mean some individuals do not invest in the stock market and may not have acquired the same knowledge as others who do invest in the stock market.

Another reason for the relationship between income and financial knowledge may be that characteristics associated with higher incomes, such as higher levels of education, also influence performance on the quiz.[6]

Furthermore, some international research has found a link between financial literacy (of which financial knowledge is an element) and financial behaviours like saving for retirement or using credit—particularly among those in lower income groups.[7]

The CFCS quiz confirms the important association between household income and financial knowledge. Canadians with household incomes of $67,000 or less achieved an average score of 62%. Those with income in the median range ($67,001 to $95,000) had an average score of 67%. Those with incomes above the median (above $95,000) had an average grade of 71%, about 10 percentage points greater than those in the lower income group (Chart 1).

Not only did income impact financial knowledge scores directly, but it often influenced the relationship of individual demographic characteristics and financial behaviours with financial knowledge. Thus, it is also important to examine the relationship between financial knowledge and other characteristics both globally and within each income range.

The university-educated score higher on financial knowledge

Education was clearly associated with scores on the financial knowledge quiz. Across all income levels those who had a university degree had higher scores than those with less education. For example, university graduates had an average score of 73% while those with a high school diploma or less had an average score of 60% (Chart 2).

Men consistently scored somewhat higher than women on the quiz but the difference in scores was relatively small for those in the lower and median income groups. The difference was most pronounced in the upper income group where men, on average, scored 3.1 percentage points higher than women (Table 1).

Chart 1 Higher incomes associated with higher scores on financial knowledge assessment

Average score (%)

Below-median household income†
(0 to $67,000): 62

Median household income
($67,001 to $95,000): 67*

Above-median household income
(over $95,000): 71*

† reference group
* statistically significant difference from the reference group at p < 0.05
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

Chart 2   Higher education associated with higher financial knowledge scores

University degree — 73*
Some postsecondary less than a university degree — 69*
High school diploma or less† — 60

Average score (%)

† reference group
* statistically significant difference from the reference group at p <0.05
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

Chart 3   Age only made a difference for the highest income group

Average score (%)

	Below-median household income (0 to $67,000)	Median household income ($67,001 to $95,000)	Above-median household income (over $95,000)
18 to 24 years	62	65	65*
25 to 34 years	62	67	70*
35 to 44 years †	61	66	73
45 to 54 years	61	67	72
55 to 64 years	63	69	74

† reference group
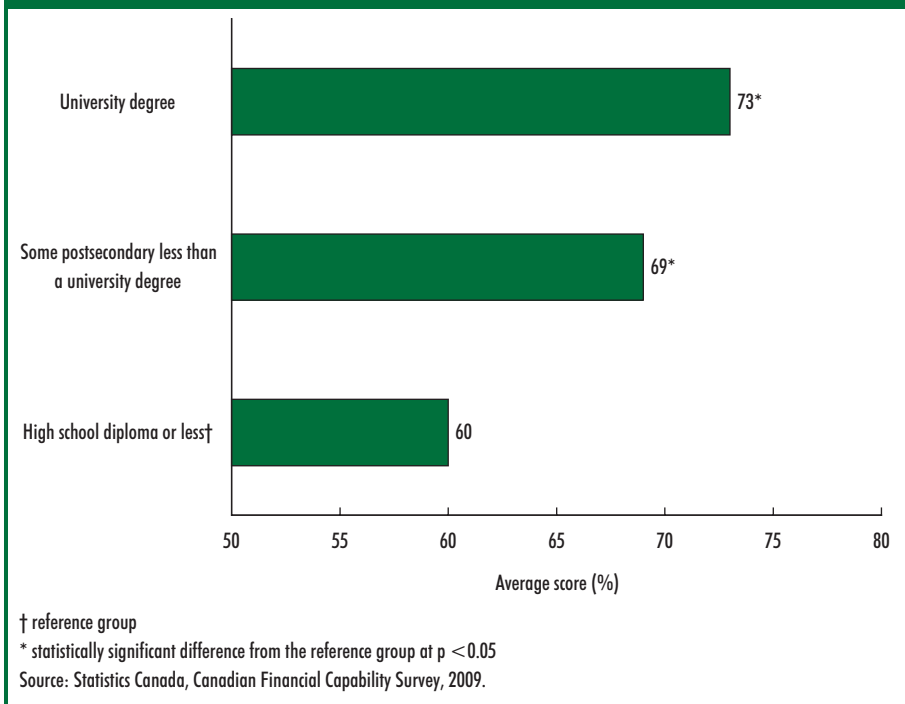* statistically significant difference from the reference group at p <0.05
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

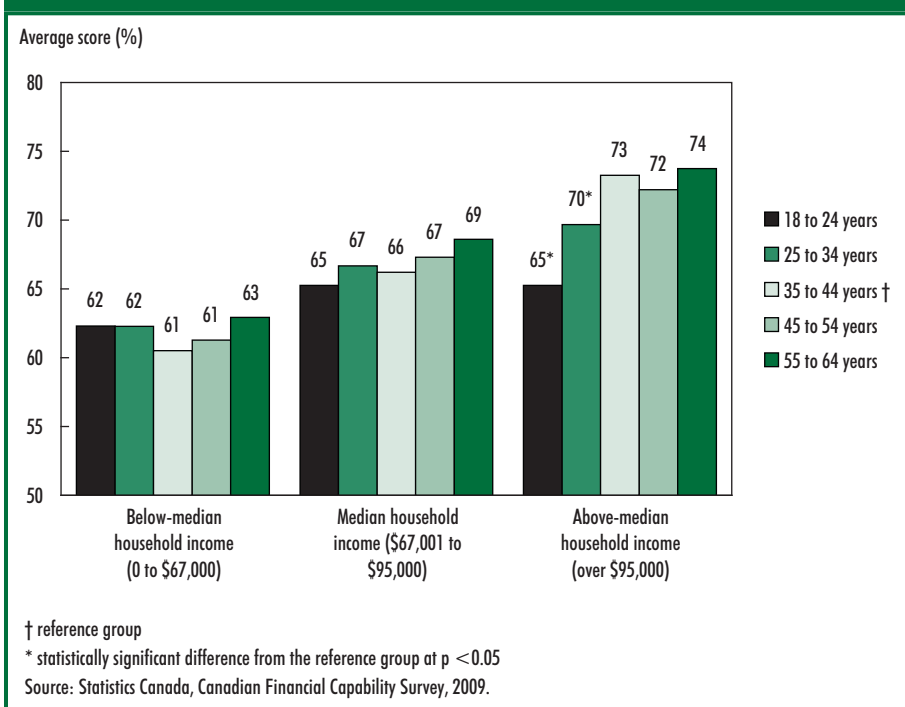### The relationship between certain characteristics and financial knowledge differs by income level

Labour force status was also associated with quiz scores but the relationship varied across income groups. In the lowest and highest income groups, those who were self-employed or those who were retired scored higher than those were employed. In the median income group, the relationship between labour force status and financial knowledge was statistically significant but relatively weak.

In the aggregate, it appears that homeowners had higher financial knowledge scores than renters. However, once household income was considered, the relationship between home ownership and higher financial knowledge scores existed only for those in the lower income group. For the middle and higher income groups, home ownership was not associated with financial knowledge scores.

A similar situation occurs when the relationship between age and financial knowledge is considered. In general, the data show that younger individuals (18 to 24 years of age) had less financial knowledge than older individuals. However, once income is considered, the impact of age was seen only in the highest income group—it did not influence scores in the lower and middle income groups (Chart 3). Thus, older people with higher incomes had greater financial knowledge than their younger counterparts, but there were no age-based differences for the other two income groups.

Immigrants score lower on financial knowledge than those born in Canada

Immigrants had lower financial knowledge scores than people born in Canada. However, among immigrants, the length of time they had been in Canada was an important related characteristic—with those in Canada more than 10 years generally scoring higher than more recent immigrants

Table 1   Demographic characteristics and financial knowledge quiz scores

Select characteristics	Average quiz score				Household income not stated[2]
	Overall average[1]	Below-median household income (0 to $67,000)	Median household income ($67,001 to $95,000)	Above-median household income (over $95,000)	
	percentage				
Total	**66.6**	**61.8**	**66.9**	**71.4**	**56.8**
Age					
18 to 24 years	64.1*	62.3	65.3[E]	65.3*	53.4
25 to 34 years	66.0	62.3	66.7	69.7*	57.3
35 to 44 years†	67.2	60.5	66.2	73.2	56.7
45 to 54 years	67.1	61.3	67.3	72.2	60.3
55 to 64 years	67.5	62.9*	68.6	73.8	56.9
Sex					
Women†	65.1	60.9	65.7	69.6	56.3
Men	68.0*	62.7*	68.0*	72.7*	57.5
Family status					
Unattached	66.6	64.4*	73.3*	78.4*	58.9
Couple only	67.7	62.2*	66.7	73.0	57.5
Couple with children†	67.2	59.4	66.3	72.3	58.9
Single parent	63.6*	60.9	70.6[E]	68.3[E]	55.7
Other	64.3*	62.8*	65.2	65.3*	54.5*
Immigrant status					
Born in Canada/Canadian citizen by birth†	67.9	63.7	68.2	71.9	58.8
Long-term immigrant	63.0*	57.3*	62.4*	69.1*	52.0*
Recent immigrant (in last 10 yrs)	57.6*	52.0*	F	69.5*[E]	47.0*
Education					
High school diploma or less†	60.0	57.1	61.2	65.0	49.4
Some postsecondary (less than a university degree)	68.8*	64.9*	68.5*	72.1*	61.3*
University degree	73.1*	65.9*	72.4*	76.3*	65.3*
Labour force status					
Employed†	67.4	62.3	67.0	71.4	58.4
Self-employed	69.9*	65.5*	67.8	74.3*	62.6*
Unemployed	60.9*	57.6*	64.3	68.3	50.2*
Retired	67.9	64.5*	70.2*[E]	75.6*	59.8
Other	62.8*	60.2	64.6[E]	66.2*	53.2*
Home ownership					
Own with no mortgage	68.4	63.9	67.3	72.3	60.6
Own with mortgage†	68.1	63.4	67.1	71.2	57.9
Rent	61.9*	59.4*	65.6	70.1	52.3*
Region					
Atlantic Canada	64.0*	61.0	64.7	68.3*	60.2*
Quebec	64.0*	60.2	65.5	68.7*	55.9
Ontario†	67.1	60.7	66.8	72.6	55.4
Saskatchewan/Manitoba	67.3	64.5*	66.9	71.0	57.4
Alberta	69.5*	66.0*	67.6	71.7	62.3*
British Columbia	69.2*	65.1*	70.5	72.7	59.2

† reference group

* statistically significant difference from the reference group at $p < 0.05$

1. Overall percentage means do not include those who did not state their household income.

2. Results reported for those who did not state their household income, but no analysis is provided in the article.

Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

(except in the highest income group). In addition, the difference in scores between those born in Canada and immigrants decreased in size as household income increased (Chart 4).

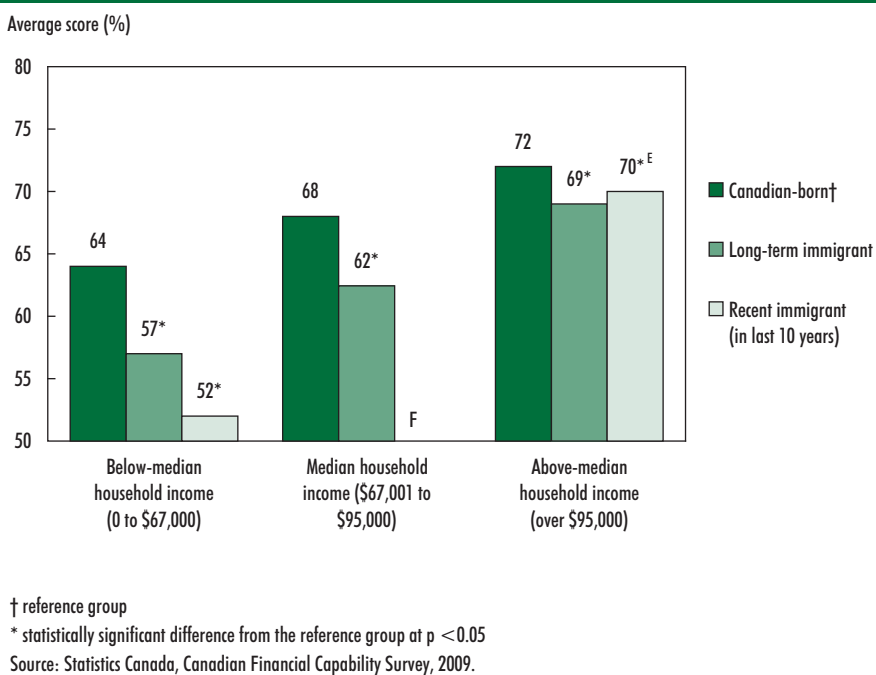### Financial knowledge scores vary by region of residence and income

Overall, scores on the financial knowledge quiz increased from east to west—from 64% in Atlantic Canada to 69% in British Columbia. However, as seen with the other socioeconomic and demographic characteristics, once household income is considered the relationship becomes more complex. For the lower income group, scores were higher in the west than in the east. For those in the middle income group, region of residence was not associated with financial knowledge. People in the highest income group had lower scores in Atlantic Canada and Quebec compared with those in Ontario and the west.

Among the various household types, people who lived alone did better on the financial knowledge quiz than those in families (Chart 5). This may be because those who live alone have sole responsibility for their day-to-day financial transactions and other financial decisions.
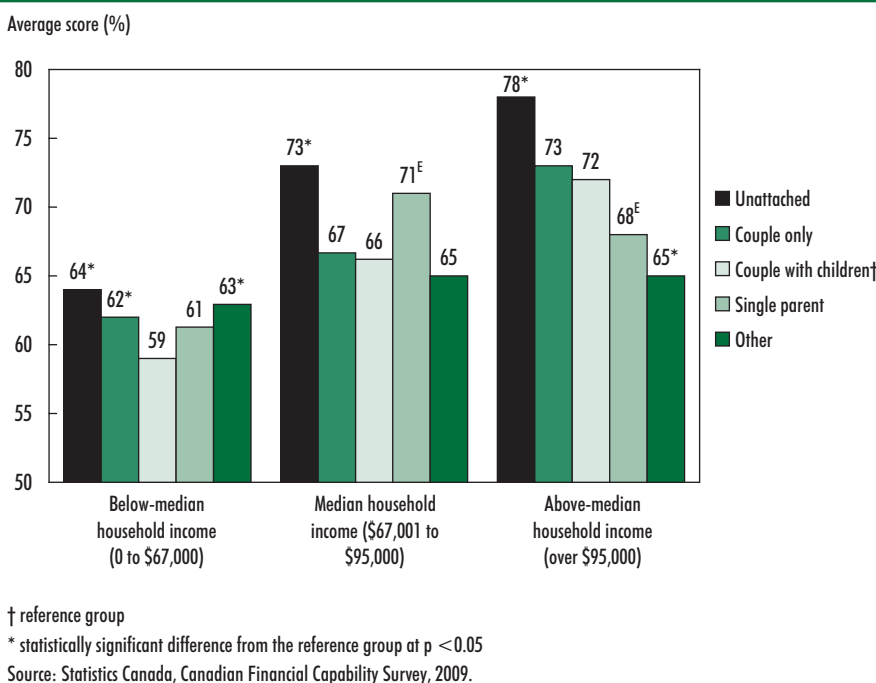
Financial behaviour and financial knowledge are related but income also plays a role

Not only is there a relationship between financial knowledge and demographic characteristics, but financial behaviour is also linked to financial knowledge. Individuals may acquire financial knowledge and subsequently use this knowledge in their day-to-day financial transactions. For example, individuals can learn about how credit, interest rates and general banking work when using a credit card to pay for purchases or withdrawing money for paying bills. Individuals can use and acquire financial knowledge while undertaking more complex and

Chart 4 Immigrants had lower financial knowledge scores than the Canadian-born

Average score (%)

Below-median household income (0 to $67,000): Canadian-born 64, Long-term immigrant 57*, Recent immigrant 52*
Median household income ($67,001 to $95,000): Canadian-born 68, Long-term immigrant 62*, Recent immigrant F
Above-median household income (over $95,000): Canadian-born 72, Long-term immigrant 69*, Recent immigrant 70* E

Legend:
- Canadian-born†
- Long-term immigrant
- Recent immigrant (in last 10 years)

† reference group
* statistically significant difference from the reference group at p <0.05
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

Chart 5 For all income groups, unattached individuals had the highest financial knowledge scores

Average score (%)

Below-median household income (0 to $67,000): Unattached 64*, Couple only 62*, Couple with children 59, Single parent 61, Other 63*
Median household income ($67,001 to $95,000): Unattached 73*, Couple only 67, Couple with children 66, Single parent 71 E, Other 65
Above-median household income (over $95,000): Unattached 78*, Couple only 73, Couple with children 72, Single parent 68 E, Other 65*

Legend:
- Unattached
- Couple only
- Couple with children†
- Single parent
- Other

† reference group
* statistically significant difference from the reference group at p <0.05
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

Table 2 Household financial behaviours and financial knowledge quiz scores

Select characteristics	Average quiz score				
	Overall average[1]	Below-median household income (0 to $67,000)	Median household income ($67,001 to $95,000)	Above-median household income (over $95,000)	Household income not stated[2]
			percentage		
Total	**66.6**	**61.8**	**66.9**	**71.4**	**56.8**
Use a household budget					
No†	66.1	61.3	66.0	70.5	55.3
Yes	67.2*	62.4	67.6	72.1*	59.2*
Late payments in last twelve months					
No†	67.1	62.0	67.0	71.7	57.6
Yes	63.7*	61.6	66.4	68.1*	52.8*
Financial struggle					
No†	67.8	61.9	67.3	71.8	57.7
Yes	64.8*	61.8	66.4	69.9*	55.6
Have a credit card					
No†	57.8	56.8	62.1[E]	F	45.8
Yes	67.5*	62.9*	67.2*	71.6*	58.7*
Have investments					
No†	63.7	60.0	65.2	69.6	52.7
Yes	70.8*	67.2*	69.4*	72.9*	63.4*
Responsibility for day-to-day bills					
Self†	68.0	63.1	70.0	74.2	60.6
Spouse	65.9*	58.5*	64.0*	71.3*	56.0*
Both	66.1*	61.2	65.4*	70.8*	56.2*
Someone else	62.5*	60.1	61.7*[E]	64.1*	53.1*
Responsibility for financial decisions					
Self†	68.4	63.3	70.3	76.1	60.0
Spouse	62.4*	56.1*	61.1*	68.0*	52.5*
Both	67.1*	61.6*	66.2*	71.4*	59.5
Someone else	62.8*	60.4*	63.7*[E]	64.0*	52.8*
Taken finance-related course in last 12 months					
No†	66.2	61.2	66.4	71.5	56.2
Yes	69.5*	67.1*	70.2*	70.8	60.4*

† reference group
* statistically significant difference from the reference group at p < 0.05
1. Overall percentage means do not include those who did not state their household income.
2. Results reported for those who did not state their household income, but no analysis is provided in the article.
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

long-term financial transactions like investing, saving for retirement or making decisions about loans and mortgages.[8] These activities and transactions can be thought of as financial behaviours and they play an important role in the financial knowledge of individuals.

One important element of financial behaviour when considering its relationship to financial knowledge is the choices, decisions and actions made regarding household financial decisions and transactions. There are two distinct areas of financial participation: day-to-day transactions like paying bills and longer term financial decisions like financial investment and planning. In both of these areas, regardless of household income, those who have sole responsibility for these decisions had higher financial knowledge scores than those who had no responsibility or shared the responsibility. For instance, in the below median income group those with sole responsibility for day-to-day financial transactions

scored 3 percentage points higher than when responsibility was assumed by someone else (63% versus 60%). In contrast, for those in the above median group, the difference between these two groups is larger at 10 percentage points (74% versus 64%) (Table 2).

Specific actions or behaviours like having a credit card or taking a financial course are also financial behaviours that are related to financial knowledge. Regardless of income level, people with a credit card had higher financial knowledge scores than those who did not (67% versus 58%). People with investments also scored higher than those without, but the magnitude of the difference varied by income. Similarly, having taken some type of financial course in the 12 months preceding the survey was associated with higher scores on the financial knowledge quiz. Furthermore, people in the highest income group who followed a budget or made bill payments on time were significantly more likely

to have higher financial knowledge scores than those who were in the high income grouping but did not make bill payments on time or follow a budget (Table 2).
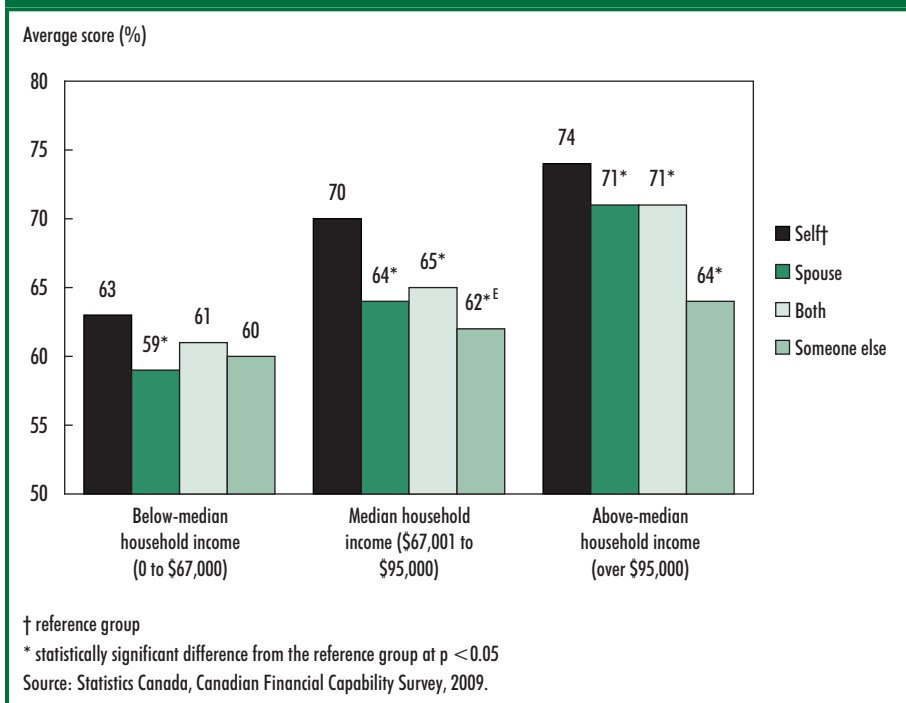
Summary
Navigating the myriad of financial options and understanding the underlying choices available can be a daunting task. Financial knowledge can assist with this navigation while simultaneously being enhanced by these activities.

The relationship between household income and financial knowledge is notable. Those in the higher income group had higher average scores than those in the lower and middle income groups, and the relationship between financial knowledge and other characteristics like demographics and financial behaviours often varied by income group.

Among the demographic characteristics, the relationship between education and financial knowledge was strong, with those with higher education having higher average scores. Men had slightly higher scores than women and the self-employed had higher scores than those employed by someone else and those without work. Home ownership, region of residence, family status and age were also related to financial knowledge and the nature of these relationships varied by income. Immigrants had lower financial knowledge scores than people born in Canada. This relationship was complex, with income and time in Canada being important considerations when looking at average financial knowledge scores among immigrants.

Financial behaviours and financial knowledge were also related and often varied by income group. Being solely responsible for day-to-day financial responsibilities and other types of financial decisions was associated with having higher financial knowledge scores compared to others who shared these responsibilities, but the magnitude

Chart 6   People with sole responsibility for day-to-day financial transactions had higher financial knowledge scores

Average score (%)

Legend: Self† (black), Spouse (dark green), Both (light green), Someone else (medium green)

- Below-median household income (0 to $67,000): Self† 63, Spouse 59*, Both 61, Someone else 60
- Median household income ($67,001 to $95,000): Self† 70, Spouse 64*, Both 65*, Someone else 62*E
- Above-median household income (over $95,000): Self† 74, Spouse 71*, Both 71*, Someone else 64*

† reference group
* statistically significant difference from the reference group at p <0.05
Source: Statistics Canada, Canadian Financial Capability Survey, 2009.

of the difference varied by income group. Similarly, other financial behaviours like having a credit card or using a budget were also associated with financial knowledge.

Leslie-Anne Keown is an analyst with *Canadian Social Trends,* Social and Aboriginal Statistics Division at Statistics Canada.

1. Braunstein, S. and C. Welch. 2002. "Financial literacy: An overview of practice, research, and policy." *Federal Reserve Bulletin*. November. p. 445-457.

2. Braunstein, S. and C. Welch. 2002; and Hung, A., A. Parker and J. Yoong. 2009. *Defining and Measuring Financial Literacy.* Working Paper WR-708. http://ssrn.com/abstract=1498674 (accessed March 2010).

3. Pignal, Jean and Sarah Guay. 2009. *Validation of the Canadian Financial Capability Assessment.* Unpublished. Special Surveys Division, Statistics Canada. Ottawa. p.10.

4. Policy Research Initiative (PRI). 2006. *Why financial capability matters: synthesis report on Canadians and their money*. Ottawa. PRI.

5. Financial Services Authority of Great Britain (FSA). 2005. *Measuring Financial Capability: An Exploratory Study*. University of Bristol, Personal Finance Research Centre. FSA.

6. Bernheim, B. D. 1998. "Financial illiteracy, education, and retirement saving." *Living with Defined Contribution Pensions*. O. Mitchell and S. Schieber (eds.). Philadelphia. University of Pennsylvania Press p. 38-68.

   Scott, J. 2006. "Financial knowledge of the low-income population: Effects of a financial education program." *Journal of Sociology and Social Welfare*. March.

7. Policy Research Initiative. 2006; Policy Research Initiative. 2004. *Financial capability and poverty: discussion paper* PRI (SEDI).

8. Braunstein, S. and C. Welch. 2002; Hilgert, M. and J. Hogarth. 2003. "Household financial management: The connection between knowledge and behavior." *Federal Reserve Bulletin*. July. p. 309-322; and Policy Research Initiative (PRI). 2006.

Appendix A   The financial knowledge quiz of the Canadian Financial Capability Survey

Each of the 14 questions in the quiz is listed below. The correct answers and the percentage of the study population that selected the correct answer are presented in the answer key at the end of the box.

1.   **If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have at least as much buying power in a year's time?**
   a) Yes
   b) No

2.   **A credit report is…?**
   a) A list of your financial assets and liabilities
   b) A monthly credit card statement
   c) A loan and bill payment history
   d) A credit line with a financial institution

3.   **Who insures your stocks in the stock market?**
   a) The National Deposit Insurance Corporation
   b) The Securities and Exchange Commission
   c) The Bank of Canada
   d) No one

4.   **True or false. By using unit pricing at the grocery store, you can easily compare the cost of any brand and any package size.**
   a) True
   b) False

5. **If each of the following persons had the same amount of take home pay, who would need the greatest amount of life insurance?**
   a) A young single woman with two young children
   b) A young single woman without children
   c) An elderly retired man, with a wife who is also retired
   d) A young married man without children

6. **If you had a savings account at a bank, which of the following statements would be correct concerning the interest that you would earn on this account?**
   a) Sales tax may be charged on the interest that you earn
   b) You cannot earn interest until you pass your 18th birthday
   c) Earnings from savings account interest may not be taxed
   d) Income tax may be charged on the interest if your income is high enough

7. **Inflation can cause difficulty in many ways. Which group would have the greatest problem during periods of high inflation that lasts several years?**
   a) Young working couples with no children
   b) Young working couples with children
   c) Older, working couples saving for retirement
   d) Older people living on fixed retirement income

8. **Lindsay has saved $12,000 for her university expenses by working part-time. Her plan is to start university next year and she needs all of the money she saved. Which of the following is the safest place for her university money?**
   a) Corporate bonds
   b) Mutual Funds
   c) A bank savings account
   d) Locked in a safe at home
   e) Stocks

9. **Which of the following types of investment would best protect the purchasing power of a family's savings in the event of a sudden increase in inflation?**
   a) A twenty-five year corporate bond
   b) A house financed with a fixed-rate mortgage
   c) A 10-year bond issued by a corporation
   d) A certificate of deposit at a bank

10. **Under which of the following circumstances would it be financially beneficial to borrow money to buy something now and repay it with future income?**
    a) When something goes on sale
    b) When the interest on the loan is greater than the interest obtained from a savings account
    c) When buying something on credit allows someone to get a much better paying job
    d) It is always more beneficial to borrow money to buy something now and repay it with future income

11. **Which of the following statements is not correct about most ATM (Automated Teller Machine) cards?**
    a) You can get cash anywhere in the world with no fee
    b) You must have a bank account to have an ATM card
    c) You can generally get cash 24 hours-a-day
    d) You can generally obtain information concerning your bank balance at an ATM machine

12. **Which of the following can hurt your credit rating?**
    a) Making late payments on loans and debts
    b) Staying in one job too long
    c) Living in the same location too long
    d) Using your credit card frequently for purchases

13. **What can affect the amount of interest that you would pay on a loan?**
    a) Your credit rating
    b) How much you borrow
    c) How long you take to repay the loan
    d) All of the above

14. **Which of the following will help lower the cost of a house?**
    a) Paying off the mortgage over a long period of time
    b) Agreeing to pay the current rate of interest on the mortgage for as many years as possible
    c) Making a larger down payment at the time of purchase
    d) Making a smaller down payment at the time of purchase

Answer key:

Question	Correct answer	Percentage giving correct answer	Question	Correct answer	Percentage giving correct answer
1	b	70	8	c	68
2	c	51	9	b	43
3	d	38	10	c	30
4	a	76	11	a	79
5	a	81	12	a	94
6	c and d	14 and 64	13	d	75
7	d	57	14	c	92