Economic Insights

Financial Expectations and Household Debt

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by René Morissette, Social Analysis and Modelling Division, Statistics Canada

This *Economic Insights* article quantifies the degree to which families who expect their financial situation to get better in the next two years have, all else equal, more debt than comparable families. The data are drawn from the Survey of Financial Security for 1999, 2005 and 2016. The term "family" is used to refer to family units and includes economic families and unattached individuals. Debt and income estimates are shown in 2016 dollars. The study shows that even after a large set of socioeconomic characteristics is controlled for, families who expect their financial situation to improve in the near future have significantly more debt and generally higher debt-to-income ratios than other families.

Introduction

Economists usually agree that workers, families and firms incorporate expectations into their decision-making process.[1] Workers who expect their employer to implement mass layoffs in the near future may, as a precautionary measure, start searching for a new job, leave the firm or move into self-employment. Consumers who anticipate increases in durable goods prices may purchase products sooner. Firms that expect increasing demand for their products may choose to invest in machinery and equipment to increase their production capacity. Likewise, families who expect their financial situation to improve in the near future (e.g., because the major income earner anticipates

a promotion) may increase their consumption expenditures, therefore carrying greater amounts of non-mortgage debt than they would have otherwise, or may choose to move to a larger dwelling and carry a higher mortgage.

It is generally difficult to assess how much expectations matter empirically since statistical agencies do not often collect this information. Fortunately, there are exceptions. In 1999, 2005 and 2016, Statistics Canada's Survey of Financial Security (SFS)—a survey of families' assets and debts—asked

Chart 1
Debt-to-disposable income ratio of households, first quarter (Q1) of 1990 to fourth quarter (Q4) of 2018

percent
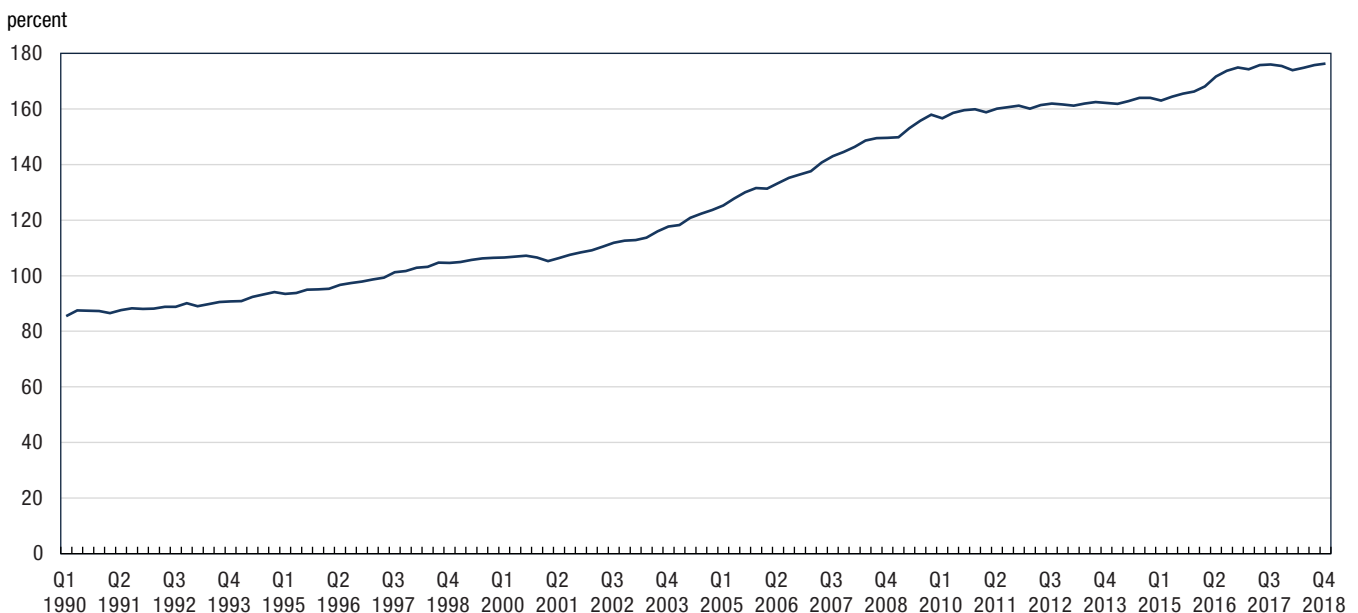
Source: Statistics Canada, *Table 38-10-0235-01 Financial indicators of households and non profit-institutions serving households, national balance sheet accounts.*

1. For example, see economics Nobel Prize laureate Robert E. Lucas, Jr. (1976).

Canadian families the following question (Survey of Financial Security n.d., Question K17):

> "In the next two years do you think your (family's) financial situation will get better, worse, or stay the same?"

This question allows researchers, inter alia, to analyze whether families who expect their financial situation to improve carry significantly more debt than otherwise comparable families. These analyses may shed light on factors that underlie the evolution of household indebtedness. This issue is particularly interesting to policy makers and Canadians given the secular increase in various measures of household indebtedness, such as the debt-to-disposable income ratio of Canadian households (Chart 1).

Using the SFS for 1999, 2005 and 2016, this article quantifies the degree to which families who expect their financial situation to improve in the next two years have, all else equal, more debt and higher debt-to-income ratios than observationally equivalent families.[2]
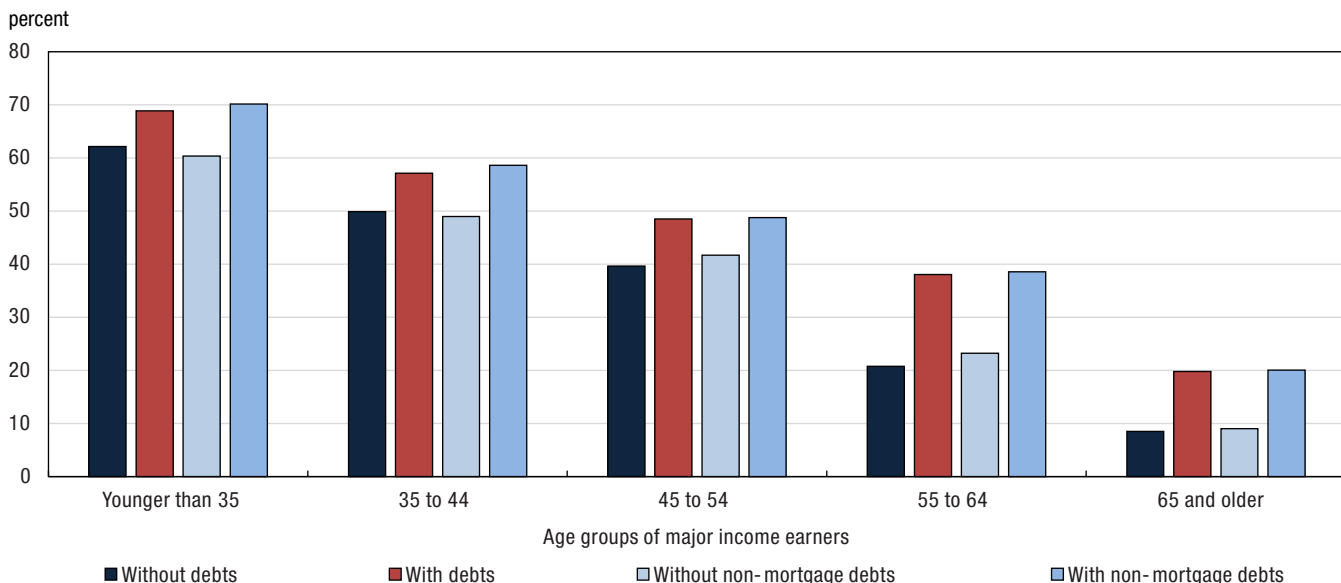
Expectations by age

Since individual earnings tend to increase faster at the beginning of a career than during subsequent stages, one would expect young families to anticipate stronger growth in employment income and thus to be more optimistic about their financial situation in the near future than older families. Chart 2 supports this view. Regardless of whether families carry debts or non-mortgage debts, the percentage of families with positive expectations for their financial situation in the near future declines monotonically with the age of the major income earner. Specifically, families where the major income earner is younger than age 35 are at least 3.5 times more likely than families where the major income earner is aged 65 or older to expect their financial situation to get better in the next two years.

Chart 2 also shows that, within a given age group, families with some debt report slightly more optimistic expectations than other families. One interpretation is that families carrying relatively large amounts of debt might be more likely than others to pay off some of this debt quickly and would, therefore, be more likely to expect their financial situation to improve based on the resulting balance sheet realignment. It is not possible to test this hypothesis with SFS data. Nevertheless, the fact that younger families report more optimistic expectations than older families, regardless of their debt status, is consistent with the notion that their expectations for their financial situation contain information about expected growth in employment income.[3]

Chart 2
Percentage of families who expect a better financial situation in the next two years, by age of major income earner and debt status

percent

Age groups of major income earners

■ Without debts   ■ With debts   ☐ Without non-mortgage debts   ☐ With non-mortgage debts

Source: Statistics Canada, Survey of Financial Security, 1999, 2005 and 2016.

2. For compactness, the article compares families who expect their financial situation to get better with other families, i.e., families who expect their financial situation to stay the same or to worsen. Across all years considered, 45% of families expected their financial situation to improve, 45% expected it to stay the same, and 10% expected it to worsen. The main finding of the paper—the fact that financial expectations are a strong predictor of household debt—holds when these three groups are analyzed separately.
3. When synthetic birth cohorts are constructed from SFS 1999 and SFS 2016, the percentage of families who report positive expectations about their financial situation in the near future falls within cohorts over time. This finding indicates that the patterns shown in Chart 2 are not simply the result of major income earners born in recent years being intrinsically more optimistic than older major income earners.

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Table 1
Financial expectations and average non-mortgage debt, all families

	Average difference between the non-mortgage debt of families with positive expectations[1] and that of other families		Average non-mortgage debt	
	Homeowners	Renters	Homeowners	Renters
	2016 dollars			
All family units	6,836***	2,020**	22,338	9,135
Age of major income earner (years)				
25 to 34	9,319***	1,951†	23,481	13,431
35 to 54	5,533***	1,322*	27,162	9,992
55 or older	8,707***	2,598***	16,521	4,464
Education level of major income earner				
High school or less	3,956**	2,239**	18,746	6,381
Postsecondary education	5,781***	1,221	23,129	10,674
University degree	9,748***	1,798	26,522	13,888
Immigration status of major income earner				
Landed immigrant	6,771***	792	22,912	8,900
Canadian-born	6,610***	2,219***	22,174	9,197
1999	5,505***	2,389***	13,896	7,836
2005	3,379	1,966	22,041	8,554
2016	10,376***	1,859†	29,088	10,728

* significantly different from reference category ($p < 0.05$)
** significantly different from reference category ($p < 0.01$)
*** significantly different from reference category ($p < 0.001$)
† significantly different from reference category ($p < 0.10$)
1. Families who expect their financial situation to get better in the next two years.
Notes: Columns 1 and 2 show results from multivariate analyses that control for the age, education level and immigration status of the major income earner; family income after tax; family size; equity in the principal residence; equity in other residences; business equity; registered pension plan assets; assets in registered retirement savings plans; economic region fixed effects; and, whenever applicable, regional unemployment rates, mean home prices in a given economic region, and year effects. Statistical inference is based on standard errors clustered at the economic region level.
Source: Statistics Canada, Survey of Financial Security, 1999, 2005 and 2016.

Expectations and non-mortgage debt

Table 1 assesses whether families who have positive expectations carry greater amounts of non-mortgage debt than other comparable families. Data from 1999, 2005 and 2016 are pooled to perform multivariate analyses. These analyses indicate that even after controlling for a large set of covariates,[4] homeowner families with positive expectations held roughly $6,800 (2016 dollars) more in non-mortgage debt than other homeowner families during the period from 1999 to 2016. Since the average non-mortgage debt among homeowners (including families with no non-mortgage debt) amounted to about $22,300 during this period, the difference is empirically significant: it represents 30% of average non-mortgage debt for this group.

Among homeowners, positive expectations for their financial situation in the near future are associated with significantly greater amounts of non-mortgage debt, even when the data are disaggregated by the age, education level or immigration status of the family's major income earner. The same is true for renters, although the differences for this group are often estimated less precisely.

In sum, Table 1 indicates that families who have positive expectations about their financial situation in the near future generally have more non-mortgage debt in a given year than other comparable families.

Expectations and the debt-to-income ratio

Families with positive expectations about their financial situation may not only incur greater expenditures and non-mortgage debt than other families, but they may also choose to buy bigger homes and carry larger mortgages. This could happen if, for example, the family expected its employment income to permanently increase over the next few years.

Multivariate analyses support this hypothesis. All else being equal, homeowner families with positive expectations for their financial situation held about $27,900 more in mortgage debt than other families during the period from 1999 to 2016.[5] Since the average mortgage debt of homeowners (including those with no mortgage debt) amounted to about $101,000 during this period, the difference represents 28% of the average mortgage debt for homeowner families.

Therefore, homeowner families who expect their financial situation to improve in the near future display higher amounts of non-mortgage debt and mortgage debt than other families. This suggests that homeowner families with positive expectations will have greater debt-to-income ratios than other families.

Table 2 examines this issue for families whose after-tax income equals $10,000 or more (2016 dollars) and who are in the bottom 95% of the debt-to-income ratio distribution for the years 1999, 2005 and 2016, collectively.[6] For this sample, the debt-to-income ratios of homeowner families with positive expectations were, on average, 32 percentage points higher during the period from 1999 to 2016 than the debt-to-income

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4. The multivariate analyses shown in Table 1 control for the age, education level and immigration status of the major income earner; family income after tax; family size; equity in the principal residence; equity in other residences; business equity; registered pension plan assets; assets in registered retirement savings plans; economic region fixed effects; and, whenever applicable, regional unemployment rates, mean home prices in a given economic region, and year effects.
5. This difference is found after controlling for the age, education level and immigration status of the major income earner, as well as family income after tax, family size, business equity, registered pension plan assets, assets in registered retirement savings plans, economic region fixed effects, regional unemployment rates, mean home prices in a given economic region, and year effects.
6. These restrictions are imposed to exclude families with extremely high debt-to-income ratios. If included in the sample, these families would yield average debt-to-income ratios that are not representative of the debt-to-income ratios of typical families. Excluding families in the top 5% of the debt-to-income ratio distribution amounts to excluding families whose debt-to-income ratios are higher than 4.5.

Table 2
Financial expectations and debt-to-income ratios, families with at least $10,000 (2016 dollars) in after-tax income and debt-to-income ratios no higher than 4.5

	Average difference between the debt-to-income ratio of families with positive expectations[1] and that of other families		Average debt-to-income ratio	
	Homeowners	Renters	Homeowners	Renters
	percentage points		percent	
All family units	**32.2*****	**6.2*****	**116.5**	**27.8**
Age of major income earner (years)				
25 to 34	46.4***	-0.3	208.1	39.3
35 to 54	28.1***	5.8*	145.5	28.2
55 or older	26.6***	9.3***	59.1	13.0
Education level of major income earner				
High school or less	31.3***	8.0***	94.9	20.5
Postsecondary education	30.0***	8.3*	130.8	33.4
University degree	34.4***	-1.4	132.2	38.1
Immigration status of major income earner				
Landed immigrant	43.9***	4.1	129.4	24.2
Canadian-born	29.2***	6.5***	113.2	28.8
1999	28.7***	5.8***	100.0	25.2
2005	29.8***	5.8	113.7	27.1
2016	37.8***	7.4**	133.1	30.7

* significantly different from reference category ($p < 0.05$)
** significantly different from reference category ($p < 0.01$)
*** significantly different from reference category ($p < 0.001$)
1. Families who expect their financial situation to get better in the next two years.

Notes: Columns 1 and 2 show results from multivariate analyses that control for the age, education level and immigration status of the major income earner; family income after tax; family size; economic region fixed effects; and, whenever applicable, regional unemployment rates, mean home prices in a given economic region, and year effects. Statistical inference is based on standard errors clustered at the economic region level.
Source: Statistics Canada, Survey of Financial Security, 1999, 2005 and 2016.

ratios of other comparable families.[7] This difference is substantial since the average debt-to-income ratio observed for the sample of homeowners used in Table 2 amounted to 117% during the 1999-to-2016 period.

Regardless of the age group, education level or immigration status of the major income earner, homeowner families who expect improvements in their financial situation have debt-to-income ratios exceeding those of other homeowner families by at least 27 percentage points.

Among renter families, those who have positive expectations also have, in the aggregate, higher debt-to-income ratios than renter families with other expectations. However, the differences are less pronounced, at least in absolute terms. Differences are precisely estimated for renter families whose major income earner is Canadian-born, 35 or older, or has no university degree.

Overall, Tables 1 and 2 provide evidence that, in a given year, families' expectations about their financial situation in the near future are strongly correlated with their levels of indebtedness.

This does not imply, however, that changes over time in families' expectations can account for the increase in household indebtedness observed from 1999 to 2016. Since the percentage of families with positive expectations changed little during this period—from 46% in 1999 to 44% in 2016—changes in expectations cannot account for the observed increase in household indebtedness. Therefore, this suggests that other unobserved factors—e.g., a preference for bigger houses, a desire to maintain status with rich households in a context of rising income inequality (Bertrand and Morse 2016) or a falling aversion to high levels of indebtedness—may underlie the growth in household indebtedness since the late 1990s.

Conclusion

This article shows that families' expectations about their financial situation are, in a given year, strongly correlated with their amounts of debt and debt-to-income ratios. All else equal, families who expect their financial situation to improve in the near future have significantly higher levels of debt and debt-to-income ratios than comparable families.

One important issue is the degree to which these correlations represent a causal effect of expectations regarding income growth on household indebtedness or some unobserved trait (such as optimism) that leads families to simultaneously expect improvements in their financial situation and carry large amounts of debt. Without panel data on wealth and expectations, it is impossible to disentangle these two mechanisms. Another possibility is that the positive correlation between expectations and indebtedness arises partly because families who carry relatively large amounts of debt might be more likely than others to pay off some of these debts quickly, and therefore expect their financial situation to improve. A third possibility is that past changes in a family's financial situation might drive both its expectations and its current debt levels. Regardless of the underlying mechanisms generating this correlation, the results shown in this article highlight the fact that families' expectations for their financial situation are strong predictors of household indebtedness in a given year. This finding is of interest to statistical agencies and researchers. It suggests that the collection of data on families' expectations enriches analyses of household indebtedness and that such analyses could routinely include expectations as a control variable.

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7. The multivariate analyses shown in Table 2 control for the age, education level and immigration status of the major income earner; family income after tax; family size; economic region fixed effects; and, whenever applicable, regional unemployment rates, mean home prices in a given economic region, and year effects.

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