

CURRENT ANALYSIS

August 2014

Rising leverage lurks behind improving Canadian household net worth

Statistics Canada at the start of this year released an updated Survey of Financial Security (SFS) for 2012. This report provides a snapshot of Canadian household balance sheets that provide various disaggregations by both asset and liability categories. While much of this detail is available in more timely indicators, like Statistics Canada’s quarterly national balance sheet accounts, an advantage of the SFS is that these categories can be further broken down by household age. The surveys have been conducted periodically with the 2012 survey similar in scope to a survey conducted in 1999. There was an intervening survey in 2005 which largely covered the same variables but with a notably reduced sample size that makes the results of that survey less robust. In this note, we focus on how household balance sheets have evolved among different age cohorts over the period from 1999 to 2012.

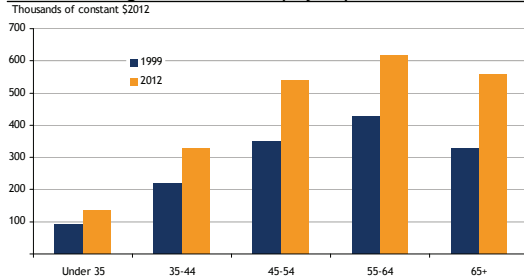
Net worth has increased across all age cohorts

One of the more comprehensive indicators that emerges from the SFS is the measure of household net worth. The SFS confirms earlier reported data that household balance sheets, on net, have improved substantially in recent decades. The SFS data shows a sizeable 66% improvement in real household net worth from 1999 to 2012, or 4% per annum, excluding employer pension plans, the value of which can shift dramatically based on the methodology used to convert future cash flows to a present value asset<sup>1</sup>. Part of that increase reflected the impact of population aging. Households in the 55+ categories tend to have higher net worth so an increasing share of the population in the 55+ age cohorts as the baby boom generation ages boosted the average. With that said, holding the age composition of Canadian households steady at 1999 levels, average net worth still would have increased by about 54% over the period and, as Graph 1 indicates, the dollar improvement has also been relatively evenly distributed among all age cohorts. In percentage terms, all posted substantial increases, ranging from 44% for the 55-64 age cohort to 70% for the 65+ cohort, over the period.

Housing an important source of net worth improvement

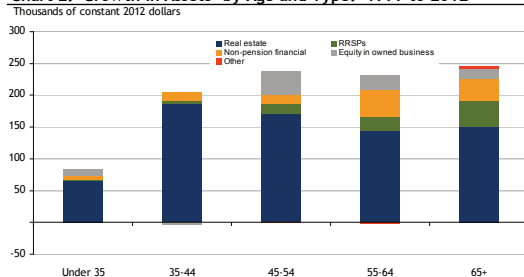
The SFS data also confirms that much of the total increase in average household net worth between 1999 and 2012 was accounted for by increases in equity in real estate. This component alone accounted for over 60% of the total improvement in average net worth over the period. The importance of housing

Chart 1: Average Net Worth Ex Employer Sponsored Pensions



Source: Statistics Canada, RBC Economics Research

Chart 2: Growth in Assets\* by Age and Type: 1999 to 2012



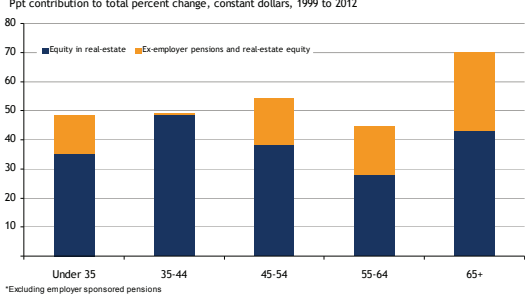
\*Excluding employer pension assets

Source: Statistics Canada, RBC Economics Research

**Paul Ferley**  
 Assistant Chief Economist  
 (416) 974 7231  
 paul.ferley@rbc.com

**Nathan Janzen**  
 Economist  
 (416) 974 0579  
 nathan.janzen@rbc.com

**Chart 3: Change in Household Net Worth\* by Asset Type**



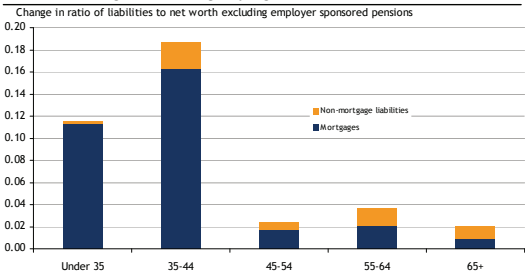
\*Excluding employer sponsored pensions  
Source: Statistics Canada, RBC Economics Research

**Chart 4: Liabilities to Net Worth ex-employer pensions**



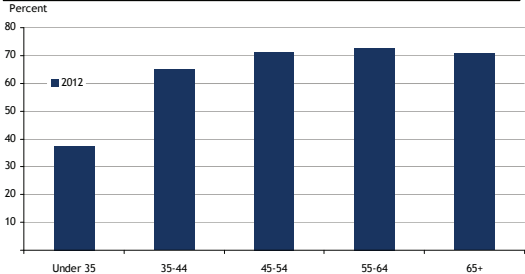
Source: Statistics Canada, RBC Economics Research

**Chart 5: Change in Leverage by Age Cohort: 1999 to 2012**



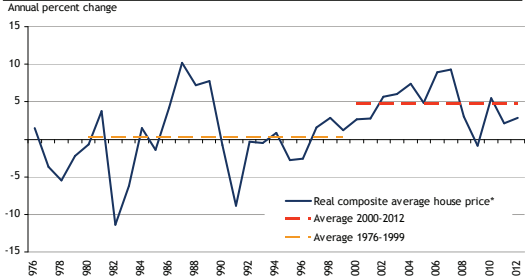
Source: Statistics Canada, RBC Economics Research

**Chart 6: Home Ownership Rate**



Source: Statistics Canada, RBC Economics Research

**Chart 7: Canadian Real House Price Growth**



\*Deflated by the consumer price index  
Source: Royal LePage, RBC Economics Research

to the improvement in household balance sheets has been observed in other more-timely data and is not surprising given the rapid run-up in house prices over the last decade. Breaking down the data by age cohort, however, shows that the extent to which households have counted on real-estate equity to drive net worth improvement has varied significantly by age of household. Although increases in average equity in real-estate accounted for the majority of net worth gains for all age cohorts, the cohort aged 35-44 in 2012 was by far the most reliant on net real-estate assets with that category accounting for all or virtually all of the increase in asset holdings (Chart 2) and net worth (Chart 3) for that age group relative to its 1999 equivalent.

**First time home buyers and rising house prices boosted leverage ratios...**

Moreover, although average asset holdings have increased significantly, younger age cohorts have also become significantly more leveraged relative to their 1999 equivalents compared to older age groups. The increase in the ratio of household liabilities to net worth for the 35-44 age cohort in 2012 relative to its 1999 average, for example, was over two times the all-ages average increase and has significantly outpaced the increase in any other age cohort (Chart 4).

Breaking down the increased leverage ratio by type of debt shows that most of the increase in household leverage in the 35-44 age cohort has been the result of increased mortgage debt (Chart 5). The comparatively large increase in leverage appears to be related to the fact that this age cohort made up much of the population of first-time home buyers between 1999 and 2012; a period that also coincided with a historically high rate of house price appreciation. The households aged 35-44 in 2012 were aged 22 to 31 in 1999. As Chart 6 reiterates, homeownership rates rise sharply when moving from the Under-35 to the 35-44 age cohort, suggesting that the 35-44 age cohort in 2012 did contain a disproportionate share of the first-time home buyer population between 1999 and 2012.

Real house prices increased by an average of 4.6% per year from 1999 to 2012, which was well-above the average 0.3% increase over the prior two decades (Chart 7). This has resulted in higher leverage ratios for first-time home buyers. For existing homeowners (i.e. households who purchased their home prior to 1999), the price gains between 1999 to 2012 simply resulted in an increase in equity in real-estate.

**...although leverage also increasing excluding real-estate**

Interestingly, although real estate debt was by far the largest contributor to the increased leverage of the 35-44 population in 2012, it was not the only factor. Excluding real-estate, leverage still increased notably for this age cohort relative to other age groups when compared to their 1999 equivalents

(Chart 8). There could be a number of explanations for the increase. For one, interest rates are significantly lower than they were in 1999 which has reduced the monthly carrying costs associated with higher debt; however, this would potentially contribute to higher leverage ratios for all age cohorts.

Another could simply be that there has been a shift in preference for current consumption at the expense of future consumption, resulting in less saving. Higher income or an increase in expected future income could have induced greater borrowing by the 35-44 year olds in the 2012 survey or it could reflect growing comfort with the idea of carrying a higher debt level than in the past. It is also possible, however, that the increased cost of purchasing a home and servicing a mortgage, particularly for first-time buyers, has left less funds available for other purchases requiring greater non-mortgage debt.

It is the case that the cost of servicing higher debt levels does appear to have risen significantly for the 35-44 age cohort despite declining interest rates. As a rough approximation, the monthly mortgage payment on a 25-year mortgage at market rates and average mortgage debt outstanding has risen much more sharply for the 2012 cohort of 35-44 year-olds compared to their 1999 equivalents than for other age groups (Chart 9).

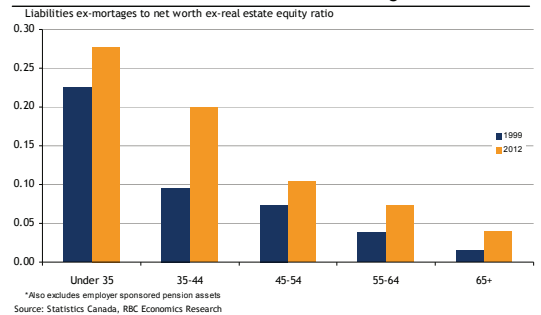
### Homeowners cashing in on real-estate wealth?

The main contributor to the rise in leverage outside of real-estate for the 35-44 age cohort has been line-of-credit debt (Chart 10). Vehicle loans also added incrementally to average leverage while student loan debt was essentially unchanged and small declines in credit card and “other” debt actually provided small partial offset. The Bank of Canada, in its [Winter 2011-2012 Review](#) found that home equity extraction, in part through the use of lines of credit tied to housing, had been responsible for much of a run-up in household debt-to-income ratios over the previous decade. It is possible that the increased use of lines-of-credit by the 35-44 age cohort is a reflection of households withdrawing some of the substantial gains in real-estate equity seen over the period while the increase in overall leverage outside of real-estate suggests that at least some of the withdrawn funds are being used for consumption rather than investment in other assets. Indeed, Chart 11 shows that this may have been a factor across age cohorts. For some of the older age cohorts, it is noteworthy how significant the increase has been compared to the very low levels that prevailed in 1999.

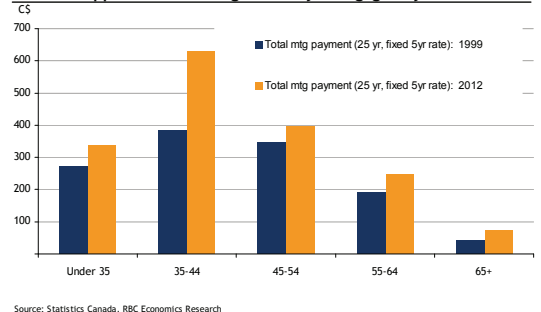
### Conclusion

Household net worth increased substantially for all age cohorts between 1999 and 2012. Although a welcome development, much of the improvement has been related to historically rapid home price appreciation that has boosted homeowner equity in real estate. This fact has long been evident in

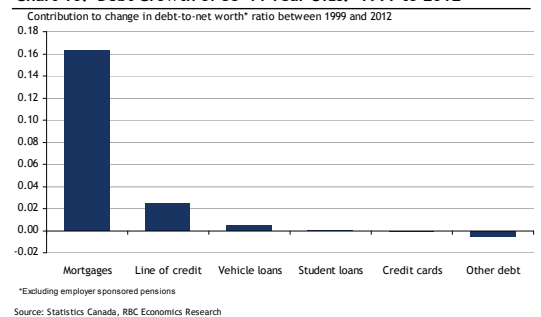
**Chart 8: Liabilities to Net Worth Ratio ex-Housing\***



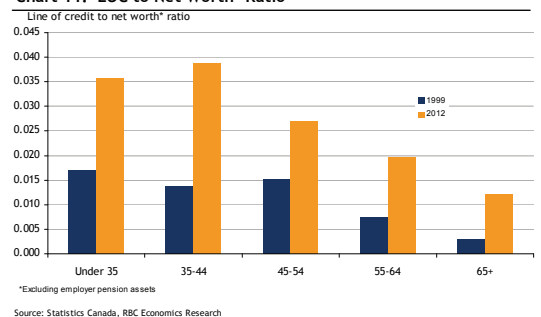
**Chart 9: Approximate Average Monthly Mortgage Payment**



**Chart 10: Debt Growth of 35-44 Year Olds: 1999 to 2012**



**Chart 11: LOC to Net Worth\* Ratio**



more timely data; however, detailed balance sheet by age data from the SFS suggests that one consequence of outsized price gains has been a sharp rise in household leverage, particularly in the 35-44 age group relative to its 1999 equivalent. The increased leverage for this age cohort was likely related to the fact that this group contained a disproportionate share of first-time homebuyers and that the 1999 to 2012 period also coincided with historically high rates of house price appreciation. Increased leverage is largely, albeit not entirely, concentrated in real-estate borrowing, so a sharp drop in housing prices could have a dramatic impact on household balance sheets, particularly for the cohort aged 35-44. More generally, this age cohort is also vulnerable to a sharp increase in interest rates or a drop in household income due to its highly leveraged position in both mortgage and non-mortgage debt. We are not expecting such to occur. We expect that housing markets will undergo a “soft landing” as activity moderates to levels more in line with demographic fundamentals over the next couple of years while the economy is expected to grow modestly going forward, lowering the unemployment rate and allowing for a gradual rise, or “normalization,” of interest rates to occur alongside rising household incomes. With that said, the increased leverage associated with both mortgage and non-mortgage borrowing does imply the 35-44 age category is particularly vulnerable relative to the rest of the population were an unforeseen shock to occur.

**End Notes:**

1. Standard methodology to convert future pension payments to a present value asset is calculate a discounted sum of all future cash flows. The discount rate is typically based on longer-term market interest rates. As a result, a substantial decline in market interest rates between 1999 and 2012, rather than a significant increase in actual expected future pension payments, likely accounts for much of a large increase in average pension assets over the period. Importantly, the present value of the future pension payments is more sensitive to choice of discount rate the further a household is from retirement age. As a result, the methodology also could be distorting pension asset holdings, and therefore net worth, across age cohorts.

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