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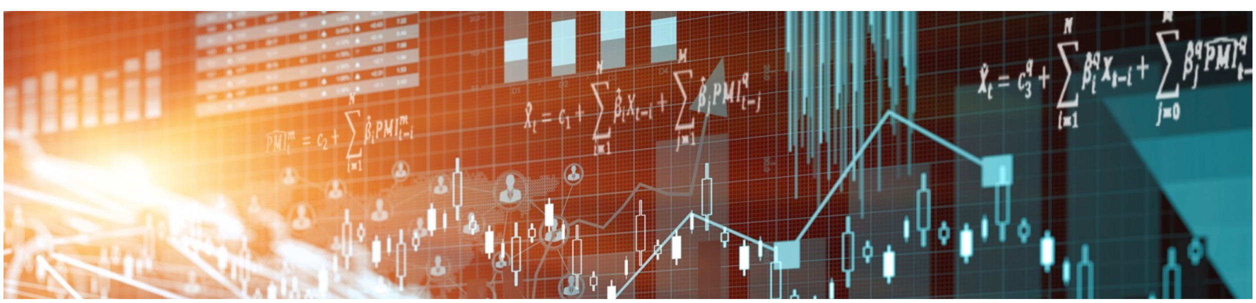
Credit Cards: Disentangling the Dual Use of Borrowing and Spending



by Olga Bilyk and Brian Peterson

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Credit Cards: Disentangling the Dual Use of Borrowing and Spending

by

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Abstract

Over the past 15 years, aggregate credit card balances have been increasing, except for a brief spell in the aftermath of the 2007–09 financial crisis. Determining whether the growing balances are due to increased usage of credit cards as a method of payment or whether they reflect increased short-term borrowing is challenging because aggregate balances are snapshots of charges on credit cards before households make their monthly payments. In this note, we exploit household-level survey data to distinguish between the dual use of credit cards for borrowing or paying for purchases. We find that the growth in credit card balances over the past 15 years reflects increased usage of credit cards for payment (i.e., spending) rather than increased short-term borrowing.

Bank classification: Credit and credit aggregates; Financial stability

Résumé

Les encours des cartes de crédit n'ont cessé d'augmenter depuis 15 ans, mis à part durant une courte période après la crise financière de 2007-2009. Il est difficile d'établir si cette augmentation tient à un emploi accru de la carte de crédit comme mode de paiement ou à l'augmentation des emprunts de court terme. En effet, l'encours global ne renseigne que sur la totalité des sommes portées sur les cartes de crédit à un moment donné, avant que les ménages effectuent leurs paiements mensuels. Dans cette note analytique, nous exploitons les données d'une enquête réalisée auprès des ménages pour distinguer l'usage des cartes de crédit comme instrument de paiement et comme instrument de crédit. Nos résultats montrent que la hausse des encours des cartes de crédit ces quinze dernières années est attribuable à une utilisation plus fréquente de la carte de crédit comme moyen de paiement des dépenses de consommation, et non comme source d'emprunts de court terme.

Classification de la Banque : Crédit et agrégats du crédit; Stabilité financière

Issue

Over the past 15 years, aggregate credit card balances have been increasing except for a brief spell in the aftermath of the 2007–09 financial crisis. Determining whether the growing balances are due to increased use of credit cards as a method of payment or whether they reflect increased short-term borrowing is challenging. This is because aggregate balances are snapshots of credit card charges before households make their monthly payments. In this note, we exploit household-level survey data to distinguish between the two uses of credit cards—for borrowing or paying for purchases.

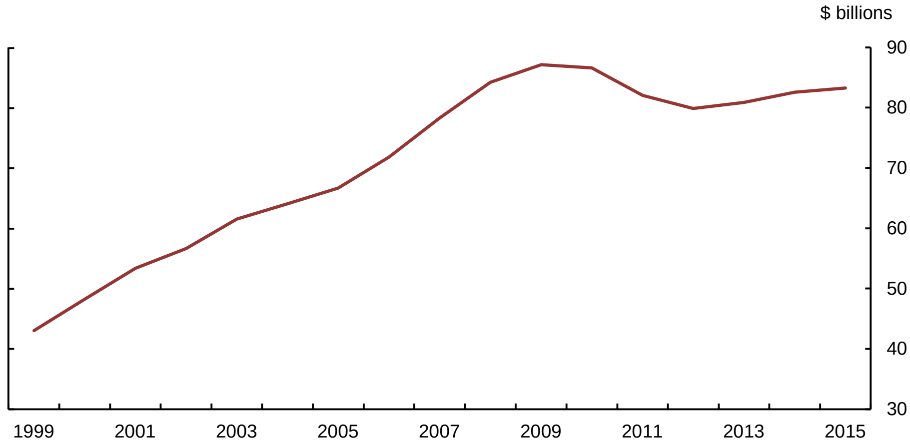
Key Messages

- *The growth in credit card balances over the past 15 years reflects the increased use of credit cards for payment (i.e., spending) rather than increased short-term borrowing.*
- *The majority of credit card owners in Canada do not carry any credit card debt. The share of such households grew from 48 per cent in the early 2000s to 55 per cent in recent years.*
- *Examining the various ways credit cards are used at the household level, we find that high-income renters are among the heaviest credit card borrowers. This reflects the fact that these households lack access to cheaper forms of borrowing, such as home equity lines of credit (HELOCs). The extent to which borrowing by renters represents a vulnerability for the financial system is tempered by the fact that they have a relatively large capacity to repay, given their high income, and tend to have credit cards with lower interest rates.*

1. Motivation: Dual Use and Aggregate Data

Leading up to the financial crisis of 2007–09, credit card balances for Canadian households increased steadily, according to data from Equifax.[1] In real terms, credit card balances grew two-fold from 1999 to 2009, reaching an all-time high of $87.1 billion in the latter year, as measured in constant 2014 dollars (**Chart 1**). Following the crisis, balances decreased to $79.8 billion in 2012 but subsequently grew to $83.3 billion as of 2015Q2.[2]

Chart 1: Aggregate credit card balances increased over the past 15 years
Constant 2014 dollars



Source: Equifax
Last observation: 2015Q2

To understand recent patterns in credit card balances, it is important to recognize the dual role of credit cards as a method of payment and as a means of borrowing. Consider two types of credit card users: *the convenience user* and *the borrower*. The convenience user relies on credit cards solely as a means of payment, making purchases with a credit card but repaying the outstanding balance fully within the allowable time limit.[3] In contrast, the borrower makes purchases with a credit card but does not fully repay the amount spent when it is due, thus facing interest charges on unpaid balances. The series displayed in **Chart 1** does not discriminate between borrowing and spending, given that it tracks current balances on credit cards rather than balances outstanding after the last payment.[4]

Does the growth in credit card balances over the past 15 years reflect increased use of credit cards for borrowing or for spending? The answer to this question can have implications for financial stability. For instance, excessive accumulation of unsecured interest-bearing credit card debt could represent a

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1. A similar trend is found in chartered bank data. See Statistics Canada CANSIM Table 176-0011. Equifax provides a broader measure that is not affected by securitization and changes to accounting due to implementation of International Financial Reporting Standards.
2. Balances normalized by household income and per capita balances display a similar pattern, namely, increasing up to the crisis period and weaker post-crisis.
3. Technically, these types of users are enjoying some interest-free borrowing (referred as the “float”) between the time they make a purchase and when they repay their balance after they receive their bill.
4. This is also true of credit card balances reported by chartered banks to the Office of the Superintendent of Financial Institutions (OSFI) and reported in Statistics Canada CANSIM Table 176-0011.

vulnerability for the financial system if it is concentrated among households with less-stable incomes. On the other hand, survey results have shown that households have increasingly been using credit cards as a means of payment.[5] Growing credit card balances because high-income households use credit cards as means of payment (for convenience or rewards) would not be a concern for financial stability.

To distinguish between credit card usage by borrowers and that by convenience users, we need to examine how much a household repays on its credit card balances. Fortunately, Ipsos Reid's Canadian Financial Monitor (CFM) survey provides information that can help us distinguish between these two possibilities.

2. Dual Usage in Household-Level Data (CFM)

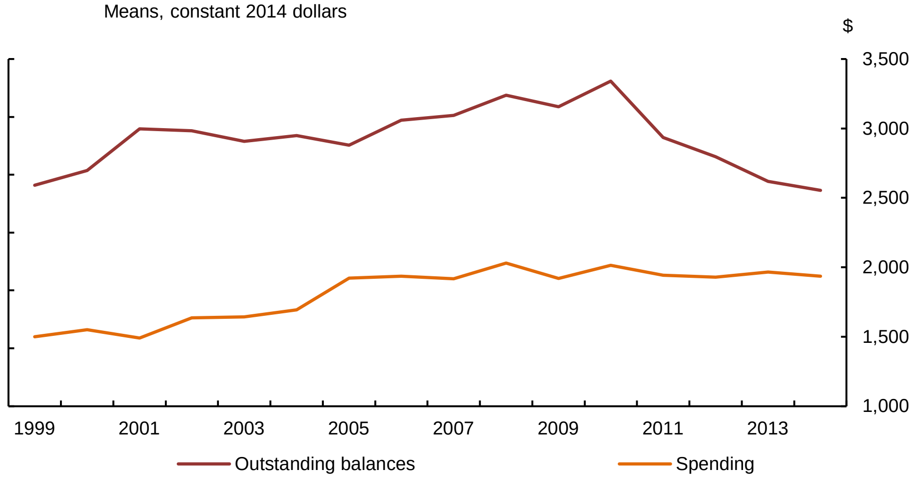
In the CFM survey questionnaire, credit card owners are asked to consult their most recent credit card statements and report both their spending over the past month and the balances outstanding after making their latest payment. Using this information, **Chart 2** documents the evolution of average balances and spending (per household with at least one credit card). We find that, over the 1999–2014 period, average credit card spending per household increased by roughly one-third. In contrast, after peaking around 2010, average balances have been declining since then and, as of 2014, stand at levels observed in 1999.[6]

These results suggest that the aggregate trend observed in **Chart 1** is most likely due to credit cards being used increasingly as a convenient method of payment rather than as a source of short-term borrowing. The decline in credit card borrowing implies that households have been switching to other types of consumer debt.[7]

5. In this note, we do not examine the household's choice of a payment method. Henry, Huynh and Shen (2015) report that the share of credit cards among the payment choices reached 31 per cent in terms of volume and 46 per cent in terms of value in 2013. This is a 12 per cent and 5 per cent increase, respectively, compared with 2009. The growth has been attributed to the drop in the cash and debit share. For more information, see Henry, Huynh and Shen (2015).
6. "Balances" is a stock variable and includes items other than spending, such as balances carried from previous periods as well as transfers. Spending is a flow, measured on a monthly basis, and is only a fraction of accumulated balances.
7. Crawford and Faruqui (2011–12) argue that secured personal lines of credit have been the main drivers behind the growth of consumer credit since the mid-1990s, partly reflecting a substitution away from credit cards. For more information, see Crawford and Faruqui (2011–12).

Chart 2: Credit cards are increasingly being used as a payment method rather than a loan product

Outstanding balances and spending per household with a credit card
Means, constant 2014 dollars



Source: Ipsos Reid
Last observation: 2014

Analyzing the microdata, several stylized facts emerge that confirm our conjecture that convenience users are growing in importance, for several reasons. First, the majority of credit card owners in Canada do not carry any credit card debt and are therefore classified as convenience users.[8] Indeed, the proportion of such households grew from 48 per cent in the early 2000s to 55 per cent in recent years (**Chart 3**). Second, over time, convenience users have been spending more than borrowers (**Chart 4**). This result is robust to controlling for differences in income between convenience users and borrowers (see **Chart A-1** in the Appendix). Third, the average balances carried by borrowers have dropped following the crisis.

The microdata therefore suggest that convenience users are growing in importance when explaining movements in aggregate credit card balances. In the next section, we expand our understanding of the drivers behind credit card usage by controlling for some pertinent household characteristics. We use our results to explore vulnerabilities associated with credit card borrowing.

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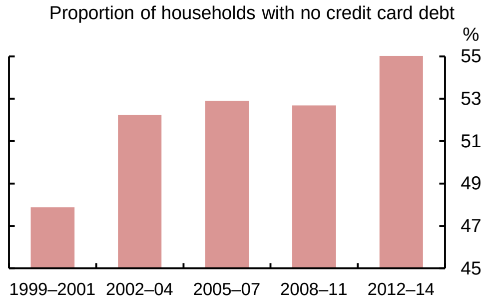
8. Among convenience users, a small number of households do not report any spending and are likely to resort to credit cards only in emergency situations.

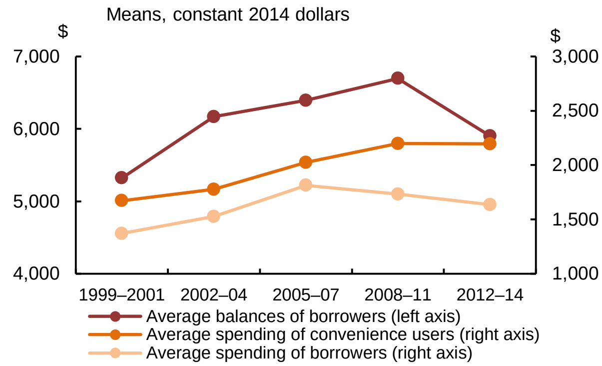
Chart 3: Share of convenience users increased compared with the early 2000s



Source: Ipsos Reid

Last observation: 2014

Chart 4: Convenience users are incresingly spending more compared with borrowers



Source: Ipsos Reid

Last observation: 2014

3. Variety of Credit Card Usage in CFM and Potential Vulnerabilities

Among the household characteristics likely to affect the use of credit cards are household income, age of household head, homeownership status and region of residence. **Table A-1** summarizes information on the incidence of convenience users, as well as average balances and spending across these dimensions.[9]

For the rest of this note, we focus on home ownership and income since they offer interesting insights on the characteristics of credit card borrowers and the extent to which credit card borrowing can pose a vulnerability to the financial system. **Chart 5** compares outstanding credit card balances of homeowners and renters across different income quintiles while **Chart 6** compares their spending. Both charts reveal significant differences in credit card usage by these different households. While borrowing and spending increase with income for both renters and homeowners,[10] renters borrow more, but spend less, than homeowners. Overall, households with the highest outstanding balances are high-income renters while spending is much more concentrated among high-income homeowners.

The difference in borrowing across renters and homeowners reflects differences in access to alternative sources of short-term borrowing by these two groups of households. Homeowners can borrow against their house and access cheaper forms of borrowing, such as home equity lines of credit (HELOCs), while renters are more likely to rely on credit cards as a source of borrowing. The concentration of credit card debt among high-income renters, who have a greater ability to repay their debt given their higher income, is thus a natural outcome reflecting the constraints that these households face. Significantly, renters are also more likely to own low-interest credit cards. For instance, using the Methods-of-Payment Survey data, Henry, Huynh and Shen (2015) find that 16 per cent of renters have credit cards

9. Interesting observations in Table A-1 include households in Alberta and households aged 35 to 54 being among the heaviest borrowers on credit cards. Further, the incidence of convenience users among older households (age above 65) has been declining and their credit card balances have been growing over time, unlike other age groups. These are issues for further research.

10. Although, the top income quintile of homeowners borrows about the same as the fourth income quintile of homeowners.

with interest rates below 5 per cent compared with 11 per cent of home owners.[11] This moderates the extent to which credit card borrowing by these groups of households would represent a vulnerability for the financial system.

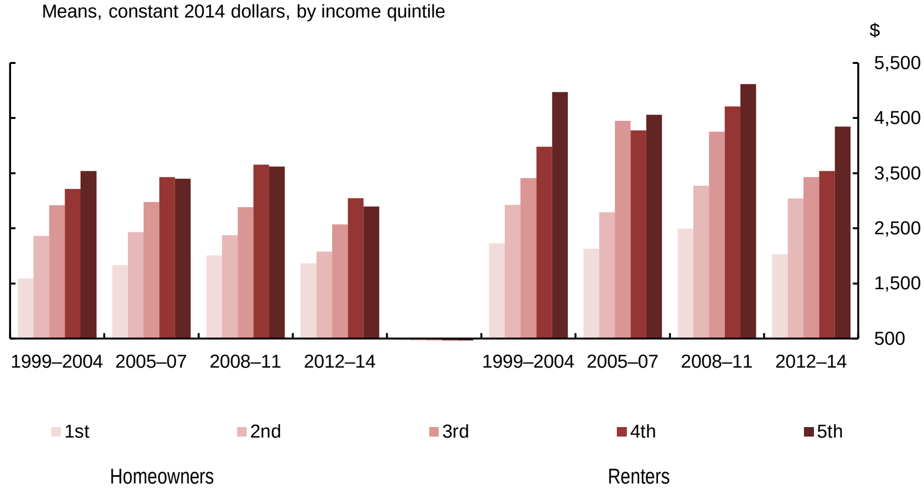
Closer examination of **Chart 5** and **Chart 6** shows a broad decline in borrowing in the most recent years across all income groups for both renters and homeowners while there is no decline in spending. This observation further supports the view that spending via credit cards is growing in importance relative to borrowing.

To summarize, credit cards have increasingly been used by Canadian households as a convenient payment method. Credit card borrowing has been declining and its pattern at the household level reflects the natural constraints that households face. Continued monitoring and deeper analysis is nevertheless warranted as credit card borrowing is risky unsecured credit at high interest rates.

11. Note that credit card interest rates were not available in the CFM before 2012. Between 2012 and 2014, highly indebted households (with credit card debt over $10,000) paid an average annual interest rate of 16.3 per cent compared with 18.3 per cent for convenience users. In the 1999–2006 period, households admitting that a low interest rate was one of the features of their credit card had, on average, balances twice as high as those of the rest of the respondents.

Chart 5: Across all income quintiles, renters have higher outstanding credit card balances than homeowners do

Means, constant 2014 dollars, by income quintile

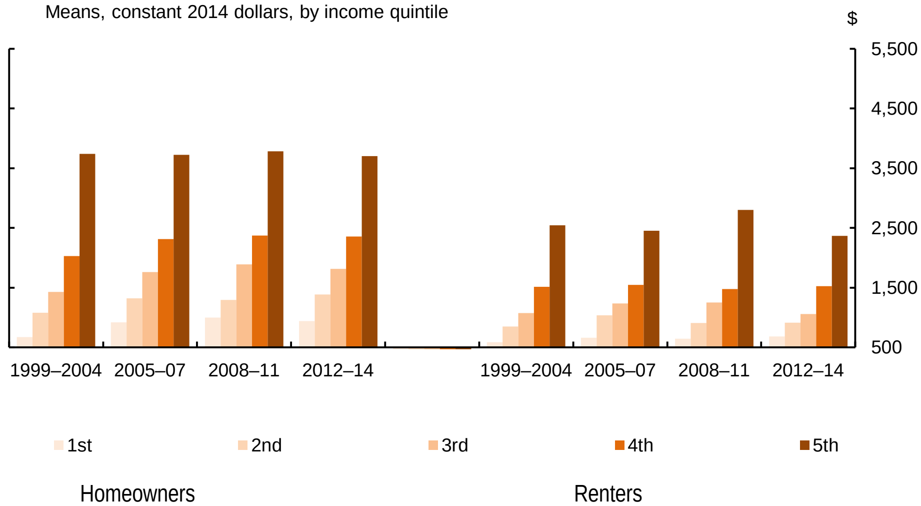


Source: Ipsos Reid

Last observation: 2014

Chart 6: Across all income quintiles, homeowners spend more with their credit cards than renters do

Means, constant 2014 dollars, by income quintile



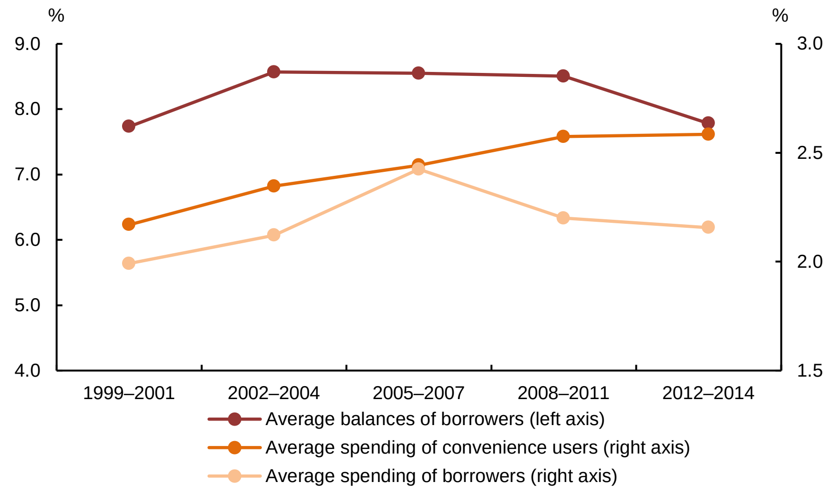
Source: Ipsos Reid

Last observation: 2014

Appendix:

Chart A-1: Covenience users spend more than borrowers do after controlling for differences in income

Normalized by average household income for a given group



Source: Ipsos Reid

Last observation: 2014

Table A-1: Heterogeneity of credit card usage in Canadian Financial Monitor data

	Incidence of convenience users (%)					Average outstanding balances ($)					Average spending ($)				
	1999-2001	2002-2004	2005-2007	2008-2011	2012-2014	1999-2001	2002-2004	2005-2007	2008-2011	2012-2014	1999-2001	2002-2004	2005-2007	2008-2011	2012-2014
Region															
BC	47.7	53.7	54.0	53.3	56.5	3,313.1	3,239.9	3,251.2	3,456.2	2,781.4	1,670.5	1,982.2	2,125.8	2,326.4	2,202.9
AB	45.9	49.9	51.0	51.8	54.0	3,348.1	3,996.4	3,537.3	4,015.7	3,761.6	1,787.9	1,886.5	2,299.5	2,392.8	2,370.4
SK/MB	48.5	51.8	54.0	53.3	57.9	2,673.1	2,879.3	3,060.9	3,217.2	2,638.3	1,402.2	1,572.8	1,725.0	1,951.6	1,963.3
ON	48.5	53.3	53.2	52.9	55.9	3,031.8	3,178.0	3,332.3	3,386.9	2,661.3	1,585.7	1,783.2	2,012.4	2,051.3	2,017.1
QC	50.4	54.4	54.5	54.1	54.6	1,796.2	1,830.6	2,017.7	2,176.1	2,001.1	1,318.2	1,320.0	1,650.9	1,624.4	1,653.1
ATL	38.7	40.2	45.3	46.3	47.8	3,165.2	3,724.1	3,579.7	3,678.1	3,156.5	1,306.8	1,370.0	1,728.9	1,614.3	1,492.2
Income quintile															
1st	44.7	52.2	51.8	50.6	50.8	1,990.0	1,901.4	2,009.8	2,287.2	1,958.4	613.0	632.9	770.9	798.2	793.9
2nd	44.3	51.3	50.5	50.8	52.6	2,502.0	2,631.6	2,584.8	2,711.2	2,417.8	886.6	1,065.8	1,204.7	1,149.6	1,219.9
3rd	44.5	49.0	47.4	49.9	51.6	3,017.4	3,085.6	3,379.2	3,226.9	2,772.7	1,285.5	1,391.0	1,613.7	1,727.9	1,637.0
4th	49.0	49.7	51.5	50.6	54.9	3,139.1	3,528.5	3,569.1	3,820.1	3,129.7	1,935.4	1,972.2	2,187.9	2,230.3	2,215.6
5th	59.3	59.7	60.4	58.8	62.0	3,484.2	3,743.1	3,503.1	3,746.0	3,007.3	3,601.0	3,702.9	3,614.4	3,702.2	3,599.3
Age															
<35	34.5	37.5	37.4	38.2	41.9	3,136.2	3,599.1	3,293.7	3,567.9	2,836.0	1,349.7	1,516.9	1,652.8	1,639.7	1,559.2
35–44	42.9	45.5	44.9	44.0	48.0	3,212.3	3,635.5	3,902.1	4,104.3	3,411.8	1,726.8	1,939.5	2,200.3	2,175.9	2,163.4
45–54	46.9	51.0	51.6	49.4	53.9	3,255.9	3,354.8	3,752.6	3,801.2	3,052.6	1,887.1	2,028.5	2,395.9	2,315.7	2,328.1
55–64	57.1	60.3	58.8	59.6	59.3	2,376.6	2,291.9	2,781.4	2,996.4	2,535.4	1,557.3	1,596.6	2,053.9	2,173.1	1,993.1
>=65	70.3	73.0	71.9	69.5	67.9	1,319.8	1,275.7	1,313.5	1,590.5	1,669.6	1,019.0	1,005.2	1,342.3	1,613.0	1,667.6
Home ownership															
Owner	52.9	56.1	57.8	57.5	59.5	2,753.2	2,905.2	2,965.0	3,063.7	2,589.0	1,785.8	1,919.6	2,270.0	2,316.5	2,279.6
Renter	36.8	41.8	41.0	39.8	42.7	2,820.0	3,058.0	3,121.7	3,447.1	2,838.0	917.8	944.4	1,092.2	1,066.3	1,020.1

Note: Constant 2014 dollars

Source: Ipsos Reid

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