

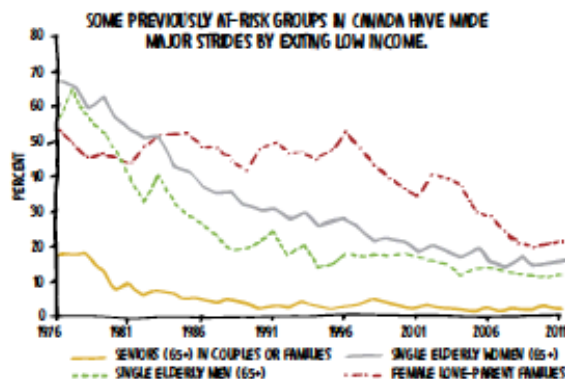
Microdata on household vulnerability in Canada: 1999 to 2014

Jennifer Robson (Carleton)
David Rothwell (Oregon State)
Canadian Economics Association
Ottawa
June, 2016

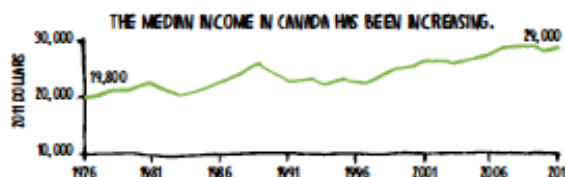
CANADA'S TAX-AND-TRANSFER SYSTEM IS DOING A LOT OF THE HEAVY LIFTING TO OFFSET MARKET INEQUITIES.

INCOME QUINTILE	SHARE OF TOTAL (%)	AVERAGE (\$)	SHARE OF AFTER-TAX-AND-TRANSFER INCOME (%)	AVERAGE AFTER-TAX INCOME (\$)	IMPLICIT TAX/TRANSFER RATE (%)
LOWEST QUINTILE	1.0	3,900	4.8	5,100	244
MIDDLE QUINTILE	16.6	48,000	16.3	51,800	7
TOP QUINTILE	82.3	271,800	79.3	249,900	-19

Share of total personal income and average income for the lowest, middle and top quintiles, before and after tax-and-transfer redistribution, 2011 (Statistics Canada, CANSIM table 202-0701, Income Statistics Division.)

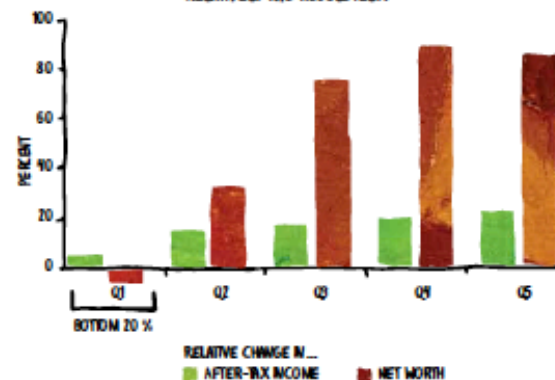


Proportion of people in low income after tax, by economic family type, 1976 to 2011 (Statistics Canada, CANSIM table 202-0804, Survey of Consumer Finances and Survey of Labour and Income Dynamics.)



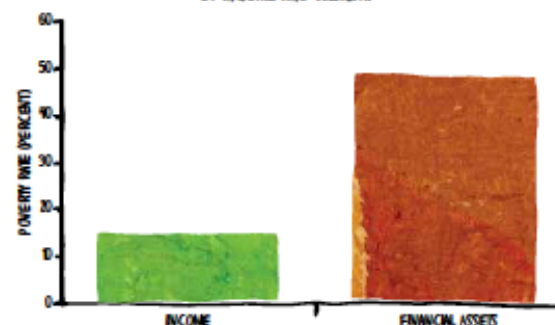
Median individual income, 1976-2011 (Statistics Canada, CANSIM table 202-0701, Income Statistics Division.)

BASED ON ASSETS, THE BOTTOM INCOME TIER IS FALLING BEHIND, RELATIVELY AND ABSOLUTELY.



Relative change in distributions of household income and net worth, by quintile, 1999-2012 (Author's calculations based on Statistics Canada, Survey of Financial Security.)

THERE'S A HUGE GAP BETWEEN POVERTY MEASURED BY INCOME AND WEALTH.



Poverty rates according to income and financial assets, 2012 (Statistics Canada, low income measure; financial asset data: author's calculations based on Statistics Canada, Survey of Financial Security.)

BAD NEWS

GOOD NEWS

Canadian household debt soars to yet another record

DAVID PARKINSON - ECONOMICS REPORTER
The Globe and Mail
Published Friday, Mar. 11, 2016 8:49AM EST

Household debt still rising, but most Canadians in decent shape: experts

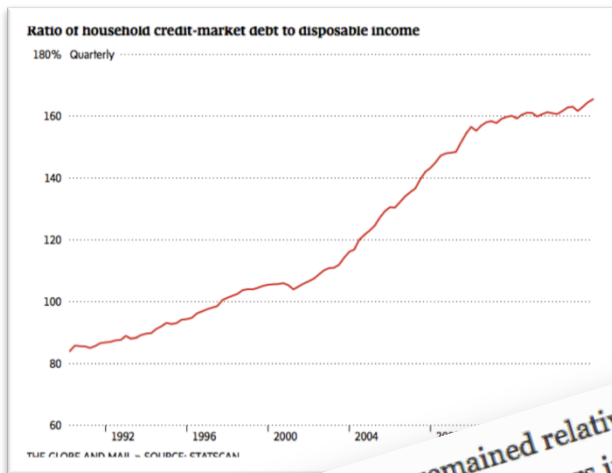
Bank of Canada worries some Canadian households may be over their heads
By Andy Blatchford, The Canadian Press Posted: Dec 30, 2015 5:00 AM ET | Last Updated: Dec 30, 2015 5:00 AM ET

For Immediate Release

May 24, 2016

Canadian homeowners struggling to pay bills as housing costs rise: Manulife Bank survey

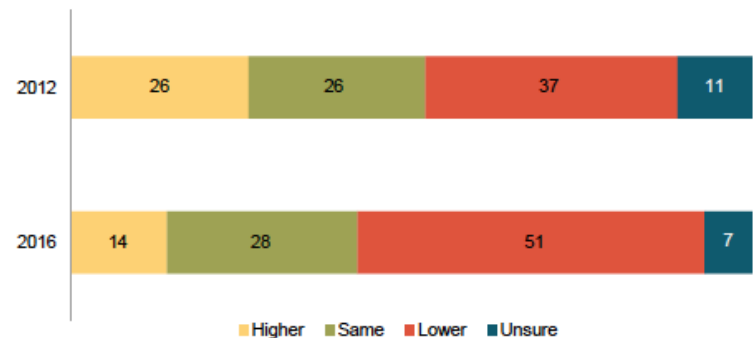
- Average mortgage debt increased to \$181,000 since last fall
- One in three homeowners "caught short" at least once in the past year
- 60 per cent lack confidence they'll have enough savings for retirement



The overall arrears rate has remained relatively stable at about 0.34 per cent, though there has been a small increase in arrears in resource-sensitive Alberta and Saskatchewan.

Chart 4
PERCEPTIONS ON FUTURE STANDARD OF LIVING

per cent of survey respondents



Source: Nanos Research, February 12, 2016.

CONSUMER May 18, 2016 5:26 am

Delinquency rates for non-mortgage loans on the rise in Canada: TransUnion

By Staff The Canadian Press

The Atlantic

SUBSCRIBE SEARCH MENU≡



The Secret Shame of Middle-Class Americans

Nearly half of Americans would have trouble finding \$400 to pay for an emergency. I'm one of them.

138k



Big trends:

- ✓ Income poverty down
- ✓ Net worth up
- ✓ DSR up



How are subgroups doing?

Who is 'vulnerable'?



FINANCIAL FRAGILITY OF EURO AREA HOUSEHOLDS

Miguel Ampudia, Has van Vlokhoven
and Dawid Zochowski

An Improved Framework for Assessing the Risks Arising from Elevated Household Debt

Umar Faruqui, Xuezhi Liu and Tom Roberts

Report on the Economic Well-Being of U.S. Households in 2014

May 2015



Ivana Herceg and Danijel Nestić

A New Cluster-Based Financial Vulnerability Indicator:
The Analytical Concept and its Application for Stress
Testing in a Post-Socialist Economy

Microdata too

Assets matter

Basket of measures

- Liquidity
- Financial services
- Ability to handle shocks
- Missed payments

Data sources

Survey of Financial Security (SFS)

- 1999, n= 21,000
- 2005, n= 9,000
- 2012, n= 20,000

Income, assets and debts of economic family

Demographic characteristics of individual respondents

Canadian Financial Capability Survey (CFCS)

- 2008, n= 27,500
- 2014, n= 12,600

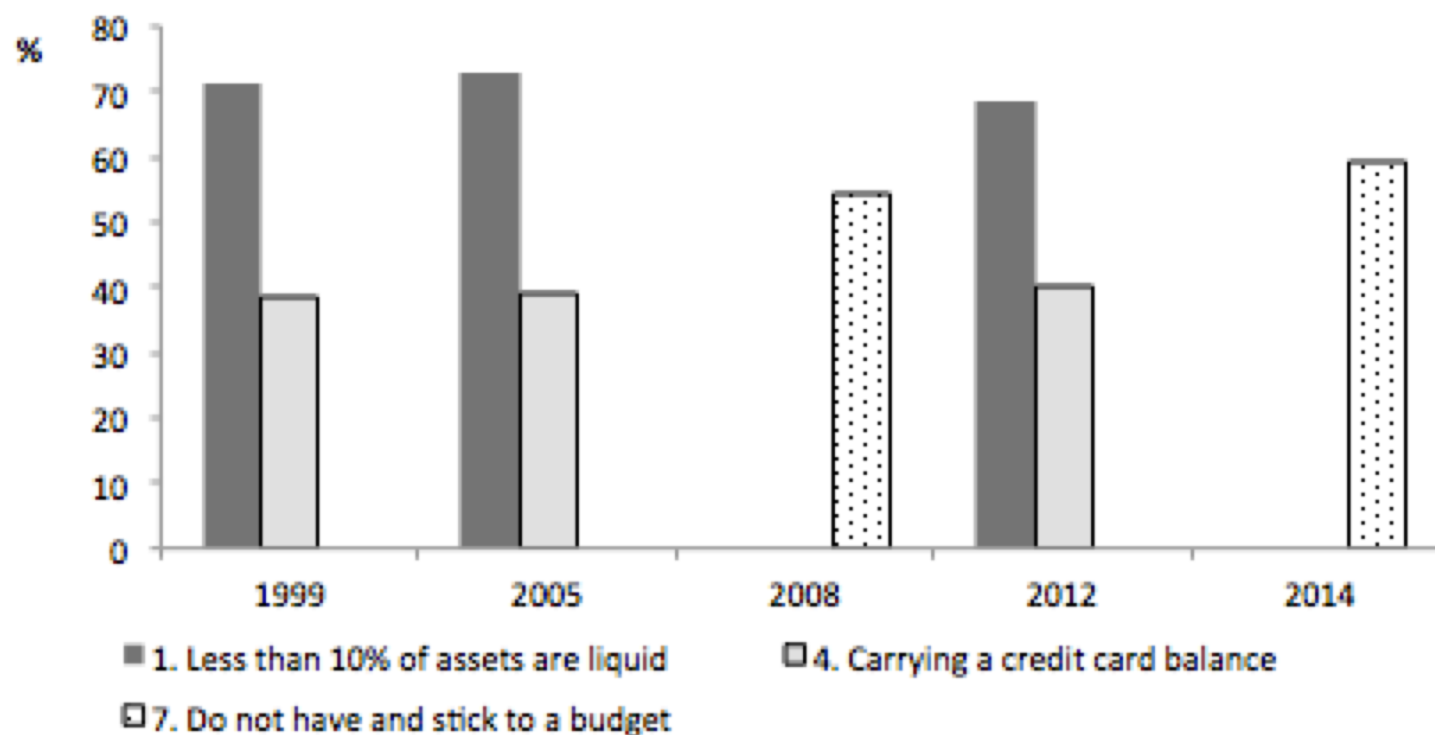
Mix of family and individual financial resources and behaviors

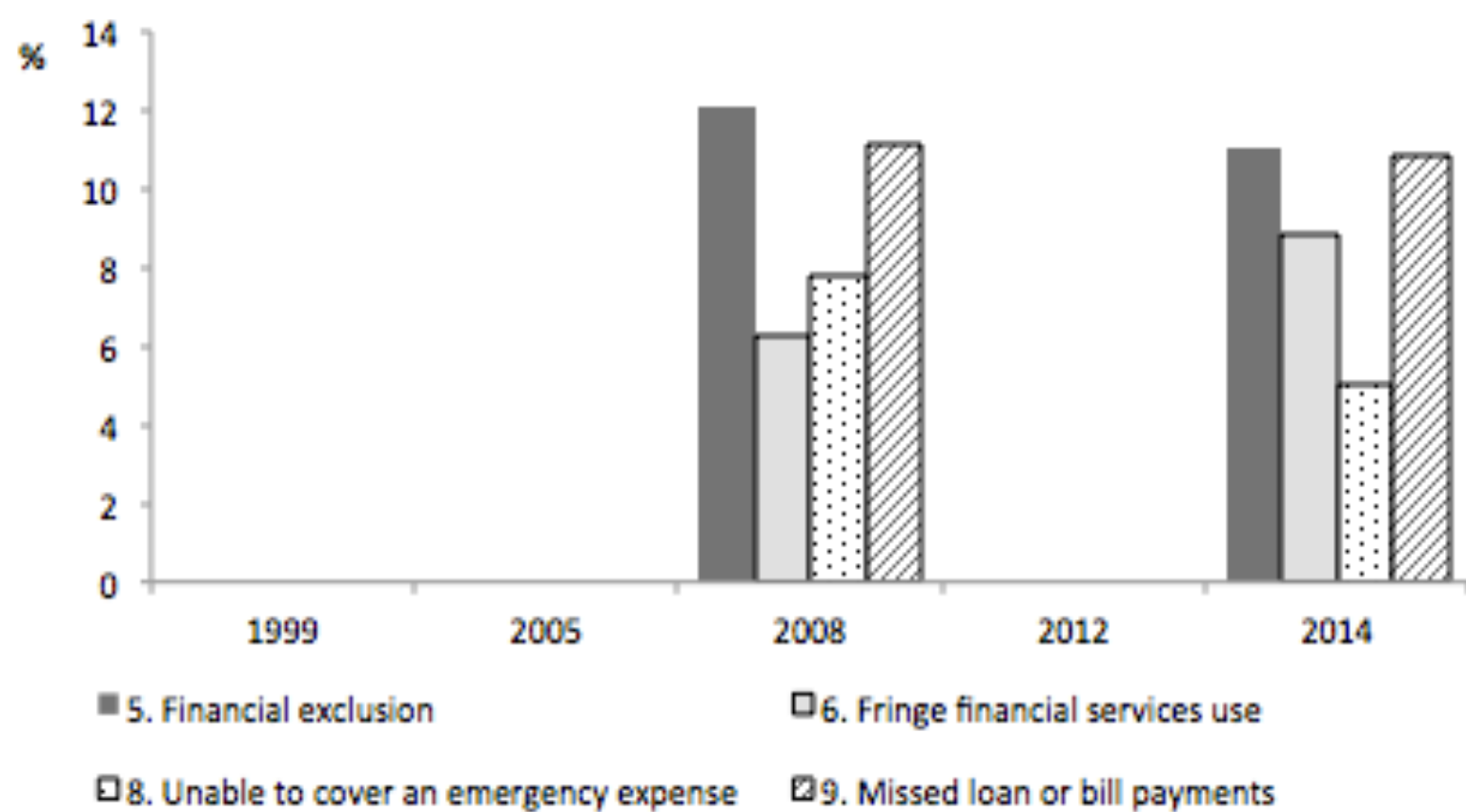
Individual knowledge

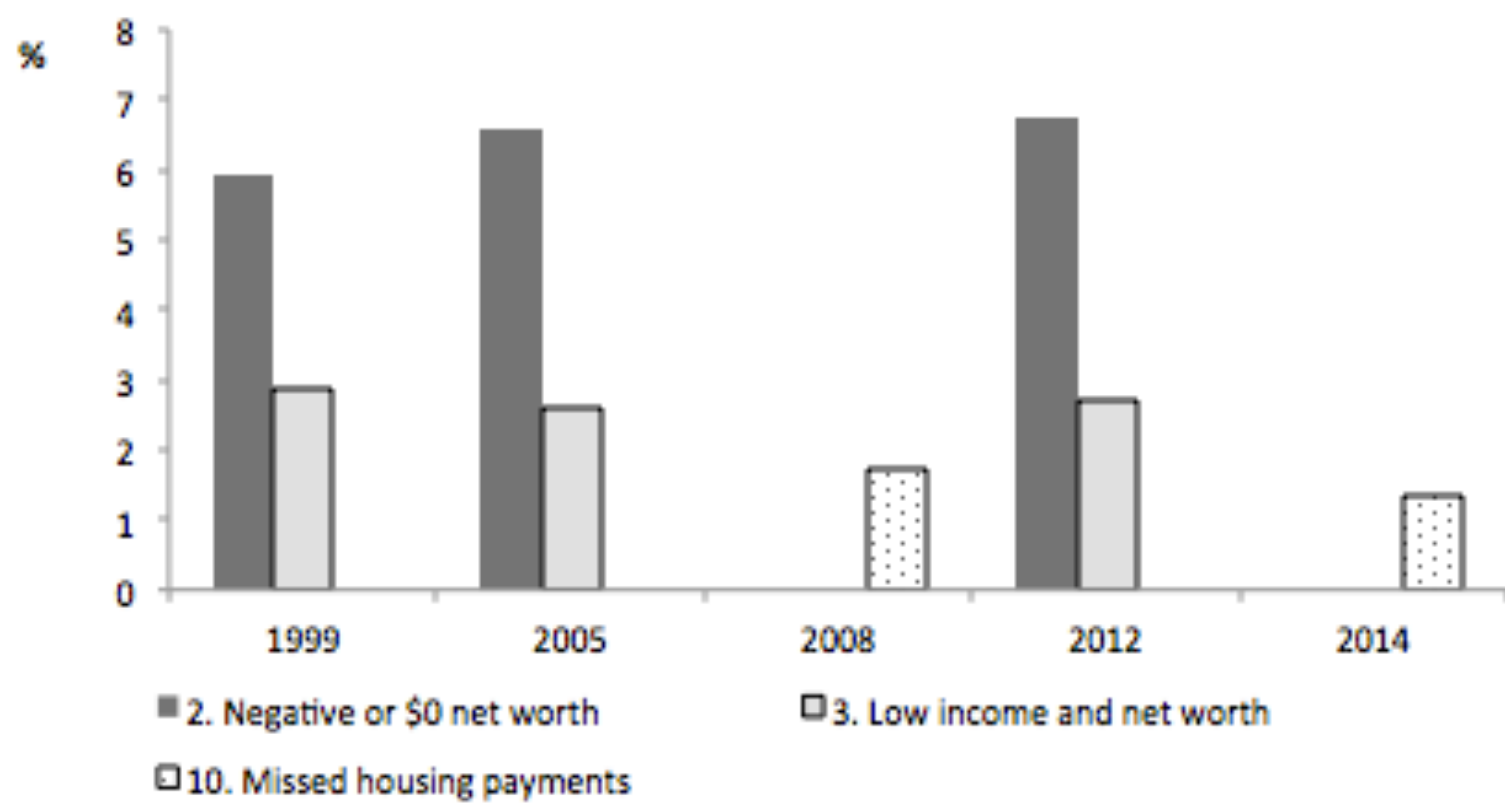
Indicators

Indicator	Description	Source
1. At least 10% of assets are liquid	Based on ratio of liquid assets to total assets. Total assets include pension assets on a termination basis. Liquid assets include cash deposits, investments outside of RRSPs, RESP savings and term desposits.	SFS
2. Negative or \$0 net worth	Based on equivalized net worth (including pensions).	SFS
3. Low income and net worth	Based on equivalized net worth and equivalized family income. Net worth is low if it is \$0 or negative. Income is low if it is below ½ of the median or \$16,103.	SFS
4. Carrying a credit card balance	Based on a \$1 or greater balance in debt owed on all credit cards (including store cards).	SFS
5. Financial exclusion	The respondent reports having no deposit account or no one in the economic family has a credit card.	CFCS
6. Fringe financial services use	The respondent reports personal or family use in the last 12 months of any of payday loans, pawnshops or cheque cashers.	CFCS
7. Having and sticking to a budget	The respondent reports that the economic family does have a budget and that it stays within that budget “always” or “usually”.	CFCS
8. Unable to cover an emergency expense	The respondent is unable to name one or more methods (ranging from use of savings to formal and informal borrowing) to meet an emergency expense and reports that he or she would not be able to such an expense. The expense is set at \$500 if family income is below \$60,000 and \$5,000 for family income of \$60,000 or more.	CFCS
9. Missed loan or bill payments	The respondent reports having fallen behind by two months or more on regular loan or bill payments in the last 12 months. The question may refer to either personal or family obligations.	CFCS
10. Missed housing payments	The respondent reports having fallen behind by two months or more on regular rental housing or mortgage payments in the last 12 months. The questions may refer to either personal or family obligations.	CFCS











Figure 1: Incidence of financial vulnerability, various indicators (SFS 1999, 2005 and 2012; CFCS 2008, 2014)







Trends?

Indicator	Change ?
1. At least 10% of assets are liquid	
2. Negative or \$0 net worth	
3. Low income and net worth	
4. Carrying a credit card balance	
5. Financial exclusion	
6. Fringe financial services use	
7. Having and sticking to a budget	
8. Unable to cover an emergency expense	
9. Missed loan or bill payments	
10. Missed housing payments	

1999 through
2012

2008 through
2014

Independent variables

Variable	Description	Source
Older age	Economic family main income earner is aged 65 years or older. Respondent is aged 65 years or older.	SFS CFCS
Younger age	Respondent is aged 18-34 years of age.	CFCS only
Unattached adult	Respondent does not live in an economic family. Respondent lives in a household size equal to 1.	SFS CFCS
Single parent	Economic family is composed of a single parent and one or more dependent children.	SFS and CFCS
Low income	Economic family income, after-tax falls in the bottom quintile (equivalized income is < \$18,013). Economic family total income falls in the bottom quintile (total income is < \$32,001).	SFS CFCS
Low wealth	Economic family net worth falls in the bottom quintile (equivalized net worth is < \$9,801).	SFS only
Homeownership	Economic family (including singles) owns their primary residence, with or without a mortgage.	SFS and CFCS
Recent immigrant	Respondent immigrated to Canada after 2000.	CFCS only
Low education	Respondent's highest level of education is a secondary school diploma.	CFCS
Social assistance	Economic family (including singles) received \$1 or more in social assistance income in the previous year.	SFS and CFCS

- Logistic regression
- All variables binary
- Stata version 14
- Bootstrap method (replicate weights)
- Merged models and sub-populations by year

Table A.1: Summary of independent variables, SFS (1999, 2005 and 2012), CFCS (2008, 2014)

Variable	1999	2005	2008	2012	2014
% of seniors	18.27	17.99	16.61	20.71	18.81
% of young adults	-	-	31.41	-	30.57
% of unattached adults	32.15	33.68	13.44	34.82	14.09
% of single parents	5.13	4.46	4.37	3.92	6.77
% of homeowners	60.42	61.90	73.37	62.53	65.05
% with any social assistance income	12.77	9.83	6.06	9.44	6.67
% recent immigrants	-	-	5.25	-	8.29
% with less than PSE education	-	-	37.49	-	34.48

Table 3: Logistic regression- odds ratio for all variables, Survey of Financial Security (all years, by year)

	All years			SE			1999			SE			2005			SE			2012			SE		
At least 10% of all assets in liquid form (+)																								
Senior	2.72	***	0.12	2.9	***	0.18	3.05	***	0.31	2.28	***	0.16												
Unattached adult	1.19	***	0.06	1.52	***	0.09	1.07		0.12	1.06		0.09												
Single parent	0.79	*	0.08	0.75	*	0.09	1.09		0.23	0.64	**	0.11												
Homeowner	0.34	***	0.02	0.39	***	0.03	0.33	***	0.04	0.32	***	0.03												
Had social assistance income	0.48	***	0.04	0.53	***	0.05	0.4	***	0.07	0.49	***	0.06												
Low income	1.09		0.07	0.99		0.07	1.09		0.14	1.23	*	0.12												
Low wealth	0.57	**	0.07	1.13		0.09	1.01		0.14	1.45	***	0.14												
Negative or \$0 net worth																								
Senior	0.23	***	0.04	0.15	***	0.04	0.11	***	0.06	0.35	***	0.09												
Unattached adult	1.16		0.12	1.13		0.14	1.22		0.26	1.1		0.19												
Single parent	1.23		0.17	1.02		0.16	1.68		0.49	1.04		0.25												
Homeowner	0.76		0.12	0.62	*	0.11	0.72		0.22	0.98		0.29												
Had social assistance income	0.84		0.09	0.96		0.13	0.96		0.23	0.67	*	0.13												
Low income	0.88		0.09	1.14		0.15	.58*		0.13	1.08		0.19												
Low wealth	omitted	-	-	-	-	-	-	-	-	-	-	-												
Low income & neg. or \$0 net worth																								
Senior	0.15	***	0.05	0.08	***	0.03	0.11	*	0.1	0.21	**	0.09												
Unattached adult	1.49	*	0.24	1.57	*	0.29	1.18		0.39	1.75		0.57												
Single parent	1.96	**	0.38	1.44		0.31	2.29	*	0.85	2.26	*	0.87												
Homeowner	0.5	*	0.16	0.4	*	0.15	0.62		0.36	0.61		0.4												
Had social assistance income	0.842		0.12	0.88		0.15	1.02		0.29	0.69		0.18												
Low income	omitted	-	-	-	-	-	-	-	-	-	-	-												
Low wealth	omitted	-	-	-	-	-	-	-	-	-	-	-												
Balance on credit cards or instalments																								
Senior	0.29	***	0.02	0.24	***	0.02	0.26	***	0.34	0.35	***	0.03												
Unattached adult	0.78	***	0.04	0.72	***	0.05	0.8	*	0.09	0.82	*	0.07												
Single parent	1.15		0.10	0.99		0.10	1.47	*	0.27	1.08		0.16												
Homeowner	1.05		0.06	1.02		0.06	1.21		0.15	0.90		0.09												
Had social assistance income	0.76	***	0.06	0.78	**	0.07	0.7	*	0.12	0.80		0.10												
Low income	0.52	***	0.30	0.58	***	0.10	0.44	***	0.06	0.56	***	0.07												
Low wealth	1.41	***	0.10	1.23	**	0.06	1.6	**	0.24	1.4	**	0.15												

* significant at p<0.05

** significant at p<0.01

*** significant at p<0.001

Table 4: Logistic regression- odds ratio for all variables, Canadian Financial Capability Survey (all years, by year)

	All years		2008		2014	
		SE		SE		SE
Financial exclusion						
Young	0.964	0.91	1.1	*** 0.02	0.84	0.16
Senior	0.98	0.92	1.12	*** 0.02	0.84	0.16
Unattached adult	1.55	*** 0.11	1.33	*** 0.02	1.70	*** 0.16
Single parent	1.45	* 0.23	1.70	*** 0.04	1.34	0.37
Recent immigrant	0.69	0.14	1.05	0.04	0.49	0.19
Low income	2.3	*** 0.19	2.70	*** 0.05	1.95	*** 0.34
Low education	2.4	*** 0.17	2.33	*** 0.04	2.42	*** 0.34
Had any social assistance income	2.41	*** 0.28	2.44	*** 0.05	2.4	*** 0.52
Homeowner	0.28	*** 0.02	0.32	*** 0.01	0.24	*** 0.04
Used any fringe financial services						
Young	1.23	* 0.12	2.28	0.05	0.76	0.14
Senior	0.74	* 0.10	0.78	0.03	0.68	0.14
Unattached adult	0.81	0.1	0.69	0.02	0.89	0.17
Single parent	1.01	0.19	1.21	0.05	0.93	0.29
Recent immigrant	1.86	** 0.39	1.84	0.08	1.78	0.64
Low income	1.22	0.16	1.12	0.03	1.45	0.31
Low education	1.77	*** 0.18	2.19	0.05	1.56	* 0.27
Had any social assistance income	1.54	* 0.27	1.79	0.05	1.30	0.41
Homeowner	0.41	*** 0.04	0.45	0.01	0.39	*** 0.06
Have and stick to their budget (+)						
Young	0.71	*** 0.04	0.72	*** 0.01	0.69	** 0.08
Senior	0.83	** 0.05	0.85	*** 0.01	0.83	0.09
Unattached adult	1.05	0.06	0.96	*** 0.01	1.12	0.11
Single parent	0.99	0.12	1.14	*** 0.02	0.94	0.19
Recent immigrant	1.05	0.13	1.35	*** 0.03	0.94	0.19
Low income	0.89	0.06	0.97	* 0.01	0.78	* 0.10
Low education	0.69	*** 0.04	0.65	*** 0.01	0.72	* 0.08
Had any social assistance income	1.08	0.10	1.1	*** 0.02	1.06	0.19
Homeowner	0.91	0.05	0.94	*** 0.01	0.84	0.09

Could not cover an emergency expense									
Young	0.83		0.09	0.96	*	0.02	0.64		0.19
Senior	0.78	*	0.07	0.71	***	0.02	0.93		0.19
Unattached adult	0.96		0.09	0.99		0.02	0.90		0.19
Single parent	1.26		0.24	1.46	***	0.05	1.39		0.58
Recent immigrant	1.30		0.29	1.27	***	0.05	1.53		0.71
Low income	1.76	***	0.19	1.81	***	0.04	1.41		0.39
Low education	1.68	***	0.13	1.78	***	0.03	1.49	*	0.29
Had any social assistance income	1.29	*	0.14	2.09	***	0.05	0.59		0.21
Homeowner	0.34	***	0.03	0.37	***	0.01	0.26	***	0.06
Behind on a bill or loan payments									
Young	1.27	*	0.11	1.34	***	0.02	1.24		0.22
Senior	0.29	***	0.04	0.26	***	0.01	0.32	***	0.08
Unattached adult	0.82	*	0.07	0.98		0.02	0.65	*	0.11
Single parent	1.39	*	0.18	2.30	***	0.05	0.94		0.25
Recent immigrant	0.77		0.16	0.85	***	0.03	0.75		0.29
Low income	1.18		0.13	1.43	***	0.03	0.75		0.29
Low education	1.16		0.11	1.19	***	0.02	1.10		0.21
Had any social assistance income	1.82	***	0.27	1.69	***	0.04	2.09	*	0.61
Homeowner	0.46	***	0.04	0.52	***	0.01	0.41	***	0.08
Behind on housing payments									
Young	1.13		0.21	1.32	***	0.05	1.01		0.49
Senior	0.23	***	0.06	0.30	***	0.02	0.18	*	0.12
Unattached adult	0.72		0.12	0.81	***	0.05	0.73		0.26
Single parent	1.31		0.28	2.59	***	0.15	0.59		0.44
Recent immigrant	1.26		0.64	1.11		0.08	1.46		1.74
Low income	2.35	***	0.64	1.57	***	0.09	3.28		2.01
Low education	1.74	*	0.42	1.33	***	0.05	2.31		1.33
Had any social assistance income	0.98		0.24	1.31	***	0.05	0.69		0.45
Homeowner	0.41	***	0.06	0.32	***	0.01	0.50	*	0.51

* significant at p<0.05

** significant at p<0.01

*** significant at p<0.001

Age

Generally good to be older

Lower odds of:

Illiquidity, \$0/neg net worth, low net worth + income, CC debts, unable to cover an emergency expense, missed payments

Higher odds of financial exclusion in 2008 only and not sticking to budget

But not terrible to be young

Higher odds of not sticking to budget and **falling behind on loans/bills, behind on housing** in 2008 only.

Poverty

Low income

Lower odds:

- CC debt
- **Illiquidity**
- \$0 or negative net worth (?)

Higher odds:

- Financial exclusion
- Not in budget
- Unable to cover emergency
- Missed loan/bills ('14)
- **Missed housing**

Low net worth

Higher odds:

- Illiquidity
- CC debt

Social assistance

Lower odds:

- CC debt
- \$0 or negative net worth (?)

Higher odds:

- **Illiquidity**
- Financial exclusion
- Unable to cover emergency
- Missed loans/bills

Homeownership

Vaccine or pox?

Lower odds of:

- \$0 or negative net worth (?)
- Low income AND low net worth
- Financial exclusion
- Fringe banking
- Unable to cover emergency
- Missed loans/bills
- Missed housing

Good news

Higher odds of:

- Illiquidity
- Not sticking to a budget

Not good news

Why bother?

Better pinpoint nature and sources of risk

Better anticipate demand for social welfare

How *much* bother?



“The Bank’s DSR simulations use the Ipsos Reid Canadian Financial Monitor (CFM) household microdata **because they are available on a regular basis.**”

(Dey, Djoudad and Terajima, 2008)