

The Effects of Asset Price Changes on Economic Security in Canada, 2005-09

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I. Introduction

In May 2008 the Toronto Stock Exchange composite index (TSX) stood at 14,715. Nine months later it had fallen to 8,123, a decline of 45%. Billions of dollars in household wealth, in the form of stocks, mutual funds, and pension assets, were wiped out. The accompanying slump also reduced the value of business equity, as well as house and other real estate values. Meanwhile workers, many of whom had taken on sizeable debts in the preceding boom, were thrown out of work, often with little in the form of liquid assets to cushion the blow. Thus the worldwide financial and economic crisis of 2008-09 has posed major problems for the economic security of many families and households in Canada.

The purpose of this short paper is to explore some of the impacts on economic security of asset price changes since Statistics Canada's last Survey of Financial Security (SFS) was conducted in May-July 2005. This is a complex topic that could be approached in various ways. Here we will ask what impact observed asset price declines would have had on household wealth and security in the absence of any change in asset quantities. Although an interesting exercise, this is clearly also a partial one. Changes in asset prices induce changes in asset demands, and quantities also change in response to other factors, for example interest rates and employment. A full analysis of the impact of wealth changes on economic security over the last couple of years would have to take quantity as well as price changes into account. But that is beyond the scope of this paper.

The paper is organized as follows. The next section briefly sketches the magnitude of asset price changes since the 2005 SFS and lays out asset and debt holdings according to after-tax income quintiles of Canadian families in 2005. Section III then performs various experiments to see how these assets and debts would have been affected by the rise of prices from 2005 to their peak in the summer of 2008, and by the subsequent price declines. Section IV looks at security impacts from a different perspective, assessing the distribution of asset and wealth impacts across families, in order to examine differences in patterns of vulnerability.

II. Ingredients

Asset Price Changes

Table 1 shows some of the key information on asset price changes in Canada since 2005. It shows values at three points in time: June 2005, the midpoint of the May-July 2005 period when the SFS was in the field; May 2008 when the TSX peaked; and February 2009 when the TSX hit its lowest point, before the recent rally. While house prices peaked a little later than the TSX, in August or September according to the two indexes reported here, in May 2008 house prices were very close to their peak. Also, the amplitude of proportional changes in house prices is much less than that of stocks. Thus it seems sensible to regard May 2008 as the peak for asset prices that are relevant to families in Canada.

While most of the stocks Canadian families hold, directly or indirectly (e.g. through pension plans), are likely listed on the Toronto Stock Exchange, there are other exchanges in Canada, some stocks are unlisted, and Canadians also hold some U.S. and foreign shares.

Unfortunately there do not appear to be any readily available estimates of how Canadians' stock holdings break down across these different categories. Even if such estimates were available, there would be additional difficulties. For example, exchange rate changes may have a substantial effect on the value of foreign stocks, or no impact at all if the investments are hedged.

Taking the non-TSX stock price changes explicitly into account would add some nuances to this exercise, but it is unlikely that it would alter conclusions too greatly. The S&P 500 rose 30% from its June 2005 value of 1,191 to a peak of 1,549 in October 2007 and then fell 53% to 735 in February 2009. Thus U.S. stocks peaked earlier than Canadian, did not rise quite as much, and fell more. Most Canadians who invested in U.S. stocks must have suffered more than those who limited themselves to domestic shares over the period 2007-09. This effect would have been enhanced for those who did not hedge their investment for exchange rate changes, since the Canadian dollar also rose from 80.6 cents U.S. at the end of June 2005 to

almost exact parity in May 2008, and then after rising to \$1.10 in July 2008 had fallen to 80.3 cents in February 2009.

An important item in personal balance sheets, as we shall see, is business equity. There is no price index for the value of private business, of course. It is clear, however, that this value rose during the boom and has fallen in the bust. In the work reported in this paper it is assumed that proportional changes in business equity were the same as those in the TSX. This assumption should appeal to those who believe the stock market does a good job of reflecting the true business values, assuming that there were similar trends in the value of listed and unlisted enterprises.

Table 1 also shows two house price indexes, both of which show a smaller rise in the boom and a smaller decline in the bust, than we have seen for stocks. The Statistics Canada new housing price index has the obvious limitation that it is only for new houses. What we ideally would like is a quality-adjusted price index for a representative basket of existing houses. An attractive index in this context appears to be the Teranet-National Bank index, which is based on comparisons in six major cities of the prices at which the same houses sold on at least two occasions. This index of course excludes new housing, and it is this index that we use in what follows. We will also assume that other real estate had the same percentage price changes, a somewhat heroic but forgivable assumption for present purposes.

Asset Holdings in 2005

Table 2 shows the pattern of mean assets and debts within after-tax income quintiles of Canadian families in 2005.¹ The same breakdown is expressed in terms of %'s of total assets in Table 3. In viewing these tables we should keep in mind that they classify families according to current, rather than permanent or lifetime income. The lowest and highest quintiles will have disproportionate shares of those with low and high transitory income

¹ Families here are ranked simply by their total after-tax income. For a more complete analysis it would be good to also examine results when one ranks according to adult-equivalent income.

respectively. Thus the mean wealth of these groups shown here is at the bottom greater than one would expect if ranking by permanent income, and at the top less.

Table 2 shows that average family net worth in 2005 was substantial, at \$364,130, and that mean assets stood at \$421,033.² The bulk of assets, 60.6% in fact, were in non-financial form, which includes a 33.5% share for principal residences and 10.5% for business equity. Pension-type assets made up 28.6% of total assets, with about two thirds of this in the form of employer pension plans (mainly RPPs) and the remainder in RRSPs, RRIFs, and the like. Finally, directly held financial assets, including stocks and bonds, accounted for only 10.8% of the average portfolio.

As is well known there is a tendency for the kind of financial assets that are held disproportionately by the rich to be understated in household surveys. (See e.g. Davies and Shorrocks, 2000.) The value of houses, in contrast, is reported on average quite accurately. This means that the balance sheet seen in Table 2 may be somewhat short of assets like stocks and bonds, an impression that is supported by comparisons with Statistics Canada's National Balance Sheet figures, which are compiled largely from independent sources. Still, Statistics Canada has worked hard to reduce this problem, with some success. Further, the SFS has the notable advantage of including estimates of wealth held in employer pension plans, which is very important in getting a complete picture of personal wealth, and is a feature absent from the wealth surveys conducted in most other countries and prior to 1999 in Canada itself. Thus one gets a relatively complete and reasonable picture of wealth-holding from the SFS, although one should bear in mind that, like other household surveys, it is unlikely to capture the extreme upper tail of the wealth distribution very well.

Tables 2 and 3 also provide some basic information on household debts, which are fairly well captured in sample surveys. Debt is of particular interest since there has been much alarmism of late over increasing levels of household debt. We see that, at least according to

² For comparison, the National Balance Sheet estimates for persons and unincorporated businesses in the second quarter of 2005, when divided by the number of SFS families (13.1347 million) indicate figures of \$347,033 and \$418,864 for mean net worth and total assets respectively. (See earlier editions of Statistics Canada, 2009.) A difference between the SFS and the NBS is to be expected, because of differences in coverage, definitions and methods. Given these differences, the two are remarkably close on these estimates.

the SFS, household debt averaged just 13.5% of household assets in 2005, which is hardly alarming. More than half of this debt was in the form of mortgages.

Turning to the quintile breakdown, one might perhaps expect to see that lower income groups have higher debts and less in the form of financial assets than higher income groups. This expectation turns out to be false. The total debt of the bottom quintile is only 12.1 % of its assets, and both of the bottom two deciles have a larger share of their assets in financial form than the overall population. The most notable differences across the quintiles are i) the fraction of assets in pension-type form rises strongly over the first four quintiles (before declining a bit for the top quintile), and ii) the share of non-financial assets declines over the first four quintiles.

Assets and Debts in Relation to Disposable Income

While it is interesting to look at asset and debt amounts, and portfolio composition in % terms, this does not allow one to answer questions like “Do households have enough assets?” or “How long could the typical family live on its savings if it had to?” In other words, we need more information, or a different kind of information in order to appreciate the contribution of household wealth to economic security.

There are various ways of assessing the contribution of wealth to economic security. One could, for example, aggregate income and wealth by adding the annuity-equivalent value of wealth to non-investment income, in an approach pioneered by Weisbrod and Hansen (1968) and applied in Canada in a lifecycle framework by Irvine (1980). Here we try to get at the matter in a less ambitious way in Table 4, by considering the size of assets and debts in relation to disposable income.³

³ This is the same approach used by the OECD for many years in presenting its asset and debt summaries for the G7 countries. See e.g. Organization for Economic Co-operation and Development (2006), table III.1, p. 138, which reports a net wealth to disposable income ratio for Canada of 640% in 2005. Corresponding figures are given for 15 OECD countries, among which Canada ranks 8th from the top in terms of this ratio. Canadian household debts are indicated as 126% of disposable income, which is the sixth lowest debt ratio shown. The difference between these ratios and those shown here in Table 4 are due to the use of National Balance Sheet data for wealth and National Accounts data for disposable income, rather than SFS data.

Table 4 shows that the total assets and net worth of Canadian families are quite high relative to after-tax income. Overall, net worth is 742.6% of after-tax income. Absent that information, debts might seem high, at 116.1% of disposable income, but when considered in relation to the size of assets they once again do not appear too alarming. Interestingly, this favourable overall picture applies through most of the distribution. In the second quintile net worth is “only” 650.2% of income, but even that figure seems quite healthy. Looking at individual assets and asset groups we see again that pension assets mainly rise in importance with income and non-financial assets decline. The bottom quintile, on the whole, has strong holdings of financial assets, and even of deposits, which equal 95.3% of its income. While Table 4 gives us an idea of broad differences between families at different income levels, it also conceals a great deal of variation within quintiles. Part of this variation is idiosyncratic to the family unit but some is also systematically related to observable characteristics. To get some idea of the latter relationships we can examine Tables 5 and 6, which show the assets and debts of families with different characteristics. Table 5 shows amounts and Table 6 translates into %’s of after-tax income.

We find in Table 5 that unattached individuals, those whose major earner is female, and families where the major earner is less than 65 years old, all have lower wealth and assets than average. The difference is particularly large for the unattached. The same holds true for unattached individuals when we look at assets as a % of income. Overall, their net worth averages just 703.7% of disposable income, compared to 742.6% for the full sample. On the other hand, families where the major earner is female have a *higher* ratio of net worth and total assets to after-tax income than we saw for the full sample in Table 4. This may indicate justified additional caution in a group with relatively low income and greater vulnerability.

Table 6 also throws a little light on the question of whether there are particular family types that may tend to have high debt or small liquid assets, and therefore are more vulnerable to asset price or other shocks. Of the six groups identified it is the “younger” families (those below 65) who have the highest debt:income ratio (128.5%) and the lowest financial assets in relation to income. This group, for example, has bank and other deposits equal to just 22.7% of disposable income. In popular terms, they could continue their spending for less than

three months using the money they have in the bank. Of course, they also have mutual funds, stocks and other assets that could be fairly readily sold.

The over-65 major earner group as a whole appears impressively prepared for life's financial ups and downs according to these data. Even taking out their net worth in pension-type assets, which equals about five times their disposable income, they would have net worth of about ten times income. Debts for this group are on average very small. If there is cause for concern in these aggregate data it might be that employer pension plan equity equals only 341.4% of average income for the over-65 group. This reflects the fact that only a minority of workers in Canada have an employer pension plan. (In 2006, for example, only 38.1% of paid workers in Canada had an RPP. See Statistics Canada's *The Daily* for July 4, 2008.) To an extent this low incidence of pension plans is offset by the generosity of Old Age Security and the Guaranteed Income Supplement in Canada, which produce a high replacement rate of income in retirement for the bottom quintile (see LaRoche-Côté et al. 2008). However, there is a residual group of middle income families who experience a lower income replacement rate in retirement because the public programs and their private savings do not compensate them fully for their lack of an employer-based pension.

III. Asset Price Effects

Tables 7 and 8 apply the asset price changes considered above to the 2005 SFS in order to estimate the levels of assets and debts that would have been achieved at the peak of the boom, in May 2008, and in the trough of the recent bust, in February 2009. Values are given in 2005 \$'s, so that it is only changes in real asset prices that are considered here. Once again we break down families into their 2005 after-tax income quintiles.

In performing the reported calculations it is assumed that stocks, mutual funds, and business equity would all have been affected the same, and that their prices would follow the TSX. RRSPs, RRIFs, other sheltered savings, and defined contribution (DC) employer pension plans were assumed to be have 60% of their assets in stocks or mutual funds (which follows Table 7 in Statistics Canada, 2006). The remaining 40% was assumed not to be affected by

real price changes. Equity in employer pension plans was assumed to be 80% in defined benefit (DB) plans and 20% in DC or equivalent plans, following the observed division in the number of members of DB and DC plans in Canada in 2007. (Again see *The Daily*, July 4, 2008.) Prices of houses and other real estate go up at the rate shown by the Teranet-National Bank index. Remaining assets, and all debts, are assumed not to change in real value.

Table 7 shows a substantial increase in assets and net worth from the time of the 2005 SFS to the peak of the boom. Mean net worth rose to \$494,878, or by 17.5%. This is a healthy increase, especially when we consider that it is in real terms, but it is perhaps less than one might have expected in light of the much larger rise in stock prices. The explanation, of course, is that families hold a relatively small portion of their assets in stocks, directly or indirectly.

Table 8 indicates that, although the drop in asset prices after May 2008 reduced household wealth, overall what it did was to return real family wealth to the level seen in the 2005 SFS. An unpleasant surprise, of course, and more than that for those who had invested heavily in the stock market, or who had DC pension plans, but overall a kind of restoration of the status quo ante. Mean net worth in February 2009 according to these estimates would have been \$365,867 in the absence of quantity changes in asset holding (not to mention aging of the population and so on), which is as near as makes no difference to the \$364,130 found in the 2005 survey. Stocks, mutual funds, and sheltered savings plans like RRSPs would have been down significantly, yes, but non-financial assets would have risen enough to compensate - - the drop in the housing market has been much smaller than the rise from 2005 to mid 2008. And, interestingly, according to these numbers employer pension plans, overall, would have declined in value only a small amount - - by 7.1% (see Table 10). Some small redistribution from the top quintile to the rest of the population would have occurred, since the top quintile had a larger share of its assets in the stock market, directly or indirectly, but in the main the pattern of impacts would have been fairly similar across the income ranges.

It is worth commenting more on the relatively small decline of employer pension plans shown here. In the real world there is great concern about the fragility of many pension plans

at the moment. But the two things are quite consistent. The fragility of these plans is precisely due to the fact that the decline in the value of the assets held in DB plans is not passed on in formal legal terms to employees. So, the legal entitlements of the workers are not reduced - - which is what is shown in the tables here. On the other hand, a positive probability of pension plan collapse and the possibly radical reduction in benefits that would occur as a result has arisen. If one were to factor in these probabilities, then one would see a reduction in the expected value of pension rights greater than 7.1%. How large would this impact be? It is difficult to say. But suppose that 20% of the DB plans had a 50% chance of complete collapse, probably a “worst case” picture. Then this would imply a further 8% drop in the expected value of employer pension plans. Overall net worth would go down a little, but not a lot. The anxiety, insecurity and pain are highly concentrated. For those affected by the possibility of loss of pension benefits there is a huge problem. But this is not a problem that is shared by the majority of Canadians.

Finally, one can compare the simulated changes in wealth due to asset price declines found here with the changes seen in the National Balance Sheet (NBS) for persons and unincorporated businesses. The simulation here produces a 17.5% increase in net worth from June 2005 to May 2008 and a 17.5% drop thereafter to February 2009. The NBS shows a 29.0% increase in net worth from the second quarter of 2005 to the second quarter of 2008 (the data are not available monthly), and a decline of 7.3% to the end of 2008. The larger increase in NBS net worth from 2005 to the second quarter of 2008 than we simulate for the SFS could plausibly be explained by quantity increases in assets. But it is not obvious what accounts for the relatively small decrease in net worth from the second quarter of 2008 to the end of the year in the NBS.

IV. Distribution of Asset Value Declines

A shortcoming of the above analysis is that, even though we have disaggregated by quintiles, and by family types to some extent, we are still aggregating. We know that there are particular individuals and families who have been badly caught by the collapse of stock prices and by the threat of pension plan meltdowns. But they do not show up in the kind of

analysis that has been considered so far. There is a lot of room for work that would redress this balance and consider individual situations more carefully. Here we will make a small foray into this area by looking at the distribution across the SFS families of % declines in four key wealth/asset indicators that would have occurred due to asset price changes during the financial/economic crisis of 2008/09.

Table 11 shows the distribution of % asset declines from May 2008 to February 2009 that would have occurred according to the SFS data under the assumptions we have been making about asset price changes and the lack of quantity changes. The table shows that, among positive initial wealth holders, 14.5% would have seen no decline in net worth. The modal group, with 45.9% of the population, would have seen a drop of 10 to 25%. And a small group, 0.7% would have experienced a decline in net worth of more than 50%. Thus there are groups of individuals and families that have suffered very badly indeed in wealth terms from the financial/economic crisis. Their loss of economic security is not difficult to imagine.

Table 11 goes on to show the distribution of price impacts over this period for financial assets, for financial assets plus RRSPs - - "financial assets plus", and for "financial assets plus" minus consumer and student debt. In these cases a fairly high proportion of the sample would have experienced no change, since their (mostly small) wealth is held in the form of the assets, like deposits and vehicles, that are assumed to have no real change in price. Still, 5.9% of the families would have seen a drop of 25% or more in financial assets, and 10.6% would have seen a 25% or more decline in financial assets plus RRSPs. Finally, when debts are brought in, we have a more extreme situation, with 0.5% of families seeing a 50% + decline.

That more families do not see a large decrease in financial assets is explained by the fact that participation in stocks and mutual funds is still relatively low in Canada.⁴ When it comes to financial assets, what many Canadian families have is simply deposits, Canada Savings

⁴ Statistics Canada (2006, Table 5) indicates that only 9.9% of families in the 2005 SFS held stocks directly. Mutual funds, investment funds, or income trusts were held by 14.0%.

Bonds, or GICs. These holdings were not threatened in the crisis, and the precautionary value of these assets has been well demonstrated.

V. Conclusion

What is the “bottom line” from this exercise? On the one hand, we have seen that the sharp drop in the stock market after May 2008 reduced holdings of stocks, mutual funds, and DC pension plans greatly. The value of business equity has likely also fallen by a similar percentage. Unmeasured, but nevertheless important declines in the expected value of some DB pension rights should not be discounted. And house prices have declined somewhat. It is not a good news story. But the result, in the absence of changes in asset quantities, would have been to restore mean family wealth in real terms to the level seen in the 2005 SFS. Thus, in overall terms the wealth reduction due to the crisis is a little hard to see as a great disaster.

There is pain, however, and a drop in economic security due to the effects of asset price declines. This pain is concentrated among particular groups - - for example those who invested heavily in stocks or mutual funds, defined contribution (DC) pension plan members, business owners, members of shaky defined benefit (DB) pension plans, and owners of houses and other real estate in some areas. There is much less pain among those with cautious savings/investment strategies, among members of safe DB pension plans, and others, who may form a majority of Canadian families.

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Table 1: Asset Price Indexes

	House Prices.....		TSX	CPI
	Stat Can	Teranet-		
	New Houses	National Bank		
Jun-05	129.3	100	9902.8	106.9
May-08	158.4	129	14714.7	114.6
Feb-09	155.3	121.2	8123	113.8
June				
2005=100...				
May-08	122.5	129	148.6	107.2
Feb-09	120.1	121.2	82	106.5

Table 2: Mean Asset and Debt Holdings by After-Tax Income Quintile, 2005 (\$)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All
Deposits	10597	11030	20838	19975	26837	17862
Mutual Funds	1539	5277	7309	9217	26970	10067
Bonds	526	2564	1712	4385	3781	2595
Stocks	4122	2646	3519	10792	24163	9051
Other Financial Assets	2357	1894	7314	7013	11570	6032
Total Financial Assets	19141	23411	40692	51381	93321	45606
RRSPs/LIRAs	6339	11528	18421	37370	101027	34951
RRIFs/LIFs/LRIFs	1568	4330	10246	12408	10594	7803
Employer Pension Plan	7079	31239	70031	114848	164835	77643
Total Pension Type Assets	14986	47097	98698	164626	276456	120397
Principal Residence	39148	73013	131979	176793	283423	140842
Other Real Estate	19245	14008	46457	22724	76968	35879
Vehicles	3164	7530	10745	16895	25811	12819
Business Equity	8517	17424	32963	27297	134797	44217
Other Non-Financial Assets	7560	13076	19395	26528	39779	21273
Total Non-Financial Assets	77634	125051	241539	270237	560778	255030
Total Assets	111761	195559	380929	486244	930554	421033
Mortgage Debt	5541	14935	32630	53135	75548	36375
Total Debt	13575	27164	50423	76396	116941	56903
Net Worth	98185	168395	330506	409848	813614	364130
Market Income	5378	19593	36424	64520	136309	52466
After-tax Income	11117	25900	39604	59508	108976	49032

Table 3: Assets and Debts as % of Total Assets, After-Tax Income Quintiles, 2005

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All
Deposits	9.5	5.6	5.5	4.1	2.9	4.2
Mutual Funds	1.4	2.7	1.9	1.9	2.9	2.4
Bonds	0.5	1.3	0.4	0.9	0.4	0.6
Stocks	3.7	1.4	0.9	2.2	2.6	2.1
Other Financial Assets	2.1	1.0	1.9	1.4	1.2	1.4
Total Financial Assets	17.1	12.0	10.7	10.6	10.0	10.8
RRSPs/PIRAs	5.7	5.9	4.8	7.7	10.9	8.3
RRIFs/LIFs/LRIFs	1.4	2.2	2.7	2.6	1.1	1.9
Employer Pension Plan	6.3	16.0	18.4	23.6	17.7	18.4
Total Pension Type Assets	13.4	24.1	25.9	33.9	29.7	28.6
Principal Residence	35.0	37.3	34.6	36.4	30.5	33.5
Other Real Estate	17.2	7.2	12.2	4.7	8.3	8.5
Vehicles	2.8	3.9	2.8	3.5	2.8	3.0
Business Equity	7.6	8.9	8.7	5.6	14.5	10.5
Other Non-Financial Assets	6.8	6.7	5.1	5.5	4.3	5.1
Total Non-Financial Assets	69.5	63.9	63.4	55.6	60.3	60.6
Total Assets	100.0	100.0	100.0	100.0	100.0	100.0
Mortgage Debt	5.0	7.6	8.6	10.9	8.1	8.6
Total Debt	12.1	13.9	13.2	15.7	12.6	13.5
Net Worth	87.9	86.1	86.8	84.3	87.4	86.5

Table 5: Mean Assets and Debts by Family Characteristics, 2005 (\$)

	Unattached Individuals	Families of 2+	Major Earner is...		Age of Major Earner is...	
			Male	Female	< 65	65+
Deposits	14647	19495	17634	18213	11796	45503
Mutual Funds	5676	12297	12012	7057	8679	16391
Bonds	1423	3189	2042	3449	1815	6148
Stocks	5905	10650	8813	9421	7062	18120
Other Financial Assets	3549	4765	4506	4123	4361	4329
Total Financial Assets	31402	52821	46361	44439	35573	91332
RRSPs/LIRAs	12447	46381	40029	27093	38977	16605
RRIFs	7361	8028	8803	6256	1219	37809
Employer Pension Plan	42959	95260	87429	62499	68344	120023
Total Pension Type Assets	62767	149669	136261	95848	108540	174437
Principal Residence	58488	182671	155831	117646	138467	151664
Other Real Estate	17548	45190	33996	38793	36581	32682
Vehicles	5245	16666	14706	9898	13563	9425
Business Equity	7706	62762	49126	36620	50340	16314
Other Non-Financial Assets	11690	26141	23181	18321	21430	20558
Total Non-Financial Assets	100678	333430	276841	221277	260381	230643
Total Assets	194847	535920	459463	361564	404493	496412
Mortgage Debt	12227	48640	40904	29366	43393	4392
Debt	22767	74242	62747	47859	66918	11264
Net Worth	172081	461678	396715	313705	337576	485148
Market Income	24255	66795	60952	39334	58935	22986
After-tax Income	24452	61517	55097	39647	52076	35160

Table 7: Assets and Debts adjusted to May 2008 for Real Asset Price Changes, by After-Tax Income Quintiles (2005 \$s)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All
Deposits	10597	11030	20838	19975	26837	17862
Mutual Funds	2134	7315	10131	12775	37384	13954
Bonds	526	2564	1712	4385	3781	2595
Stocks	5713	3667	4878	14959	33492	12546
Other Financial Assets	2357	1894	7314	7013	11570	6032
Total Financial Assets	21327	26470	44873	59107	113064	52988
RRSPs/PIRAs	7807	14198	22689	46027	124432	43048
RRIFs/LIFs/LRIFs	1931	5333	12620	15283	13048	9611
Employer Pension Plan	7407	32687	73275	120169	172473	81241
Total Pension Type Assets	17145	52218	108584	181480	309953	133900
Principal Residence	47098	87840	158782	212696	340980	169443
Other Real Estate	23154	16853	55891	27338	92598	43165
Vehicles	3164	7530	10745	16895	25811	12819
Business Equity	11806	24151	45690	37837	186844	61290
Other Non-Financial Assets	7560	13076	19395	26528	39779	21273
Total Non-Financial Assets	92781	149450	290503	321294	686012	307991
Total Assets	131253	228139	443960	561880	1109028	494878
Mortgage Debt	5541	14935	32630	53135	75548	36375
Total Debt	13575	27164	50423	76396	116941	56903
Net Worth	117678	200974	393537	485484	992087	437975
Market Income	5378	19593	36424	64520	136309	52466
After-tax Income	11117	25900	39604	59508	108976	49032

Table 8: Assets and Debts adjusted to February 2009 for Real Asset Price Changes, by After-Tax Income Quintiles (2005 \$s)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All
Deposits	10597	11030	20838	19975	26837	17862
Mutual Funds	1186	4065	5629	7099	20773	7753
Bonds	526	2564	1712	4385	3781	2595
Stocks	3175	2038	2711	8312	18610	6972
Other Financial Assets	2357	1894	7314	7013	11570	6032
Total Financial Assets	17840	21590	38204	46783	81571	41213
RRSPs/PIRAs	5465	9938	15881	32218	87098	30132
RRIFs/LIFs/LRIFs	1352	3733	8834	10697	9133	6727
Employer Pension Plan	6884	30378	68100	111681	160290	75502
Total Pension Type Assets	13700	44049	92814	154596	256521	112362
Principal Residence	44536	83063	150147	201129	322436	160229
Other Real Estate	21894	15936	52852	25852	87563	40818
Vehicles	3164	7530	10745	16895	25811	12819
Business Equity	6560	13420	25388	21024	103822	34056
Other Non-Financial Assets	7560	13076	19395	26528	39779	21273
Total Non-Financial Assets	83715	133025	258527	291428	579411	269195
Total Assets	115255	198665	389545	492808	917503	422770
Mortgage Debt	5541	14935	32630	53135	75548	36375
Total Debt	13575	27164	50423	76396	116941	56903
Net Worth	101680	171501	339122	416411	800562	365867
Market Income	5378	19593	36424	64520	136309	52466
After-tax Income	11117	25900	39604	59508	108976	49032

Table 9: Change in Real Value of Assets and Debts from June 2005 to February 2009, by After-Tax Income Quintiles (%)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All
Deposits	0.0	0.0	0.0	0.0	0.0	0.0
Mutual Funds	-23.0	-23.0	-23.0	-23.0	-23.0	-23.0
Bonds	0.0	0.0	0.0	0.0	0.0	0.0
Stocks	-23.0	-23.0	-23.0	-23.0	-23.0	-23.0
Other Financial Assets	0.0	0.0	0.0	0.0	0.0	0.0
Total Financial Assets	-6.8	-7.8	-6.1	-8.9	-12.6	-9.6
RRSPs/PIRAs	-13.8	-13.8	-13.8	-13.8	-13.8	-13.8
RRIFs/LIFs/LRIFs	-13.8	-13.8	-13.8	-13.8	-13.8	-13.8
Employer Pension Plan	-2.8	-2.8	-2.8	-2.8	-2.8	-2.8
Total Pension Type Assets	-8.6	-6.5	-6.0	-6.1	-7.2	-6.7
Principal Residence	13.8	13.8	13.8	13.8	13.8	13.8
Other Real Estate	13.8	13.8	13.8	13.8	13.8	13.8
Vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Business Equity	-23.0	-23.0	-23.0	-23.0	-23.0	-23.0
Other Non-Financial Assets	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Financial Assets	7.8	6.4	7.0	7.8	3.3	5.6
Total Assets	3.1	1.6	2.3	1.3	-1.4	0.4
Mortgage Debt	0.0	0.0	0.0	0.0	0.0	0.0
Total Debt	0.0	0.0	0.0	0.0	0.0	0.0
Net Worth	3.6	1.8	2.6	1.6	-1.6	0.5
Market Income	0.0	0.0	0.0	0.0	0.0	0.0
After-tax Income	0.0	0.0	0.0	0.0	0.0	0.0

Table 10: Change in Real Value of Assets and Debts from June 2005 to February 2009, by After-Tax Income Quintiles (%)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	All
Deposits	0.0	0.0	0.0	0.0	0.0	0.0
Mutual Funds	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4
Bonds	0.0	0.0	0.0	0.0	0.0	0.0
Stocks	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4
Other Financial Assets	0.0	0.0	0.0	0.0	0.0	0.0
Total Financial Assets	-16.3	-18.4	-14.9	-20.8	-27.9	-22.2
RRSPs/PIRAs	-30.0	-30.0	-30.0	-30.0	-30.0	-30.0
RRIFs/LIFs/LRIFs	-30.0	-30.0	-30.0	-30.0	-30.0	-30.0
Employer Pension Plan	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1
Total Pension Type Assets	-20.1	-15.6	-14.5	-14.8	-17.2	-16.1
Principal Residence	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4
Other Real Estate	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4
Vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Business Equity	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4
Other Non-Financial Assets	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Financial Assets	-9.8	-11.0	-11.0	-9.3	-15.5	-12.6
Total Assets	-12.2	-12.9	-12.3	-12.3	-17.3	-14.6
Mortgage Debt	0.0	0.0	0.0	0.0	0.0	0.0
Total Debt	0.0	0.0	0.0	0.0	0.0	0.0
Net Worth	-13.6	-14.7	-13.8	-14.2	-19.3	-16.5
Market Income	0.0	0.0	0.0	0.0	0.0	0.0
After-tax Income	0.0	0.0	0.0	0.0	0.0	0.0

Table 11: Distribution of Families by % Asset Declines from May 2008 to February 2009

% Decline	Net Worth	Financial Assets	Financial Assets plus RRSPs	Financial Assets plus RRSPs minus Consumer and Student Debt
Zero	14.5	81.6	45.2	40.1
zero to 10	24.0	6.7	17.4	15.9
10 to 25	45.9	5.9	26.9	25.8
25 to 50	3.0	5.9	10.6	12.1
50 +	0.7	0.0	0.0	0.5
% with Negative Initial Holdings	11.8	0.0	0.0	5.6
Mean May 2008 (\$)	443,954	85,707	129,082	125,653
Mean Feb 2009 (\$)	363,383	73,567	103,625	100,196
% Drop in Mean	18.1	14.2	19.7	20.3

Note: The distribution of % changes is only among those with positive initial holdings of the relevant variable. Means are for the whole sample.