Economic Viewpoint
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Canada's national balance sheet: Falling assets leading to increased savings

Summary

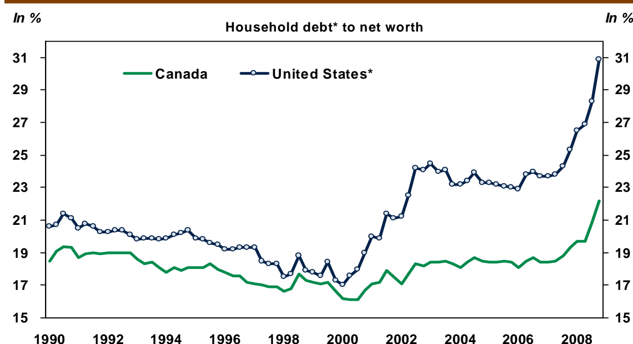
The debt-to-net worth ratio for Canada's households has risen sharply over the past few years. And yet the Statistics Canada's data analysis conducted by Statistics Canada on the national balance sheet suggests that the situation will only deteriorate further in the coming quarters due particularly to a significant drop in the value of assets. If no turnaround is forthcoming, the burden of servicing debt could compromise advances in consumer spending in the years to come. An increase in the savings rate seems inevitable in the short term, a hypothesis corroborated by economic theory and empirical assessments. Our model signals that the savings rate in Canadian households could exceed 7% in the next few quarters. This will steepen the decline of Canada's economy at the beginning of 2009 and soften the scope of the economic recovery.

HOUSEHOLD DEBT LESS OF A CONCERN IN CANADA

Concerns about debt levels are not new. They have however deepened recently with this global recession that has now reached Canada's shores. In this *Economic Viewpoint*, we will look at the situation in Canada in light of the data on the national balance sheet published by Statistics Canada.

At first glance, Canada's households are carrying substantially less debt than households south of the border. As we can see in graph 1, the debt level of Canadian households (consumer and mortgage loans) represented almost 22% of their net worth at the end of 2008[1]. This ratio is less than that of U.S. households (calculated on a comparable basis), which is closer to 31%. Both countries had debt levels that were relatively the same until a few short years ago, but the level of debt in U.S. households has risen sharply since the start of the new millennium. We saw also an increase in Canada during the same period, albeit more subdued. The fact that the balance sheet in Canadian households is in better shape than that of our U.S. neighbours brings with it some measure of comfort. That said, we can't delude ourselves: the situation in Canada is still a concern. The debt-to-net worth ratio for Canada's households is at an all-time high right now, and this situation could very well deteriorate further in the coming quarters.

Graph 1 – Canadian households seem to be in better shape



*Consumer credit and mortgage debt for individuals, sole proprietorships and non-profit organizations.
Sources: Federal Reserve, Statistics Canada and Desjardins, Economic Studies

[1] This measure is different from the usual ratio of outstanding debt (consumer and mortgage) to disposable income (which is a flow). The ratio mentioned in this study is better in that it measures two levels of Canadians' balance sheets. However, regardless of the ratio used, the conclusions drawn from any comparisons between the U.S. and Canada remain essentially the same. The debt-to-personal disposable income ratio for Canadian households was 128% in Q4 of 2008 compared with 150% in the United States for the same period.

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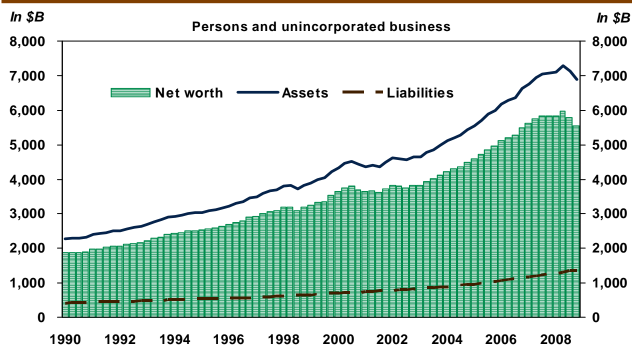
HOUSEHOLD ASSETS FACE DOWNWARD PRESSURES

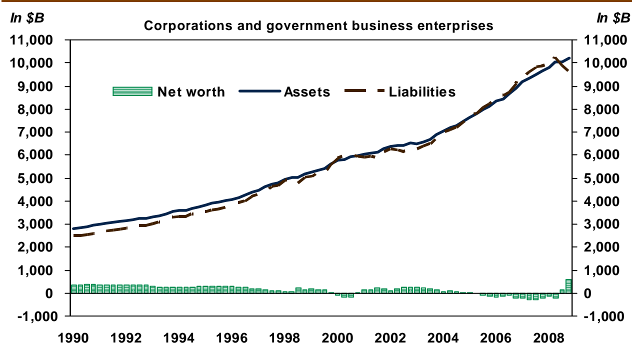
In order to fully understand the underlying debt trends, we have to break down the data in our national balance sheet. The data is divided into three categories: persons and unincorporated business, corporations and government business enterprises, and public administrations. Graphs 2 to 4 illustrate movements in assets and liabilities in these three categories. Persons' net worth – or assets less liabilities – reached $5,538B in Q4 of 2008, compared with $567B for corporations and only $18B for public administrations. Persons therefore held about 90% of Canada's total net worth at the end of 2008 (graph 5). This shows how growth of household balance sheets is crucial to the net worth of Canada's overall economy.

Graph 2 – Rise in Canadian individuals' assets pumped up their net worth



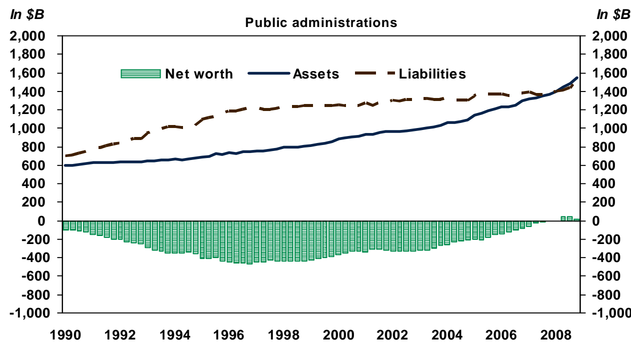
Sources: Statistics Canada and Desjardins, Economic Studies

Graph 3 – Net worth of Canadian corporations is fairly limited



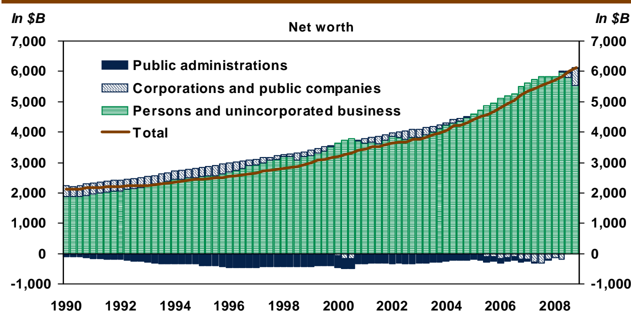
Sources: Statistics Canada and Desjardins, Economic Studies

Graph 4 – Net worth of Canada's public administrations show slight improvements



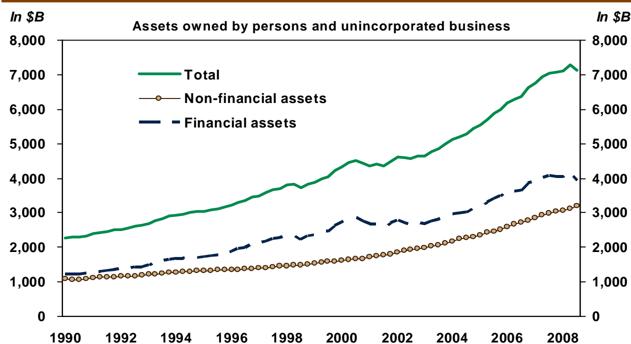
Sources: Statistics Canada and Desjardins, Economic Studies

Graph 5 – A significant percentage of Canada's total net worth stems from individuals



Sources: Statistics Canada and Desjardins, Economic Studies

Graph 6 – Canadian households' asset allocation

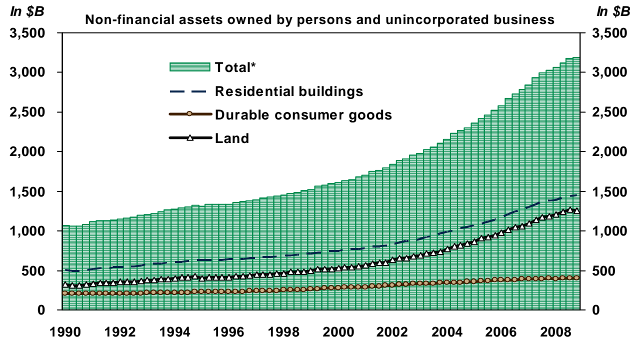


Sources: Statistics Canada and Desjardins, Economic Studies

As shown in graph 2, net household worth has advanced significantly in the past few years due to a sharp increase in the household assets held. These assets are held in two distinct categories: financial and non-financial assets (graph 6). The non-financial assets held by individuals consist mainly of residential buildings and related land, other components being of limited value (graph 7). Equities, life insurance, pensions, cash and deposits make up the financial assets held by individuals (graph 8).

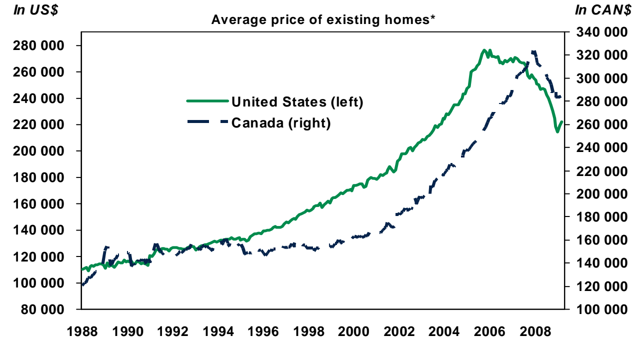
And yet two of these assets are of particular concern since they are subject to a major devaluation: real estate assets (buildings and land) and equities held. On the real estate side, if home prices in Canada have thus far resisted the downward

Graph 7 – Canadian households' allocation of non-financial assets



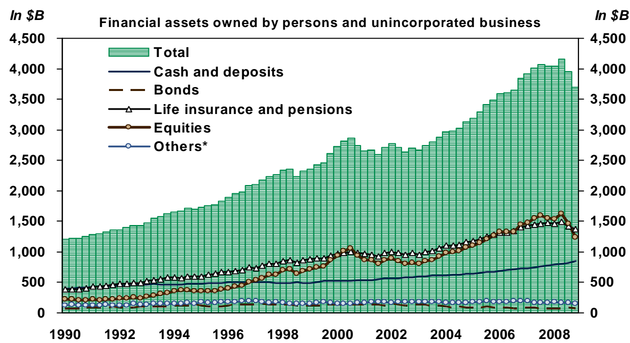
* Including non-residential buildings, machinery, equipment and inventory, considered negligible assets in this category.
Sources: Statistics Canada and Desjardins, Economic Studies

Graph 9 – Real estate in the U.S. and Canada: the similarities are growing...



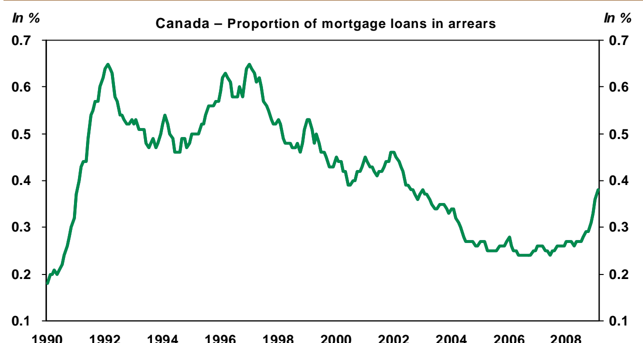
* Adjusted for seasonal effects.
Sources: National Association of Realtors, The Canadian Real Estate Association and Desjardins, Economic Studies

Graph 8 – Canadian households' allocation of financial assets



*Including mortgages, foreign investments, short-term items and consumer credit, considered negligible assets in this category.
Sources: Statistics Canada and Desjardins, Economic Studies

Graph 10 – Canada's real estate market appears less vulnerable



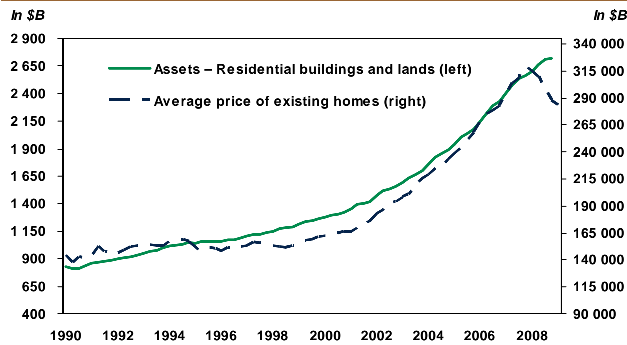
Sources: Canadian Bankers Association and Desjardins, Economic Studies

spiral we are seeing in the U.S., prices in Canada have posted a marked decline since January 2008. Prices for existing homes have fallen by 12.3% to date in Canada, a decline that is starting to look a lot like what is currently taking place across the border (graph 9). The problems at the core of the real estate market in both countries are not quite the same. Our position is that home prices in Canada will not decline to the extent they have in the U.S. Moreover, subprime mortgages never gained much traction in Canada and the proportion of mortgages in arrears is still relatively weak (graph 10). That said, it now appears as though the downward trend in home prices has reached Canada and further price declines are inevitable in the next few months.

These declining prices are still not having an impact on the real estate assets held by individuals on the national balance sheet. And as such, the value of assets related to residential real estate and land has been rising consistently since the early 1990s, reaching $2,716B at the end of 2008. Given the current drop in home prices, it seems inevitable that household real estate assets will also fall in the near term (graph 11). How steep will this decline be? It's hard to answer that question accurately right now. Nevertheless, we can assume that the drop in home prices we've seen this past year will eventually impact household assets. A drop of at least 12% in real estate assets seems inevitable.

In such conditions, household assets could fall by $325B in the coming quarters. If we assume that liabilities will remain essentially the same, the full force of this decline will be felt on net worth. This will translate into an increase in the household debt-to-net worth ratio, which could reach as high as 24% in the near term. It should be noted that this debt level is still largely below what we are currently seeing in the U.S. However, everything seems to indicate that home prices will continue to trend downward in the months to come. As a result, the total drop in real estate assets held by individuals could exceed 12%, which would see the debt ratio rise sharply against net worth. However, it is unlikely the gap between Canada and the United States will close completely. According to our estimates, the real estate assets held by Canadians would have to fall by at least $1,550B to bring our debt ratio to the same level we are seeing in the United States (30.9%): this would require real estate prices to fall by almost 60% in Canada, a highly unlikely scenario.

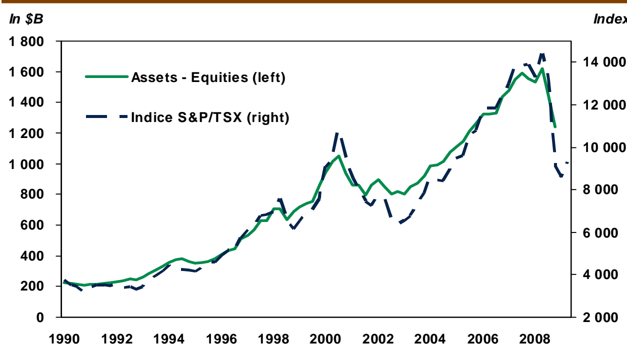
Graph 11 – Heading towards a decline in real estate assets in Canada



Sources: The Canadian Real Estate Association, Statistics Canada and Desjardins, Economic Studies

The growth of household assets does not rest solely on residential buildings and land – certain financial assets form an important part of household balance sheets. In this context, the growth of securities has been a source of concern for the past few quarters. This is because the effect of the falling stock prices since last summer only partially impacts the numbers for securities held by Canadians. As seen in graph 12, it seems almost certain that falling stock prices will have a further impact on household assets in upcoming quarters. The S&P/TSX lost almost 50% of its worth from its peak reached on June 18, 2008 to its low point on March 9, 2009. The slight upturn posted this spring allowed us to wipe out part of these losses, such that the total decline is a little less than 40% at the time of writing. If we assume that securities will fall by the same degree, we can anticipate a $650B decline from the peak reached in the second quarter of 2008. And yet the total decline was only $378B by the end of 2008. We are likely to see an additional decline of almost $270B in the next few months. This extensive drop will obviously reduce household net worth. According to our estimates, this additional decline, on its own, could contribute to increasing the debt-to-net worth ratio by 23.3%.

Graph 12 – Moveable assets set to fall sharply in Canada



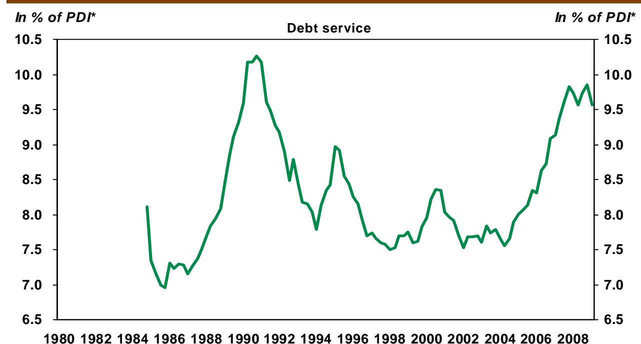
Sources: Datastream, Statistics Canada and Desjardins, Economic Studies

The drop in real estate assets and the reduction in securities are simultaneous occurrences, however. The total impact on household balance sheets is therefore higher than the results posted to date. In fact, the overall assets held by Canadian households could tumble again by at least $595B. This combined drop could bring the debt-to-net worth ratio closer to 25% in the next few quarters. In fact, this ratio could even be higher in the likely event that home prices continue to fall. For example, one scenario predicts that if home prices fall by about 20%, this would increase the debt-to-net worth ratio to 26%. Despite the inevitable increase of the debt ratio in Canadian households in the next few quarters, it seems quite likely that it will still be significantly less than what we are seeing south of the border.

CLEARING BALANCE SHEETS OF DEBT

This considerable increase in debt levels sheds light on the need to clean up household balance sheets. Debt servicing, represented by the amount of interest payments as a proportion of income, has grown sharply over the past few years as households grapple with rising liabilities (graph 13). This situation is especially troubling in a context where interest rates are at historically low levels. And yet the next economic rebound will surely see interest rates bow to upward pressures. Unless debt is slashed, any new increase in interest rates will only burden debt repayment further. In the long run, this could put the brakes on spending and hinder economic growth.

Graph 13 – Interest payments monopolize a significant portion of income in Canada



* Personal disposable income
Sources: Statistics Canada, Bank of Canada and Desjardins, Economic Studies

Since household assets are dictated by market forces, households have no direct control over asset growth. If it is difficult to predict when home and stock prices will definitely stop falling – and where they will end up – it seems obvious that time will be required before prices regain any ground lost. In these conditions, households have little choice but to reduce their debt load to a more sustainable level over the mid and the long term.

FACTORS THAT INFLUENCE SAVINGS

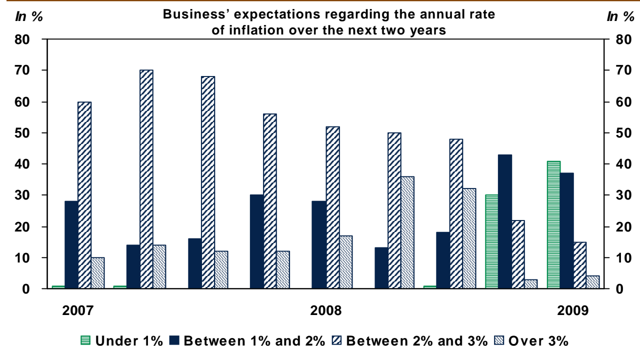
Since reducing debt is akin to increasing savings[2], this surely augurs well for an increase in the household savings rate[3] in the coming quarters. Economic theory corroborates this hypothesis on several fronts, as we can see in the advances made by the main factors that spur savings and the savings rate. On one hand, changes in privately held assets – especially real estate and securities – play a pivotal role in the savings rate. The more assets gain in value, the less households feel the need to save a portion of current income to finance future consumption. The underlying hypothesis is that households can eventually sell their assets to finance consumption. As such, the downward trend in the savings rate we've seen for many years now is in line with a period of rising real estate prices and major gains in financial markets. As we have just seen, the value of these assets will fall significantly in the next few months. Households will likely make up for this loss by growing their savings rate in the next few quarters.

Easy access to credit also plays an important role in savings growth. The relationship is simple: easy and abundant credit reduces the need to save since households anticipate that it will be easier to finance a portion of their future consumption through debt. Meaning that, the decline in the savings rate since the mid-1980s is partly attributable to abundant credit and easier access to it. For example, the annual growth of outstanding consumer and mortgage credit has been relatively steady since the end of the recession in the early 1980s. The current financial crisis will probably have some repercussions on the availability of credit across the country. If outstanding household debt continues to grow to relatively high levels, the tightening of credit conditions could possibly limit growth in the next few quarters. It goes without saying that this would drive household savings rates even higher. That said, Canada's financial institutions are well capitalized compared to many other places, which limits the risk of any major credit contraction in this country. In addition, the Bank of Canada is ready to introduce several non-traditional measures aimed at increasing liquidities, which should see access to credit maintained across the board.

The savings rate is also determined by changes in inflationary expectations. Generally speaking, concerns about accelerating prices lead households to increase their savings to preserve the real value of their investments and, by extension, secure the same purchasing power for their retirement. And since most households have an aversion to risk, this reaction can be explained by the uncertainty of advances in real returns. Obviously, the opposite is also true: fewer concerns about inflation usually do not augur well for the savings rate. When the Bank of Canada set targets for inflation in the early 1990s, this contributed to reducing the volatility of price changes while dampening uncertainty and expectations on inflation. This phenomenon could reflect the downward trend we have seen in the savings rate in the past 20 years.

For the last little while, we have seen big changes in inflation. We have seen significant disinflation set in since last summer due to the impact of falling prices for raw materials and fewer inflationary pressures due to the current recession. This reduced inflation reverberates onto inflation expectations, which are falling slightly (graph 14). This could eventually bring any increase in the savings rate to a complete halt.

Graph 14 – Inflationary expectations fall in Canada



Sources: Bank of Canada and Desjardins, Economic Studies

Moreover, our forecasts indicate that the current drop in the rate of inflation could lead to a temporary period of deflation (negative annual change in prices). And yet in some countries we have seen that deflation usually incites households to defer certain purchases. Why purchase goods or a service now if we can put off buying and get whatever we need at a cheaper price later on? This type of behaviour usually sees the savings rate rise in households. It would be surprising however if we saw this type of reaction anytime soon in Canada. Not only is anticipated deflation will be short lived, lasting only a few months, it will also not be widespread by any means in this country. For example, the Bank of Canada's benchmark index, the CPIX, which excludes the eight most volatile components, is expected to remain in positive territory.

The real rate of return on investments and credit is also a big part of the savings rate. We must remember that real rates are determined by nominal rates minus the inflation rate. A higher real return rate prompts people to save and makes using credit more expensive, which only boosts the savings rate further. Advances in the real rate of return are extremely cyclical over time. The real rate of return fell recently due to the impact of

[2] Debt being negative savings.

[3] The savings rate corresponds to savings as a percentage of disposable income.

the BoC's cuts to key interest rates and falling stock markets. This situation could change however in the months ahead. On one hand, after cutting the target for the overnight rate to 0.25%, the Bank of Canada recently announced that it would keep this rate in effect until mid-2010, at least. On the other hand, falling inflation, perhaps even deflation, is expected in the months to come. This will augur well for real rates of return until the end of 2009. In addition, the stock markets have shown signs of stabilizing for the past few weeks now and there is even hope for a faint rebound sometime this year. This could favour a recovery in real returns and, by extension, the savings rate in the quarters ahead.

Movements in government budgetary balances also influence the household savings rate. In theory, rational individuals increase their savings when governments accumulate deficits. This increase is justified by an eventual higher tax burden, due to the need to finance higher debt servicing while gradually paying down the public debt. In fact, an increase in the government debt is not always fully offset by a growth in the savings rate. Households obviously expect that a portion of the additional tax burden will be shouldered by future generations. Data from industrialized countries suggest that each new dollar of government debt translates into an increase of between $0.50 and $0.60 in savings. The drop in government debt since the end of the 1990s no doubt contributed to the downward trend seen in the household savings rate. The tables have turned recently however with the announcement of major budget deficits at both the federal and provincial levels. With public debt expected to grow in the next few years, we expect the savings rate in households to increase as well.

Lastly, the savings rate also depends on the age of the individual, to a certain extent. It is well known that retirees have lower savings rates: the need to dip into savings to cover current expenses considerably undermines their savings rate. And yet the upcoming onslaught of retiring baby-boomers will have a major impact on age distribution among Canada's population. Retirees will soon represent a greater portion of the population, which could drive down the savings rate further.

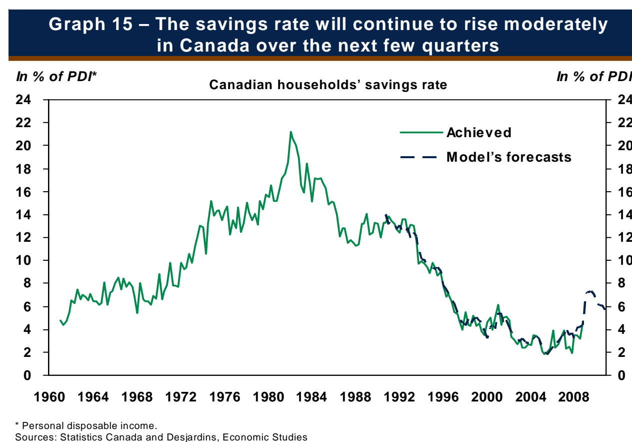
Drawing inspiration from these different relationships, we have developed a model to predict the savings rate based on certain independent variables and an autoregressive process. As we can see in table 1, the different coefficients are in line with the main hypothesis put forth earlier. Besides, a decline in household assets increases the rate of savings, like a jump in the public debt and an increase in real interest rates. As such, we expect that the savings rate could exceed 7% by mid-2009, compared with 4.7% at the end of 2008 (graph 15). Some factors could contribute to stabilizing the savings rate next year, however. The inflation rate should continue to fall significantly

Savings rate forecast model

Variables	*Coefficients*	*p-value*
Household assets	**-0.09**	**0.009**
Federal government debt	0.49	0.000
Real interest rate	0.19	0.041
Inflation rate	0.37	0.000
Population median age	-0.62	0.001
AR(1)	0.44	0.001
Constant	27.04	0.000

Dependent variable = Household savings rate
R^2 = 0,9741
Durbin-Watson statistic = 1,9987

Graph 15 – The savings rate will continue to rise moderately in Canada over the next few quarters



* Personal disposable income.
Sources: Statistics Canada and Desjardins, Economic Studies

in the months ahead, the median age of the population should continue to increase and the decline in household assets should stabilize eventually. It bears noting that this model does not capture the effects of deflation anticipated in 2009 which is expected to be brief and more localized. Moreover, our sample does not include any other incidence of deflation.

PUBLIC DEFICITS WILL INCREASE GOVERNMENT DEBT

In closing, a few words on another sector that will influence movements in the national balance sheet in the next few years: public administrations. As mentioned earlier, the era of budget surpluses in Ottawa is clearly behind us and will be for the foreseeable future. Deteriorating economic conditions and the recently launched stimulus plan will result in considerable budget deficits. Several provinces are also already grappling with a significant deterioration in their public finances. Alberta, Ontario and Québec are already gearing up to post major deficits for the next few years. Under these circumstances, it is quite clear that the federal and provincial government debt will rise substantially.

According to the data in the national balance sheet, Canada's public administrations posted a net worth of $45B in the third quarter of 2008. This is a marked improvement over the net worth of -$466B recorded at the end of 1996. Given the

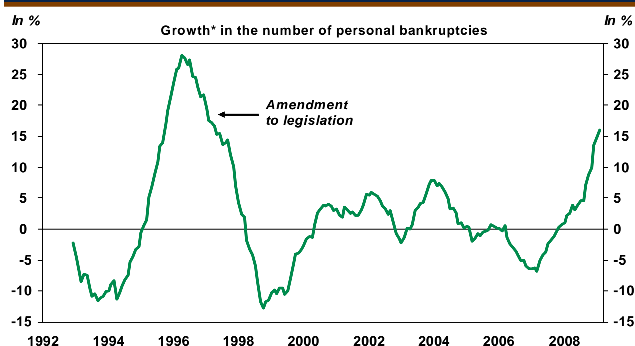
anticipated increase in the public debt, we have to expect the net worth of public administrations to fall in the next few years. The next few years' deficits should increase the overall public debt by about $85B, at the federal level only. If we include provinces and municipalities, the debt load of public administrations could easily pass the $100B mark. Assuming that assets remain unchanged, the net worth of public administrations could quickly dwindle into negative territory. The fourth quarter results for 2008 already point to a decline of $26.8B in the net worth of public administrations compared with the previous quarter. In fact, everything depends on shifts in the value of assets held by public administrations. Much like the situation in households, the value of government real estate assets is expected to fall. However, major investments in infrastructure will increase the value of government assets in the years to come. The bottom line: the impact on assets held by public administrations remains uncertain.

CONCLUSION: THE INCREASE IN THE SAVINGS RATE WEAKENS THE ECONOMIC OUTLOOK

The expected clean-up in households' balance sheets and rise in the savings rate in the next few quarters will have a major impact on how Canada's economy will advance over the short and mid terms. And given that savings constitute the difference between income and consumer spending, any reduction in household debt (or increased savings) inevitably represents a pullback in spending in a scenario where incomes stay the same. This type of contraction in consumption could not only deepen this current recession, it could also dampen the extent of the economic recovery. Our most recent forecasts call for a decline in real GDP of approximately 7% in Q1 2009, the sharpest drop since data on economic accounts have been available. This decline is partly due to a major drop in consumption.

Signs that Canada's households are becoming increasingly affected by the current economic downturn are starting to multiply. In addition to deteriorating balance sheets and increased debt servicing, Canadians have suffered significant

Graph 16 – Personal bankruptcies growing rapidly in Canada



* Annual change in the 12-month moving figure.
Sources: Statistics Canada and Desjardins, Economic Studies

job losses over the past few months. As such, the number of personal bankruptcies has risen sharply since 2008 (graph 16).

That said, we have noted that the deterioration in Canada's household balance sheets is and will remain less severe than what we are seeing in the United States. In this context, less difficult adjustments will have to be made and Canada will no doubt be in a better position to benefit from the global economic recovery.

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