



HIGHLIGHTS

- Canadian personal indebtedness has become excessive. Low income families seem particularly vulnerable
- Economic and financial fundamentals suggest that the personal debt-to-income ratio should be in the 138% to 140% range over the coming five years. The current ratio is at 146%.
- A U.S.-style crisis is not in the making, but Canadian personal debt growth must slow relative to its past rapid pace of increase.
- Various factors point to a moderation of household borrowing, but a sustained low rate environment with short-term rates only returning to 3.50% by 2013 may still support personal liability growth of 5% annually. With personal income growth likely to advance at 4% per annum, personal debt-to-income could rise to 151% by 2013.
- This suggests that further prudential actions might be warranted, but should not occur until the current housing cooling has run its course and the economy is on a firmer footing.

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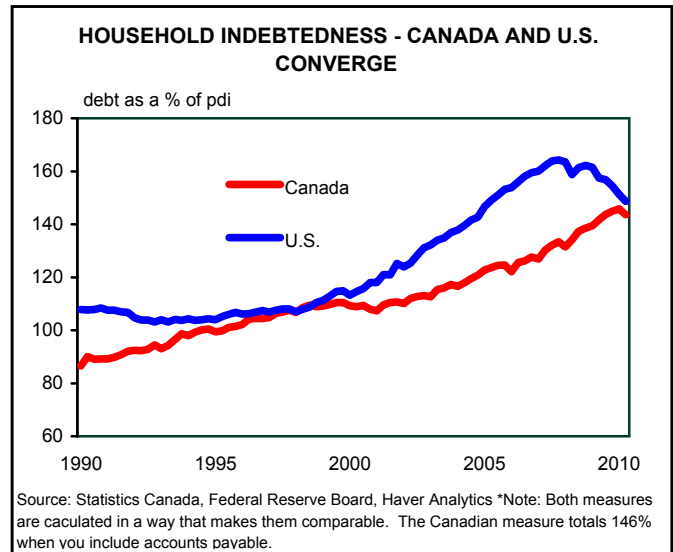
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**CANADIAN HOUSEHOLD DEBT
A CAUSE FOR CONCERN**

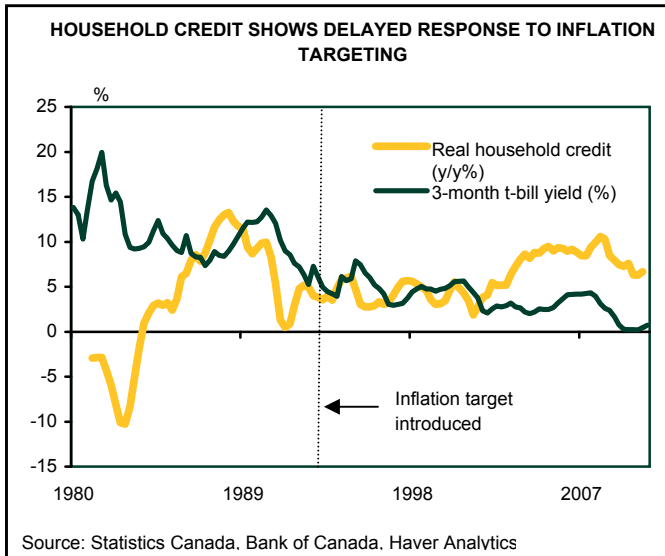
The relentless rise in household debt in Canada, both in absolute terms and relative to personal disposable income (PDI), is a growing cause for concern. Since the mid-1980s, total household debt as a share of PDI in Canada has almost tripled – from 50% to 146% – and a visible acceleration in the long-term trend of debt accumulation has taken root since 2007. With debt-loads mounting in Canada and U.S. personal debt in decline (reflecting deleveraging and home foreclosures) over the past couple of years, there has been a rapid convergence in the Canadian household debt-to-income ratio vis-à-vis that of the United States.

In this report, we provide answers to some of the most pressing questions on the topic of Canadian household debt. In particular, is Canada headed for a U.S.-style household debt crisis? And, is there an optimal or sustainable level of household debt? The answer to the first question is ‘no’. The Canadian debt imbalance is currently not as great as that experienced in the U.S. and does not require a major deleveraging. However, the answer to the second question is that Canadian personal indebtedness has become excessive relative to what economic models would predict as appropriate. In other words, growth in personal debt must slow relative to income growth over the coming years or else the risks of a future deleveraging will increase.



What demand factors account for the upward trend in household indebtedness?

The long-term upward trend in personal debt cannot be pinned on just one or two factors, although a significant portion can be tied to structural shifts in the macroeconomic environment – particularly during the 1990s. The introduction of inflation targeting by the Bank of Canada in the early 1990s set the stage for a secular decline in interest rates that improved debt affordability. At the same time, these macroeconomic trends created a heightened sense of financial security among households. Low and stable inflation reduced the likelihood of future interest-rate volatility, while relatively stable growth in the economy and job market lowered the probability of layoffs and an interruption in household income – all of which made households more comfortable carrying greater debt loads.



Nowhere was the impact of lower borrowing costs and greater household confidence more clearly observed than in the housing market, where ownership rates increased steadily over the past two decades. A self-perpetuating cycle occurred. Strong increases in demand bid up housing prices, which together with equity market gains prior to the 2008/2009 recession, raised net wealth. This positive wealth effect encouraged households to increase their rate of investment and consumption, further driving up borrowing and debt levels.

Demographics also helped drive demand for credit. Baby boomers (individuals born between 1946 and 1964) shaped debt trends just as they shaped product markets. They bought homes and then moved up the property ladder over time, using real estate as a source of wealth creation.

Another key macroeconomic trend that boosted demand for credit was increased labour market participation by women. Experience shows that households with two income earners tend to carry more debt per person relative to their income. Having two incomes creates a sense of income security, as the probability of losing both income streams is much reduced. This can be a false sense of security if both incomes are needed to service debt.

During the 2000s, the “echo” generation has been providing a boost to home purchases, helped by favourable housing affordability created by low interest rates that allowed these young workers to borrow sizeable amounts.

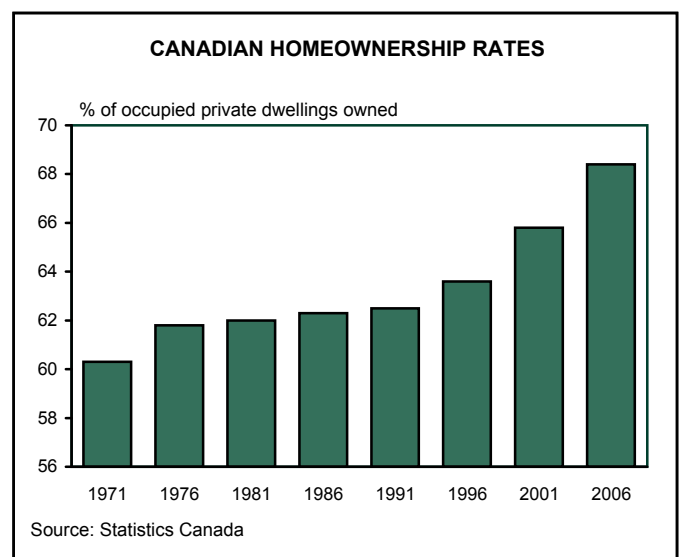
Demand for credit has received a significant boost from a cultural shift from thrift towards consumerism. This has been an international trend, in which consumers have a greater desire to consume larger quantities of goods and services than they have in the past – particularly discre-

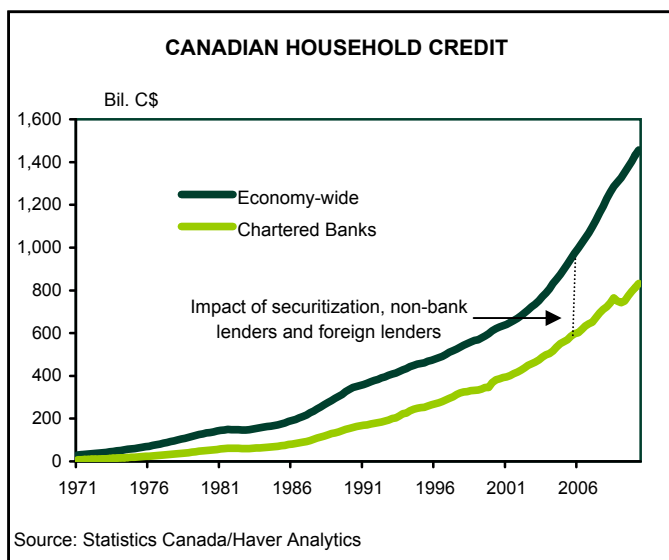
tionary items. Households have also become impatient, meaning that when they want something, they have become more inclined to finance purchases through credit to enjoy consumption sooner rather than later. This has altered the lifepath of spending. The traditional lifepath model is that individuals wish to smooth consumption over their lifetime. They borrow when young, pay down debt and save for retirement when more mature, and then run down savings and assets when older. However, individuals are now taking on debt earlier, and maintaining debt longer. For example, an increasing number of retirees are carrying debt after leaving the labour market.

As one might expect, carrying a higher debt burden means that more Canadians are at risk of running into difficulty meeting their financial obligations in the event of an unforeseen economic or financial shock. This would normally act as a check on growth in demand for credit. However, the social stigma associated with declaring personal insolvency has declined. Indeed, whereas in the 1950s or 1960s individuals would find it difficult to admit bankruptcy, today such an occurrence is generally met with understanding and support – a desirable and positive development but one that is still supportive to increased leverage of personal balance sheets. Moreover, individuals who go into bankruptcy are no longer credit market outcasts. Seven years after declaring insolvency, individuals become eligible for credit once again from most institutions, and in the interim most are able to get access to credit, albeit at likely punitive interest rates.

How important have supply side factors been in driving credit?

As demand for credit rose in recent decades, a number





of supply-side developments helped raise credit availability to households. These supply-side developments have included increased competition within the financial industry, the growing use of securitization, product innovation, deregulation in the banking sector and the relaxing of some credit constraints, which particularly benefited first-time home buyers.

A number of reforms to the Bank Act occurred in the 1980s and early 1990s that increased competition in the Canadian financial sector. Domestic competition was heightened, and while foreign banks have been operating in Canada since the early 1980s, changes to the Bank Act in the late 1990s removed some restrictions on foreign banks. Non-bank lenders also became more active in credit markets. The impact on pricing was more limited than the impact on the supply of credit as institutions fought over market share.

Furthermore, financial innovations like the automation of credit approval, and widespread use of standardized credit scoring helped to make the loan application process move more quickly and efficiently. But even more importantly, increased competition helped to spur significant financial innovation that made credit more attractive. Credit cards that provided benefits to card-holders for travel and the like was one innovation of note in the 1980s that encouraged individuals to carry larger monthly balances. The introduction of home equity lines of credit (HELOCs) was the most significant innovation of the 1990s and 2000s. Prior to HELOCs, the ability of households to borrow was largely constrained by their current and future income. HELOCs have allowed households to borrow more against the value of their homes or extract equity from their home for consumption or investment purposes, while simultaneously of-

fering more flexible repayment terms than with a traditional mortgage. The result has been greater access to credit and lower monthly payments in a low interest rate environment. As shown in the accompanying chart, the popularity of HELOCs has risen over the past 10 years.

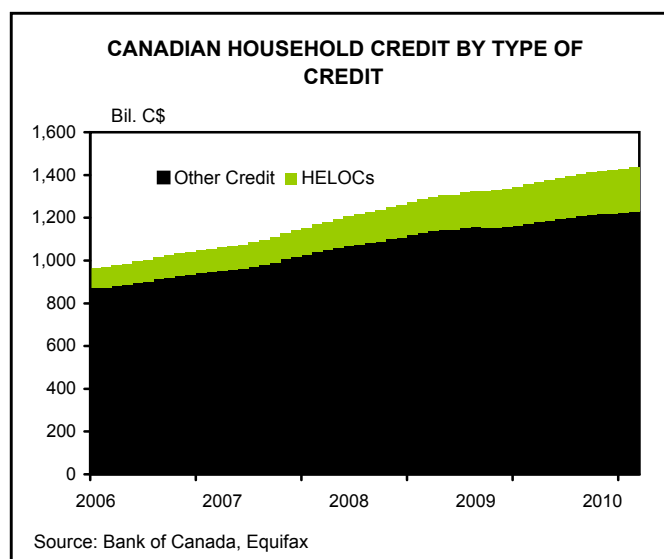
Innovations in the ways financial institutions fund mortgages and other loans have also played a supportive role. Securitization of mortgages and other loans lowered funding costs for financial institutions, which in turn increased the supply of credit.

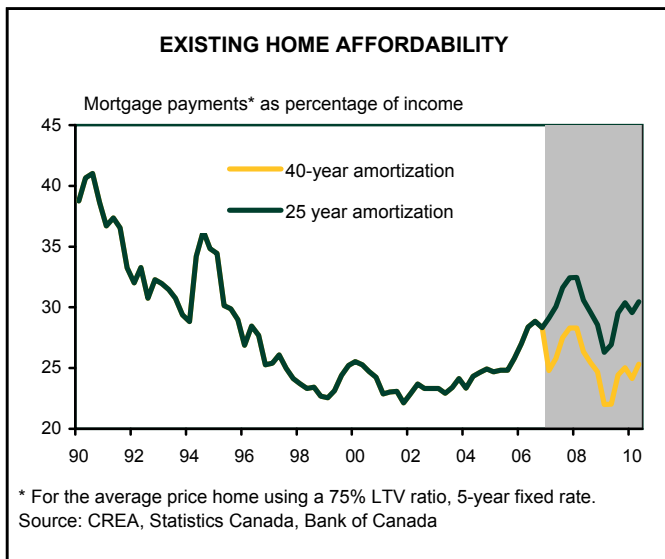
Another contributor to rising household indebtedness over the last 20 years has been adjustments to mortgage insurance rules. Three major changes to mortgage insurance rules helped to make mortgage credit more available and attractive.

First, the required down payment was reduced. In the early 1990s, a homebuyer required a 10% down payment to qualify for mortgage insurance. Through a series of regulation changes over the 1990s and early 2000s, the minimum down payment was reduced to 5%. The down payment was temporarily lowered to zero by the end of 2006, but was then taken back up to the current requirement of 5% in October 2008.

Second, the qualification requirement for mortgage insurance was eased in April 2007. A homebuyer is currently only required to purchase mortgage insurance if the down payment is less than 20%; previously that threshold was 25%

Third, the maximum amortization was increased in steps from 25 years at the start of 2006 to 40 years by the fall of that year. As we discuss later, this has since been reduced to 35 years in October 2008. The extension to 40 years amortization provided a sizeable boost to affordability. For





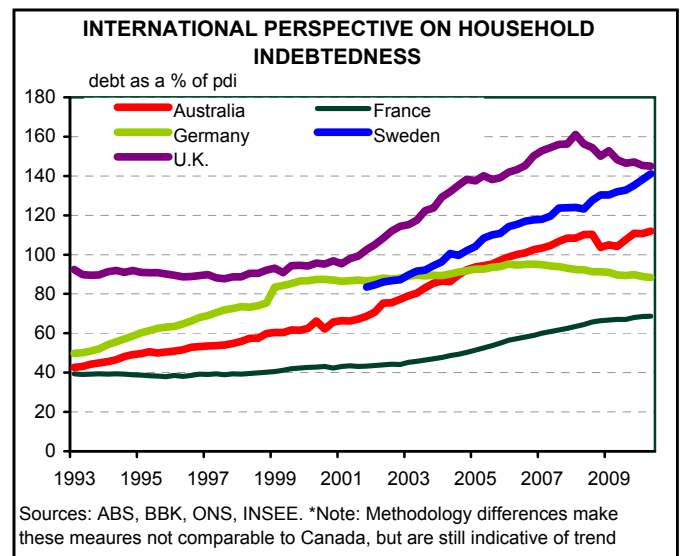
example, an individual with an income equal to the national average in 2007 that purchased a home equal to the national average at that time and opted to finance at the 5-year posted rate could carry a mortgage \$40,000 larger with a 40-year amortization period rather than a 25-year one with the same monthly payments.

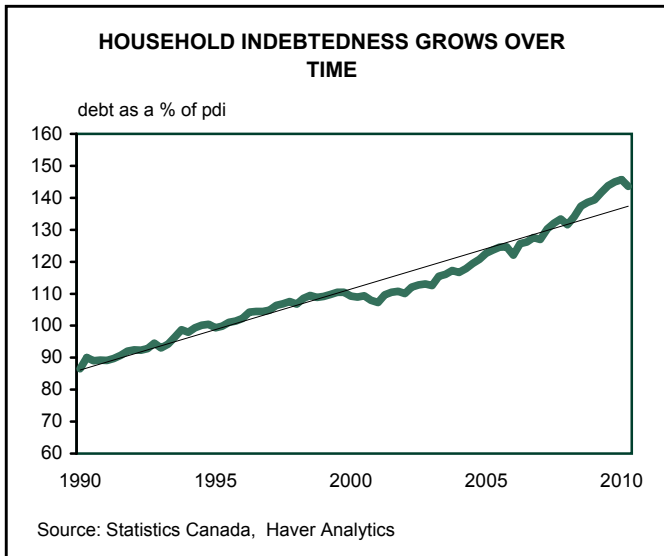
The bottom line is that all of these changes boosted housing affordability and encouraged more rapid growth in real estate associated debt.

Up to this point, we have itemized the various demand and supply factors, but one should also acknowledge that there is a significant interplay between the two. Typically, this dynamic is pro-cyclical. During periods of robust economic and housing activity, demand for credit rises and financial institutions accommodate the growth by increasing credit availability and innovating in order to boost supply of credit. However, the last couple of years have been atypical. Household debt accelerated relative to income during the most recent recession, bucking the experience of the past two recessions in the 1980s and 1990s when rising unemployment led to slower personal debt accumulation. In both of the last two economic recessions in Canada, a tightening in monetary policy was a leading contributor to the downturn. Leading up to this past downturn, interest rates were not as high as they were heading into the 1980s and 1990s recession, and as a result, monetary policy has been far more accommodative this time around. As we will argue later, this countercyclical behaviour may have helped get the Canadian economy out of recession, but it has also meant that the economic downturn failed to unwind the period of excessive debt growth relative to income that took place in the 2000s.

Is Canada alone in experiencing an upward trend in the debt-to-income ratio?

With similar supply and demand dynamics evident across the advanced economies, the upward trend in household indebtedness over time has been an international phenomenon. In countries that tend to be more conservative towards household borrowing and have lower home ownership rates – like Germany, Italy, and France – the rise in indebtedness has been more shallow and gradual. Nonetheless, inflation targeting by the European Central Bank and credit innovations that improved debt affordability still boosted credit growth. In the historically Anglo-Saxon countries of the U.S., U.K., Canada and Australia – which tend to have a culture more tied to consumption and home ownership – household debt growth has been the strongest. The rise in indebtedness in the U.S. and U.K. was remarkable and clearly excessive. These countries experienced a large housing bubble that was subsequently followed by a real estate bust in 2007 and 2008, which resulted in a sharp decline in household debt-to-income ratios. Australia’s economic performance over the last two years has been the most like the Canadian experience, but nothing like that in the U.S. and U.K.. The comparability of the Canadian and Australian experience is not surprising, as both are small open commodity-driven economies where domestic demand remained strong and the housing market and labour market recovered quickly after a short-lived contraction during the 2009 recession. Nevertheless, monetary policy has not been as accommodative ‘down under’, nor was there the same degree of relaxation in mortgage rules in Australia. Accordingly, the rise in household indebtedness in Australia over the last three years has been more subdued than in Canada.





Is there a limit to how high the debt-to-income ratio can rise?

There is no ‘constant’ or ‘optimal’ debt-to-income ratio. As mentioned earlier, the demand for debt is influenced by trends in personal finance and personal preference. For example, if debt is being accumulated to purchase assets, and asset prices are likely to rise at a considerable rate, then borrowing to accumulate wealth makes perfect sense and can lead to a higher debt-to-income ratio. Moreover, financial innovation can lead to a structural rise in debt relative to income. Imagine a situation where mortgages could be amortized over 100 years. The resulting decline in debt service costs would mean that households could carry much higher debt relative to income. What truly matters is whether the prevailing debt-to-income ratio makes sense based on the current structure of financial services and the prospects for personal finances.

The recent U.S. and U.K. experience shows what can happen when the ratio does become excessive relative to economic and financial fundamentals. Coincidentally, debt-to-PDI ratios in both countries peaked at close to 160% of PDI – some 14 percentage points above Canada’s current level.

Can a 160% threshold be used as an appropriate guideline for determining when a particular risky level has been reached? The challenge with merely applying the 160% threshold to Canada is that it fails to account for the fact that debt ratios in the U.S. and U.K. likely overshot their sustainable levels. The issue is by how much, and that is difficult to tell. Furthermore, the appropriate level of debt relative to income is likely higher given the different debt structure in these countries. For instance, in the U.S., households

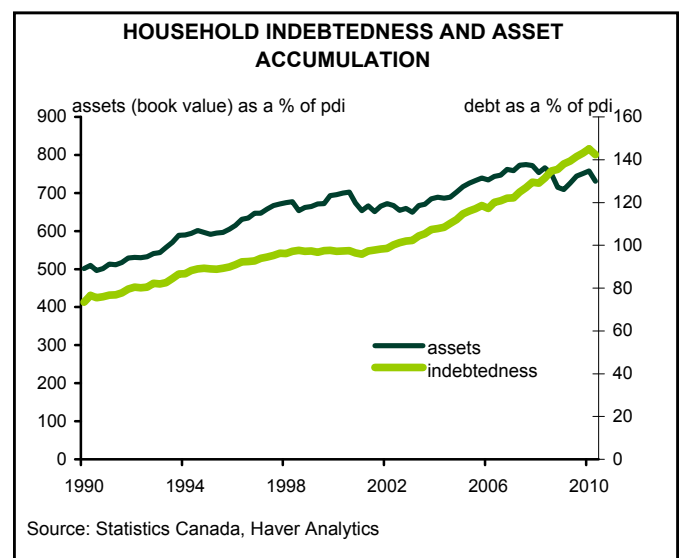
can deduct mortgage interest payments from their income taxes payable. This would have the effect of allowing U.S. households to carry more debt relative to income than Canadian households.

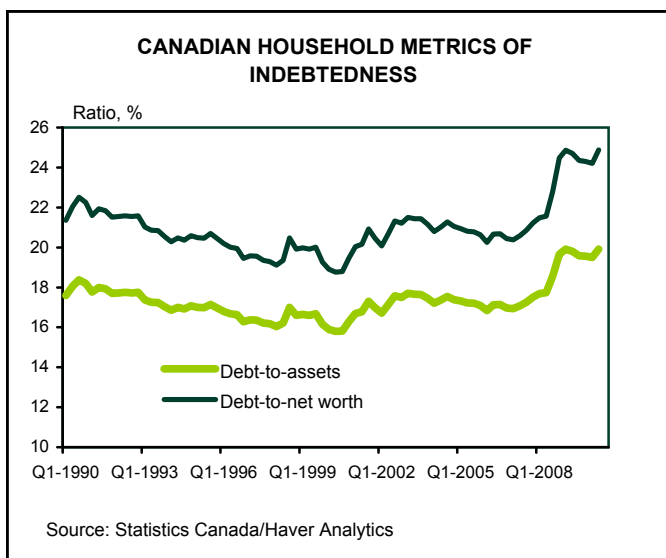
Moreover, the debt-to-income ratio has its own inherent limitations. Since households often use debt to accumulate assets, which in turn can be drawn on in case of financial stress, or used to smooth out their consumption and/or to provide income during retirement, it becomes critical to look at a broader array of household ratios to assess the vulnerability of households to economic shocks. These include the debt-to-net worth ratio, the asset-to-liability ratio and the share of homeowner’s equity within total assets. Most importantly, the total debt-to-income ratio falls short in providing a clear gauge on the ability of households to meet their debt obligations. This is because the income used is annual income, and Canadian households don’t pay off all their debt in one year. So, affordability of debt as measured by an estimated debt service ratio needs to be a key part of the analysis.

What are these other indebtedness metrics saying?

Consistent with the debt-to-income ratio, all of the Canadian debt metrics seem to line up on the side of growing vulnerability, but not a looming crisis.

First, one needs to consider the evolution of household balance sheets. Over the 1980s and 1990s, the rise in the household debt-to-income ratio was accompanied by stability in the debt-to-assets ratio and the debt-to-net worth ratio. In the 2000s, however, there was a break in the trend where accumulation of household debt was encouraged by capital gains. Put another way, households saved less and





relied too heavily on asset price gains to do the saving for them, while at the same time they were comfortable adding to their debt obligations. The trouble is that at least some of the asset price gains are likely unsustainable, as equities are struggling to regain the ground they lost during the recent financial turmoil. Moreover, TD Economics believes that national average home prices have risen roughly 10-15% above the levels supported by economic fundamentals. Since 2006, the rise in the debt-to-income ratio has been associated with a large increase in the ratio of debt-to-assets and debt-to-net worth for the first time on record. Over 2009, the rise in these measures largely reflected a sharp decline in asset values related to the short-lived correction in housing and equity markets. However, even as asset values have returned to pre-recession levels, these measures remain at historically high levels. This is particularly concerning given that we believe that the rebound in asset values may be a bit overdone.

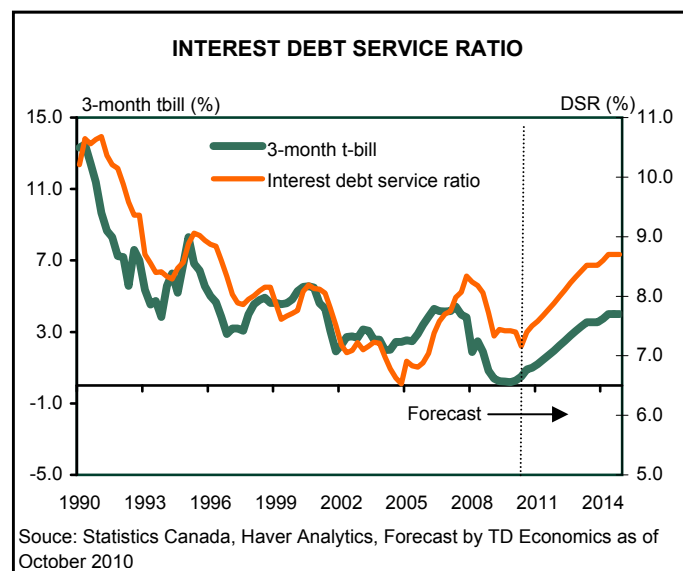
Estimates of the aggregate household debt service ratio have also been flashing some warning lights. What is typically used to assess debt affordability is the ratio of interest payments on debt as a share of PDI. This measure, which does not include principal payments, is popular in large part because it is computed and made readily available by Statistics Canada. Interest costs also pose the biggest risk to household finances, whereas principal payments are generally stable.

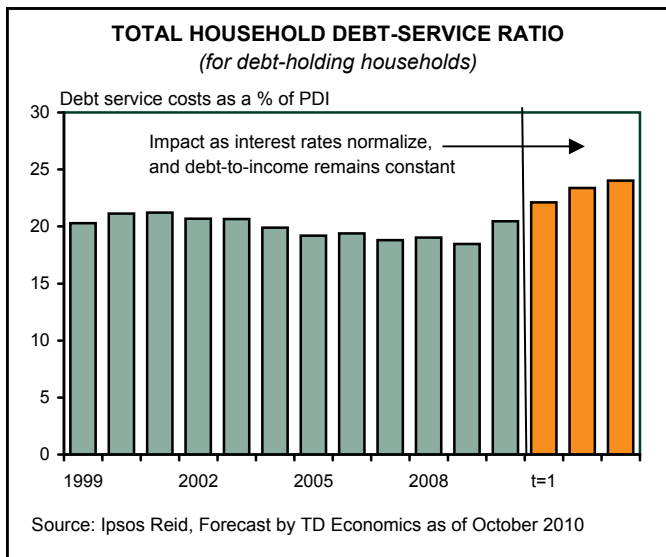
Although interest costs absorb a relatively small share of PDI, the fact that they are not at record lows given the near record low level of interest rates is striking. In fact, the last time the debt-service ratio was at its current value of 7.2%, the overnight rate was at 4.25% rather than its current level of 1.00%.

This perspective is somewhat backward looking, however, since interest rates will not remain at these emergency levels over the medium-to-longer term. An important exercise is to calculate what this ratio would rise to if the overnight rate were at a more normal level, say 3.5%, given a debt-to-income ratio of 146% and a moderate pace of PDI growth of 3.0-4.0%. Under this scenario, the debt-interest cost ratio would climb to 8.5% – a level not experienced since mid 1990s when interest rates were at double digits.

But, once again, this does not provide the full story, since households must shell out to meet both principal and interest payments. In Canada, data on principal repayments is difficult to come by. The Bank of Canada uses data available from the Ipsos Reid Canadian Financial Monitor (CFM), which provides detailed financial data on households across the country¹.

Similar to the interest-only debt service ratio, these figures reveal that the affordability of debt remains within a comfortable range but only because interest rates remain extremely low. However, if short-term rates were to rise towards 3.5% and 5-year rates were to rise towards 5%, the combined principal and interest payments would reach 23% of PDI – the highest level since 1999, which is the start of the series. Under the more likely scenario in which the debt-to-income ratio continues to grow – albeit at a much more muted pace than experienced since 2007 – debt servicing costs will reach 24% of PDI as interest rates return to more normal levels. Put another way, if interest rates rise 3 percentage points, the debt-to-income ratio would have to fall back to levels seen in 2006 (125%-130%) to have the same debt service costs as today.





What share of the Canadian population is particularly vulnerable?

Average statistics can conceal the real story. In this case, the moderate increase in the aggregate debt affordability numbers hides the true extent of Canadians that are in a position of financial stress.

Researchers at the Bank of Canada (BoC) use the Ipsos Reid data to estimate the number of households that would become financially vulnerable given the current level of indebtedness, and under various interest rate outcomes. The standard the BoC applies to determine financial vulnerability (or stress) is households whose debt-service ratio exceeds 40%. The BoC uses a 40% threshold to determine vulnerability, because households with debt service ratio above this mark have a greater probability of defaulting on their loans.

The analysis was last published in early 2010, using 2009 data. The BoC found that just over 6% of households were in a position of financial stress at that time. Under a scenario where the overnight rate rises to 3.5%, debt continues to grow at its current rapid pace, and PDI growth runs at a healthy 5% annualized growth, approximately 7.5% of households would become financially vulnerable.

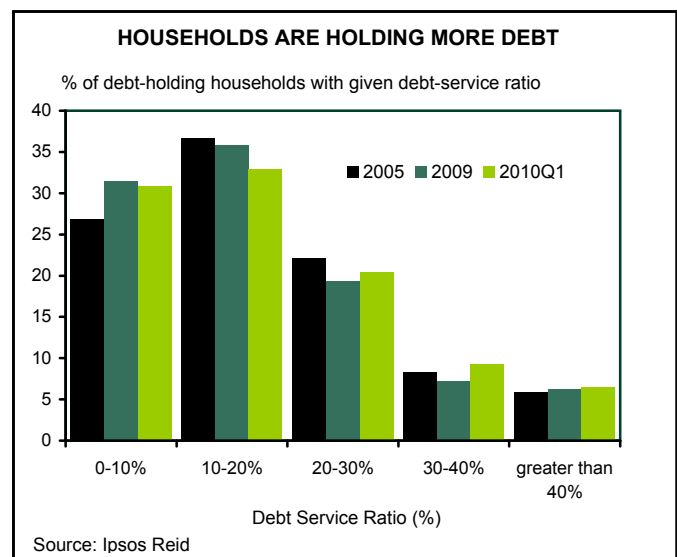
Since the BoC conducted its analysis, more up-to-date figures from Ipsos Reid have been released for the first half of 2010. We have used similar methodology to the BoC's to rerun the analysis. Based on the new figures, a slightly higher 6.5% of households are currently financially vulnerable (or have a debt-service ratio of 40% or above). More striking, the share of those on the verge of becoming vulnerable (those with a debt-service ratio of 30-40%) had risen from 7.2% in 2009 to 9.3% - up almost two percentage points. Given the change in the distribution of debt,

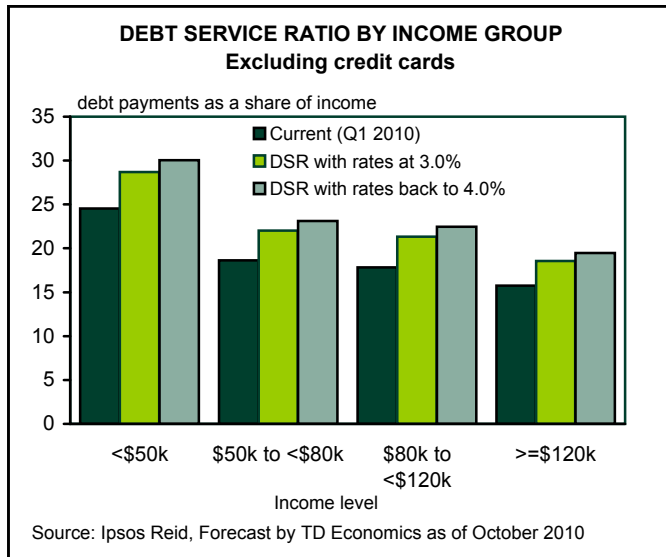
we have estimated that as much as 10-11% of households may become financially vulnerable if the overnight rate rose to 3.5% under similar assumptions used by the Bank of Canada². The ratios do not suggest that a major personal financial crisis is brewing. For example, the vulnerability ratio reached 15% before U.S. households became significantly distressed. Furthermore, financial stress in the U.S. was compounded by a massive spike in the unemployment rate. But, the analysis does highlight that more Canadians are vulnerable to higher interest rates that must ultimately come when the economy is stronger.

What segment of the population is particularly at risk?

Digging even deeper into the Ipsos Reid database, it becomes apparent that the concentration of those households in financial stress are at the low end of the income spectrum. While about three quarters of overall debt is still held by middle-to-high income families, low-income families have the highest debt-to-income ratio (180%), and the highest debt-service ratio (25%). Households in the lowest income bracket are also more vulnerable to rising interest rates and would face debt service costs exceeding 30%, on average, if interest rates were to normalize, thus pushing them close to the financial stress threshold. These statistics are important because low-income families are more susceptible to adverse economic shocks (more likely to lose their jobs), and they do not have a strong asset base that they can liquidate in times of financial stress.

The Ipsos Reid data also shows that the older population (65+ years) is holding more debt than they have in the past, and those that should be preparing for retirement (ages





55-64 years) are carrying heavier debt burdens than in the past. The data indicate that more Canadians are choosing to stay in the labour force longer – perhaps due to higher debt loads or lower financial security. However, interpreting the data is difficult. An alternative perspective could be that the higher debt load is the result of households choosing to work longer simply because they want to, or are physically able to. The causation is unclear, but the higher indebtedness of older Canadians is concerning.

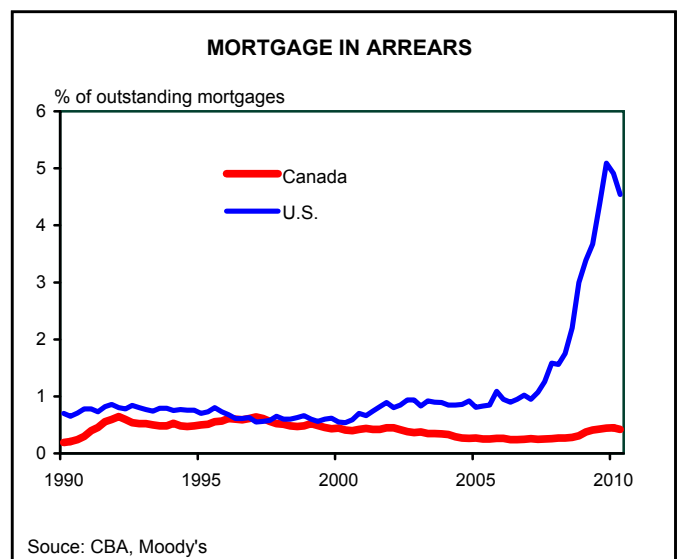
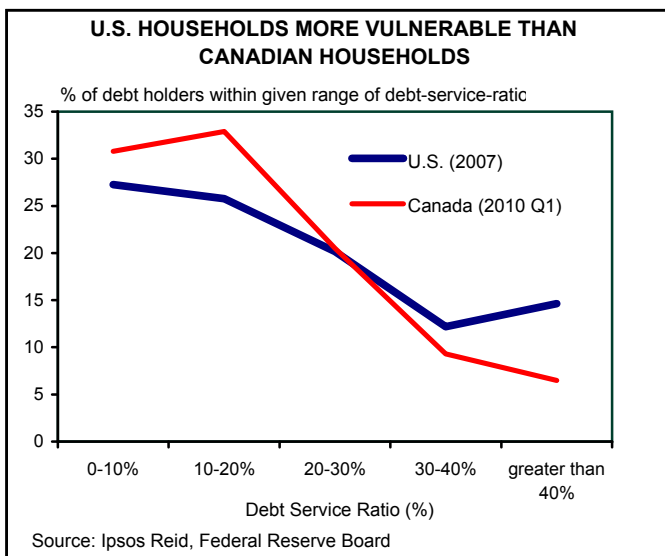
Are we headed for a U.S.-style deleveraging?

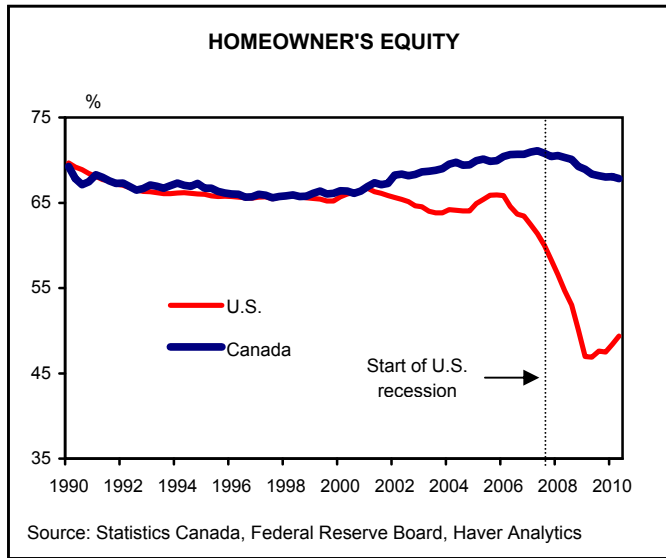
In spite of growing vulnerability of a significant minority share of households, the level of risk associated with household indebtedness appears significantly lower than that in the United States. As we have already noted, the U.S. debt ratio at its peak in 2007 was significantly higher than in Canada today. In the U.S., bankruptcies and loan

delinquencies were also a larger concern than they are in Canada. For instance, the share of mortgage in arrears in the lead-up to the recession (i.e., those related to the level of debt rather than unemployment) jumped to 1.5% in the U.S. – a level three times higher than that currently recorded in Canada.

The key explanation behind the differing household credit conditions are well known by now. In the U.S., financial institutions undertook much riskier lending practices during the sub-prime boom. As a result, a much higher share of U.S. households became over-extended. In 2007, 15% of U.S. indebted households had a debt service ratio above 40% – twice the level of that in Canada. Even under the scenario where household debt continued to grow significantly faster than income over the next couple of years, the share of Canadian households that would become financially vulnerable would not reach the levels experienced south of the border in 2007. As mentioned above, the ability of households to deduct mortgage interest costs from taxes payable would have the effect of allowing U.S. households to carry more debt relative to their income than their Canadian counterparts. However, that being said, research still shows that households with a debt-service ratio of 40% and above are more likely to become delinquent on loan payments.

Another differentiating factor is the stronger balance sheets enjoyed by Canadians, on average. In the United States, there was a more pronounced deterioration in other measures of indebtedness – such as the debt-to-assets and debt-to-net worth ratios – leading up to the crisis compared to the recent experience in Canada. The average Canadian has a significantly higher amount of equity built up in their homes, relative to their U.S. counterparts, where many had negative equity positions. In the U.S. (and U.K.) a large





share of households had taken advantage of a quicker appreciation in home prices relative to that in Canada in order to increase their borrowing further. At one point, 75% of mortgage renewals in the U.S. were taking on larger outstanding balances, as Americans were rapidly extracting equity from their homes for consumption purposes. While Canadians have also been extracting equity from their homes for consumption, the trend has been far less pronounced and the bulk of the debt accumulation has been largely associated with the purchase of a home – and in particular – first time homebuyers jumping into the market.

What is the appropriate level of the Canadian personal debt-income ratio?

Although estimating the appropriate level of the debt-to-income ratio is not an exact science, we have developed a model that appears to provide good predictive power. Variables in the model include: assets as a per cent of PDI, the unemployment rate, core inflation, housing affordability (which would include changes in rules that increase amortization), the 5-year government bond yield (a proxy for the 5-year mortgage rate) and home prices. According to this model, household indebtedness can sustainably grow in direct relation with a rising asset base, improving affordability and a lower jobless rate. The model suggests that after running more or less in line with its equilibrium level until 2007, the debt ratio has since exceeded it. Applying the TD Economics base case economic forecasts for these inputs over the next few years, a sustainable level of debt-to-PDI is estimated in the 138-140% range over the next 5 years – some 6-8 percentage points below its current level.

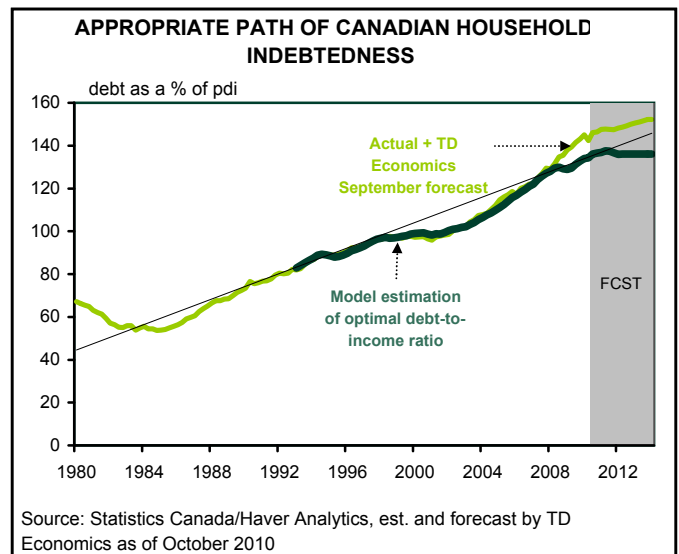
Implications for Personal Insolvencies

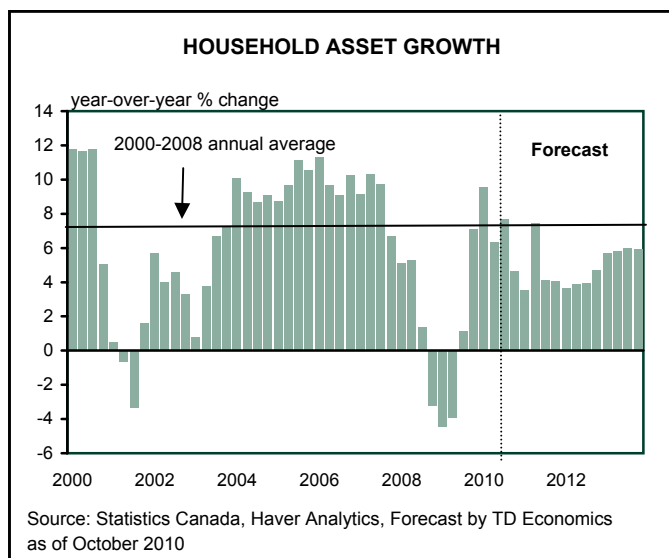
The growing financial stress among low income Canadians and the likelihood of a relatively high unemployment rate projected (7.5-8%) over the medium term suggests that the rate of credit delinquencies and bankruptcies will remain elevated at close to their current level over the next few years. At the same time, however, the share of debt held by households who declare insolvency (or that write-off debt) is likely to remain low at 0.6%. Ditto for mortgages in arrears, at 0.5%.

There are risks to this outlook. Historically, the number of bankruptcies have been tightly tied to labour market conditions, but as of late they have been much higher than would be suggested by the rise in the unemployment rate. The number of bankruptcies per capita during this recession was 50% higher than the 1990s recession – despite the stronger performance of the domestic economy and labour markets this time around. And, despite a stunning recovery in Canadian employment, the level of bankruptcies and insolvencies have remained elevated – likely a consequence of the level of debt. The implication is that one needs to be more cautious when looking at the unemployment rate as the traditional driver of delinquencies, as greater emphasis is likely required on the level of indebtedness.

What does this sustainable range imply about the future path of borrowing?

Taken at face value, the current excess of household debt relative to income implies that a considerable and protracted adjustment is required in order to bring the ratio back to a





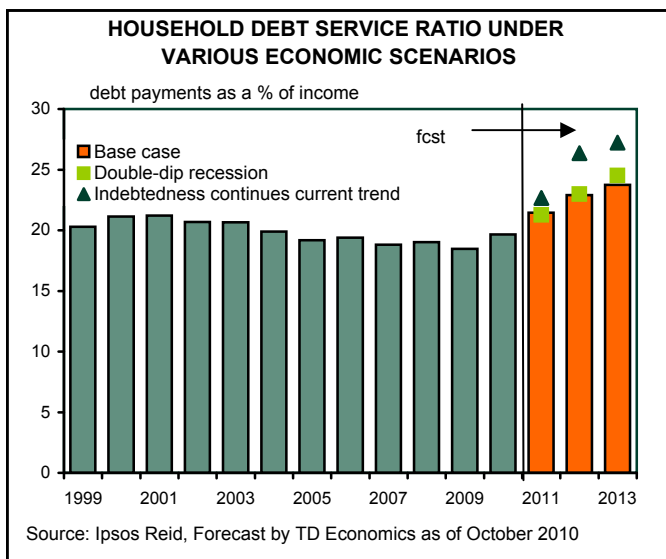
an appropriate level. Consider that average annual growth in household debt has run at 8% per year over the past decade. In a world of moderate 4% annual average growth in PDI, average growth in household credit would need to be constrained to about 2% per year in order to return the debt ratio back to 140% within three years. Average annual debt growth of 3% would get you there in five years. These slight rates of debt growth would be unprecedented in Canada in a non-recessionary period, and they are unlikely to occur in an abnormally low interest rate environment. However, we do believe that debt growth might slow from the 8% average annual gain in the last decade to 5% per annum over the coming five years.

While not an exhaustive list, there are a number of influences that will provide a natural brake to credit growth over the next few years:

- *Housing activity* is likely to remain relatively subdued – in recent years, first-time home buyers have accounted for as much as half of purchases, up from their long-term average of about one-third. With many rushing to get ahead of higher rates, and the pool of first time buyers largely exhausted in our view, housing activity is unlikely to return back to its recent peak over the next several years. The slowing in the housing market will feed through to other types of big-ticket consumer purchases and overall demand for credit.
- *Capacity to borrow* is likely to be more constrained – the consequence of being above a sustainable level of indebtedness is that the capacity to take on more debt is constrained. First, with increased usage during the recession, the available credit on home-equity lines

has fallen relative to pre-recession levels. Second, as we have discussed, as interest rates head up gradually, households will have to devote a greater share of their income to paying their monthly debt obligations. Higher interest rates will also diminish the numbers of individuals qualifying for credit.

- *Appreciation of asset values* will be more moderate – going forward, we expect that households will not be able to leverage rapidly growing asset values to the same extent as over the past decade. In view of the widespread belief that economic growth will be only gradual, the pace of corporate profit growth in the coming years is likely only to support equity returns of 6-8% over the long haul, almost half the rate experienced over the last decade. Meanwhile, home prices are expected to grow at their long-run average of about 4% in the coming decade, which is also close to half of its trend rate before the recession.
- *Structural supply* influences likely to provide less of a boost. Some of the changes to the mortgage insurance rules were reversed. The maximum amortization period went from 40 years to 35 years, and the required down payment went from 0% to 5% in October 2008. The In early 2010, the Federal Government also hardened mortgage insurance qualification rules. Banks are now required to income test borrowers against the 5-year posted mortgage rate for all mortgage vehicles of less than 5-year term and the 5-year contracted rate on all 5-year mortgages, whereas banks had been using the 3-year posted mortgage rate in the past. These changes have eroded a quarter of the improvement in housing affordability that occurred in 2007 with the loosening of the mortgage insurance rules. The minimum down payment on non-owner occupied properties was also increased to 20%. Finally, some of the kick to credit growth provided by the decade-long shift to flexible lines of credit may have run its course.
- *Demographics* might also temper credit growth, as more baby boomers enter retirement. This would be the typical conclusion from lifecycle modeling. However, a case could be made that the effect might be constrained by financial innovation. Given the higher debt loads among individuals nearing, or in, retirement – coupled with less retirement income and a low personal savings rate – there might be greater demand for financial vehicles that allow retirees to withdraw equity from their homes. For instance,



reverse mortgages may become more popular in the future. Financial institutions are likely to create new lending products to accommodate this demand, which would act as a new source of credit. Clearly, if such a trend took place, policy makers would need to consider prudent regulatory guidelines. However, this innovation is not likely in the next couple of years, but is plausible over a longer time horizon.

If debt growth does slow to the 5% annual pace that TD Economics anticipates over the next five years, not only would it not fail to unwind the excess in personal indebtedness present at the moment, but would aggravate it. The base case forecast is for real economic growth of roughly 2% per year, supporting personal disposable income growth of 4% annually. This mix of debt and income growth would see the personal debt-to-income ratio climb to 151% by 2013 – roughly 11 to 13 percentage points above our estimation of the sustainable level.

In our forecast, the moderate economic growth and sustained low inflation environment means that interest rates rise slowly, with the overnight rate only returning to 3.50% in 2013 and holding at that level for some time. So even though Canadians facing debt service charges in excess of 30% will face a challenging period ahead and debt will be increasingly excessive relative to income, debt will remain manageable for the majority of Canadian households.

Incidentally, in the late 1970s and early 1980s, the household debt-to-income ratio remained above its sustainable level for about five years. This period of unsustainable borrowing was followed by a drop in the debt-to-income ratio, which remained below its long-run trend value for a subsequent three years. The catalyst for the adjustment

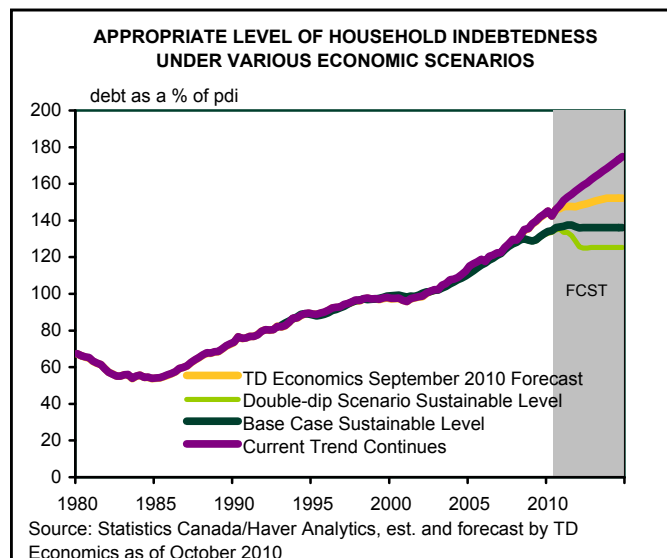
was a deep recession and a large spike in the unemployment rate. The challenge this time around is that, short of a double-dip recession that we don't expect, the trigger to scale back household borrowing by more than in the TD Economics base case forecast must be higher interest rates than currently projected or prudential actions.

What are the key risks that might lead to a harder landing?

Due to our expectation of continued low interest rates, our base case outlook pushes the adjustment period out to the second half of the decade.

In the near term, we are concerned about two negative risks in particular: (i) a negative shock to income growth or (ii) a renewed wave of borrowing that could lead to a more painful consumer finances adjustment down the road. The odds of either event happening is material, but not high enough to be the most likely scenario. We would put the odds of either outcome at perhaps 1-in-3.

In terms of the first risk, a major disruption to household income resulting from a double-dip U.S. recession or an unanticipated financial shock that would impact the Canadian economy and impact household finances. In contrast to the 2008-09 global recession, the ability of Canadian consumers and governments to spend their way through the downturn would be much more constrained, leading to a material recession and a sharp increase in the unemployment rate to above 10%. Since many households do not have much financial wiggle room, any significant disruption in income could cascade into larger delinquencies and a deleveraging by households. Under this scenario, we project that the appropriate debt-to-income ratio would fall to 127-128% by 2013 (see chart) and would require a greater degree of





adjustment in consumer finances down the road.

Alternatively, there is an upside risk to debt growth in the near term. With interest rates at abnormally low levels, households could resume their borrowing binge in the coming quarters following a short breather. In particular, medium- and long-term bond yields have fallen to historical lows over the first six months of this year, which could encourage an acceleration in the housing market. If this outcome were to play out, households would wind up in a more dire debt position. Under this case, the debt ratio could rise to 160% by 2012, which would send a strong warning signal that a material future household deleveraging might be required.

One final alternative to our base case forecast is the most desirable outcome, where the Canadian economy performs much better than anticipated, income growth surprises on the upside and this allows the debt-to-income ratio to moderate. This would be ideal, but can't be counted on.

Bottom line

To sum up, at 146% of average after-tax personal income, Canadian household debt has become excessive. Looking ahead, there are a number of influences that are likely to restrain growth in credit to well below its recent rate – a simmering down in the still-overheated housing market chief among them. But in a sustained low interest rate environment, there are limits to how much borrowing is likely to slow. Under our base case forecast, the overall debt-to-income ratio is likely to rise even higher over the next five years – to 151% – even with the anticipated moderation in credit growth. In contrast, TD Economics estimates that the appropriate level of personal debt-to-income ratio is in the order of 138-140%.

At some point, monetary policy will have to be rebalanced and interest rates will have to move back up to more neutral levels. TD Economics expects the overnight rate to rise to 3.50% in 2013. This will create financial stress on some Canadian households, but not the majority. A U.S.-style household debt crisis is not in the making.

Nevertheless, policy makers and lenders should be aware that personal indebtedness is becoming a more pressing problem, and low-income Canadians are particularly vulnerable to future interest rate increases. This suggests that prudential actions might be warranted to temper the rate of debt growth in the future. Having said that, the government needs to proceed with caution on the regulatory front. Implementing tough new measures at a time when the economy is fragile could generate a hard landing in real estate and prove counterproductive. It would be better to develop a strong understanding of what has been driving the rise in personal indebtedness and the distribution of that debt while weighing the available policy options, but wait until the extent of the housing cycle is known and the economy is on firmer ground before instituting any tighter regulations. This approach would be prudent. It takes time for policies to be developed and implemented. So, having a understanding of how to respond in the future to rising indebtedness would be sensible, just in case Canadian households fail to cool their rate of borrowing in order to take advantage of historically attractive interest rates. To be clear, the Canadian economy is best served by monetary policy that targets overall inflation and that might call for low interest rates for an extended period of time. Monetary policy is not capable of targeting personal credit growth in isolation, but regulatory changes can do so.



Endnotes and References

1. The Ipsos Reid data are not widely available, and thus, are not frequently cited. Note, we use the Ipsos Reid data to look at households who currently hold debt. The results from the CFM are not comparable to the Statistics Canada interest only debt-service ratio, because that estimate looks at all households – those who hold and do not hold debt. According to the CFM, 30% of Canadian households are debt-free. Despite the methodological difference, the Ipsos Reid data tell the same story.
2. Using Ipsos Reid's CFM data at less than an annual frequency may lead to biases in the results due to small sample issues, as the sample size in a quarter is roughly a quarter the size of the annual sample. However, quarterly data provides a good leading indicator of the direction of the data.
3. Faruqi, Umar, "Indebtedness and the Household Financial Health: An Examination of the Canadian Debt Service Ratio Distribution", Bank of Canada working paper, December 2008. <http://www.bankofcanada.ca/en/res/wp/2008/wp08-46.html>
4. Djoudad, "The Bank of Canada's Analytic Framework for Assessing the Vulnerability of the Household Sector", Bank of Canada Financial System Review, June 2010 http://www.bankofcanada.ca/en/fsr/2010/index_0610.html
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