



Current Analysis

Current Analysis reports address current economic issues of importance to RBC Financial Group and its clients.

Seven myths about household finances

2006 update

For at least a decade, bearish commentators have advanced the belief that household finances are in a precarious state that poses sharp and imminent credit risks plus a faltering ability to drive economic growth. For at least a decade, this view has proven to be dead wrong. Part of the reason for the poor track record of bearish commentators is that employment and income growth have been significantly underestimated over the years on both sides of the border, and productivity growth has been sharply underestimated for the U.S. economy. A far bigger reason, however, is that the bears too often look at the wrong measures, and too few of them at that. As a result, a very narrow perspective is obtained that sells short the ability of Canadian and U.S. consumers to drive economic activity. Instead, a much more upbeat consensus is emerging in published

research done by economists in the private sector as well as at the OECD, the U.S. Federal Reserve, the Bank of Canada, and the IMF. While there is room for caution, most of the risks going forward are purely cyclical in nature and arguably *less* significant than previous cycles. Further, the most bearish views overstate the risks posed by household finances to either lenders or the economy by placing far too much emphasis on the seven myths about household finances.

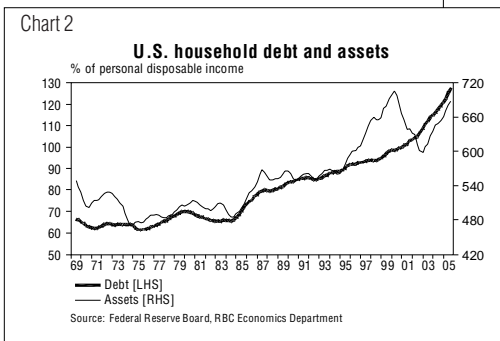
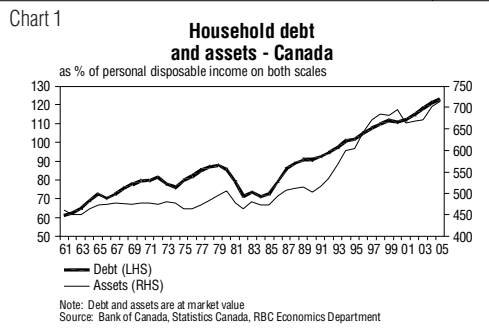
Myth 1 — Households are in over their heads in debt

The view that household borrowing reflects profligate spending patterns is deeply rooted in the application of a highly popular, but flawed, measure. The debt-to-income ratio keeps tripping new record highs (thick lines in chart 1 for Canada, chart 2 for the United States). This is often used to argue that households are borrowing well beyond their means as measured by after-tax incomes.

The primary reason why the debt-to-income measure is largely meaningless with little analytical use is precisely that people borrow out of future income to satisfy their housing and other spending needs and desires, so why compare debt amortized over much of one's lifetime to a single year's income?

The second reason for dismissing the household debt-to-income ratio is that it completely ignores how such debt is deployed. What is also displayed in chart 1 for Canada is that, just as households have run-up their debt-to-income ratios, they have also run up their asset-to-income ratios in a more than commensurate fashion by way of long-run trends. Moreover, in both Canada and the United States (chart 2), households have about six times as much invested in assets as they owe in total debt.

In Canada, the ratio of debt-to-assets at market values has floated within a narrow range from about 14% to 18% since the 1960s. In the United States, this ratio has always floated between about 11% and 20% and trended upward after the stock market correction began in the fall of 2000 but only modestly so (three percentage points) since appreciating home prices offset much of this for the bulk of households (chart 3). This suggests that the vast majority of debt is used to acquire assets, not spent on transitory consumption that yields no future potential returns.



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Arguably, all that household debt-to-income ratios indicate is that North American capital markets are highly developed and, therefore, offer a multitude of borrowing and saving instruments making it possible for borrowers and savers to smooth their income and spending needs over many years. A better measure is the total debt-service burden which compares interest and principal payments, home heating costs, and property taxes, to cash inflows in the form of after-tax income. This measure is elaborated upon in the next myth as a key driver of bankruptcy trends.

Myth 2 — Consumer bankruptcies keep getting worse

Whether or not the long-term trend in consumer bankruptcies is problematic critically depends on whether it is looked at from a social or an economic standpoint. There is no doubt that, in Canada and the United States, the number of consumer bankruptcies adjusted for population growth has been on a steep upward trend in the past couple of decades (chart 4). In the United States, there are presently almost sixty consumer bankruptcies for every 10,000 people per year, which represents a five-fold increase since the early 1980s. In Canada, there have been around 25 bankruptcies per 10,000 people a year in recent years, which is about a two-and-a-half fold rise compared to much of the 1980s. Changes in legislation over the years that made it easier to declare bankruptcy are part of the reason behind this trend. In Canada, labour market weakness in the first two-thirds of the 1990s was another contributing factor. On both sides of the border, greater access to credit and higher credit utilization rates per person have clearly been additional drivers. Indeed, there are many industries where product adoption rates have risen and taken social challenges up along with them, such as growth in the number of automotive vehicles over the decades that has driven more accidents.

Before turning to better measures of bankruptcy that are more relevant to the economy and lenders, it is first worth noting that the average size of consumer bankruptcies measured as the dollar value of declared liabilities per bankruptcy on an inflation-adjusted basis has remained remarkably stable over the past decade (chart 5). This measure spiked during and after the early-1980s recession and then dropped to among its lowest levels ever by the late 1980s when the bad debts had been cleared off and a recovery was well under way. After climbing again through the early 1990s recession and ensuing period of dismal household sector prospects, the inflation adjusted dollar value of declared liabilities at the point of bankruptcy has remained remarkably stable at about \$50,000 per filing.

To take account of growth in assets that has run alongside growth in debt involves looking at the value of declared liabilities at the point of bankruptcy net of declared assets that are recoverable by creditors (chart 5 again). The constant-dollar net liability measure has been running at very low and fairly stable levels of about \$20,000 to \$30,000 per bankrupt individual in the past several years.

Finally, in terms of the outlook for bankruptcies, chart 6 provides a depiction of the high degree of correlation between the total debt service burden and the declared debts of bankruptcy filings expressed as a fraction of total household debt. The charge-off rate is expected to improve over the year, as stabilizing energy prices, modest interest rate hikes, strong income growth, and slower debt growth all work to improve the debt service measure. This is expected in spite of the spikes in the service

Chart 3 **Leverage**

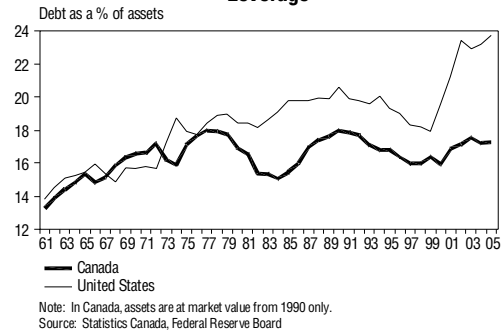


Chart 4 **Consumer bankruptcies per capita**

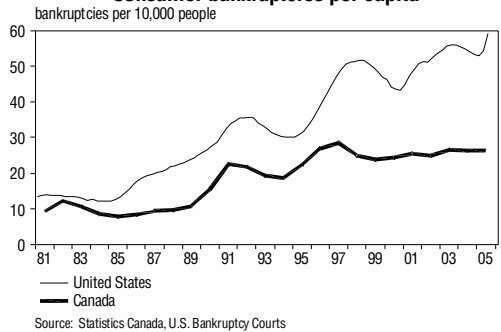


Chart 5 **Average size of consumer bankruptcies - Canada**

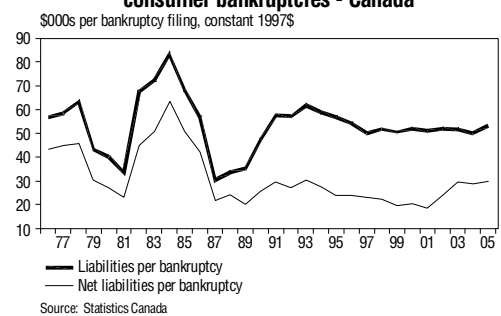
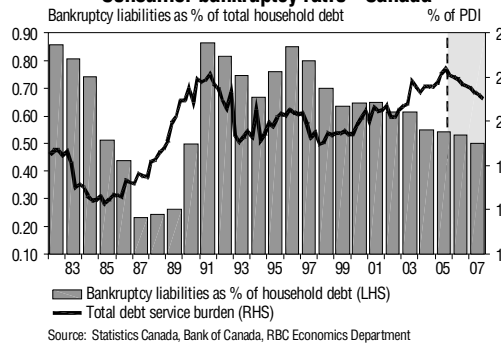


Chart 6 **Consumer bankruptcy ratio - Canada**



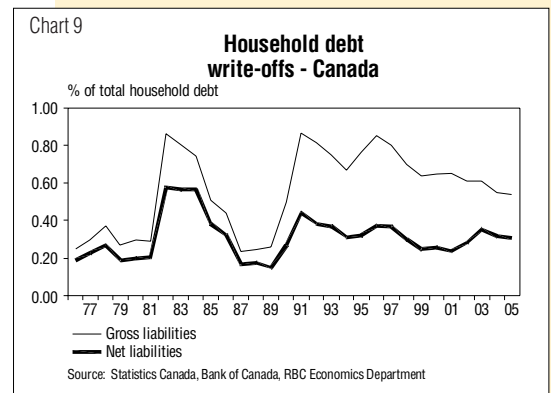
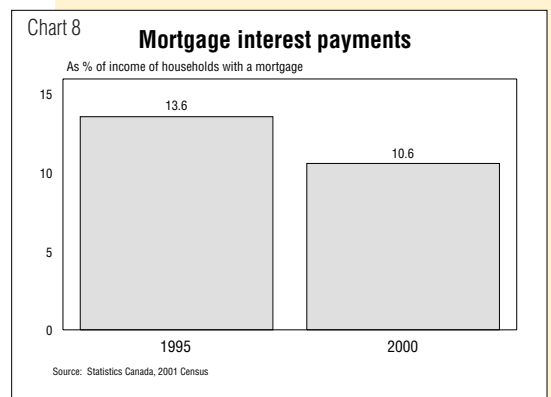
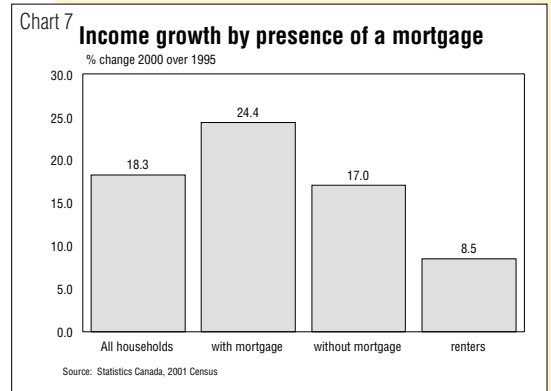
burden in 2003 and again in 2005, as these were due almost entirely to a jump in mortgage principal payments while all other components of the ratio were relatively stable. Moreover, it is highly likely that the traditionally defined debt service burden actually understates the impact of falling interest rates on mortgage borrowers, thereby overstating the fraction of income that debtors are paying towards servicing their debts. The reason for this is that only mortgage holders pay mortgage interest, which is included in the debt service measure, but this mortgage interest is divided by the disposable income of all borrowers, both mortgage holders and non-mortgage holders. As such, it compares apples to oranges. According to the most recent census data available, the growth in incomes of those households that have a mortgage has far outstripped the income growth of those who own a residence but do not have a mortgage, and of renters (chart 7). Accordingly, if we used Census data for interest payments on mortgage debt and divided it by the total income of only households with a mortgage, then the result is that during the 1995 to 2000 period, mortgage interest payments as a share of incomes dropped by three full percentage points (chart 8). In contrast, total mortgage interest payments as a share of total income of debtors and non-debtors fell by only three-quarters of one percentage point over this same period. We will get fresh Census data next year.

Overall, different measures of consumer bankruptcy trends will appeal to different interest groups. Credit counselling agencies will be keen to point to chart 4 as evidence of a growing social problem. They will argue that governments contributed to this through the relaxation of supply side constraints such as the 1967 Bank Act that opened the doors to banks expanding in the household debt marketplace, as well as changes to bankruptcy legislation over the years that have made it easier to declare bankruptcy. Social advocacy groups will also point to lenders for making credit more readily available over the decades. What needs to be considered are the trade-offs between the costs of access to credit versus the benefits.

Financial institutions, however, are more wisely advised to consider the perspectives found in charts 5, 6 and 9. What matters is how much bad debt gets written off over the long-term in relation to growth in the household lending book (chart 9). These measures have remained stable with no clear long-run trend either up or down. Growth in the household debt market reflects economic development made possible by increasingly efficient capital markets that more readily link savers and borrowers and thereby provide welfare enhancing prospects through the increased ability to smooth borrowing and saving requirements across one's entire life. This perspective thereby does not support the view that the economy is becoming more and more dangerously exposed to bankruptcy trends.

Myth 3 — Growth in revolving credit is a problem

Further potential concerns relate to growth in revolving credit products, which require only a minimum payment or the interest to be paid each period. Explosive growth in credit card balances and lines of credit in Canada, and home equity lines in the United States have raised the concern that households may be borrowing large sums through such vehicles and only meeting the minimum payment or interest requirements and continuously postponing principal repayment. That would pose the risk that the principal grows larger and larger over time and may, as a result, become a dangerous debt spiral.



Although revolving credit products have indeed been growing, they have been doing so at the expense of other fixed and variable rate products. In Canada, this phenomenon has been relatively recent, with product cannibalization still taking place as credit cards and lines of credit continue to gain market share over more traditional lending products (chart 10). The extra flexibility and added benefits of more sophisticated management of household cash flow have made these products very popular. In the U.S., credit cards gained market share over traditional lending products much earlier than in Canada, mostly during the 1980s up to the mid-1990s; more recently, however, home equity loans have become the fastest growing asset class in the U.S. The bulk of these loans are revolving lines, which allow homeowners to borrow against the equity built up in their homes. The popularity of these products has picked up for a number of reasons, including lower rates, rising amounts of home equity and, perhaps most importantly, the substantial tax advantage such products have over other forms of consumer debt. The

Tax Reform Act of 1986 eliminated deductions for interest on consumer credit, but maintained the deductibility of interest on mortgage loans, including home equity loans. But while these loans have been growing rapidly, the total share of consumer credit that is revolving in nature has not risen by a proportionate amount. Rather, the increase has been far more modest, suggesting that consumers chose to substitute this tax-advantaged mortgage debt for other traditional revolving products such as credit cards, resulting in total revolving credit remaining relatively stable over the past decade (chart 11). As such, sensitivity to higher interest rates has not changed much even with such high growth in home equity lines, and, if anything, the lower rates on home equity lines make financing these loans easier than credit cards.

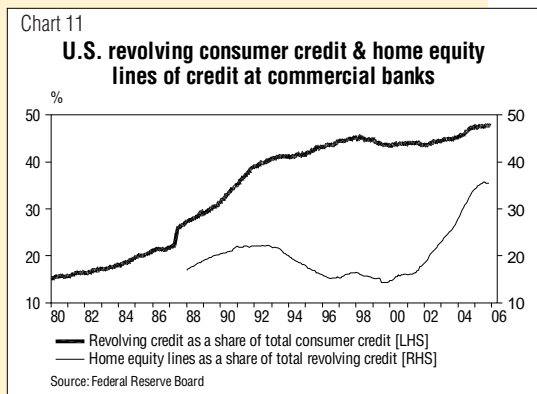
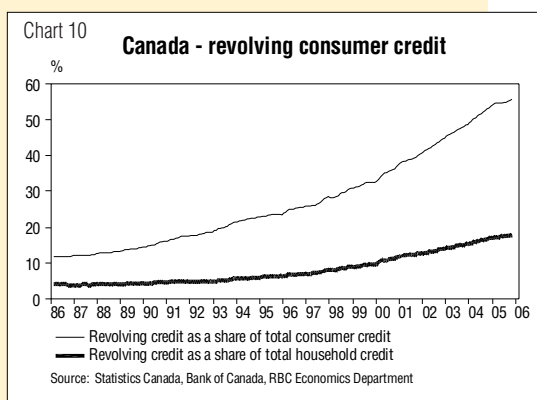
The Canadian case is a little different since both cards and lines of credit are a much, much smaller share of the consumer credit marketplace and at a far earlier stage of development in the overall revolving credit marketplace than stateside. Hence, the rapid rates of growth in lines of credit that are cannibalizing traditional fixed and variable rate loans, and more recently restraining growth in cards compared to past cycles.

Although strong growth in revolving credit products nonetheless poses the risk of increased exposure to interest rate shocks, mostly a concern for Canada since it is seeing its share of revolving credit grow, the risk appears to be manageable for a couple of reasons, both of which will be further elaborated upon in the next myth.

First interest payments, measured as share of income, are relatively low suggesting that low rates are still swamping the effect of revolving credit products on interest payments. As well, even though rates have started to rise, the pace of rate increases have been and are likely to remain modest. Second, Canadian households have built up a huge liquidity buffer to help offset any rate shocks.

Myth 4 — Households will be in trouble when rates rise

A popular viewpoint is that many households are taking on debt at floating variable rates under the assumption that today's generational lows on financing costs will remain forever. There are three main ways of addressing this risk. One concerns the likely magnitude of further interest rate changes over the 2006-07 horizon. Our view is that rates will creep up a bit more this year, but that debt serviceability conditions will remain strong. We expect short-term rates in Canada to rise by an additional one percentage



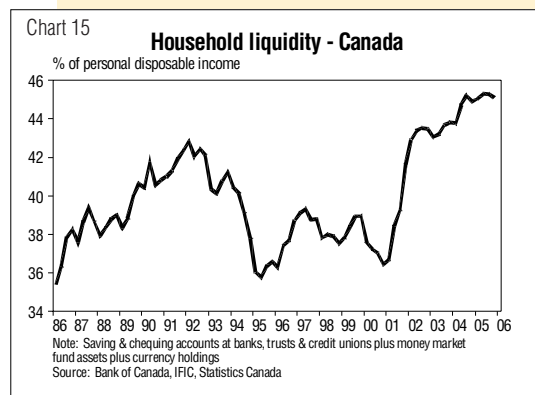
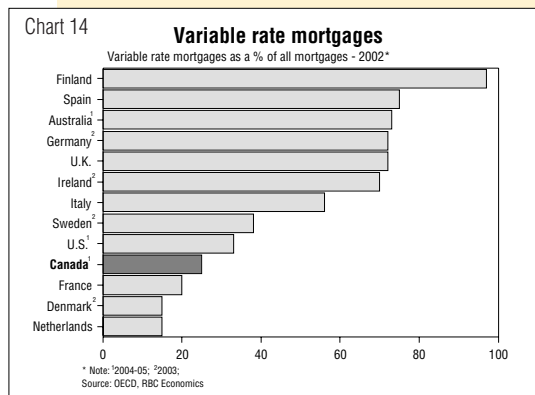
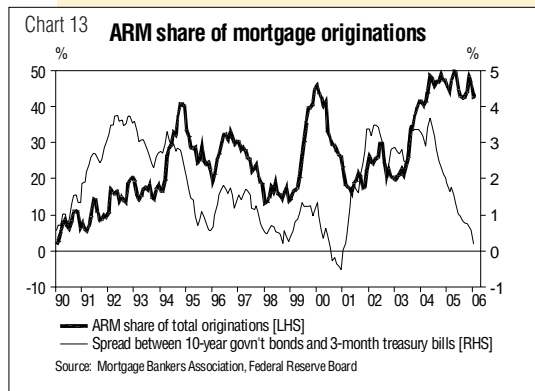
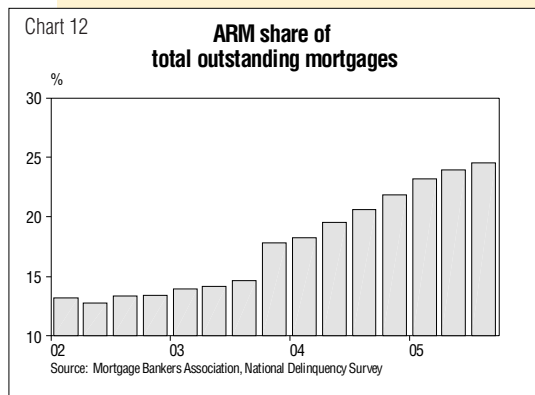
point this year. For the United States, we expect the Fed funds rate to increase from 4.5% today to about 5% by the second quarter of this year. The conditions for a run-up in rates to levels that are comparable to the late 1980s are not present today.

A second perspective is to consider the mixture between people borrowing at fixed versus floating rates. Chart 12 provides the American data. About 75% of American mortgage debtors hold fixed rate mortgages amortized over many years in a market with much lengthier average terms than in Canada. By corollary, about 25% have adjustable rate mortgages (ARMs). This presents two observations. For one, the majority of American households have taken advantage of the one-way option to refinance on the downswing of bond yields over the past decade to lock in low mortgage borrowing costs for a very long period of time. As for the minority with ARMs, they've saved a bundle in recent years compared to higher cost fixed rate mortgages. With short-term rates heading higher in the U.S., the historical relationship between ARMs and the slope of the yield curve suggests that many will be converting to lock in fixed rate mortgages (chart 13). Similar arguments hold in Canada, but less powerfully than in the United States since the refinancing market is not as developed and mortgage terms are generally much shorter than stateside.

A recent OECD survey that looked at international comparisons underscored this point further. Both Canada and the U.S. rank near the bottom in terms of the share of variable rate mortgages (chart 14). They have among the lowest sensitivities to rising interest rates relative to many other markets.

A third perspective on this question, however, entails examining how much of an interest rate shock the household sector could withstand. Addressing this question requires recognizing that household liquidity remains high. Through a flight to safety and security after the stock market corrections that began in the fall of 2000, what Canadian households have parked away in saving and chequing accounts, money market funds and outright currency holdings amounts on average to almost one-half of their total annual personal disposable income and sits just off of a record high (chart 15). In the United States, the run-up has not been a record breaker, but liquidity still stands at fairly high levels (chart 16). If needed, these liquid holdings could be reallocated back to end-of-year 2000 levels before the abnormal run-up in a variety of ways (chart 17). Canadian households could draw down such liquid reserves to support up to a massive 8.8% shock to the household debt service burden spread over a year or two, or large increases in spending or equity market investments. In addition to using liquidity reserves, households always have the choice of consolidating and restructuring their overall indebtedness should a greater interest rate shock arise. In the United States, household liquidity could be redeployed to end of 2000 levels to absorb a 5.9% shock to the debt service burden, or fund a 6% increase in consumer spending. Note that such swings in the debt service burden have never happened — not even with the sky-high rates of the late 1980s and early 1990s in Canada. Indeed, such massive amounts of liquidity suggest that Canadian households are better exposed than ever before to cyclical risks.

Those cyclical risks must be viewed in a manner that presents them consistently to one another and go beyond interest rates. It is often mentioned that there could be surprises



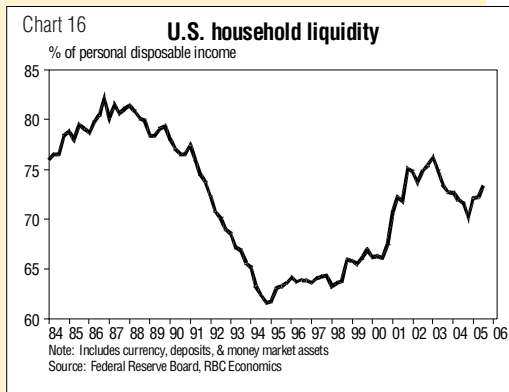
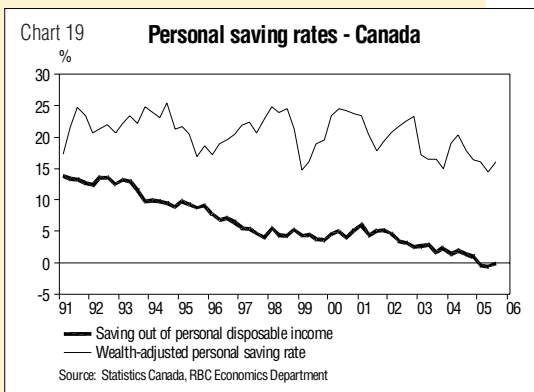
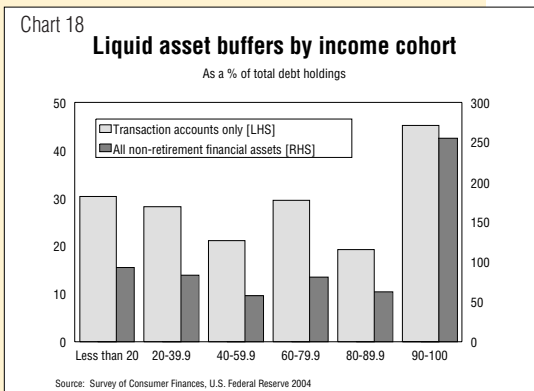


Chart 17 Potential impact of reallocating liquidity

	Canada	United States
Decrease in total debt service burden	-8.8%	-5.5%
Increase in total consumer spending	9.0%	5.7%
Increased investments	C\$69 billion	US\$495 billion

Source: RBC Economics Department



to employment growth, borrowing costs and asset prices going forward. For all three to come true simultaneously is essentially a bet upon significant stagflation returning - marked by rising inflationary pressures, rising interest rates, and slow economic growth. This is highly unlikely. Instead, the more likely scenario is that if, say, housing markets did correct and this shocked employment, borrowing costs would likely *fall* as central banks move to inject liquidity into a weakened economy. Once again, it is exceedingly rare to have all of these variables turn sour at once and not a terribly good personal or business financial plan that fully bets upon such an outcome.

But, are the people with the debt the ones with the liquidity? Chart 18 might help answer this question. It uses the newly released 2004 Survey of Consumer Finances in the United States to compute holdings of liquid financial assets, defined as either transaction accounts or all non-retirement related financial assets, and then divides that by the amount of debt owing within each individual income cohort. The data shows that the lowest income cohorts have relatively large liquid balances, by both measures, compared to their levels of debt. In addition, the middle-income cohorts also have a healthy buffer in liquid financial assets.

Myth 5 — Households are not saving enough

A continual downward movement in the conventionally defined personal saving rate during the 1990s and through to today has often times sparked concerns about the inadequacy of household saving (thick lines in charts 19, 20). If households are not saving enough, then they cannot have substantial rainy-day contingency funds to address, in part, the challenges of household debt, and/or they may not achieve their retirement and other saving goals.

The problem, however, is that the conventional saving measure is a very narrowly defined perspective on household savings. It is derived from the same National Income Accounts that report figures on overall economic growth and simply calculates the percentage of total personal income after all taxes and transfer payments to and from governments that is not spent in any given year. As such, it is useful as a measure of how the pool of new saving dollars for fresh investment is growing. This measure has, indeed, dropped sharply during the last decade from the 12-14% range down to about 0% today. Keep in mind, however, that this measure gets substantially revised by Statistics Canada from time to time and in recent years most of the revisions have been to the upside such as when negative personal saving rates in the mid- to late-1990s were completely revised away to stay significantly positive. Nevertheless, this downward trend is a function of many things including a downward shift in inflation expectations that presents less risk of an erosion in purchasing power on future wealth, lower interest rates and the unleashing of pent-up consumer spending and housing market volumes after the dismal first two-thirds of the 1990s.

However, that is not how most households think of their savings behaviour. Most households also consider changes in their wealth positions when they reflect on the adequacy of their saving patterns. This is defined as not only what they add to their savings from their income, but also valuation changes in assets minus changes in their indebtedness. As such, a wealth-adjusted saving rate takes the change

in net worth divided by wealth-adjusted income, defined as personal income plus the annual change in net worth after removing double counting of saving.

Charts 19 and 20 depict the results by comparing the two measures of personal saving rates in Canada and the United States. Whereas the conventional measure has dropped sharply during the past decade, the wealth-adjusted measure has consistently floated around one-fifth of disposable income being saved by Canadian households each year in the past decade. After dropping sharply when stock markets were on a losing streak after the fall of 2001, this measure of saving has since recovered strongly in an environment of healthy house price gains and strong equity market returns. This does not suggest that households have a saving problem.

In the United States, the wealth-adjusted personal saving rate dropped sharply into negative territory after equity markets began correcting in the fall of 2000 (chart 20). During the past three years, the wealth-adjusted saving rate has trended back into sharply positive territory.

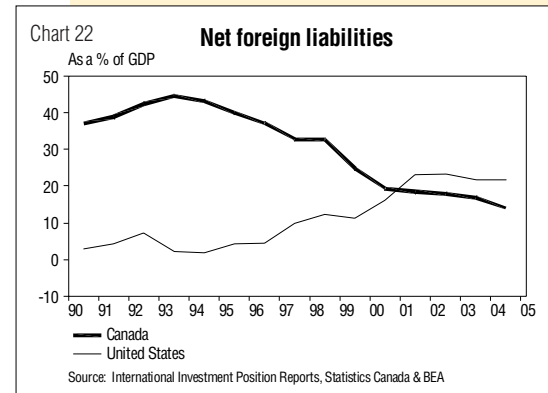
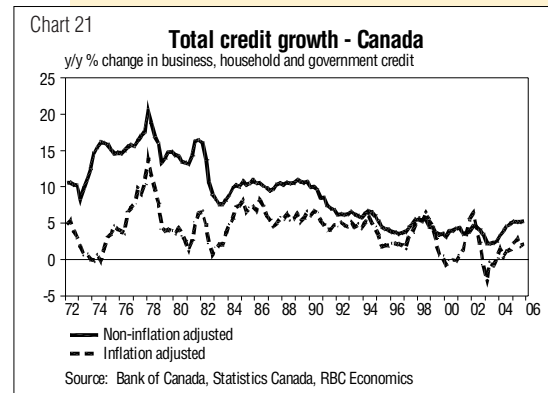
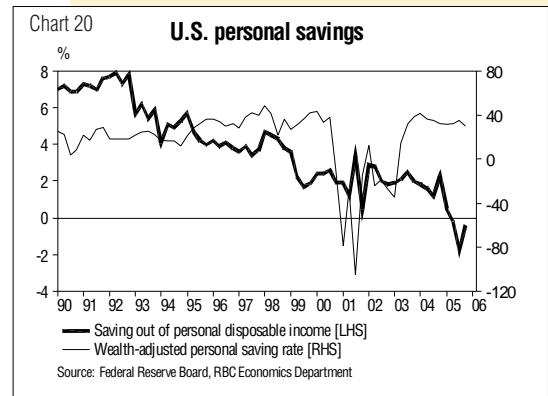
Of further significance is that evidence of a saving problem affecting Canada must surely be defined on a broader level than just looking at households. Most economists would argue that saving must be evaluated from the standpoint of the nation as a whole. Presently, all levels of governments combined into one group are saving by running overall surpluses, businesses are saving through retained earnings, Canada has a trade surplus, and this all offsets a weak personal saving rate such that Canada's interactions with the rest of the world are not marked by a saving deficiency. Far from it, Canada is paying down net external debt that is owed to the rest of the world in stark contrast to the United States which is running up liabilities to foreign investors at a rapid pace due to government borrowing and consumption that is driving a record trade deficit. Indeed, in Canada, households are the only significant driver of credit borrowing patterns as total credit across all levels of government, plus businesses, plus households is growing at among the slowest paces ever (chart 21). This more holistic perspective is what ultimately counts if one is trying to gauge risks to Canadian capital markets associated with household indebtedness.

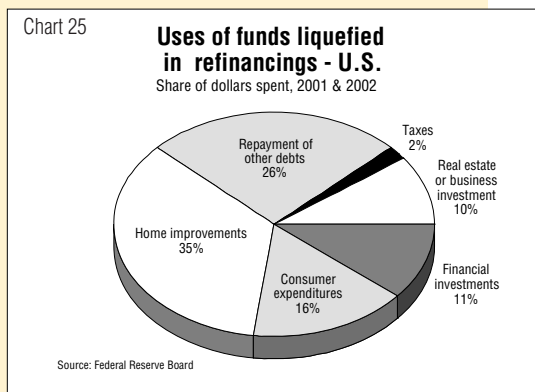
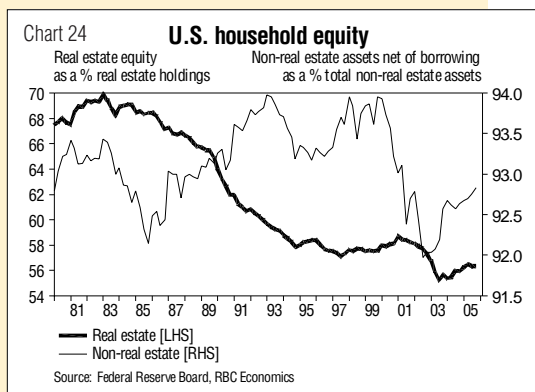
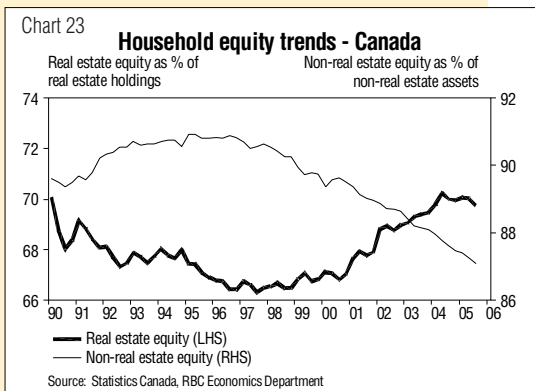
Stateside, the national credit market picture is open to debate with the climbing ratio of external debt to GDP in the United States having now caught up to Canada's ratio which is headed in the opposite direction (chart 22). For now, the United States is capable of servicing such external debt particularly given productivity and income gains from recent years. Continuing to ramp up growing trade and fiscal deficits in future years, however, could pose heightened risks to the U.S. economy.

Myth 6 — Households are spending their home equity

It is commonly argued that Canadians are putting less money down on their house purchases and borrowing more to pay for their homes than in the past. Although this is true for some buyers, particularly first-time homebuyers who lack money for a down payment and are fine with paying mortgage insurance premiums, is it true of the average Canadian homeowner?

Chart 23 provides the answer. In Canada, the pace at which house values have risen





in recent years has far outstripped the pace at which mortgage credit has been growing. Hence, the amount of equity that Canadians have in their homes — defined as the market value of their residences minus their mortgages — has increased for seven straight years after trending downward throughout much of the 1990s and though it began to moderate last year, it still remains well above its long-run average. At the same time, however, the net equity that Canadian households have on all other parts of their balance sheets has been falling for ten years. This is defined as all other assets except real estate minus all debt other than mortgages, expressed as a percentage of the market value of those assets. The overall result is that the combined leverage ratio has been fairly steady.

In the United States, this trend was the opposite of Canada's after 2001, but numbers over the past couple of years have shown a reversal in trend with both real estate and non-real estate equity rising (chart 24). Despite the declines over 2001-03 and lower overall equity levels compared to Canada, the equity position of U.S. households does not appear to be problematic. Home equity is rising again, plus households have been adjusting their household finances in a responsible way by drawing down home equity through higher mortgages. This is because the 1986 Income Tax Act changes, which phased out the deductibility of interest payments on non-mortgage debt while still allowing for the deductibility of mortgage interest payments, tilted preferences towards using mortgage debt instead of consumer credit to meet consumption choices. The fact that throughout recent refinancing waves, American households have driven lower growth in non-real estate debt suggests that they were responsibly readjusting their indebtedness so as to lower their weighted average after-tax debt carrying costs. In all four equity measures for Canada and the United States, however, the changes have been small over the years.

What is more interesting is how households have used the proceeds from mortgage refinancing waves such as the one witnessed in the spring of 2003. Although detailed information is as yet not available, surveys from past rounds of refinancing such as 2001-02 may be useful (chart 25). During that period, only 16% of the proceeds of mortgage refinancing went to consumer expenditures. The rest was either used to reduce debt (26%), or make investments such as home improvements (35%), real estate (10%) or financial investments (11%).

Myth 7 — Equity and real estate markets pose big risks to credit quality

The final myth is that equity and real estate market developments materially affect household credit quality in a negative manner. Starting with equity markets, as they corrected in 2001 and 2002 before recouping losses in the past couple of years, households as a group were hit hard in their wealth positions. However, for the average household, finances have improved markedly during the period of weakness and recovery in equity markets.

Chart 26 provides the reasoning for this by using the new 2004 Survey of Consumer Finances done by the U.S. Federal Reserve, which breaks down household wealth and debt service positions by individual age and income cohorts. What this chart shows is that middle-income households have benefited remarkably from the fact that, at the

starting point of the equity market correction, they had much more invested in property markets than equities. Furthermore, the very upper income households, which were most reliant on equities in their overall wealth positions, had very low debt service burdens compared to middle-income households. Therefore, it is middle-income households that have benefited from strong property markets and the lowest interest rates in history. Those households, in turn, comprise the vast majority of overall households. Indeed, an equity market correction might actually be a strong positive for credit quality since debtors tend to own little by way of equities and would likely benefit from lower borrowing costs as central banks move in classic fashion to inject liquidity into financial markets after any equity correction. As such, whether or not equities are over valued today is of little consequence to household borrowing conditions and may be a positive thing. Comparable arguments hold in Canada.

But what about the fundamental health of real estate markets? Some suggest that we may be in a North American housing bubble, and if so, that when it pops it will take down household credit quality. Our own view is that we are not in a housing bubble, though there are pockets of concern across parts of North America. But let's assume there is a housing bubble for argument's sake. Would its unwinding be enough to materially shock household credit quality?

Not likely. People don't default on their loans because the book values of their homes have dropped by 10, 20 or 30%. They do so when cash flows become impaired. This occurred in the early 1990s when a real estate bubble popped, but not because of it. Cash flows back then deteriorated because of weakening employment markets and rising debt servicing costs in a sharply deteriorating environment for both fiscal and monetary policy made worse by many other simultaneous adjustments. In the Canadian case, short-term interest rates soared to the 12-15% range and were well above U.S. rates, while the unemployment rate soared to double digits and many discouraged workers dropped out of the labour force entirely. No one is predicting a return to such conditions, but what if they actually did arise once again? Given our arguments regarding liquidity and mortgage refinancing, it is quite likely the case that households are less exposed to such cyclical risks than they were back in the early 1990s - not more than ever as a minority of commentators argue.

