Scotiabank Group

Special Report
— An Assessment of North American Household Balance Sheets

January 5, 2004

Adrienne Warren, (416) 866-4315
adrienne_warren@scotiacapital.com

Aron Gampel, (416) 866-6259
aron_gampel@scotiacapital.com

Conclusions

❑ The debt-financed consumer spending spree in the United States and Canada is not letting up, pointing to even higher levels of household indebtedness in 2004. The key factors underpinning borrowing — affordability, rising property values, immigration, dual incomes and asset diversification — are still broadly supportive. At the same time, there is no shortage in the availability of funds. Both the Fed and the Bank of Canada are keeping short-term rates steady, while financial institutions, in general, have not tightened credit conditions to any meaningful degree.

❑ Improving economic conditions in the United States set the stage for another solid year of mortgage and consumer credit demands. The revival in U.S. activity appears more sustainable, with consumer spending being underpinned by the resumption in job creation and the continued use of price incentives and discounts. U.S. firms are gearing up industrial activity to restock depleted inventories, and are investing more in productivity-enhancing machinery & equipment. Even so, the already saturated level of 'big-ticket' sales should help restrain the extent of household borrowings.

❑ Though the current economic and interest rate environment is relatively benign, record levels of indebtedness leave North American households exposed to any reversal in economic fortunes. In particular, debt service burdens — bloated by unprecedented 'cash-outs' during the repeated waves of mortgage refinancing in recent years — are highly leveraged to a significant rise in borrowing costs. No less problematic would be the sharp deterioration in underlying economic circumstances, such as job losses, slower income growth or declining home prices.

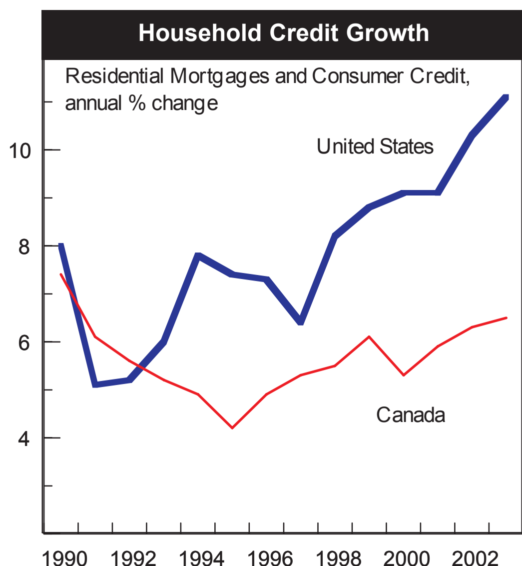
❑ For the time being, borrowing costs are expected to remain at or near historical lows. The 30-year U.S. mortgage rate is 5.9%, up from a cycle-low of 5.2% in June, but well below the 10-year average of roughly 7.4%. (In Canada, a 5-year mortgage rate is 6.5%, up from 5.8% in June, but similarly below its 10-year average of 7.8%.) The extent of any further near-term backup is constrained by the persistence of an ultra-low Fed funds rate of 1%, with inflation pressures largely absent and the 2004 Presidential election race looming on the horizon. Moreover, in a financial market environment still characterized by low yields, there is a significant amount of funds from private sources available for investment in mortgages.

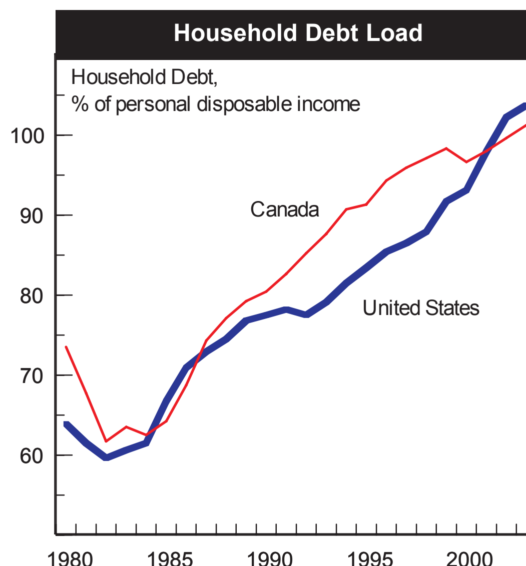
❑ Looking ahead, mortgage rates are at risk of moving higher. Rising household credit demand, alongside burgeoning U.S. fiscal requirements, are expected to increasingly bump up against those of an expanding global economy, thereby reinforcing a rising and steeper yield curve. A wildcard in the outlook is the potential for an even weaker U.S. dollar, a development that could exacerbate the rise in borrowing costs and compound the economic and financial market volatility. Any renewed rise in U.S. longer-term financing and mortgage costs would have a ripple effect in Canada, though a more moderate pace of household borrowing could limit the back-up domestically.

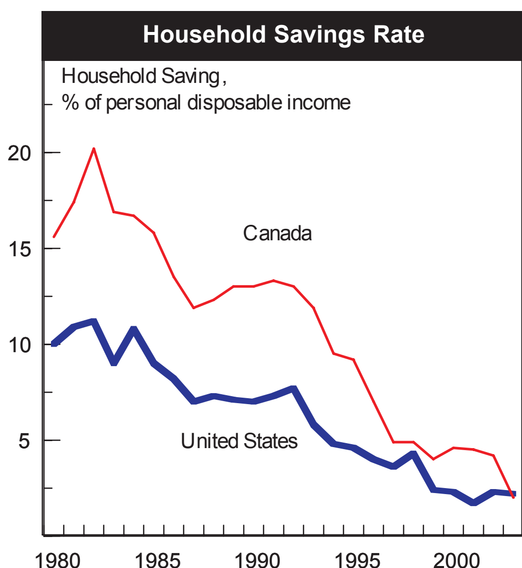
❑ At the same time, the immediate impact of rising interest rates on household finances will be diffused by the significant amount of refinancing activity that has effectively locked in low borrowing costs. In addition, the negative effects of higher interest rates on the liability side of personal balance sheets will be at least partially mitigated by a quicker turnaround in expected yields on household financial assets.

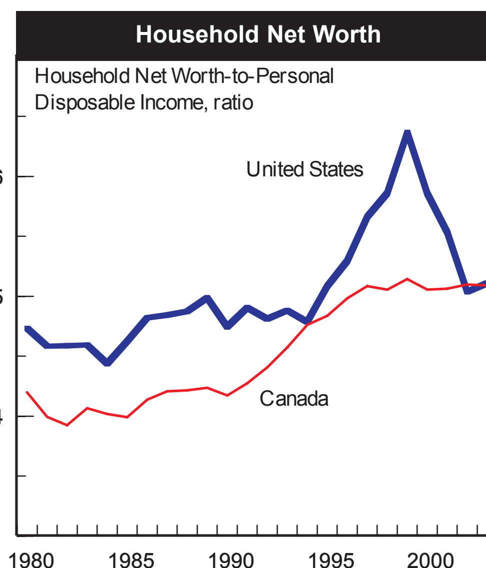
- Some erosion in affordability is under way. In the housing sector, the sustained run-up in home prices and the modest upturn in longer-term borrowing costs has begun to chip away at one of the foundations supporting the above-trend rate of household credit growth. Yet, rising home valuations, and more recently higher stock prices, are boosting household net worth, thereby helping to insulate borrowers from the ongoing rise in indebtedness. Nevertheless, alternative measures of savings and liquidity have continued to weaken, suggesting that the financial cushion supporting households is probably inadequate to protect against a lengthy and severe correction in the housing market.

- Canada's increasing economic underperformance relative to the United States suggests that domestic borrowing could increasingly lag U.S. trends in 2004. The country's near-term economic prospects are not as bright as those in the United States. Domestic export competitiveness has been seriously challenged by a combination of factors such as an increasing number of lower-cost producers, a lagging productivity performance and the continuing sharp rise in the Canadian dollar. The restructuring stemming from the significant compression on earnings will likely translate into fewer private-sector jobs, reduced income gains, and a slower pace of consumer 'big-ticket' expenditures.









'Big-Ticket' Spending Fuels Credit Boom

North American consumers have run up their debt to record levels in recent years in order to support an extended buying spree on homes and other 'big-ticket' items. In Canada, residential mortgage and consumer credit growth has averaged 6% annually since 1997, a full percentage point faster than underlying income growth of 5%. The gap has widened even further over the past year, with credit growth remaining on a steady trajectory but year-over-year income growth slowing to just 3%. Household debt as a share of personal disposable income soared to a record 101% in the third quarter of 2003, up from 98% just 12 months earlier. (All figures based on National Balance Sheet Accounts data.)

An even more dramatic 'borrow-to-buy' mentality has gripped U.S. shoppers. U.S. household credit growth has averaged 9% annually since 1997, and posted a staggering 11% advance over the latest 12 months. With income growth running only slightly above the trend in Canada, U.S. households have witnessed an even faster run-up in debt loads. U.S. mortgage and consumer credit debt accounted for 104% of disposable income in mid-2003, compared with 97% — essentially the same as in Canada — a year earlier.

North Americans' borrowing and spending appetite has been fuelled by a favourable mix of financial incentives. Consumers have been taking advantage of generational low borrowing costs amid a highly competitive pricing environment highlighted by '0%' auto financing. While Canadians have benefitted from a healthier pace of job creation, wage gains have held up better in the United States due to a much stronger productivity performance. The 'borrow-to-buy' mood has also been supported by steadily rising home values that have encouraged debt refinancing, and an aversion to equity market investing after several years of volatility and capital gain losses.

Now, however, the consumer spending momentum is at risk of slowing just as business expenditures are ramping up. Labour market conditions have softened in Canada over the past year, and remain weak in the United States, notwithstanding some recent signs of improvement. In both countries, real wage gains have moderated, undercutting purchasing power at a time when earlier pent-up demand has been largely satisfied. More important from a longer-term perspective is whether North American household balance sheets have been fundamentally weakened by the rapid rise in borrowing. If so, this could lead to a more substantial and extended period of subpar spending growth.

Balance Sheet Health Mixed

While the headlines often call attention solely to the record run-up in debt loads, a broader cross-section of balance sheet measures paints a mixed picture of the financial health of the typical household.

In Canada, debt servicing costs are historically low due to low interest rates and continued income gains, suggesting that the rise in debt is currently not placing an unmanageable strain on income flows. Household net worth is on the increase again, thanks mainly to appreciating home values, and has surpassed its late-1990s peak. In fact, the value of non-financial assets — 80%

Household Balance Sheet Indicators — Canada

			1980s	1990s	2000-02	2003
Debt Load	Total Household Debt/PDI	%	69.2	90.3	98.0	101.2
	Mortgages/PDI	%	49.8	67.5	69.9	71.2
	Consumer Credit/PDI	%	19.4	22.8	28.1	30.0
Debt Service	Ttl Debt Payments/PDI	%	7.6	8.8	7.9	7.5
	Mortgage Payments/PDI	%	5.0	6.1	4.9	4.6
	Cons. Credit Payments/PDI	%	2.6	2.7	2.9	2.9
Debt Leverage	Ttl. Debt/Financial Assets	%	31.4	32.3	32.5	34.4
	Ttl. Debt/Ttl Assets	%	16.3	17.9	18.4	18.7
Liquidity	Liquid Assets/Ttl Liabilities	ratio	1.6	1.3	1.0	1.0
	Liquid Assets/Financial Assets	%	50.7	43.2	32.1	33.6
Net Worth	Net Worth/PDI	ratio	4.1	4.7	5.1	5.1
	Ttl Assets/Ttl Liabilities	ratio	6.2	5.6	5.4	5.3
Savings Rate	Saving/PDI	%	15.3	9.1	4.4	2.0
Interest Earnings	Interest Income/PI	%	13.9	13.8	11.2	9.8
Consumer Bankruptcies	per 1000 adults		na	3.1	3.3	3.6

of which is homeowner equity — has risen faster than the run-up in mortgage obligations since 1998. Consumer bankruptcies (per 1000 adults) have been relatively stable in recent years, even if high by historical standards.

At the same time, household debt leverage (i.e. debt-to-total assets or debt-to-financial assets) is hovering at a record high while household liquidity (i.e. liquid assets-to-financial assets or liquid assets-to-total liabilities) has slumped to record low levels, leaving only a small share of savings readily available to cushion for difficult times. The personal savings rate has likewise fallen to all-time lows.

Demographic factors are behind some of these balance sheet trends. Looking back over the past two decades, the increase in household debt in North America has been driven mainly by mortgages, as the baby boom generation moved into its prime home buying years. Holding the home ownership rate — or the share of the population aged 25-44 — constant over this period, total debt per household would be significantly lower today. At the same time, the steady reduction in the liquidity of investment portfolios is at least in part due to an aging population and an asset shift into pensions and life insurance.

Aggregate debt measures also must be viewed with some caution. Total household debt is likely inflated by the growth in credit card use for routine expenditures, in which the balance is regularly paid off each month, as well as by the increasing use of personal credit cards for home-based businesses. A gradual shift from auto ownership to leasing has tended to lower measured debt service ratios, while higher home ownership rates have had the opposite effect. In general, debt servicing ratios understate the total financial obligations of households by excluding recurring fixed expenses such as rent, auto leases, homeowners' insurance and property taxes.

Household balance sheets look broadly similar in the United States. Rising home prices are boosting net worth, though the increase in U.S. home equity has only matched the rise in mortgage debt. At the same time, household leverage is at a record high, while liquidity and savings rates are hovering at or near record lows.

The most notable difference between the two countries is in debt service ratios. U.S. debt servicing costs as a share of disposable income have stabilized after steadily rising through the latter half of the 1990s, but remain high by historical standards. (Note that the *level* of the published debt service ratio is much higher in the United States because it includes both interest *and* principal payments. If U.S. households have increased principal payments relative to income in recent years, as has been the case in Canada, this would tend to bias the trend in debt servicing ratios upwards.)

The less favourable debt servicing trend south of the border reflects the bigger rise in U.S. debt loads, but also differences in borrowing behaviour. U.S. mortgage refinancing activity has surged in recent years, encouraged by the combination of lower interest rates, reduced mortgage transaction costs and appreciating home values. While lower interest rates and a lengthening of average maturity have tended to reduce required monthly mortgage payments, this has been partially offset by an increase in the average outstand-

Household Balance Sheet Indicators — United States

			1980s	1990s	2000-02	2003
Debt Load	Total Household Debt/PDI	%	66.9	82.9	97.7	103.7
	Mortgages/PDI	%	48.2	62.4	73.0	79.8
	Consumer Credit/PDI	%	18.7	20.5	24.7	23.8
Debt Service	Ttl Debt Payments/PDI	%	11.4	11.7	13.1	13.3
	Mortgage Payments/PDI	%	na	na	na	na
	Cons. Credit Payments/PDI	%	na	na	na	na
Debt Leverage	Ttl. Debt/Financial Assets	%	22.9	23.0	25.4	29.1
	Ttl. Debt/Ttl Assets	%	13.9	15.2	16.6	18.4
Liquidity	Liquid Assets/Ttl Liabilities	ratio	2.8	2.1	1.7	1.6
	Liquid Assets/Financial Assets	%	64.7	47.5	43.4	45.4
Net Worth	Net Worth/PDI	ratio	4.7	5.2	5.5	5.1
	Ttl Assets/Ttl Liabilities	ratio	7.2	6.6	6.1	5.4
Savings Rate	Saving/PDI	%	9.1	5.2	2.1	2.2
Interest Earnings	Interest Income/PI	%	14.9	13.0	11.5	10.5
Consumer Bankruptcies	per 1000 adults		2.3	5.4	7.0	8.1

ing balance due to home equity 'cash-outs'. As a result, only about half of refinancing U.S. households have actually lowered their monthly mortgage payment.

Mortgage refinancing among Canadian homeowners is also up in recent years, but accounted for only about 10-15% of all mortgage holders compared with over 25% in the United States. The expected payoff from refinancing in Canada is generally lower as existing terms to maturity are shorter. At the same time, lower interest rates have substantially reduced monthly payments on new and renewed mortgages.

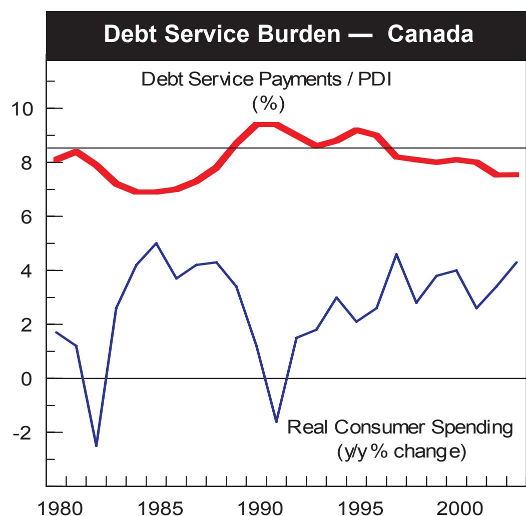
Canadian and American households have also taken somewhat different approaches to balance sheet restructuring. Roughly 50% of refinancing U.S. households have used equity extracted from their home to pay down higher cost non-mortgage debt. This has tended to dampen demand for consumer credit. Canadian households, on the other hand, have responded to the drop in short-term rates by increasing their share of consumer debt (i.e. non-mortgage debt), particularly variable rate lines of credit. As a result, longer-term mortgage debt has been the faster growing component in the United States in recent years, while demand for shorter-term consumer credit has been relatively stronger in Canada.

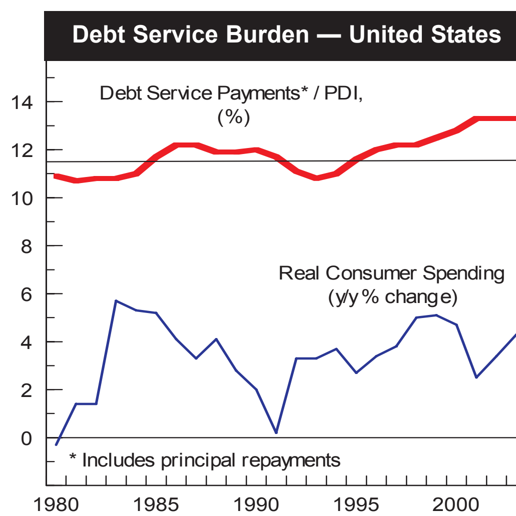
Assessing Liability Risk

To ascertain the balance sheet risk of Canadian and U.S. households, we have estimated the impact of a rise in interest rates and/or a slowdown in income growth on household debt loads as well as debt service burdens. Our projections are based on effective mortgage and consumer credit interest rates, as opposed to market rates, in order to take into account the term structure of household liabilities. Effective interest rates (what consumers actually pay out on their current debt) are less volatile and adjust with a considerable lag, as only a fraction of debt is rolled over at market rates each year. For example, because current short- and long-term mortgage rates in Canada are below the average effective mortgage rate of 6.5%, the effective rate would still edge down over the coming year given a small backup in market rates.

At the same time, the adjustment process is likely faster today given the growing popularity of variable rate lines of credit and variable rate mortgages. Lessening the impact on households, however, is the fact that variable rate mortgages tend to cap debt-service payments by mainly affecting principal repayments. Mortgage debt still accounts for the lion's share (70% in Canada and 77% in the United States) of total household liabilities.

Moreover, a significant proportion of household debt remains at fixed terms, with variable rate terms representing only 1 in 5 outstanding mortgages in Canada and an even smaller share of recent renewals. The 5-year remains by far the favourite choice of Canadian homeowners, accounting for 6 in 10 outstanding mortgages. Its attractiveness has decreased somewhat in recent years, but the 5-year term still accounted for over 40% of all mortgage renewals during the first half of 2003. Many households, particularly first-time buyers with less flexibility, are choosing to lock in at historically low long-term rates. In the United States, close to 90% of refinancing households have taken out fixed rate mortgages in recent years.





Rising Rates Pose Longer-Term Risk

Overall, our analysis suggests that a modest slowing in income growth would not pose a huge threat to household financial health or consumer spending, but that both Canadians and Americans are vulnerable to a sustained rise in borrowing costs. While the full impact will take time as many households are currently locked in at low rates, household sensitivity to higher interest rates has likely increased in recent years due to the ongoing run-up in debt combined with a shift to shorter maturities and variable rate credit, at least in the case of Canada.

In Canada, for example, a one percentage point increase in the average effective interest rate over five years, assuming steady income and credit growth, would lift debt servicing costs as a share of after-tax income to almost 9% from the current 7½% level. In the past, when debt service costs have broached 8½%, as occurred in both the early-1980s and early-1990s, the loss of purchasing power led to a retrenchment in discretionary spending until debt payments were brought back to more manageable levels.

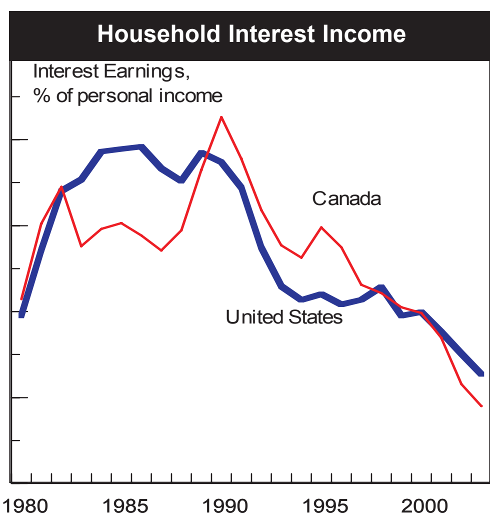
A one percentage point increase in the U.S. effective interest rate by 2008 would lift debt servicing costs above 14% of disposable income — essentially into uncharted territory. Traditionally, U.S. consumers have reined in their spending when debt servicing costs (principal plus interest) approach the 12% level, as was the case in the mid-1980s. The current U.S. spending spree amid record debt servicing costs is an anomaly, and most likely reflects the large but temporary boost to purchasing power from tax cuts and home equity 'cash-outs'. As this support fades in 2004, discretionary income will be considerably more strained.

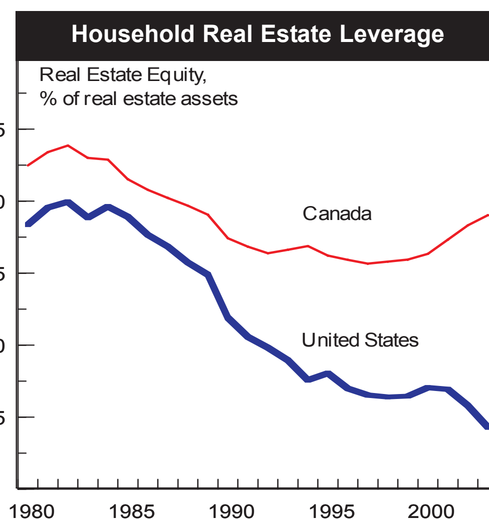
Lower Interest Rates a Double-Edged Sword

Of course, household liabilities cannot be analyzed in isolation. Changes in financial market conditions, including interest rates, equity markets and home prices, also have a significant impact on the asset side of balance sheets. Indeed, North American households currently have $5 in household assets for every $1 in outstanding liabilities.

While the decline in interest rates over the past three years has lowered debt carrying costs, the overall impact on household finances (at an aggregate level) has been negative. This is because North American households *own* considerably more in interest-bearing assets than they *owe* in consumer and mortgage debt. Also, because many assets are in highly liquid form while many borrowers are locked in for an extended period, the impact of lower income yields is often felt before the benefits of lower rates materialize.

Interest earnings received by Canadian households have fallen by close to 10% since early 2001 when rates began their downward slide. Interest earnings now account for less than 10% of personal income, compared with roughly 12% at the start of the decade. To date, the cost to savers of lower interest earnings has more than offset the benefit to borrowers — interest earnings net of interest payments have fallen by more than $10 billion since the fourth quarter of 2000. The dampening impact on consumer spending, however, has





been muted by the fact that lower rates benefit spenders, who tend to have more debt and fewer financial assets, at the expense of savers.

Interest income of U.S. households has likewise deteriorated, though to a lesser extent than in Canada, probably because Americans typically hold a smaller share of their financial assets in interest bearing securities. Interest earnings accounted for just 10% of U.S. personal income in 2003Q3, down a percentage point since early 2001. On the plus side, the negative effect of higher interest rates on the liability side of household balance sheets will be at least partially mitigated by a quicker turnaround in financial asset returns.

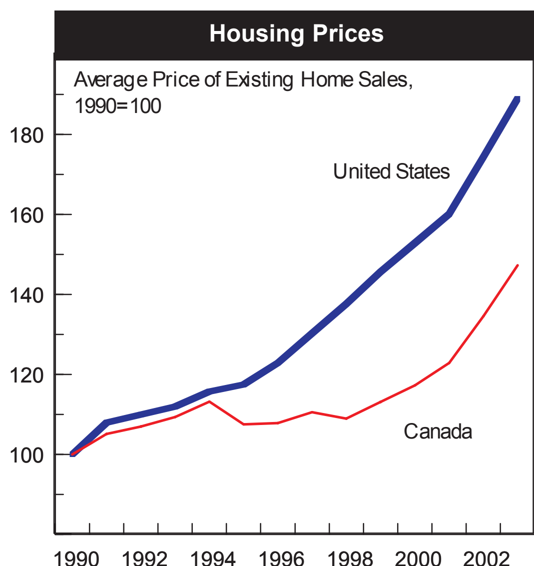
Increased Real Estate Exposure

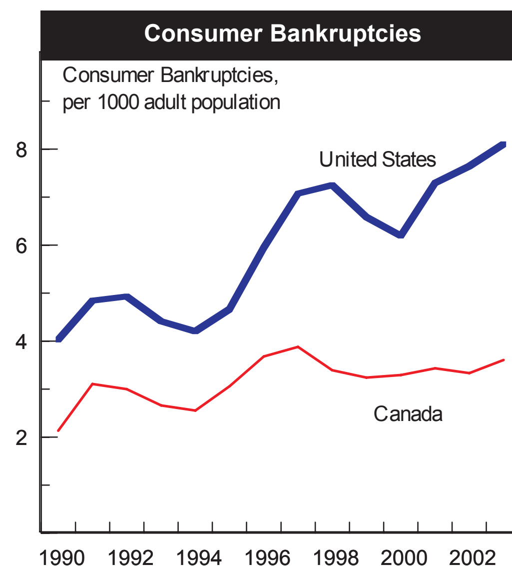
The composition of North American household assets has shifted toward real estate holdings in recent years, most notably in the United States, reflecting the bursting of the stock market bubble in the late-1990s, falling interest rates and low inflation. U.S. equity wealth is still high by historical standards, with stocks and mutual funds representing 16% of total household assets in mid-2003. Real estate, however, is considerably larger, at 28% of all assets. U.S. households are more exposed to a decline in home prices than in equity markets, in contrast to the situation that existed at the start of the decade.

The sensitivity of U.S. household balance sheets to a correction in real estate markets has also been heightened by increased household leverage in real estate assets. With the rise in demand for real estate being heavily financed, U.S. home equity (real estate assets less mortgage liabilities) as a share of real estate assets has fallen to an all-time low of 54%, compared with an average of close to 70% through the 1970s and 1980s.

Canadian households are also exposed to a correction in housing prices. The typical Canadian household is much less leveraged to real estate markets than its U.S. counterpart, with home equity as a share of real estate assets still running close to its long-term average of 70%. However, real estate represents a larger share of all household assets in Canada, at 37%.

Despite record household indebtedness, North American finances are reasonably healthy, thanks to low interest rates and continued income gains. Nevertheless, recent balance sheet developments suggest that a sustained rise in interest rates or a decline in home prices would pose a credible longer-term risk to the overall economy. In the United States, the lack of improvement in debt servicing ratios and rising household leverage in real estate markets are key concerns. In Canada, a shift to shorter-term and variable rate debt has left households more exposed.





This Report is prepared by Scotia Economics as a resource for the clients of Scotiabank and Scotia Capital. While the information is from sources believed reliable, neither the information nor the forecast shall be taken as a representation for which The Bank of Nova Scotia or Scotia Capital Inc. or any of their employees incur any responsibility.

Scotia Economics
40 King Street West, Box 4085,
Station "A", Scotia Plaza
Toronto, Ontario Canada M5W 2X6
Tel: (416) 866-6253 Fax: (416) 866-2829