Bank Financial Group

Special Report

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TD Economics
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HIGHLIGHTS

- The U.S. recovery will be very slow and mild following the Great Recession, a departure from historical experiences
- The financial crisis has severely damaged the U.S. financial sector's ability to efficiently intermediate credit, and this will hamper the recovery phase
- In addition, massive losses in net worth imply that this recovery will not be like the consumer-driven recoveries of the past
- International experiences with financial crises support the view that damaged credit flows and an ailing financial sector are major catalysts towards a slow recovery
- Although this was a deep recession for Canada as well, the relatively healthy financial sector and domestic economy should facilitate a recovery that is more in line with historical standards

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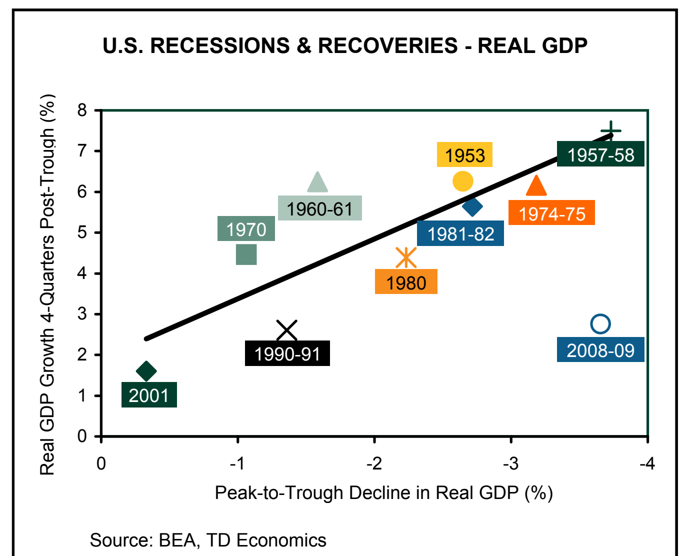
HOW WILL THE GREAT RECESSION AND ITS RECOVERY COMPARE TO THE PAST?

Comparing Recessions in the U.S.

With the Great Recession likely in the rearview mirror, the focus has shifted 180° from how deep the contraction will be, to what form the recovery will take. In the U.S., history suggests that the worse the recession, the stronger the recovery. Yet, despite the fact that this was one of the deepest, most protracted recessions in U.S. history, the recovery is not expected to be any faster than with recessions in the past. As the accompanying graph illustrates, the growth in economic output within the first year of recovery is typically about 2-3 times larger than the decline in total output over the course of the recession. Given that relationship and the 3.7% peak-to-trough decline in real GDP in the current recession, one would expect a recovery in GDP of about 7-10% over the course of the second half of 2009 and first half of 2010. Yet, the TD forecast is for growth over the next four quarters of just 2.8%, and indeed the consensus is very close. This modest recovery is much more reminiscent of the growth that followed the 1990's or 2001 recessions where the output decline was around one-third and one-ninth, respectively, of the 3.7% peak-to-trough decline in economic output that occurred in the latest recession. The story is much the same with respect to U.S. employment. TD expects the peak-to-trough decline to exceed 5%, the worst decline in any post-war recession, while the recovery is expected to be very modest. This, of course, begs the question, why will this recovery be such an outlier? As it turns out, the answer lies in the very nature of the Great Recession.

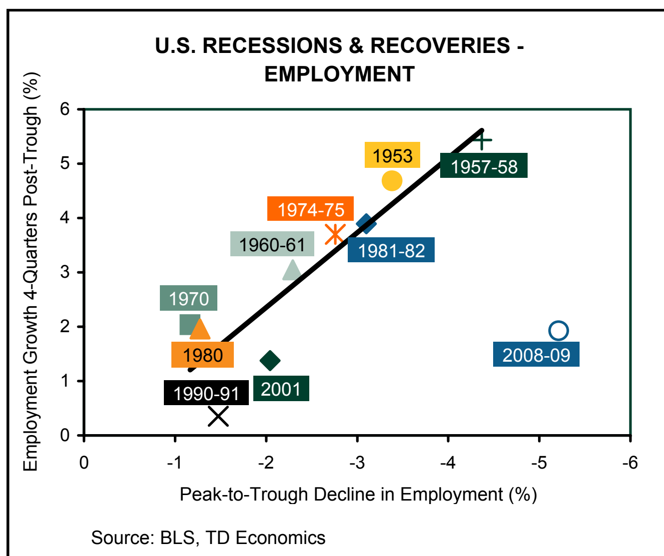


Financial Crises vs. Normal Recessions: The American Experience

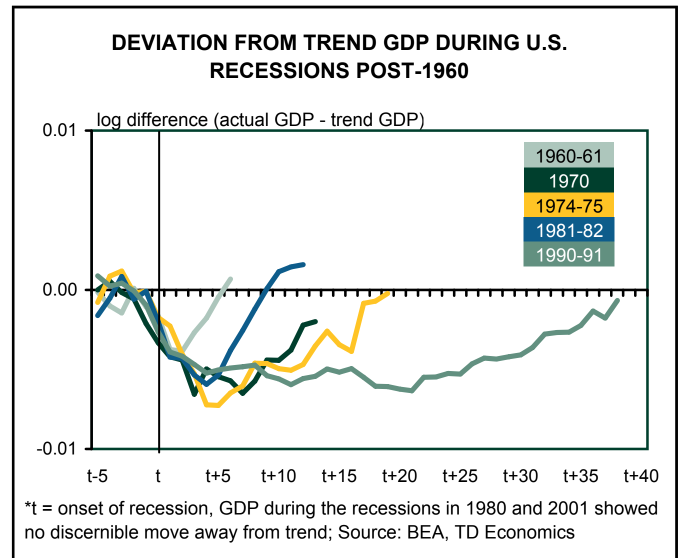
The words, "financial crisis", were thrown around by many to describe this recession, and rightly so. The subprime mortgage crisis and the systemic risk in the financial system, as characterized by the failure of several major U.S. financial institutions, caused an unprecedented wave of corporate loan losses and writedowns to the tune of US$1.6 trillion. The balance sheets of remaining financial institutions in the U.S. were, thus, severely damaged when these losses

were combined with the freefall in market capitalization that occurred over the course of 2008 and 2009. In tandem with the job losses, demand destruction, rising default rates and non-performing loans, and general economic malaise that usually surrounds a recession, the almost insurmountable level of financial stress caused these same institutions to severely contract the amount of available credit in the economy by drastically raising lending standards. Going forward, U.S. financial institutions must take the time to clean up their balance sheets, deleverage, and rebalance their risk activities. However, in doing so, they are unable to supply firms and consumers with the credit that is so necessary during the recovery phase. This is why the recovery in the U.S. is expected to be slow: a financial crisis impedes the ability of the financial sector to efficiently intermediate credit for a long period of time. Without access to sufficient credit in the medium-term, capital accumulation is constrained, the productivity of workers stagnates, employment growth recovers only slowly, and the overall recovery is encumbered because any pent-up demand, little as it may be in the current situation, will not have the same impact that it would if credit conditions were normal. In addition, households lost over $14 trillion in net worth over the course of 2008. Any recovery in income and asset prices will partly be absorbed by higher savings in an effort to rebuild that lost wealth.

The recovery, thus, heavily depends on how damaging the effects of the financial crisis will be in the long-term. In its post-war history, the U.S. has never suffered from a shock that was this powerful and that will likely prove to be very enduring. In fact, the U.S. economy has bounced back rapidly from every recession in the past 50 years, save for one. The exhibit on the right shows how deep and how



Source: BLS, TD Economics



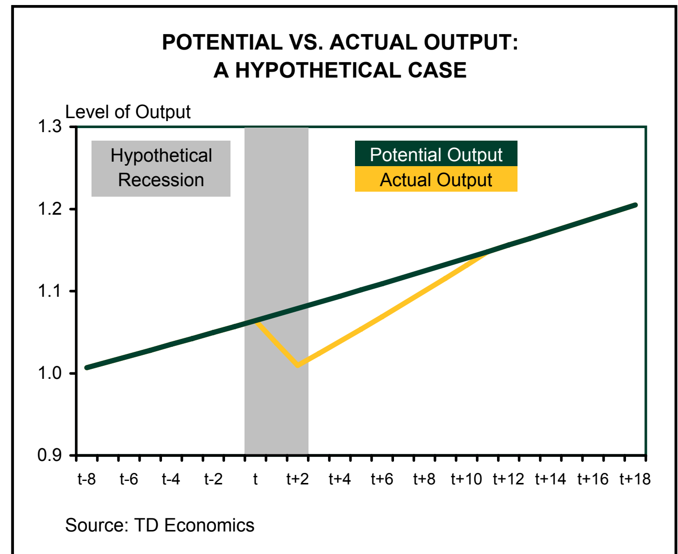
*t = onset of recession, GDP during the recessions in 1980 and 2001 showed no discernible move away from trend; Source: BEA, TD Economics

protracted each recession was since 1960. The horizontal line at zero indicates the path upon which the U.S. economy was growing and would have continued to grow had no recession ever occurred, referred to as trend or potential GDP; hence, a downward movement across time implies either a contraction or a slowing of growth in economic output, while an upward movement implies that growth at that point is stronger than growth in potential GDP. So within about 16 quarters or less (around 4 years or less), the gap caused by the recession between what economic output should have been had no recession occurred, and what the actual level of output was, is completely eliminated. For further discussion of the methodology, please refer to the following textbox.

The sole exception to this was in the wake of the savings and loans (S&L) crisis in the 1990's. Output did eventually fully recover to the pre-recession trend, but it took almost 10 years to do so. In fact, the S&L crisis is the only example of a financial crisis in the United States' post-war history: at the time, 747 savings and loans institutions failed due to the bursting of the housing bubble. However, S&L institutions comprised a very small portion of total lenders in the U.S. and so the constraint in credit that followed is quite small when compared to what is expected after the current recession. The reason for the prolonged recovery is not solely because of this constraint, although that was a factor. Four years after the onset of the recession (around t+16 in the graph), output does appear to have begun growing more rapidly and that a full recovery was on the horizon. This was 1994. Around the same time, the Clinton administration passed one of the most aggressive deficit-reduction programs in U.S. history in an attempt to combat record high deficits following the Reagan and Bush presidencies; deficits that,

Potential Output

In a very basic sense, economic output can be thought of as the combination of two components, the labour force and the productivity of that labour force. When an economy is operating at full capacity, meaning as many of those workers are being utilized as possible on a sustainable basis, then the resulting level of output is what is referred to as potential output, or potential GDP. The growth rate of potential GDP is, thus, comprised of the growth rates of its components, labour force growth and productivity growth. When a recession occurs, the output that is actually produced declines as jobs are shed and economic capacity is left idle. However, the same economy's potential output continues to grow because the labour force continues to grow, and to some extent, so does productivity. The recession has done nothing to change that fundamental capacity.



Hence, a recovery from a recession can be characterized in two different ways. The more widely used metric is the first quarter of growth following any consecutive contractions in output that may have occurred. This typically signals that the recession is over and that the economic recovery is underway. However, at that point the economy is still technically operating below its full capacity. Pent-up demand that accrues over the course of the recession boosts economic growth above potential growth and that is what causes actual output to converge with potential output. Until that gap is closed, the recovery can be deemed incomplete. This is the second metric by which to judge a recovery, which we will refer to here as a "full recovery".

Hence, with regards to the "deviation from trend GDP" exhibits in the main body of this piece, the horizontal line at zero indicates what path potential output is estimated to have been on, while each line indicates how far actual output moved away from potential in each recession. These are presented in such a way that the depth of the decline during each recession can be compared, apples to apples, because the methodology takes into account the fact that potential GDP growth varies across time. A return to zero, thus, indicates a "full recovery".

incidentally, had helped to boost growth throughout the 1980's. Thus, the reason for the prolonged recovery in the 1990's was a combination of higher than average trend growth during the 1980's, constrained credit following the S&L crisis, and aggressive deficit reductions in the mid-1990's. Had this last aspect not occurred, the time it took for a full recovery to emerge might have been much shorter.

The S&L experience certainly carries some implications for the long-term outlook of the U.S. economy. They were both financial crises, albeit to glaringly different magnitudes, and because of the $150 billion and $787 billion fiscal stimuli put forth by the Bush and Obama administrations over the past two years, deficit-reduction will most likely characterize both recovery phases. Hence, a reprisal of the 1990's recovery is certainly possible. However, the fact that the magnitude of the current financial crisis is so much greater warrants the need for evidence of similar situations.

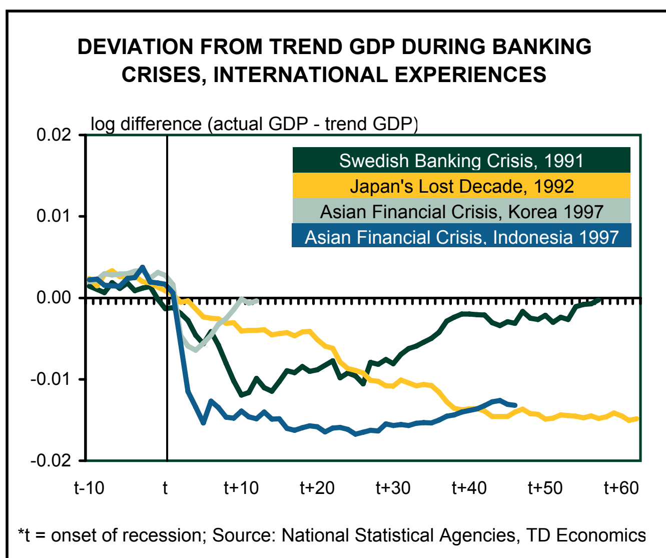
Financial Crises: The International Experience

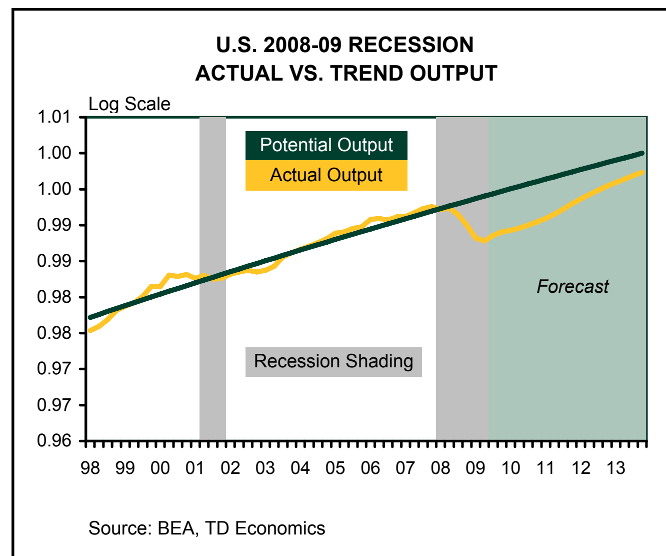
To that end, we turn to the histories of other countries who have suffered through similar financial crises. History tells us that a financial crisis has the ability to prevent an economy from ever posting a "full recovery" by causing a permanent downward shift in potential output. This is what happened in Japan following the 1990's recession, and it happened in Indonesia following the 1997 Asian Financial Crisis. On the other hand, Korea recovered quite rapidly from the same Asian Financial Crisis despite the fact that its economy was equally devastated as that of Indonesia. A similarly strong recovery occurred in Sweden following their banking crisis in the 1990's, although it took them almost 15 years to fully recover.

The cause of the differences in the speed and strength of the recoveries lies in the different policy responses to each of the respective financial crises. With regards to Korea,

the federal government was extremely aggressive in combating the financial crisis: emergency loans from the IMF, deposit guarantees, debt guarantees, asset purchases, bad debt purchases, bank nationalization, liquidity measures, direct intervention in credit markets, and drastic labour market reform were all instituted within months of the onset of the crisis. In sum, these measures all worked to prevent the destruction of Korea's financial institutions and lending to the private sector increased continually throughout the crisis and recovery. Thus, Korea's economy stabilized quite rapidly and economic output recovered to its pre-crisis trend within a few years of the onset of the Asian Financial Crisis.

Japan's recovery from its 1990's recession, on the other hand, was quite the opposite. Although the Japanese government had put forth a number of the same measures, their responses were too passive and piecemeal such that the actions themselves became ineffective in preventing the fall of the financial sector. The term 'zombie banks' was coined to describe Japanese commercial banks that would receive a small bailout each time a problem arose, but did not actually fix the insolvency problems. As non-performing loans accumulated, commercial banks became too debt-ridden to extend new loans or refinance old ones, despite the bank bailouts. Thus, credit markets became paralyzed. Japanese consumers lost faith in the financial system and began cutting back spending which pushed the nation into a deflationary spiral. Corporate profits were, thus, depressed for years, as was employment growth. And because the economy limped along for an entire decade, the recession received the moniker, "Japan's lost decade." Over that period, the federal government put forth ten different fiscal stimulus packages full of tax-cuts, public infrastructure plans, and spending programs which did nothing to spur the economy





but caused their debt-to-GDP ratio to double from 48% in 1991 to 96% in 1999. Overall economic output stagnated until basically the beginning of the current decade. To many, this is considered one of the worst case scenarios for an economy following a financial crisis.

The Bottom Line for the U.S.

The above historical examples of financial crises may provide insight about the shape of the U.S. recovery. Given the size, scope and speed of the monetary and fiscal response by the U.S. government, a reprisal of Japan's lost decade on U.S. soil is extremely unlikely. On the flipside, a recovery that is as rapid as those we saw in the 70's and 80's is also unlikely because the fallout from the financial crisis will linger for some time.

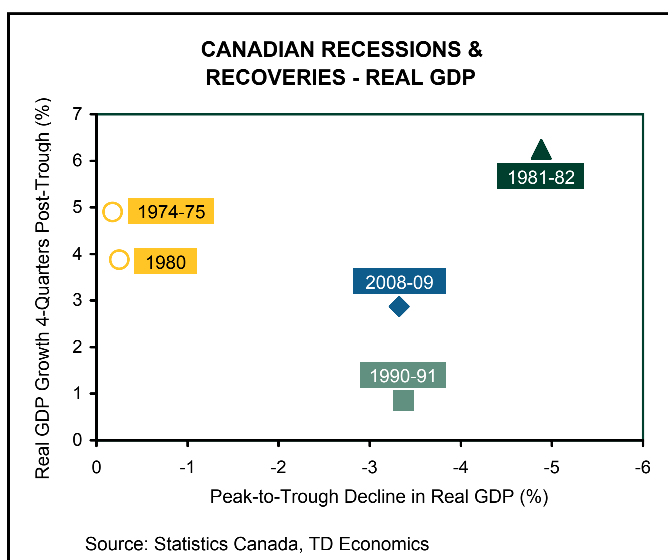
Within our five-year forecast horizon, we expect U.S. economic output to gradually converge towards its pre-crisis potential level, as both fiscal stimulus measures and accommodative monetary policy continue to bolster the economy. However, there are two major caveats to this. The first is that this recovery is unlike any other we have seen in U.S. history because it will be the first recovery that is not consumer driven. The financial crisis has been a blow to personal consumption that will not be recovered in the near-term. So although we do expect consumer spending to post moderate growth in the coming quarters, this recovery will not be the pent-up demand driven booms like those we have seen in the past. Investment should recover, as well, as low borrowing costs spur new investment demand, but one of the biggest supports will be the export sector which has greatly benefitted from the long-term depreciation in the U.S. dollar.

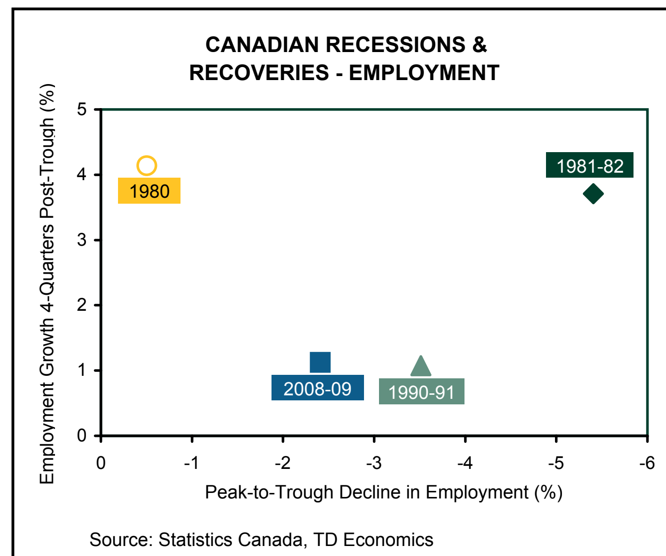
The second caveat is that our five-year forecast horizon ends alongside the stimulus measures the U.S. government has planned. If contractionary fiscal policy follows after 2013, then a complete convergence between actual and pre-crisis potential output may not emerge; and, in fact, depending on how extreme the spending restraint may be, economic growth may stagnate. Incidentally, this mirrors the circumstances following the 1990's recession very closely and so, again, it is quite feasible that a reprisal of the 1990's recovery will emerge.

In any case, the Great Recession will go down in history as being the most severe recession in history, second only to the Great Depression. At this point, there are too many unknowns for economists to clearly forecast the future direction of the U.S. economy, or the global economy for that matter, but we do know a few things. The financial crisis has severely damaged credit flows and household wealth, the recovery will be slow and moderate because of this, and the future of the U.S. economy weighs heavily on the direction of both fiscal and monetary policy in the medium-term.

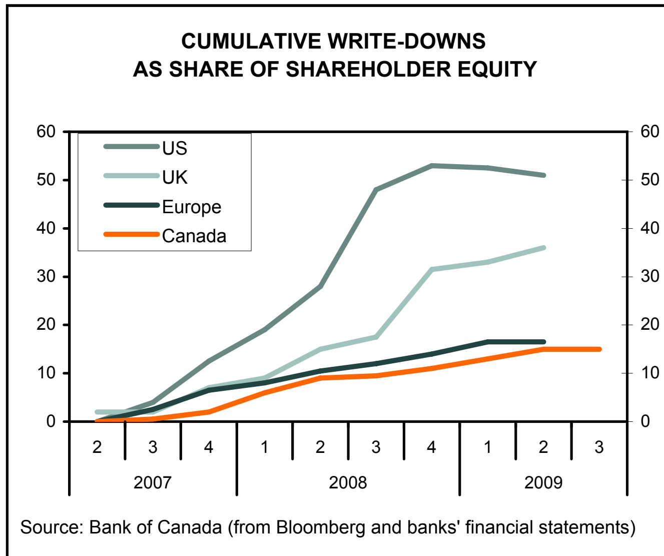
How Will the Great Recession Compare in Canada?

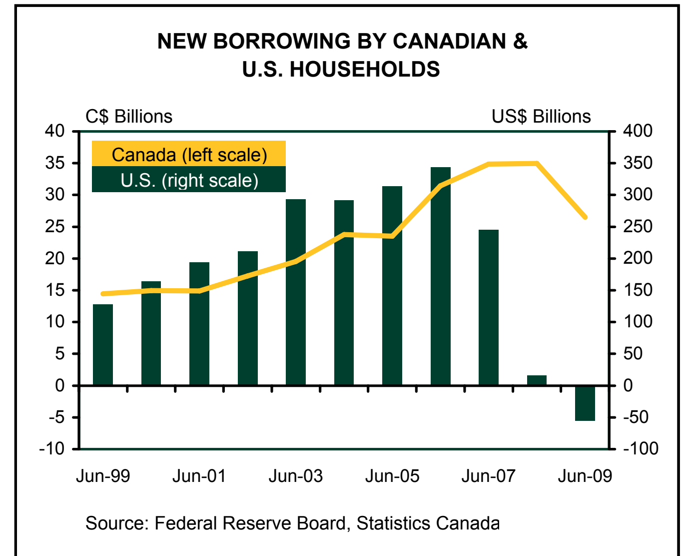
From the Canadian perspective, there are actually only two recessions since 1970 where there has been a major decline in output, those being the early 1980's and 1990's recession. Peak-to-trough declines in economic output amounted to 4.9% and 3.2%, respectively, with the recovery in the 80's being significantly stronger than the one in the 90's (6.2% vs. 0.8%). So how will this recession/recovery stack up in Canada? Ironically, given how much doom and gloom has been put forth by the media over the last year, the decline in output will not even be as severe as the 1990's and the recovery will be more than three times as strong. TD expects the peak-to-trough decline in real GDP to be 3.3%, while cumulative growth in the first four quarters of recovery will be 2.9%. And the same story holds true with respect to employment: job losses as a share of total employment will not be as bad as the 1990's and the recovery will be about the same. Relative to the early 1980's, both the decline and the recovery in GDP and employment will be less pronounced. So given prior history, the recovery in Canada can be viewed as being much more 'normal' than its American counterpart.





This is because, in contrast to the U.S., Canada's financial system weathered the global financial storm reasonably well, and the economy was ultimately driven into recession by the external shock of a global downturn. But, the fact is that the Canadian banking sector's exposure to the structured products and derivatives that so plagued its U.S. and international counterparts was relatively limited. Canadian banks were able to continue lending throughout this recession; and as such, the domestic economy will not face the constraints to growth present in the United States. Also, Canadian households did not face the same loss in net worth experienced by American households because home prices pulled back only modestly and temporarily, thus spending restraint in Canada is much less of an issue. In recent history, recessions that affected both Canada and the U.S. have been far more detrimental in Canada. During the 1981-82 recession, the peak-to-trough decline in Canadian real GDP was 4.9%, in the U.S., the decline was 2.7%. During the 1990's recession, the decline in Canada was 3.4% compared to a 1.4% decline south of the border.





Clearly, when the U.S. sneezed, Canada caught a cold; but, that certainly is not the case now. Both the peak-to-trough decline in GDP and the pace of recovery are expected to be very similar in absolute terms, but relative to the U.S., Canadian debt levels will remain well within a manageable range. This implies that the Canadian economy will be well-positioned for future growth and that fiscal restraint, though certainly necessary, will not be as monumental an issue as it will be in the United States. In fact, the most significant hurdle the Canadian recovery faces is the U.S. recovery, itself. A modest pace of growth south of the border will inevitably encumber the recovery in Canadian exports which comprise about 40% of total economic output.

So for Canada, the Great Recession will simply be known as a deep recession, with a recovery that will likely not be as strong as at times in the past, but will be facilitated by a relatively robust domestic economy and a lack of a constraint in credit markets.

Appendix A: Comparison of Major Indicators During Recessions

UNITED STATES

Recession**	GDP		Consumption		Employment		Investment		Exports		Imports		Government	
	P-T*	4Q After*	P-T	4Q After	P-T	4Q After	P-T	4Q After	P-T	4Q After	P-T	4Q After	P-T	4Q After
1948-49	-1.7	7.4	--	5.4	-5.2	8.8	-31.0	43.0	10.9	-21.0	-9.8	35.9	7.5	-1.2
1953	-2.6	6.3	-0.9	5.2	-3.4	4.7	-11.1	29.3	-4.0	20.2	-10.8	9.5	-4.2	-6.5
1957-58	-3.7	7.5	-1.4	5.7	-4.4	5.4	-17.2	35.1	-12.6	7.1	--	10.9	-1.1	4.7
1960-61	-1.6	6.3	-0.4	2.1	-2.3	3.0	-21.7	21.4	5.8	0.4	-7.9	13.8	4.0	4.4
1970	-1.1	4.5	-0.3	5.4	-1.2	2.0	-11.9	14.3	1.0	-4.8	--	1.2	0.0	-2.7
1974-75	-3.2	6.2	-1.9	5.1	-2.8	3.7	-29.6	28.2	3.8	-0.2	-22.1	26.5	4.6	2.1
1980	-2.2	4.4	-2.4	3.0	-1.3	2.0	-19.9	22.5	1.7	-0.4	-13.9	8.8	-1.1	-0.2
1981-82	-2.7	5.6	-0.8	3.6	-3.1	3.9	-22.5	34.0	-7.6	-1.3	-3.9	24.6	2.1	5.2
1990-91	-1.4	2.6	-1.1	2.1	-1.5	0.4	-14.8	10.9	6.0	10.3	-4.3	7.7	1.4	0.2
2001	-0.3	1.6	--	1.5	-2.0	1.4	-14.2	4.7	-1.3	-9.4	-4.7	9.7	1.5	5.3
2008-09F	-3.8	2.7	-1.9	1.8	-5.2	1.9	-35.7	15.1	-15.0	9.0	-20.8	10.2	3.4	1.8

*"P-T" is the peak-to-trough decline, "4Q After" is cumulative growth 4 quarters after the trough; **recessions as defined by the National Bureau of Economic Research, for those indicators with no discernible business cycle, P-T dates are defined by the NBER recession; Source: BEA, NBER; Forecast by TD Economics as at September 2009

CANADA

Recession**	GDP		Consumption		Employment		Investment		Exports		Imports		Government	
	P-T*	4Q After*	P-T	4Q After	P-T	4Q After	P-T	4Q After	P-T	4Q After	P-T	4Q After	P-T	4Q After
1974-75	-0.2	4.9	-1.3	7.0	--	--	-5.1	9.8	-6.7	3.4	-5.5	9.7	0.7	4.0
1980	-0.3	3.9	-0.5	2.5	-0.5	4.1	-3.5	15.9	-3.6	3.2	-8.4	7.2	2.9	1.1
1981-82	-4.9	6.2	-3.6	4.9	-5.4	3.7	-20.6	6.7	-7.9	19.6	-24.2	29.5	3.9	1.1
1990-91	-3.4	0.8	-3.8	0.7	-3.5	1.1	-21.0	8.4	-1.1	8.7	-3.7	8.9	2.7	2.2
2008-09F	-3.3	2.9	-1.1	2.5	-2.4	1.1	-15.6	4.6	-22.0	8.0	-20.1	11.8	2.0	2.4

*"P-T" is the peak-to-trough decline, "4Q After" is cumulative growth 4 quarters after the trough; **recessions as defined the technical definition of recession, for those indicators with no discernible business cycle, P-T dates are defined by the technical recession; Source: Statistics Canada; Forecast by TD Economics as at September 2009

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