

## US and Canadian Credit Markets

### Summary:

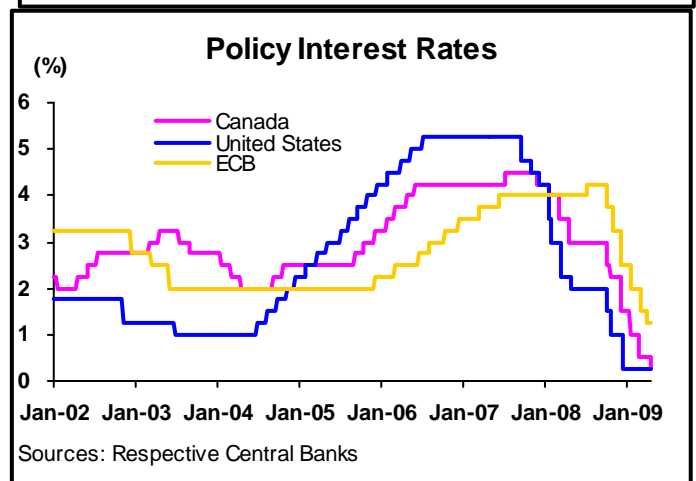
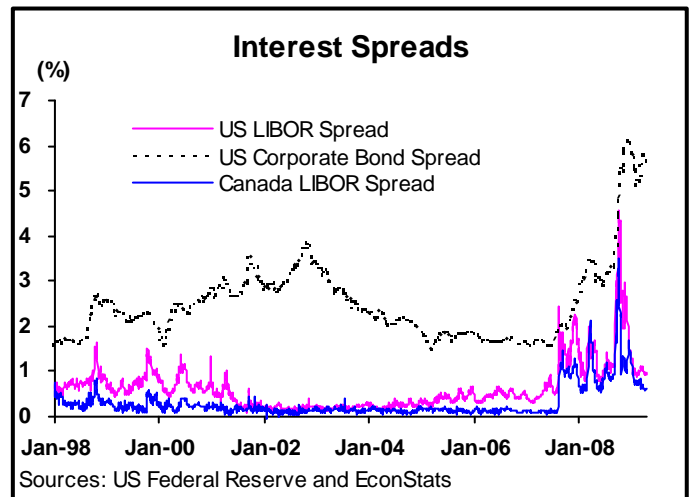
The global financial crisis has caused a severe credit crunch in the US and Canada. Banks have tightened their lending practices, as the fears of default intensify; households are deleveraging, as the economic outlook continues deteriorating and net worth declines. Policy makers are taking extraordinary actions, attempting to unclog the flow of credit. Recent evidence indicates that these measures are easing credit conditions to some extent, but it will take time before the full effects kick in and the credit market returns to normal. Nonetheless, the Canadian financial sector has proven to be relatively well positioned to weather the storm; Canadian businesses and households still have better access to credit compared to their neighbours to the south.

- Canadian financial companies have fared better during the crisis largely due to their more conservative business models and the more prudent regulatory environment in Canada.
- Despite the sharp reduction in policy rates, borrowing cost remains high for businesses and consumers.
- The availability of credit has declined in both the nonfinancial business sector and the household sector, but the decline is much sharper in the US than in Canada.

### Global Financial Crisis

The global financial crisis entered a new phase in September 2008 after the collapse of the US investment bank Lehman Brothers. Equity markets experienced sharp declines as investor confidence eroded, economic fundamentals deteriorated rapidly, and credit spreads widened to all time highs. The interest spread between the 3-month LIBOR, the rate at which banks borrow funds from each other, and the T-bill jumped to almost 5% in the US and 3.5% in Canada in October, as interbank lending activity virtually seized up because of banks' concerns over each other's financial health. In the corporate bond market, the spread between the lowest investment-grade (Moody Baa) US corporate bond and the 10 year US Treasury note also jumped to a record high of 6.2% as investors became more risk averse.

In response to the most severe financial crisis since the Great Depression, central banks and governments around the world have taken unprecedented actions to restore market confidence. Major central banks have aggressively cut policy rates to record low levels and have deployed unconventional measures such as quantitative and credit easing to purchase assets directly from financial institutions, attempting to



## US and Canadian Credit Markets

remove the toxic assets off the banks' balance sheets. In addition, they have injected an enormous amount of liquidity into the system and have provided insurance on loans.

With all the rescue measures in place, credit conditions have shown signs of improvement in recent months. Noticeably, interest spreads have eased. The 3-month LIBOR spread has dropped to about 1.0% in the US and 0.6% in Canada; however, they remain high compared to the pre-crisis 10-year averages of 0.5% in the US and 0.2% in Canada. The improvement in the corporate bond market is less pronounced. The spread still hovered around 5.5% in the US, well above the ten-year (1998-2007) average of 2.3%.

### Canadian Financial System in Better Position

The Canadian financial system is not immune to this financial tsunami, as indicated by the ABCP (Asset-Backed Commercial Paper) problem occurred in the early stage of the crisis and the C\$20 billion worth of assets written down by major Canadian banks (compared to a total potential writedowns of US\$2.7 trillion in the US projected by the IMF). However, the Canadian financial sector has proven to be more resilient than its international counterparts. In its annual Global Competitiveness Report published in October 2008, the World Economic Forum crowned Canada with the world's soundest financial system, up from the 2<sup>nd</sup> place last year. Meanwhile, the hard hit nations like the US and the UK were ranked 40 and 44, respectively, among the 134 nations and regions. Furthermore, Canada still has not experienced any financial institution failure since the crisis started, in contrast to the 54 bank failures (25 in 2008 and 29 so far in 2009) reported in the US; and the Canadian government still has not bailed out any financial institution.

Canadian financial companies have fared better during this crisis, largely because of their better balance sheets, more conservative business practices and the more prudent regulatory environment. First of all, Canadian banks were well capitalized during the early stage of the credit crunch. According to TD Bank, the median Tier 1 capital ratio, which is defined as a bank's core equity capital (mainly common stocks plus retained earnings) divided by its total risk-weighted assets, of the Canadian large cap banks was 9.6% as of December 2007. This was higher than the reported 7.6-8.5% for US banks. However, it should be noted that after a painful process of deleveraging and a series of capital injections and dividend cuts, the capital ratios of US banks have improved significantly. The latest data from the US Federal Deposit Insurance Corporation showed that the average Tier 1 capital ratio was about 9.8% for commercial banks and 12.1% for savings institutions as of December 2008. Meanwhile, the Tier 1 capital ratio averaged 10.0% for the five major Canadian banks<sup>1</sup> as of January 31, 2009, but is expected to rise further given the fact that these banks have boosted preferred shares/notes issuance over the past two months.

Pre-Crisis Tier 1 Capital Ratios, December 2007	
Canadian Large Cap Banks	9.6%
US Money Centre Banks	8.4%
US Super Regional Banks/Thriffs	8.0%
US Large Cap Regional Banks/Thriffs	7.6%
US Mid Cap Regional Banks/Thriffs	8.5%
Source: TD Newcrest	

Secondly, Canadian financial institutions have much less exposure to the subprime mortgage market and more conservative lending practices. Subprime mortgages in Canada have never exceeded 5-6% of the mortgage market, compared to over 20% in the US. Furthermore, the credit quality in the Canadian subprime market is closer to the US near prime market and Canada has never introduced the problematic reset adjustable-rate mortgages that have been popular in the US. More importantly, unlike the US, the majority of mortgages in Canada were held on bank's balance sheets, instead of in off-balance-sheet entities like SIVs (Structured Investment Vehicles). This further limited Canadian banks' risk appetite and increased their need for better risk management. According to the Bank of Montreal, only 23% of Canadian mortgage loans were securitized in 2007, mostly through the Canada Mortgage and Housing Corporation, compared to 51% in the US.

<sup>1</sup> Scotiabank (9.5%), CIBC (9.8%), TD (10.1%), BMO (10.2%) and RBC (10.6%).

## US and Canadian Credit Markets

Last but not least, the Canadian financial sector is subject to more prudent regulation. For instance, the Office of the Superintendent of Financial Institutions, the financial regulator in Canada, requires banks to have a minimum Tier 1 capital ratio of 7%, which is higher than the 4% requirement in the US. In addition, large investment dealers are bank-owned in Canada. Therefore, they are not as dependent on wholesale funding as dealers elsewhere in the world, and are also subject to more restrictive regulations. As a matter of fact, some have argued that the lack of regulation in the US investment banking sector has partially contributed to the current financial crisis, resulting the end of an era on the Wall Street – the five largest U.S. investment firms have either been acquired by a larger commercial bank (Bear Stearns and Merrill Lynch), or gone bankrupt (Lehman Brothers), or scrapped their business models and become bank holding companies (Goldman Sachs and Morgan Stanley).

### Access to Credit

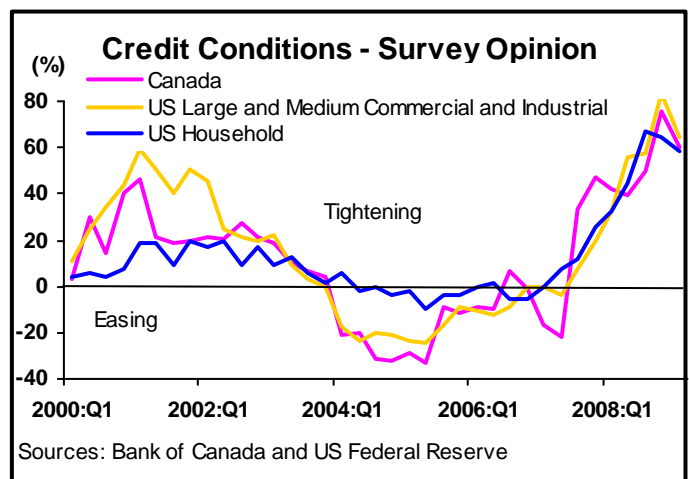
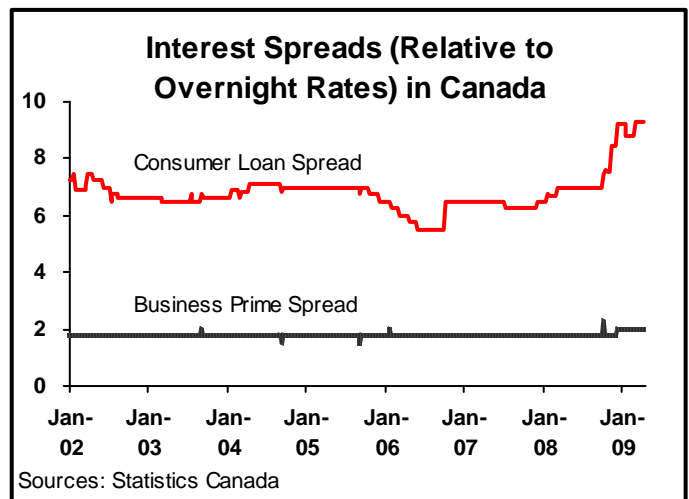
As credit conditions tightened, access to credit has become more restricted for both the business and household sectors, which is partially reflected in the higher borrowing costs. For instance, despite the aggressive interest rate cuts by the Bank of Canada, major Canadian banks did not fully pass along these benefits to their borrowers. The spread between the business prime rate and the Bank of Canada's overnight rate virtually stayed flat at 175 basis points over the past few years, but has risen to 200 basis points since December 2008. Meanwhile, the average interest premium on consumer loans over the overnight rate has increased from 6.25% in December 2007 to the current level of 9.30%. Furthermore, recent Surveys of Senior Loan Officers suggest that a record high net percentage of US and Canadian loan officers have indicated tightening their lending practices to their business and consumer clients, even though the potential profitability of their loans is likely to rise as the banks pay less for what they are borrowing but charge more for what they are lending.

The following two sections will examine to what extent the availability of credit has declined in both the nonfinancial business sector and the household sector in the US and Canada.

### Nonfinancial Business Sector

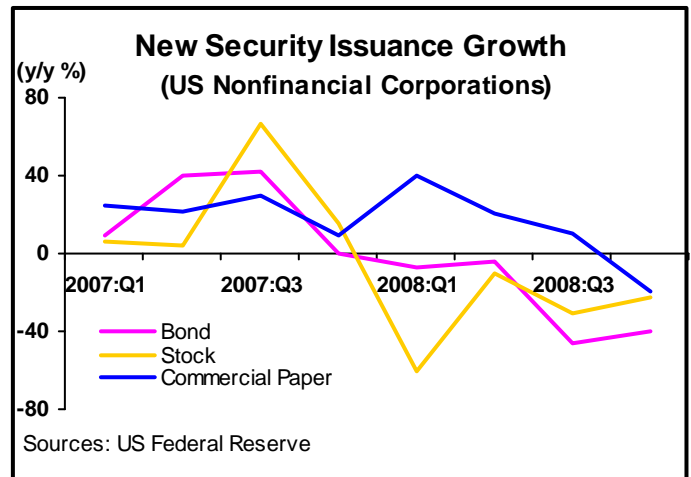
Overall, nonfinancial corporations can raise funds through two major venues: market-based and non-market-based financing. In market-based financing, firms raise capital by issuing stocks, bonds or commercial paper. In non-market-based financing, firms can borrow money directly from banks (bank loans) or other organizations such as savings institutions and governments (other loans); they can also use their properties as collateral to obtain mortgages or get trade credit from their suppliers.

Declining risk appetites, combined with depressed equity prices, have limited nonfinancial borrowers' ability to obtain market-based financing both in the US and Canada. In the last quarter of 2008, total bond issuance by the nonfinancial corporations dropped 40% year-over-year to US\$67 billion in the US (**Appendix 1**), reflecting

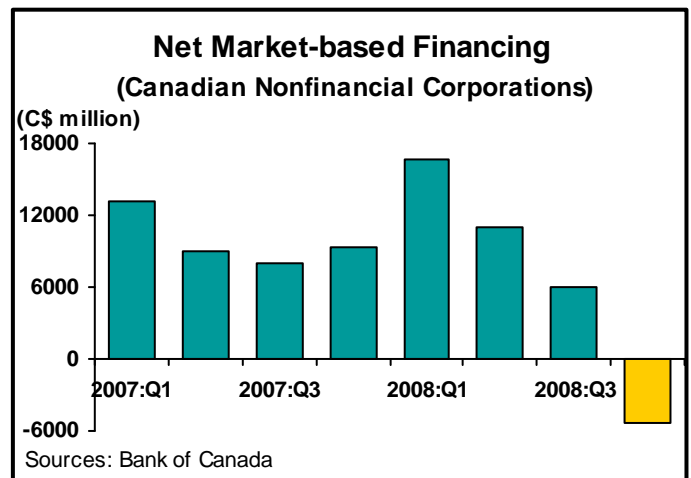


## US and Canadian Credit Markets

the dramatic widening in corporate bond spreads that made bond financing more expensive. Stock issuance also declined 22% compared to the same period in 2007, while commercial paper issuance decreased 20%. In Canada, total net market-based financing (new issuance minus repayment) contracted by C\$5.3 billion in the fourth quarter of 2008 (**Appendix 2**). In particular, total net bond issuance shrank by C\$3.1 billion, the largest contraction ever on record; net equity issuance nearly collapsed, falling 97.5% from the same period in 2007 to a total of C\$213 million, the lowest level since 1982; and the commercial paper market shrank by C\$2.4 billion, its third consecutive quarterly contraction in 2008.



The situation in the non-market-based financing markets, however, was quite different between the US and Canada. In the fourth quarter of 2008, the net bank loans obtained by the US nonfinancial corporations almost halved from the previous quarter (**Appendix 3**) and dropped 33% from the same period of the previous year. In contrast, Canadian banks actually expanded their credit significantly to their business clients, which may once again indicate that the credit conditions in Canada were better than the US. During the quarter, nonfinancial corporations in Canada secured C\$11.9 billion more bank loans (**Appendix 4**), the largest quarterly expansion ever and up 146% from the previous quarter. On an annual basis, Canadian nonfinancial corporations also reported a record inflow of C\$22.2 billion from bank loans in 2008.



Furthermore, the nonfinancial sector in Canada was still able to expand their borrowing by 8% in 2008 through commercial mortgages, compared to a 64% drop reported in the US. Suppliers were also more willing to extend their credit to Canadian companies relative to their US counterparts. In 2008, trade credit fell 11% in Canada, much lower than the 43% decline experienced in the US. Nonetheless, total non-market-based financing declined both in the US and Canada in 2008. It slid 73% in the US, largely driven by the outright contraction in other loans and the decline in commercial mortgages; it dropped 47% in Canada, mainly due to the C\$17 billion contractions in the other liabilities category.

### Household Sector

There are two major sources of financing for the household sector, consumer credit and residential mortgages. Consumer credit includes credit cards, lines of credit, car loans and etc. Residential mortgages are loans secured by properties such as houses and condominiums. They also include loans taken out under the home equity lines of credit.

Total household net borrowing has plummeted in the US as both the demand and supply of credit shrunk. This reflects the facts that the US economy has been in a recession and has lost 5.1 million jobs since December 2007; that the US housing market continues its deep correction; and that the US financial institutions are more

## US and Canadian Credit Markets

reluctant to lend as they go through their own deleveraging process. In the second quarter of 2008, home mortgage loans contracted for the first time since the US Federal Reserve started collecting this data in 1946 (**Appendix 5**). Since then, the contraction has deepened and total home mortgage loans shrunk US\$46 billion in 2008. Consumer credit also registered its first contraction since the 1992 recession in the fourth quarter of 2008. On an annual basis, net consumer credit borrowing was down 67% in 2008, while the residential mortgage market shrank by US\$46 billion. Overall, US household reduced their debt by US\$1.9 billion in 2008.

The picture for the household credit in Canada is much better, with credit still growing at robust rates. For example, in December 2008, total household credit increased 9.8% from the previous year. Growth, however, has been moderating in recent months as economic conditions deteriorated. With 354,300 Canadians losing their jobs since September and a decline of almost 8% in net worth in the second half of 2008, households scaled back spending. In the fourth quarter of 2008, personal consumption expenditures contracted by 1.3% from the previous quarter, contributing to the moderation in consumer credit demand – total consumer credit dropped 46% to C\$5 billion on a quarter-over-quarter basis and was down 22% on a year-over-year basis (**Appendix 6**).

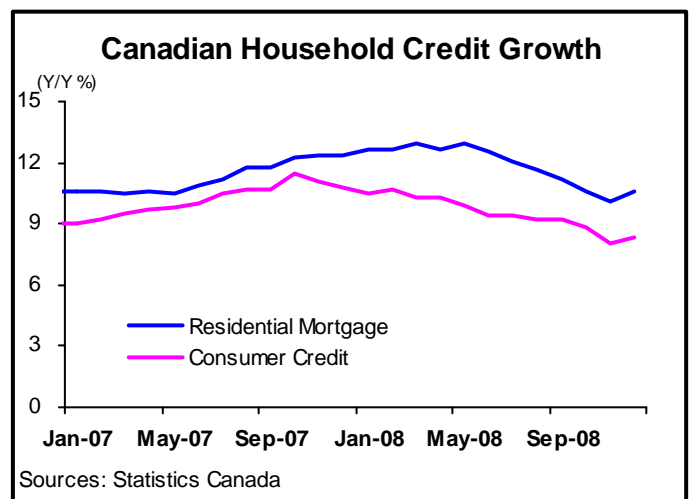
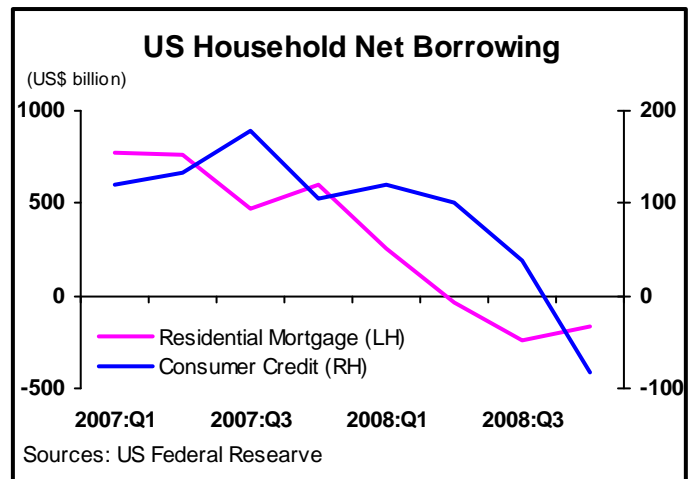
Residential mortgage borrowing has also been slowing due to the ongoing correction in the Canadian housing market. In 2008, housing starts dropped almost 8%, the largest decline since 1995. On the resale market, total sales were down 33% year-over-year during the last three months of 2008, while the average resale price has fallen 10%. As a result, total net mortgage borrowing declined to about C\$16 billion in the fourth quarter of 2008, compared to C\$20 billion in the previous quarter and C\$19 billion in the fourth quarter of 2007. Overall, Canadian households still have better access to credit than their American counterparts. Total household net borrowing reached C\$103 billion (**Appendix 6**) in 2008, down from the record high of C\$115 billion in 2007, but still was the second highest level ever.

### Conclusion:

The global financial system is experiencing its worst crisis since the 1930s. While the Canadian financial sector has fared better than its international counterparts, it is not immune to this crisis, especially when our biggest trade partner, the US, was at the epicentre of this tsunami. With both economies contracting and losing thousands of jobs, the demand for credit is expected to continue diminishing in the near future in both the business and household sectors. Meanwhile, lenders may still act cautiously in their lending practices as default risk remains high. However, with all the rescue measures taken by governments so far and more regulations to come, the market will eventually regain its confidence in the financial system and credit will flow normally again.

Prepared by Economics and Statistics.

For further information contact Ronggui Liu (780.427.8716) or Mary MacGregor (780.427.8790)



## US and Canadian Credit Markets

Appendix 1: US Nonfinancial Corporations New Securities Issuance ( US\$ millions)								
	Bond Issuance	Y/Y %	Stock Issuance	Y/Y %	Commercial Paper Issuance	Y/Y %	Total Net Financing	Y/Y %
2006-Q1	87,354	73%	16,790	28%	340,407	11%	444,551	20%
2006-Q2	88,761	69%	14,650	55%	414,887	27%	518,298	34%
2006-Q3	56,064	-5%	7,729	-57%	415,844	23%	479,637	16%
2006-Q4	111,826	108%	16,859	19%	437,250	33%	565,935	42%
2007-Q1	95,750	10%	17,768	6%	424,993	25%	538,511	21%
2007-Q2	124,692	40%	15,324	5%	505,646	22%	645,662	25%
2007-Q3	79,693	42%	12,912	67%	537,485	29%	630,090	31%
2007-Q4	111,587	0%	19,438	15%	476,133	9%	607,158	7%
2008-Q1	88,432	-8%	6,929	-61%	594,265	40%	689,626	28%
2008-Q2	119,803	-4%	13,789	-10%	607,541	20%	741,133	15%
2008-Q3	43,253	-46%	8,955	-31%	594,444	11%	646,652	3%
2008-Q4	66,942	-40%	15,071	-22%	381,180	-20%	463,193	-24%
Annual Figures								
2001	459,560		77,577		3,166,459		3,703,596	
2002	282,484	-39%	62,115	-20%	2,231,816	-30%	2,576,415	-30%
2003	362,340	28%	44,416	-28%	4,570,090	105%	4,976,846	93%
2004	259,968	-28%	64,345	45%	1,367,856	-70%	1,692,169	-66%
2005	210,825	-19%	54,713	-15%	3,888,564	184%	4,154,102	145%
2006	338,777	61%	56,029	2%	1,608,388	-59%	2,003,194	-52%
2007	404,819	19%	65,440	17%	2,007,931	25%	2,478,190	24%
2008	318,429	-21%	44,746	-32%	2,168,993	8%	2,532,168	2%

Source: US Federal Reserve

Appendix 2: Canadian Nonfinancial Corporations Net Market-based Financing ( C\$ millions)				
	Bond Issuance	Stock Issuance	Commercial Paper Issuance	Total Financing
2006-Q1	1,830	6,301	5,486	13,617
2006-Q2	-683	1,786	2,452	3,555
2006-Q3	2,690	1,532	1,840	6,062
2006-Q4	9,335	6,053	5,526	20,914
2007-Q1	5,311	5,217	2,591	13,119
2007-Q2	1,453	8,605	-1,048	9,010
2007-Q3	3,448	1,179	3,309	7,936
2007-Q4	1,930	8,491	-1,114	9,307
2008-Q1	1,909	6,846	7,982	16,737
2008-Q2	6,913	5,372	-1,275	11,010
2008-Q3	5,065	1,653	-799	5,919
2008-Q4	-3,116	213	-2,384	-5,287
Annual Figures				
2001	42,844	26,248	-7,397	61,695
2002	8,043	19,948	-4,580	23,411
2003	20,034	30,733	-12,894	37,873
2004	19,978	22,542	2,654	45,174
2005	7,297	20,167	3,895	31,359
2006	13,172	15,672	15,304	44,148
2007	12,142	23,492	3,738	39,372
2008	10,771	14,084	3,524	28,379

Source: Bank of Canada

## US and Canadian Credit Markets

Appendix 3: US Nonfinancial Corporations						
Net Non-market-based Financing ( US\$ millions)						
	Bank Loans	Other Loans	Mortgages	Trade Accounts	Others	Total Net Financing
2006-Q1	10,539	17,002	25,171	9,337	1,736	63,785
2006-Q2	-9,599	55,186	21,972	52,118	26,373	146,050
2006-Q3	7,870	-12,671	19,801	16,346	60,880	92,225
2006-Q4	8,143	52,980	26,786	35,806	-31,930	91,785
2007-Q1	12,459	47,968	27,533	34,710	-58,877	63,793
2007-Q2	12,495	68,099	35,468	34,338	-94,788	55,611
2007-Q3	39,877	80,190	26,213	30,057	59,493	235,830
2007-Q4	33,486	64,001	29,781	87,082	-129,718	84,632
2008-Q1	23,864	95	15,685	54,198	-30,058	63,783
2008-Q2	15,153	10,940	15,544	99,284	-121,965	18,955
2008-Q3	22,285	-14,296	-1,180	-72,712	22,996	-42,907
2008-Q4	11,800	-8,799	12,247	25,737	37,321	78,305
Annual Figures						
2001	-108,964	5,742	52,793	-103,731	103,009	-51,151
2002	-108,202	21,938	30,630	19,721	58,840	22,927
2003	-87,222	6,849	79,400	-54,732	-106,360	-162,065
2004	-1,150	55,081	54,143	97,256	173,986	379,315
2005	-31,907	105,797	202,262	199,446	258,982	734,580
2006	16,953	112,496	93,729	113,607	57,060	393,845
2007	98,317	260,258	118,995	186,187	-223,890	439,867
2008	73,102	-12,062	42,295	106,507	-91,706	118,137

Source: US Federal Reserve

## US and Canadian Credit Markets

Appendix 4: Canadian Nonfinancial Corporations						
Net Non-market-based Financing ( US\$ millions)						
	Bank Loans	Other Loans	Mortgages	Trade Accounts	Others	Total Net Financing
2006-Q1	2,406	1,285	2,759	4,518	-6,920	4,048
2006-Q2	4,217	1,544	1,871	1,567	-6,315	2,884
2006-Q3	-541	-459	2,470	-443	3,251	4,278
2006-Q4	577	-1,557	4,856	4,296	-4,520	3,652
2007-Q1	6,053	596	4,399	6,482	3,246	20,776
2007-Q2	3,683	-418	3,655	933	-5,043	2,810
2007-Q3	3,814	-509	3,663	5,299	4,759	17,026
2007-Q4	6,033	-950	5,580	902	4,160	15,725
2008-Q1	4,622	-3,886	4,347	2,231	-9,515	-2,201
2008-Q2	816	-917	4,801	5,315	-3,535	6,480
2008-Q3	4,827	1,723	4,298	2,007	-1,687	11,168
2008-Q4	11,894	-1,896	5,232	2,473	-3,179	14,524
Annual Figures						
2001	-10,508	-2,607	4,634	5,738	116	-2,627
2002	2,535	-277	4,915	6,441	-3,286	10,328
2003	1,206	-2,854	5,272	-250	-2,466	908
2004	12,153	-3,771	7,542	5,769	842	22,535
2005	4,319	2,537	11,571	11,842	-108	30,161
2006	6,659	813	11,956	9,938	-14,504	14,862
2007	19,583	-1,281	17,297	13,616	7,122	56,337
2008	22,159	-4,976	18,678	12,026	-17,916	29,971

Source: Bank of Canada

## US and Canadian Credit Markets

**Appendix 5: US Household Net Borrowing ( US\$ millions)**  
(Quarterly figures are seasonally adjusted annual rates)

	Home Mortgages	Consumer Credit	Total Net Borrowing
2006-Q1	1,184,000	65,300	1,249,300
2006-Q2	1,143,300	125,600	1,268,900
2006-Q3	869,300	110,400	979,700
2006-Q4	659,700	116,300	776,000
2007-Q1	769,100	119,700	888,800
2007-Q2	763,500	132,100	895,600
2007-Q3	472,700	178,400	651,100
2007-Q4	600,800	104,300	705,100
2008-Q1	251,700	120,800	372,500
2008-Q2	-32,400	101,000	68,600
2008-Q3	-241,300	38,400	-202,900
2008-Q4	-163,000	-83,000	-246,000
Annual Figures			
2001	506,900	150,700	657,600
2002	706,400	107,900	814,300
2003	859,700	104,400	964,100
2004	937,800	115,000	1,052,800
2005	1,040,700	94,500	1,135,200
2006	964,100	104,400	1,068,500
2007	651,500	133,600	785,100
2008	-46,200	44,300	-1,900

Source: US Federal Reserve

**Appendix 6: Canadian Household Net Borrowing ( C\$ millions)**

	Home Mortgages	Consumer Credit	Total Borrowing
2006-Q1	11,438	4,564	16,002
2006-Q2	20,694	9,566	30,260
2006-Q3	19,014	8,839	27,853
2006-Q4	15,973	8,145	24,118
2007-Q1	14,052	5,283	19,335
2007-Q2	22,026	12,068	34,094
2007-Q3	24,327	11,192	35,519
2007-Q4	19,784	6,365	26,149
2008-Q1	13,017	7,020	20,037
2008-Q2	22,724	10,236	32,960
2008-Q3	20,142	9,200	29,342
2008-Q4	15,587	4,984	20,571
Annual Figures			
2001	20,867	14,552	35,419
2002	28,356	17,595	45,951
2003	33,642	20,359	54,001
2004	48,624	26,656	75,280
2005	56,258	26,976	83,234
2006	67,119	31,114	98,233
2007	80,189	34,908	115,097
2008	71,470	31,440	102,910

Source: Bank of Canada