



**Bank  
Financial  
Group**

# TD Economics

## Special Report

March 24, 2009

### U.S. CREDIT FLOWS DURING THE FOURTH QUARTER SHOW STRESS ON HOUSEHOLDS AND FIRMS

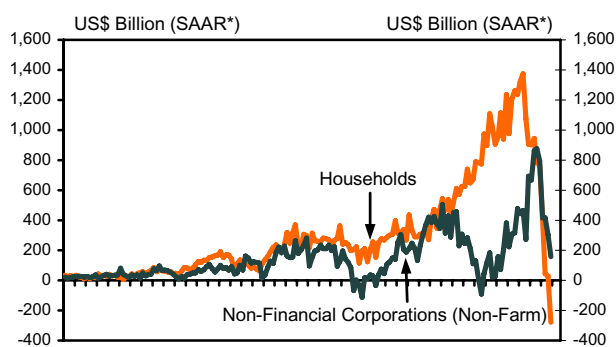
The U.S. Federal Reserve's Flow of Funds Statistics provides a vivid picture of the effects of the credit crunch during the fourth quarter of 2008. Credit market turmoil intensified in the wake of Lehman Brothers' collapse in September. The subsequent quarter witnessed a massive contraction in overall borrowing by households, led by an intensifying decline in residential mortgages. With a sag in profits, firms' access to new funds has diminished considerably overall. Borrowing by non-financial corporations through market instruments has slowed considerably – particularly with the retreat of foreign loans and the collapse of the highly-securitized “shadow banking” system (see text-box). However, there was a significant offset from a rapid pick-up of foreign direct investment (FDI) into the United States.

For non-financial corporations, the newer, non-traditional sources of funds available in recent years have now evapo-

#### HIGHLIGHTS

- **U.S. household credit contracted by US\$76.8 billion in the fourth quarter – its first contraction since 1975 and its largest ever as a share of nominal GDP.**
- **Consumer credit tightened dramatically, and mortgages contracted for the third consecutive quarter, registering a US\$36 billion annual contraction.**
- **Access to non-market debt by U.S. firms has declined, particularly as a result of declining loans by foreigners, slowing of syndicated lending, and deleveraging of the “shadow banking” system.**
- **As foreigners rapidly purchased equity stakes in U.S. firms, foreign direct investment (FDI) expanded by US\$65 billion during the quarter and US\$154 billion during 2008 – its greatest expansion since 1999.**
- **Lending by commercial banks has slowed considerably, and household credit from savings institutions contracted severely – particularly in residential mortgages.**
- **The quarterly statistics show a definite drought of credit for U.S. consumers and much worsened flows for U.S. firms.**

**U.S. BORROWING THROUGH CREDIT INSTRUMENTS**



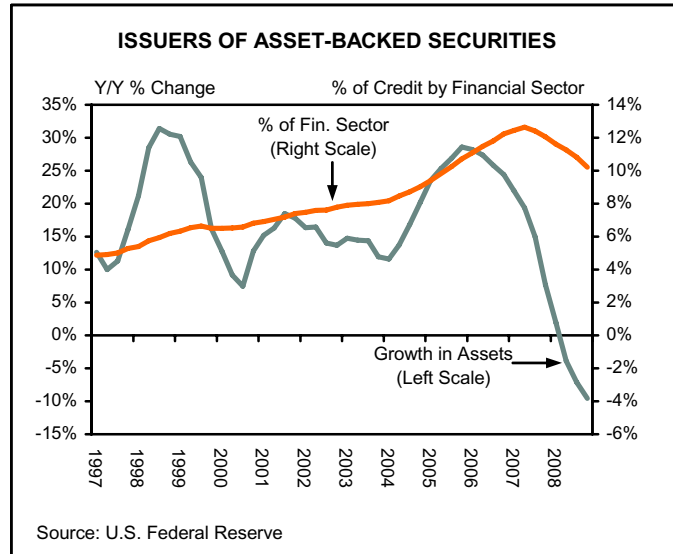
\* Seasonally-Adjusted Annual Rates  
Source: U.S. Federal Reserve

rated, and traditional U.S. credit intermediaries – commercial banks and savings institutions (see text-box) – appear too weakened to fill the gap. Neither do households appear to have adequate access to credit. From quarterly statistics provided by the U.S. Federal Deposit Insurance Corporation (FDIC),<sup>1</sup> U.S. commercial banks dramatically

### An Overview of U.S. Financial Institutions

In the U.S., traditional lending institutions take deposits and make loans. These are broadly divided into commercial banks and savings institutions. Commercial banks are typically federally-chartered and directly regulated by the Federal Reserve Bank of their respective region, but may also be state-chartered. Commercial banks issue demand (or “chequable”) and time (or “savings”) deposits as well as obtain financing from federal funds purchases and security repurchase agreements. They then use these funds to make direct loans to households and firms, as well as to purchase government and municipal securities. The commercial banking sector includes U.S.-chartered commercial banks, branches of foreign banks, bank holding companies and banks in U.S.-affiliated areas (e.g. Virgin Islands or Puerto Rico). Although the lines have blurred considerably, saving institutions are distinguished from commercial bank by their focus on household lending. Mortgages comprise 60% to 70% of savings institutions’ total assets whereas commercial banks have around a 40% share in mortgages and a stronger tilt towards business lending. While commercial banks and savings institutions represented over 50% of U.S. credit in the early 1980s, their share has fallen to under 30% at present.

The other traditional pillars of the financial system, pensions and insurance companies, have also experienced a relative decline in importance. Government-sponsored enterprises (GSEs) have come to play a much larger role in the provision of credit. On the mortgage lending side, GSEs include Fannie Mae, Freddie Mac,

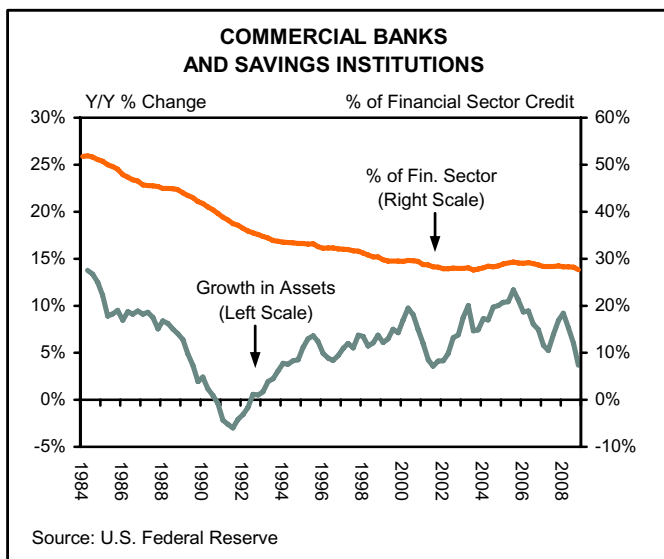


and the 12 Federal Home Loan Banks, but GSEs are also active in agricultural lending and, prior to 1995, Sallie Mae provided student loans as a GSE.

Mutual funds, exchange-traded funds and money market mutual funds have also grown considerably as providers of credit. Although these are often lumped under the “Shadow Banking” designation, we consider them as separate.

Finance companies are non-depository institutions who cover a breadth of loan types, but focus especially on consumer loans and leasing, as well as trade accounts. These include lenders like GMAC and GE Capital. During the last decades, their on-balance sheet assets have remained relatively stable as a share of total credit by the financial sector. However, lending by finance companies sharply contracted in the fourth quarter of 2008. Because these entities have been strong originators of loans for securitization, they are often regarded as major “shadow banking” players. However, their securitized lending is held under contract within a separate book-keeping entity, referred to as a Special Purpose Vehicle (SPV).

The “shadow banking” system refers to non-depository and non-traditional intermediaries engaged in lending to households and businesses. It colloquially refers to broker-dealers, hedge funds, private equity groups, structured investment vehicles and conduits, and non-bank mortgage lenders. In particular, we use this term with reference to issuers of Asset-Backed Securities (ABSs) and securitizers of mortgage pools. Particularly



### An Overview of U.S. Financial Institutions (continued)

during the past decade, these entities became major sources of funds, spurring the “shadow banking” system from under 7% of U.S. credit in 1983 to 28%.<sup>1</sup> These SPVs issue securities backed by pools of mortgages, loans and consumer credit. While often originated from commercial banks, savings institutions or finance companies, securitized ABSs are taken off balance-sheet. Credit extended by ABS issuers grew at an average pace

of 19% annually between 1998 and 2007, but has contracted precipitously since the second quarter of 2008. At its peak in 2007, this sector represented 12.6% of assets held by the U.S. financial sector, having well surpassed the holdings of mutual funds and other institutional players. Mortgage pools were also in rapid ascendance during the past 25 years, averaging 13% annual growth since 1983.

FINANCIAL SECTOR ASSETS IN CREDIT INSTRUMENTS					
Proportion of financial sector credit held at end of year, for selected years					
	1983	1990	2001	2006	2008
Monetary Authority	3.3%	2.4%	2.4%	2.3%	2.5%
<b>Depository Lenders</b>	<b>53.4%</b>	<b>41.4%</b>	<b>30.1%</b>	<b>30.6%</b>	<b>29.5%</b>
Commercial Banks	33.7%	27.9%	23.2%	24.1%	24.3%
Savings Institutions	18.2%	11.8%	5.0%	4.6%	3.4%
Credit Unions	1.4%	1.7%	1.9%	1.9%	1.8%
<b>Other Non-Depository Inst.</b>	<b>33.4%</b>	<b>33.1%</b>	<b>31.9%</b>	<b>28.9%</b>	<b>26.7%</b>
Insurers	13.5%	14.9%	11.5%	10.9%	9.6%
Pension & Gov't Retirement Funds	9.7%	8.8%	5.9%	4.8%	4.8%
GSEs	4.9%	3.8%	9.3%	7.8%	7.7%
Finance Companies	5.3%	5.7%	5.2%	5.4%	4.6%
<b>Funds and Trusts</b>	<b>3.3%</b>	<b>7.6%</b>	<b>12.7%</b>	<b>11.3%</b>	<b>13.4%</b>
Money Market Funds	2.5%	3.7%	7.0%	4.7%	6.9%
Mutual & Ex.-Traded Funds	0.7%	3.6%	5.5%	5.9%	6.0%
REITS	0.1%	0.2%	0.2%	0.8%	0.5%
<b>"Shadow Banking" System</b>	<b>6.7%</b>	<b>15.5%</b>	<b>22.9%</b>	<b>26.9%</b>	<b>27.9%</b>
Securities Brokers	0.5%	1.1%	1.4%	1.8%	1.8%
Closed Funds	0.1%	0.4%	0.5%	0.5%	0.3%
Mortgage Pools	5.1%	10.3%	12.6%	11.5%	12.8%
ABS Issuers	0.1%	2.5%	7.4%	12.2%	10.2%
Funding Companies	1.0%	1.3%	1.0%	0.9%	2.7%

Source: U.S. Federal Reserve

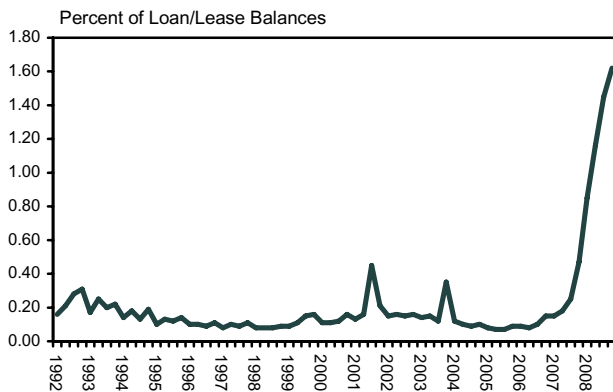
slowed their growth in lending to households and firms in the fourth quarter. Meanwhile, outstanding credit from savings institutions to households contracted by a whopping 24% year-over-year.

#### U.S. Households' Borrowing Shrinks

The contraction in U.S. household borrowing is both dramatic and nearly unprecedented. Perhaps most importantly, household mortgages contracted for the past three quarters and have now experienced an annual contraction, falling by US\$ 36 billion during 2008. U.S. household mortgages had never contracted on a quarterly basis prior to the second quarter of 2008 and this represents their first ever annual contraction. This tightening highlights the tur-

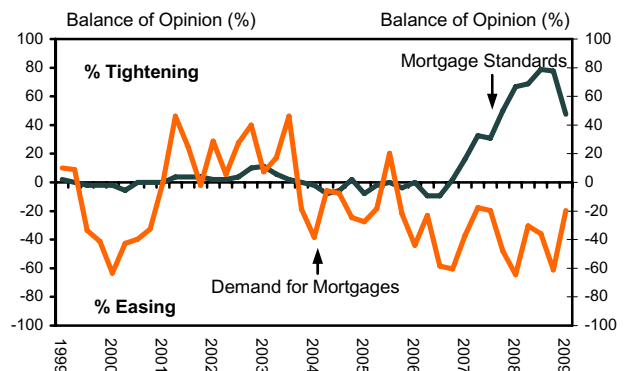
moil in U.S. housing markets. The nation-wide housing downturn would certainly point to a halt in mortgage credit growth. During 2008, existing home sales fell 14%, housing starts plummeted 40% and home prices plunged 15%.<sup>3</sup> Nonetheless, the contraction in mortgages suggests that more than the decline in demand was at work. It seems clear that there was a tightening in supply, reflecting rising risks associated with a surge in mortgage delinquencies and foreclosures, and due to the deterioration in financial conditions of many mortgage lenders. The Federal Reserve's Senior Loan Officer Survey provides a snapshot of the lending conditions in the United States. It exhibits the tightening standards for mortgages by lenders and waning demand from borrowers during 2008. Moreover,

### U.S. COMMERCIAL BANKS "CHARGE OFF" RATES FOR RESIDENTIAL MORTGAGES



Source: U.S. Federal Reserve

### SENIOR LOAN OFFICER SURVEY: MORTGAGE LENDING



Source: U.S. Federal Reserve / Haver Analytics

Note: Questions on mortgages were disaggregated by type after Q1/2007 and series represents weighted aggregate, compiled by Haver Analytics

### NEW BORROWING BY U.S. HOUSEHOLDS

	Consumer Credit	Trade Payables	Bank Loans	Other Loans	Total Credit	Mortgages	Total New Borrowing
<b>Quarterly Flows (US\$ Millions)</b>							
Q4/2004	55,984	4,112	3,537	32	63,665	252,532	316,197
Q4/2005	37,387	3,259	11,396	446	52,488	253,691	306,179
Q4/2006	51,294	3,498	13,994	160	68,946	148,567	217,513
Q4/2007	49,733	3,754	4,176	56	57,719	125,930	183,649
Q4/2008	3,853	4,025	-15,239	1,150	-6,211	-70,615	-76,826
<b>Annual Flows (US\$ Millions)</b>							
2004	115,042	16,451	-17,375	309	114,427	952,791	1,067,218
2005	94,452	13,037	12,834	40	120,363	1,047,308	1,167,671
2006	104,396	13,628	47,995	4,755	170,774	990,267	1,161,041
2007	133,637	14,625	11,405	3,198	162,865	677,898	840,763
2008	44,298	15,691	16,652	4,881	81,522	-36,020	45,502

Source: U.S. Federal Reserve

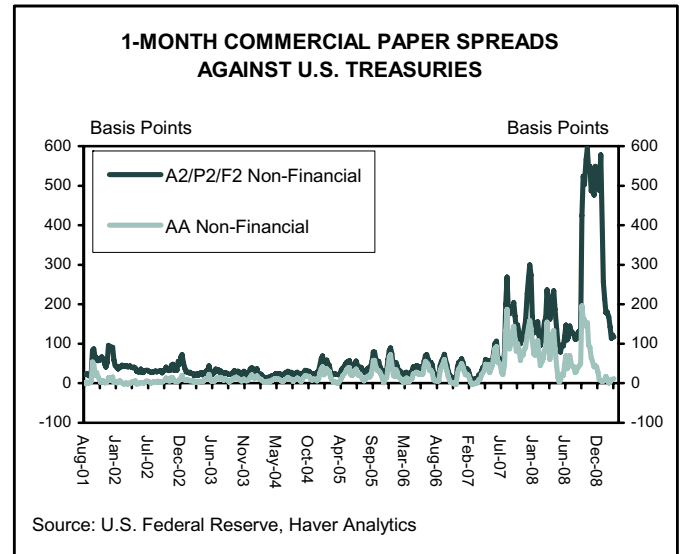
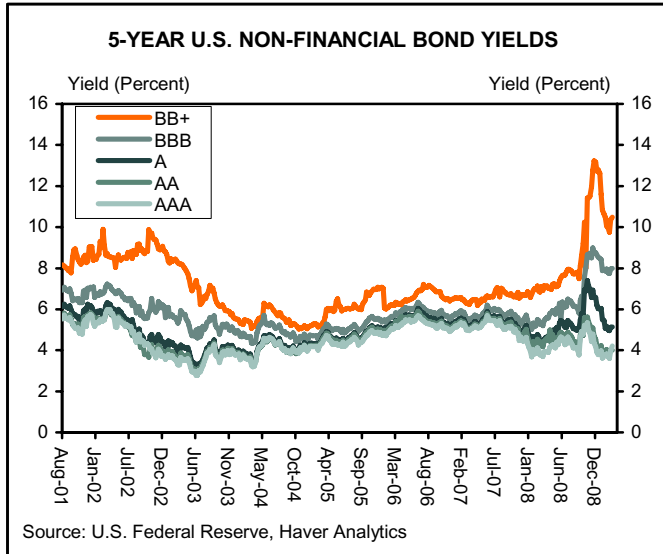
lenders have witnessed a sharp increase in mortgage losses, as reflected in jumps in their "charge-off rates," which represent the value of loans removed from the bank books and charged against loss reserves. This underscores the need for stabilization in housing markets before the U.S. credit system can regain normalcy.

As well, the nominal annual flow of consumer credit slowed to a pace not witnessed since the early 1990s. This represents a stinging pullback for the American consumer. On an annual basis, household new bank loans have remained remarkably robust. However, the positive annual growth owes to strong lending during earlier quarters, as bank loans contracted substantially in the fourth quarter. Again, this coincided with a reduction in demand for loans, as consumer demand contracted in the quarter. However, as shown by the Federal Reserve's Senior Loan Officer

Survey (SLOS), it is also a reflection of tightened conditions by lenders.

### Reduced New Funds for U.S. Firms

Total new funds for U.S. non-financial corporations (excluding farms) have slowed.<sup>4</sup> Despite the economic and financial turmoil, net profits in 2008 remained above 2007 levels. However, much of this net profit owed to an unusually heightened statistical depreciation – referred to as capital cost allowance (CCA). This was especially pronounced during the fourth quarter. Although we include consumption of fixed capital in this profit measure, net profits excluding CCA fell precipitously in the fourth quarter and annual profits plummeted to a five-year low. Similarly, retained earnings benefited from the surge in CCA, but undistributed profits plummeted, as firms struggled to main-



tain their dividends. Overall, the change in retained earnings provided a slight spur upward for new funds during 2008, but new funds from external sources have fallen below their nominal flow during 2004. Going forward, U.S. profits will suffer and heightened depreciation (consumption of fixed capital) cannot continue to buttress a dearth of internal finances.

Despite the credit crunch, U.S. non-financials have continued to raise funds through financial market instruments – albeit at a reduced pace. Non-financial new commercial paper still expanded during 2008 but at a dampened pace from prior years. Bond issuance was also still positive during 2008, and, although net new issuance waned relative to that during 2006 or 2007, it still registered historically robust flows. In prior years, repurchases of shares by non-financial corporations, and from foreign direct investment (FDI)<sup>5</sup> resulted in an overall contraction of market funds, weakening the overall funds raised by firms. However, reduced repurchases of stock and the relative resilience in bond issuance in 2008 appear to have slowed the decline in market funds.

However, the spreads on industrial corporate bonds and commercial paper rose dramatically during the autumn – particularly for speculative-grade corporations. Although investment grade spreads have narrowed somewhat, medium-term spreads remain nonetheless elevated – especially for speculative-grade bonds. While government yields may be excessively low at present, medium-term corporate yields remain especially high relative to their history – especially in the current low-inflation setting. These par-

ticularly onerous yields during the fourth quarter meant a much higher cost for corporations who finance through new bonds and commercial paper.

The flows of non-market debt have been substantially curtailed. Bank lending has been relatively resilient, but has not filled the vacuum left by the sudden dearth of credit through other channels. Most notably, “other loans,”<sup>6</sup> which comprised 18% of new non-market debt in 2007, contracted in 2008. This is the first annual contraction in “other loans” to non-financial corporations since 1993. U.S. savings institutions and finance companies continued to expand their loans. However, the substantial annual contraction in “other loans” owed to US\$48 billion shrinkage in loans from foreigners and a US\$10.8 billion contraction in lending by issuers of asset-backed securities. The swift deleveraging of the “shadow banking” system has certainly reduced the new flows of credit to businesses on Main Street. Syndicated lending also slowed dramatically, with new syndicated lending at its lowest pace in five years. Finance companies also contracted their outstanding loans by US\$15.4 billion in the fourth quarter, but flows in this category were strong enough during previous quarters for finance company lending to expand by US\$15.2 billion on the year. In contrast, U.S. government loans to non-financial corporations expanded by US\$4.4 billion during the quarter. These include loans to automakers.

The miscellaneous liabilities category represents foreign direct investment (FDI) in the U.S., pension funds payable, and the fourth quarter spike in this category owes



U.S. NON-FINANCIAL CORPORATIONS NEW NET FINANCING			
	Total Financing	Change in Retained Earnings	External Sources
<b>Quarterly Flows (US\$ Millions)</b>			
Q4/2004	279,835	188,244	91,591
Q4/2005	402,319	338,020	64,299
Q4/2006	251,673	198,859	52,814
Q4/2007	259,645	207,307	52,338
Q4/2008	233,880	206,317	27,563
<b>Annual Flows (US\$ Millions)</b>			
2004	1,052,926	850,669	202,257
2005	1,332,246	1,120,058	212,188
2006	1,046,276	966,304	79,972
2007	1,217,086	912,860	304,226
2008	1,164,210	974,328	189,882

**Source: U.S. Federal Reserve**  
Note: Revised from December 23 report (see endnotes 4 and 7)

U.S. NON-FINANCIAL CORPORATIONS NEW EXTERNAL FINANCING			
	Total External Financing	Market Funds	Non-Market Debt
<b>Quarterly Flows (US\$ Millions)</b>			
Q4/2004	91,591	-8,863	100,454
Q4/2005	64,299	-107,095	171,394
Q4/2006	52,814	-102,130	154,944
Q4/2007	52,338	-188,971	241,309
Q4/2008	27,563	-78,552	106,115
<b>Annual Flows (US\$ Millions)</b>			
2004	202,257	-28,543	230,800
2005	212,188	-304,400	516,588
2006	79,972	-359,651	439,623
2007	304,226	-500,875	805,101
2008	189,882	-179,666	369,548

**Source: U.S. Federal Reserve**

U.S. NON-FINANCIAL CORPORATIONS NEW INTERNAL FUNDS								
	Net Profit	Capital Cost Allow. (CCA)	Net Profit (Net of CCA)	Dividends	Change in Retained Earnings	% of Profit Retained	Undist. Profit (RE Net of CCA)	% Undist. Profit (Net CCA)
<b>Quarterly Flows (US\$ Millions)</b>								
Q4/2004	311,439	182,976	128,463	123,195	188,244	60%	5268	4.1%
Q4/2005	342,488	154,206	188,282	4,468	338,020	99%	183814	97.6%
Q4/2006	342,438	155,385	187,053	143,579	198,859	58%	43474	23.2%
Q4/2007	339,898	162,030	177,868	132,591	207,307	61%	45277	25.5%
Q4/2008	329,610	203,281	126,329	123,293	206,317	63%	3036	2.4%
<b>Annual Flows (US\$ Millions)</b>								
2004	1,214,893	744,978	469,915	364,224	850,669	70%	105,691	22.5%
2005	1,301,245	622,197	679,048	181,187	1,120,058	86%	497,861	73.3%
2006	1,438,246	621,076	817,170	471,942	966,304	67%	345,228	42.2%
2007	1,413,715	644,366	769,349	500,855	912,860	65%	268,494	34.9%
2008	1,472,215	811,824	660,391	497,887	974,328	66%	162,504	24.6%

**Source: U.S. Federal Reserve**  
Note: Net Profit and Retained Earnings includes Capital Cost Allowance (CCA) unless otherwise stated since this corresponds to economic returns  
Undistributed Profit is the Change in Retained Earnings less CCA

U.S. NON-FINANCIAL CORPORATIONS NEW MARKET FUNDS				
	Total Market	Share Issuance	Bond Issuance	New Comm. Paper
<b>Quarterly Flows (US\$ Millions)</b>				
Q4/2004	-8,863	-37,425	35,901	-7,339
Q4/2005	-107,095	-101,650	20,977	-26,422
Q4/2006	-102,130	-185,629	81,561	1,938
Q4/2007	-188,971	-273,476	92,107	-7,602
Q4/2008	-78,552	-112,510	48,871	-14,913
<b>Annual Flows (US\$ Millions)</b>				
2004	-28,543	-124,425	80,581	15,301
2005	-304,400	-360,725	64,035	-7,710
2006	-359,651	-602,679	220,581	22,447
2007	-500,875	-831,155	318,984	11,296
2008	-179,666	-395,080	207,602	7,812

**Source: U.S. Federal Reserve**

entirely to accelerating FDI.<sup>7</sup> The FDI component of miscellaneous liabilities picked up significantly in the fourth quarter, evidencing heightened purchases of U.S. enterprises by foreigners. Pension liabilities were virtually unchanged.

### Credit Waning from U.S. Banks and Savings Institutions

Statistics from the FDIC's Quarterly Banking Profile provide some additional insight into trends in credit provided by banks and savings institutions. U.S. commercial banks' lending has slowed dramatically. Credit to households from U.S. savings institutions is experiencing a deep annual contraction.

Growth in household credit from U.S. commercial banks slowed to 4.6% Y/Y during the fourth quarter. In contrast,

U.S. NON-FINANCIAL CORPORATIONS NEW NON-MARKET DEBT						
	Total Non-Market	Bank Loans	Other Loans	Non-Res. Mortgages	Trade Accounts	Misc. Liabilities*
<b>Quarterly Flows (US\$ Millions)</b>						
Q4/2004	100,454	20,544	32,745	15,600	28,843	2,722
Q4/2005	171,394	2,828	36,704	85,184	43,703	2,975
Q4/2006	154,944	8,143	52,980	26,786	35,806	31,229
Q4/2007	241,309	33,486	64,001	29,781	87,082	26,959
Q4/2008	106,115	11,800	-8,799	12,247	25,737	65,130
<b>Annual Flows (US\$ Millions)</b>						
2004	230,800	-1,150	55,080	54,157	97,256	25,457
2005	516,588	-31,907	105,797	202,262	199,446	40,990
2006	439,623	16,953	115,756	93,730	110,348	102,836
2007	805,101	91,817	260,258	118,994	186,187	147,845
2008	369,548	73,102	-12,060	47,268	106,507	154,731

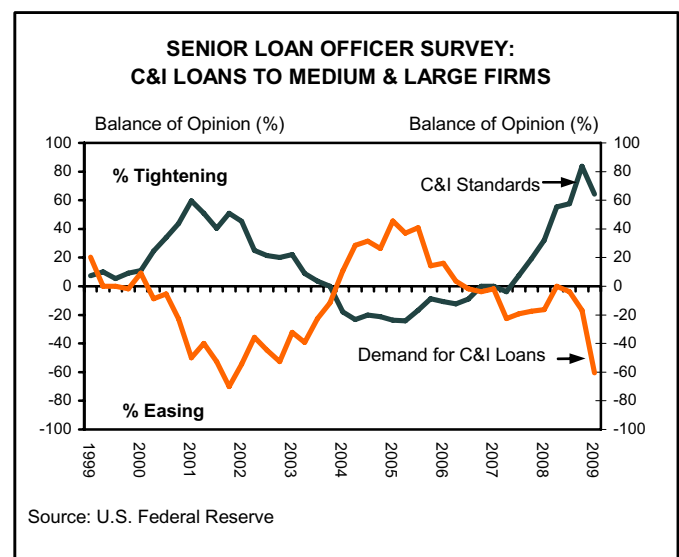
**Source: U.S. Federal Reserve**  
\* Note: Misc. Liabilities here includes FDI and pension contributions but excludes "Other" in Z.1 (see endnote 7)

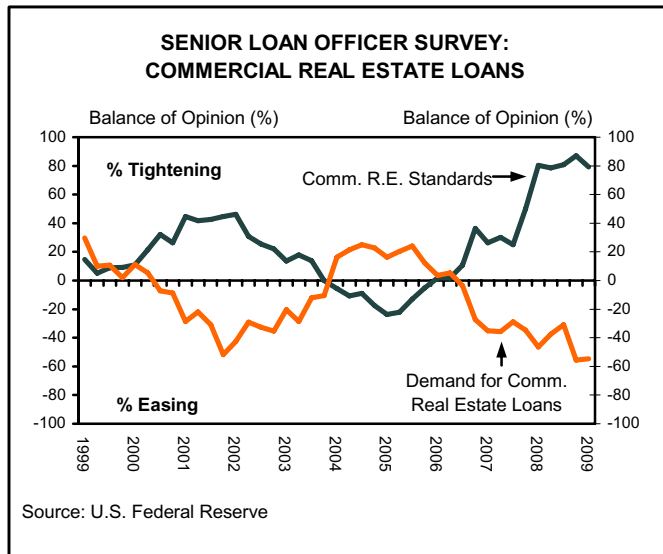
OTHER LOANS								
	Total Other	U.S. Gov't	Foreign Loans	Bankers' Acceptances	Savings Institutions	ABS Issuers	Finance Companies	Syndicated Loans
<b>Quarterly Flows (US\$ Millions)</b>								
2004Q4	32,745	172	9,523	56	93	-1,067	12,882	11,087
2005Q4	36,704	138	-4,549	-256	1,009	-6,563	25,354	21,571
2006Q4	52,980	707	10,939	-231	-155	2,594	6,861	32,265
2007Q4	64,001	-88	26,045	84	1,563	-2,221	13,548	25,071
2008Q4	-8,799	4,428	-2,591	0	3,022	-723	-15,409	2,474
<b>Annual Flows (US\$ Millions)</b>								
2004	55,081	339	6,253	-434	663	1,371	8,825	38,064
2005	105,797	822	28,330	20	1,931	-16,793	24,860	66,627
2006	112,496	1,181	7,363	-3,514	2,994	957	16,986	86,530
2007	260,258	-265	106,682	-82	3,109	-8,208	22,423	136,600
2008	-12,062	4,358	-48,791	-183	3,178	-10,829	15,233	24,974

**Source: U.S. Federal Reserve**  
**Note: Not Seasonally Adjusted**

savings institutions' credit to households contracted by 24% Y/Y. For both types of institutions, residential lending contracted quarter-over-quarter during the fourth quarter. Savings institutions' outstanding residential real estate loans posted a massive annual contraction of 25.6% Y/Y. Owing to strength in revolving home equity loans, U.S. commercial banks expanded their mortgage book by a tepid, but nonetheless positive, 4.8% Y/Y. This should not be regarded as a sign of strength. Rather, it likely represents withdrawals of home equity through previously arranged lines of credit.

U.S. commercial banks' have also continued to grow their commercial and industrial (C&I) loans, but at a much lessened year-over-year pace. In the Federal Reserve Senior Loan Officer (SLOS) Survey, bank lenders reported tightened standards for lending, as well as a decline in de-





mand for credit – as would be expected given the deterioration in U.S. economic conditions. Somewhat surprisingly, loans secured by commercial real estate have continued to grow at steady rates from both commercial banks and savings institutions. This increase has continued despite indications of both waning demand and tightening standards for commercial real estate loans in the SLOS. The pace of U.S. non-residential construction decreased considerably in the fourth quarter. Since C&I loan growth is slowing, the ongoing increases in commercial mortgages likely mean that firms are increasingly using commercial real estate as collateral to secure loans.

### Confirmation of the Credit Crunch's Toll

The Federal Reserve's fourth quarter financial flows show that the U.S. consumer's borrowing has been rapidly checked, and corporations face a drought of funds. Demand for credit has certainly decreased, but contraction has been aggravated by a sharp tightening of supply.

The "shadow banking" system, on which U.S. non-financial corporations had come to depend for much of their non-market debt, was rapidly deleveraging during the fourth quarter of 2008, causing a sharp contraction in firms' externally-sourced funds. As well, foreigners appear to have rapidly fled from direct loans to U.S. firms.

Nonetheless, the contracting credit flows are the symptoms of the disease and not the infection itself. The inevitable unwinding of asset bubbles delivered a severe shock to the global financial system, pummeling consumer demand and investment world-wide. A highly-leveraged "shadow banking" sector had grown to too large a scale,

exposing the credit system to unseen systemic risks. Now, the resultant feverish pull-back in lending makes recovery considerably more difficult, and further heightens systemic risks, protracting the paralysis of the financial system. While financial contagion is now widespread, stemming foreclosures and stabilizing U.S. housing markets are necessary, but not sufficient, conditions for a return to normalcy in

U.S. COMMERCIAL BANKS' BUSINESS CREDIT				
	Comm. & Ind. Loans	Comm. Real Estate	Construction Loans	Total
<b>Outstanding (US\$ Billions)</b>				
2004Q4	908.5	667.1	290.7	1,866.3
2005Q4	1,019.8	737.0	392.4	2,149.2
2006Q4	1,139.1	810.8	498.9	2,448.8
2007Q4	1,369.9	864.6	559.9	2,794.4
2008Q4	1,418.2	955.7	533.9	2,907.8
<b>Quarter-over-Quarter Percentage Change</b>				
2004Q4	2.1%	2.4%	6.0%	2.8%
2005Q4	3.2%	2.1%	7.7%	3.6%
2006Q4	2.0%	3.1%	4.1%	2.8%
2007Q4	4.2%	2.9%	2.2%	3.4%
2008Q4	-0.9%	2.2%	-3.5%	-0.4%
<b>Year-over-Year Percentage Change</b>				
2004Q4	4.4%	10.8%	25.5%	9.5%
2005Q4	12.3%	10.5%	35.0%	15.2%
2006Q4	11.7%	10.0%	27.1%	13.9%
2007Q4	20.3%	6.6%	12.2%	14.1%
2008Q4	3.5%	10.5%	-4.6%	4.1%

Source: U.S. Federal Deposit Insurance Corporation (FDIC)

U.S. SAVINGS INSTITUTIONS' BUSINESS CREDIT				
	Comm. & Ind. Loans	Commercial Real Estate	Construction Loans	Total
<b>Outstanding (US\$ Billions)</b>				
2004Q4	59.8	84.9	46.9	191.6
2005Q4	66.0	87.1	57.1	210.2
2006Q4	75.2	93.5	66.4	235.1
2007Q4	70.4	103.8	69.5	243.7
2008Q4	78.1	110.8	58.3	247.2
<b>Quarter-over-Quarter Percentage Change</b>				
2004Q4	-3.9%	2.2%	3.5%	0.5%
2005Q4	6.1%	2.0%	5.7%	4.3%
2006Q4	5.8%	-1.7%	0.9%	1.3%
2007Q4	-6.5%	4.1%	1.2%	0.0%
2008Q4	8.5%	2.3%	-6.9%	1.8%
<b>Year-over-Year Percentage Change</b>				
2004Q4	15.7%	6.9%	15.2%	11.5%
2005Q4	10.4%	2.6%	21.7%	9.7%
2006Q4	13.9%	7.3%	16.3%	11.8%
2007Q4	-6.4%	11.0%	4.7%	3.7%
2008Q4	10.9%	6.7%	-16.1%	1.4%

Source: U.S. Federal Deposit Insurance Corporation (FDIC)



U.S. credit markets (For a discussion of our five pillars for recovery, see TD Economics' Quarterly Economic Forecast from March 12, 2009). We expect to see ongoing contraction in household credit until housing markets bottom. With our expectation of a 40% annualized contraction in residential construction and a 25% pull-back in business investment during the first quarter of 2009, the deep-

ening recession will continue to wallop demand for credit by households and businesses.

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U.S. COMMERCIAL BANKS' HOUSEHOLD CREDIT							
Credit Cards	Cons. Loans	Total Cons. Credit	Home Equity	Residential Loans	Total Real Estate Loans	Household Credit	
<b>Outstanding (US\$ Billions)</b>							
2004Q4	371.7	467.3	839.0	398.9	1,171.2	1,570.1	2,409.1
2005Q4	354.8	482.1	836.9	431.2	1,328.2	1,759.4	2,596.3
2006Q4	341.0	516.9	857.9	469.8	1,543.6	2,013.4	2,871.3
2007Q4	376.2	583.4	959.6	485.7	1,637.4	2,123.1	3,082.7
2008Q4	405.4	593.8	999.2	589.8	1,634.3	2,224.1	3,223.3
<b>Quarter-over-Quarter Percentage Change</b>							
2004Q4	9.3%	0.2%	4.0%	6.3%	1.7%	2.9%	3.3%
2005Q4	4.7%	-2.1%	0.7%	-1.3%	1.9%	1.1%	1.0%
2006Q4	0.8%	1.6%	1.3%	5.0%	11.2%	9.7%	7.1%
2007Q4	9.5%	1.6%	4.6%	2.9%	4.2%	3.9%	4.1%
2008Q4	7.9%	-4.5%	0.2%	2.3%	-2.0%	-0.9%	-0.6%
<b>Year-over-Year Percentage Change</b>							
2004Q4	17.6%	2.8%	8.9%	40.2%	9.1%	15.6%	13.2%
2005Q4	-4.5%	3.2%	-0.3%	8.1%	13.4%	12.1%	7.8%
2006Q4	-3.9%	7.2%	2.5%	9.0%	16.2%	14.4%	10.6%
2007Q4	10.3%	12.9%	11.9%	3.4%	6.1%	5.4%	7.4%
2008Q4	7.8%	1.8%	4.1%	21.4%	-0.2%	4.8%	4.6%

Source: U.S. Federal Deposit Insurance Corporation (FDIC)

U.S. SAVINGS INSTITUTIONS' HOUSEHOLD CREDIT							
Credit Cards	Cons. Loans	Total Cons. Credit	Home Equity	Residential Loans	Total Real Estate Loans	Household Credit	
<b>Outstanding (US\$ Billions)</b>							
2004Q4	27.5	63.4	90.9	91.8	834.6	926.4	1,017.3
2005Q4	40.4	70.2	110.6	103.0	906.3	1,009.3	1,119.9
2006Q4	44.0	53.1	97.1	89.5	825.8	915.3	1,012.4
2007Q4	46.3	53.0	99.3	121.7	810.7	932.4	1,031.7
2008Q4	39.2	50.0	89.2	77.7	616.4	694.1	783.3
<b>Quarter-over-Quarter Percentage Change</b>							
2004Q4	10.0%	-0.5%	2.5%	8.4%	4.8%	5.2%	4.9%
2005Q4	36.9%	-1.8%	9.5%	1.8%	0.5%	0.7%	1.5%
2006Q4	-2.0%	-15.7%	-10.0%	-16.6%	-15.9%	-16.0%	-15.4%
2007Q4	12.7%	-2.6%	4.0%	2.0%	-5.8%	-4.8%	-4.0%
2008Q4	9.5%	2.2%	5.3%	2.5%	-3.7%	-3.0%	-2.1%
<b>Year-over-Year Percentage Change</b>							
2004Q4	17.5%	17.4%	17.4%	49.0%	21.2%	23.5%	22.9%
2005Q4	46.9%	10.7%	21.7%	12.2%	8.6%	8.9%	10.1%
2006Q4	8.9%	-24.4%	-12.2%	-13.1%	-8.9%	-9.3%	-9.6%
2007Q4	5.2%	-0.2%	2.3%	36.0%	-1.8%	1.9%	1.9%
2008Q4	-15.3%	-5.7%	-10.2%	-36.2%	-24.0%	-25.6%	-24.1%

Source: U.S. Federal Deposit Insurance Corporation (FDIC)

## Endnotes

- <sup>1</sup> The FDIC's Quarterly Banking Profile provide greater detail on the assets of commercial banks and savings institutions. We therefore rely on these statistics in our section on credit intermediaries rather than the more aggregated statistics from the Federal Reserve's Flow of Funds.
- <sup>2</sup> Our discussion of the proportion of assets held by various entities focuses here only on credit instruments. The Federal Reserve's Flow of Funds does not include derivatives. The Bank of International Settlements tracks the notional and market values of derivatives. Because of issues with valuation and assignment of exposure, we exclude derivative instruments. While these Flow of Funds statistics show the rapid expansion of "shadow banking" as credit market players, the particular exposure of these entities to derivatives is not captured here.
- <sup>3</sup> We cite the National Association of Realtors Sales of Existing Homes, the Bureau of the Census' Housing Starts for New Privately-Owned, One-Family Units, National S&P/Case-Shiller Index for home prices. Changes are annual averages.
- <sup>4</sup> Readers should note that we have adjusted our measure of total net new financing from that reported in our special report on "Credit Flows during the Credit Crunch" (December 23, 2008). This results from a revision in our treatment of the Miscellaneous Liabilities category (see endnote 7), which also changes our calculation of the total market debt measure.
- <sup>5</sup> In the Federal Reserve's treatment of equities in Z.1, share purchases by foreigners should be neutral within the amount of outstanding equity only if they are considered "portfolio" investment. FDI should subtract from the reported amount of equity outstanding, and constitutes a negative flow in this series. "Portfolio" investment is a purchase by a single foreign investor that will result in ownership of less than 10% of the outstanding equity of the issuing U.S. firm. Purchases by a single foreign investor that result in ownership of 10% or more of the firm's outstanding equity are considered FDI. FDI is included in Miscellaneous Liabilities, which we report under "non-market debt".
- <sup>6</sup> "Other loans" are defined as loans from savings institutions, finance companies, the U.S. government and government-sponsored enterprises (excluding mortgage loans), and foreigners (including foreign banks), as well as loans held by issuers of asset-backed securities. Syndicated loans are also included under this heading.
- <sup>7</sup> We exclude the "Other" category of Miscellaneous Liabilities, as reported in the Federal Reserves Z.1 Flow of Funds release, from our definition here. This item is treated as a residual and the Federal Reserve reports problems with its calculation. Notably, the change in the outstanding amount (Line 35 in L.102) does not correspond with the equivalent flow (Line 52 in F.102). The Federal Reserve is aware of this inconsistency and is working to rectify the problem. The flows and changes in amount outstanding for FDI (Line 33 in L.102 and Line 35 in F.102) differ on a quarterly basis but more closely correspond.

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