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## Capital Market Issuance Declined to \$5.0 Trillion in 2008

Securities issuance totaled \$871.1 billion in the fourth quarter of 2008, down 11.2 percent from issuance in the third quarter. Full-year issuance reached \$5.0 trillion, a 23.2 percent decline from the \$6.5 trillion issued in 2007. The sharpest declines in new issuance volume were once again seen in the sectors most vulnerable to the current credit crisis and economic environment. Underwriting in the equity market continued to show some strength as the secondary market remained relatively strong into the fourth quarter. The continued decline in the subprime mortgage and home equity loan sectors led to a significant drop in issuance of asset-backed securities. Similarly, the market for mortgage-backed securities has been significantly influenced by the absence of activity of private-label issuers. Agency MBS volume has continued to support the sector as tighter underwriting standards and the effect of several drivers have negatively influenced issuance. Double digit delinquencies and foreclosure growth rates, declining home prices and tighter mortgage underwriting guidelines are expected to continue to depress the sector in 2009.

Federal agency debt issuance declined again in the fourth quarter. In full-year 2008, treasury issuance increased as the federal government sought to meet the expected budget shortfall. Municipal fund raising in the capital markets was down only by single digits from last year, as states and localities looked to meet financing requirements amid slower economic growth and reduced tax revenue.

The U.S. economy is expected to decline further in 2009. To combat the economic decline as financial market stresses, a number of new government programs have been, and are being put into place, including direct investment in financial institutions, credit guarantees, and liquidity support facilities. The Federal Reserve also cut its target rate to a range of zero to 0.25 percent. The markets also await the implementation of several new programs introduced by recently-inaugurated President Obama, including a massive stimulus package, a new financial stability plan and significant mortgage-related measures.

### Issuance Highlights

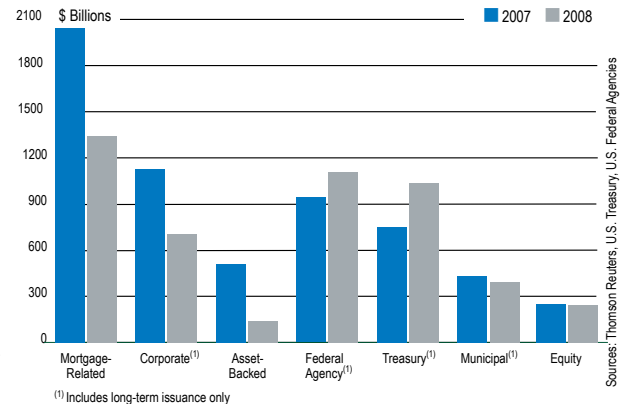
\$ Billions	2008:Q4 only	2007	2008	% Change*
Municipal <sup>1</sup>	70.1	429.3	391.5	-8.8%
Treasury <sup>1</sup>	368.9	752.3	1,037.3	37.9%
Federal Agency <sup>1</sup>	89.3	941.8	1,108.3	17.7%
Mortgage-Related	216.4	2,050.3	1,339.4	-34.7%
Asset-Backed	2.7	509.7	137.2	-73.1%
Global CDO	5.0	481.6	56.1	-88.4%
Corporate <sup>1</sup>	74.3	1,203.9	737.2	-38.8%
Equity	44.5	247.5	242.6	-2.0%

\* Percent change between 2008 and 2007

<sup>1</sup> Includes long-term issuance only

### Issuance in the U.S. Capital Markets

2007 vs 2008



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## Municipal Issuance Volume Declines Again

Short- and long-term municipal issuance totaled \$452.3 billion in 2008, 7.2 percent below the \$487.3 billion issued in 2007. Fourth quarter issuance declined by 18.8 percent from the prior quarter to \$89.3 billion due a fall in refunding as issuers responded to a tightened credit environment.

Long-term municipal issuance was \$70.1 billion in the fourth quarter of 2008, down from \$90.5 billion issued in the third quarter and \$104.8 billion issued in the same year-earlier period. For full-year 2008, long-term issuance totaled \$391.5 billion, below the \$429.3 billion issued in 2007. Short-term municipal issuance in the fourth quarter was \$19.3 billion, down from \$19.5 billion in the previous quarter and \$21.0 billion from the same period of last year. For full-year 2008, short-term municipal issuance was \$60.7 billion, 4.6 percent above the \$58.0 billion recorded in 2007.

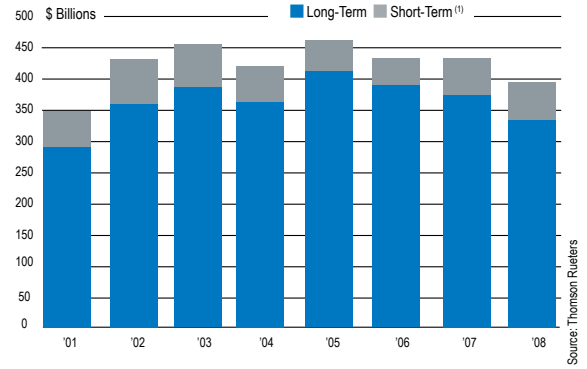
The ratio of the 10-year AAA-rated general obligation (G.O.) municipal yield to that of Treasury securities of similar maturity ended the fourth quarter at 174 percent, compared to 108 percent at the end of September. As of end-December, the yield on 10-year municipal securities was 3.91 percent, compared to 2.25 percent for comparable treasuries.

## New Money Volume Declines; Refunding Volume Rises

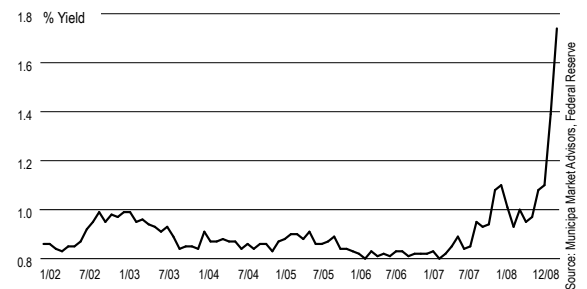
New capital issuance totaled \$212.2 billion in 2008, down 22.5 percent from that in 2007, which was a record year. The three largest use-of-proceeds sectors also saw a continued decline, with education-related issuance totaling \$90.9 billion in 2008, compared to \$107.6 billion in the previous year. General government sector issuance fell 26.1 percent to \$55.4 in 2008, and the transportation sector issuance was \$26.5 billion in new money issued compared to \$27.2 billion in 2007.

Refunding activity totaled \$179.3 billion in the twelve months of 2008, 15.2 percent above the \$155.6 billion in 2007. Of that, education-related issuance fell 4.1 percent to \$36.1 billion in 2008, while the general government sector declined to \$26.4 billion from \$39.2 billion, a fall of 32.6 percent. In contrast, healthcare sector issuance increased 54.8 percent to \$43.7 billion from \$28.2 billion in 2007.

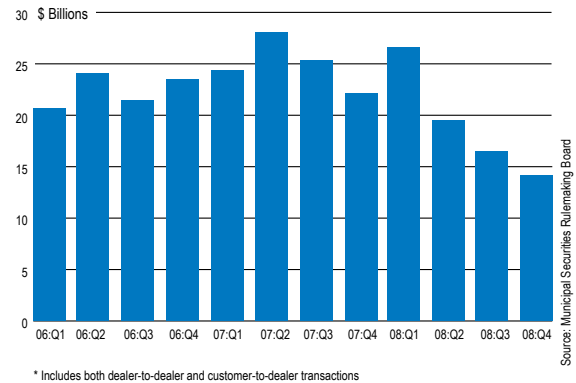
Short- and Long-Term Municipal Issuance  
2001-2008



Municipal GO AAA and 10-Yr Treasury Ratio  
Jan. 2002-Dec. 2008



Average Daily Trading Volume of Municipal Securities\*  
2006:Q1-2008:Q4



## Net Treasury Issuance Higher, Yield Curve Steepens as Fed Cuts Rates near Zero

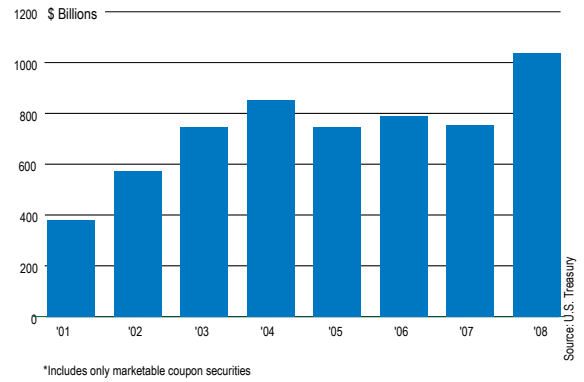
Total net issuance of U.S. Treasury securities, including bills and coupons, was \$407.7 billion in 2008, up significantly from the \$179.4 billion recorded in 2007. Net coupon issuance was \$200.3 billion in the fourth quarter, up almost five times from the \$41.1 billion issued in the same year-earlier period and more than double from the \$97.8 billion recorded in 3Q'08. Consistent with the results of SIFMA's recent Government Forecast<sup>1</sup>, the Treasury announced that it expects to borrow \$437 billion of marketable debt in the first quarter of calendar year 2009. By comparison, in 2008 the Treasury had borrowed \$367 billion of marketable debt. The U.S. federal government recorded a total budget deficit of \$455 billion for fiscal year (FY) 2008, which was less than the forecast of \$482 billion. In the face of the worst economic conditions in decades, the budget deficit in fiscal year 2009 is expected to rise to \$1.45 trillion on a massive fiscal stimulus package, financial market support, and military spending.

Gross coupon issuance volume increased 37.9 percent during 2008 to \$1.037 trillion, up from \$752.3 billion in 2007. Gross bill issuance was \$4.786 trillion, 27.9 percent above the \$3.742 trillion issued in 2007. Gross issuance is affected by expected refunding of maturing and callable debt as well as Treasury's new cash needs. Daily trading volume of treasury securities by primary dealers averaged \$553.1 billion in 2008, compared to \$570.2 in the previous year.

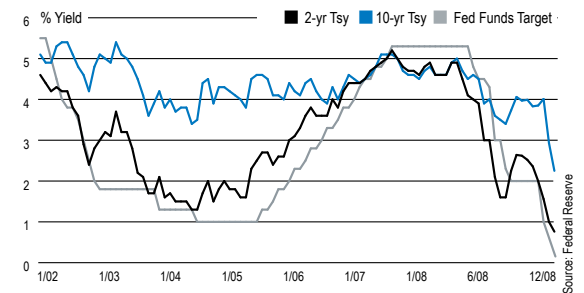
In addition to the series of rate cuts that began in September 2007 and lowered the Fed Funds target rate to a range of zero to 0.25 percent from 5.25 percent, the Federal Reserve has taken unprecedented actions to add liquidity and capital to the financial system. Among those programs, the Capital Purchase Program (CPP) invested \$177.5 billion in senior preferred shares of 214 financial institutions in over 40 states and Puerto Rico during the fourth quarter of 2008, and is committed to further purchases. On December 19, 2008, The Treasury announced a plan to make emergency loans available through this program to General Motors Corporation and Chrysler LLC to assist the domestic auto industry.

Market volatility and credit market dislocations in the fourth quarter of 2008 continued to cause a "flight-to-quality" to the safety of short-term Treasury securities, which pushed Treasury-bill yields to nearly zero percent in mid-September. Despite yields declining across the maturity spectrum, the yield curve became steeper compared to the previous quarter. The 2-year Treasury yield declined to 0.76 percent at the end of December, from 2.00 percent at the end of September, while the 10-year Treasury yield fell to 2.25 percent from 3.85 percent. The 2-year to 10-year yield spread contracted from 149 basis points at the end of the December from 185 basis points at the end of September. While concerns have reduced somewhat towards year-end from the very sharp spike in late September, until investors gain confidence in the financial markets, Treasury securities yields are expected to remain low.

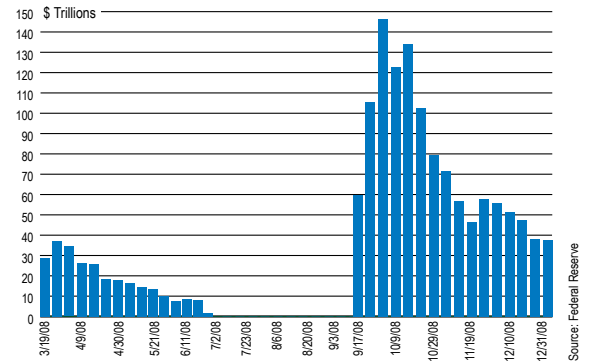
Issuance of the U.S. Treasury Securities\*  
2001-2008



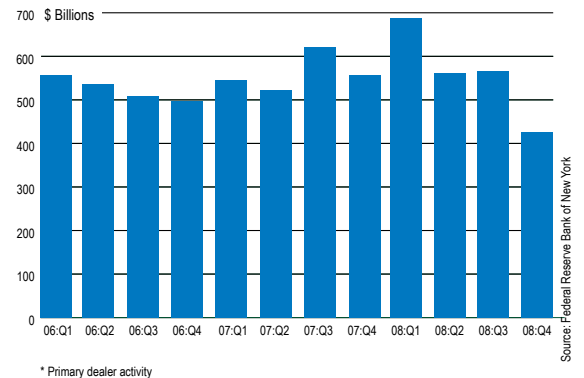
Treasury Yields and Fed Fund Rate  
Jan. 2002-Dec. 2008



Primary Dealer Credit Facility  
Mar. 2008-Dec. 2008



Average Daily Trading Volume of Treasury Securities\*  
2006:Q1-2008:Q4



<sup>1</sup> The most recent SIFMA Government Forecast can be found at: [www.sifma.org/research/pdf/GovForecast1008.pdf](http://www.sifma.org/research/pdf/GovForecast1008.pdf)

## Agency Issuance

Issuance of federal agency long-term debt totaled \$1.1 trillion in full-year 2008, 17.7 percent higher than the \$941.8 billion issued in 2007. Fourth quarter issuance reached \$89.3 billion, down from the \$198.8 billion issued in the third quarter, and vastly lower than the \$256.5 billion issued in the fourth quarter of 2007. Government Sponsored Enterprises (GSE) monthly issuance amounts peaked in April 2008 at \$157.1 billion, then declined to a low of \$14 billion in November before reaching \$47.8 billion in December.

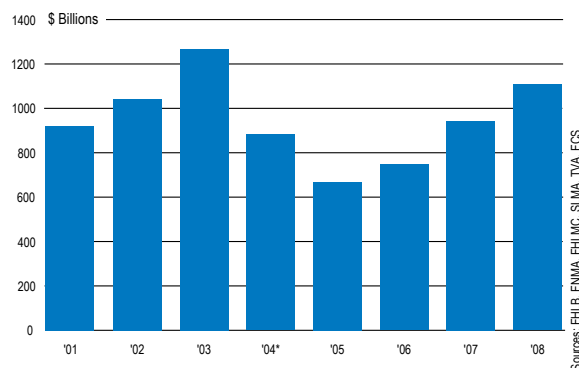
The Federal Home Loan Banks (FHLB) have acted as an important and lower-cost source of liquidity for lending and depository institutions during the prolonged credit crisis. FHLB issuance reached \$515.1 billion in 2008, an increase from the \$495.2 billion issued in 2007. Accounting for almost half of total agency debt issuance, FHLB issuance is expected to continue its pace of issuance until the credit markets recover.

Late in the third quarter, Fannie Mae and Freddie Mac were put into conservatorship, giving the U.S. federal government a 79.9 percent stake in each GSE. Freddie Mac's debt issuance increased 15.5 percent to \$220.7 billion in 2008, compared to \$191.1 billion in 2007. Issuance of debt by Fannie Mae increased to \$221.2 billion in 2008, compared to \$190.8 billion a year ago.

Long-term issuance by the Farm Credit System reached \$95.6 billion in 2008, compared with \$64.6 billion in 2007. The Tennessee Valley Authority's issuance of long-term debt was \$2.1 billion in 2008, nearly double the \$1.1 billion issued in the previous year.

SIFMA's recent Government Forecast<sup>1</sup> projects an increase in federal agency debt issuance in the first quarter of 2009 to \$173.0 billion compared to \$89.3 billion issued in the fourth quarter, but still well below the \$432.0 billion issued in the first quarter of 2008.

Long-Term Federal Agency Debt Issuance<sup>(1)</sup>  
2001–2008



<sup>(1)</sup> Excludes maturities of one year or less  
\* Beginning with 2004, Sallie Mae has been excluded due to privatization

## Long-Term Federal Agency Debt Issuance

\$ Billions	2006	2007	% Change*	\$ Change*	2008
FHLB <sup>1</sup>	495.2	495.2	4.0%	19.9	515.1
Freddie Mac	191.1	191.1	15.5%	29.6	220.7
Fannie Mae	190.8	190.8	15.9%	30.4	221.2
FCS <sup>2</sup>	64.6	64.6	47.9%	30.9	95.6
TVA <sup>3</sup>	1.1	1.1	92.7%	1.0	2.1
<b>Totals</b>	<b>942.8</b>	<b>942.8</b>	<b>17.6%</b>	<b>165.5</b>	<b>1,108.3</b>

\*Percent and amount change between 2007 and 2008

<sup>1</sup>Federal Home Loan Bank System

<sup>2</sup>Farm Credit System

<sup>3</sup>Tennessee Valley Authority

Sources: Thomson Reuters and Federal Agencies

<sup>1</sup> SIFMA Government Forecast can be found at: <http://www.sifma.org/research/pdf/GovForecast1008.pdf>

## Agency MBS Issuance Flat; But Non-Agency Issuance Nearly Zero

Issuance of mortgage-related securities (MBS), including agency and non-agency pass-throughs and collateralized mortgage obligations (CMO), totaled \$1,339.4 billion in 2008, 34.7 percent below the \$2,050.3 billion issued in 2007. The drop in year-over-year volume can be attributed to the dissolution of the private-label market, tighter mortgage underwriting standards, and the broader economic slowdown that has dampened consumer confidence and spending. Issuance of mortgage-related securities reached \$216.4 billion in the fourth quarter, well below the \$286.6 billion issued in the third quarter and \$396.3 billion issued in the fourth quarter of 2007.

The market for mortgage-related securities has been impacted by many factors, such as the subprime mortgage meltdown and the weak economy. The housing market continued to decline in 2008, as foreclosure filings to surpassed 3 million according to RealtyTrac. Home equity also continues to disappear as illustrated by the S&P/Case Shiller 20-city index decline of 18.2 percent in home prices ending November 2008.

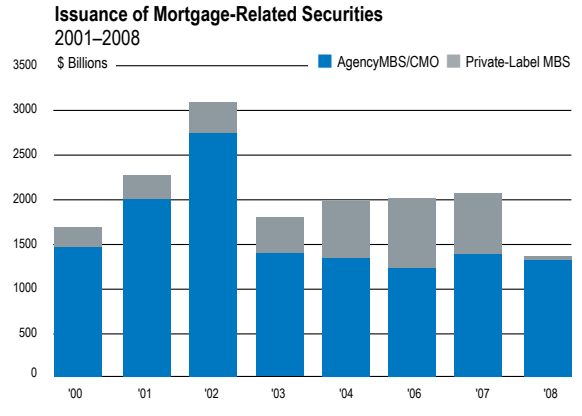
In early 2009, The U.S. Treasury and the Obama administration continued its plan to overhaul supervision of the housing-related GSEs and allow the GSEs to insure refinanced mortgages with LTVs over 80 percent without requiring additional private mortgage insurance. Furthermore, the administration outlined a plan to modify millions of mortgages.

### Agency Issuance Declines, And Private-Label Remains Non-Existent

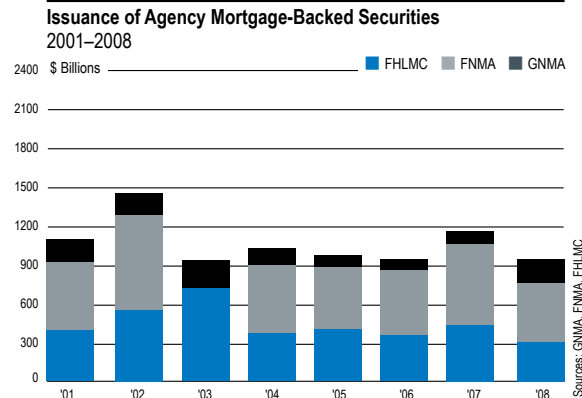
Issuance of agency mortgage-backed pass-throughs totaled \$1,148.2 billion in 2008, relatively unchanged from 2007. Agency CMO issuance decreased to \$151.0 billion in 2008, a decline of 32.3 percent compared to the \$223.2 billion issued a year earlier, due to a significant decrease in liquidity and investor appetite in this sector of the market. The relative strength of overall issuance levels reflects the significant interest rate spread between agency and non-agency securities and the resulting loan rates for mortgage borrowers, and the expanded capacity in terms of loan size limits of the GSEs under recently-passed housing bills. Agency issuance accounted for roughly 97.0 percent of total residential mortgage-related security issuance in all of 2008.

Turmoil in the private-label market has crippled other mortgage sectors. Private-label residential mortgage-backed securities (RMBS) issuance, which includes both jumbo mortgages that exceed GSE conforming loan size limits and higher credit-risk mortgages that do not meet agency underwriting guidelines, totaled only \$0.2 billion in the fourth quarter, compared to \$1.3 billion in the third quarter, and \$38.4 billion in the fourth quarter of 2007. For 2008, non-agency RMBS issuance fell to an all time low of \$25.3 billion, a decline of 94.4 percent from the \$451.2 billion issued in 2007. Last year, Congress temporarily raised the loan limit for conventional mortgage financing to \$729,750, but the limit dropped to \$625,000 in December. The limits have since been raised back to their 2008 levels, effective for 2009 originations.

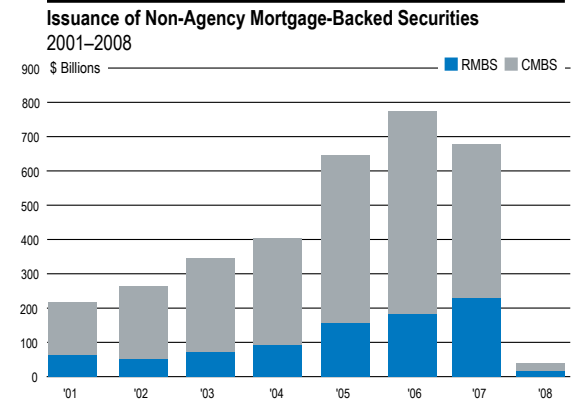
Private-label commercial mortgage-backed securities (CMBS) issuance totaled \$6.4 billion in 2008, down dramatically from the \$228.2 billion issued in 2007. No new CMBS was issued in the fourth quarter and only \$0.1 billion was issued in the third quarter compared to \$28.4 billion was issued in the fourth quarter of 2007. The CMBS sector suffered from weakened economic growth, weak consumer retail activity, and reduced investor interest in the troubled mortgage backed security sector.



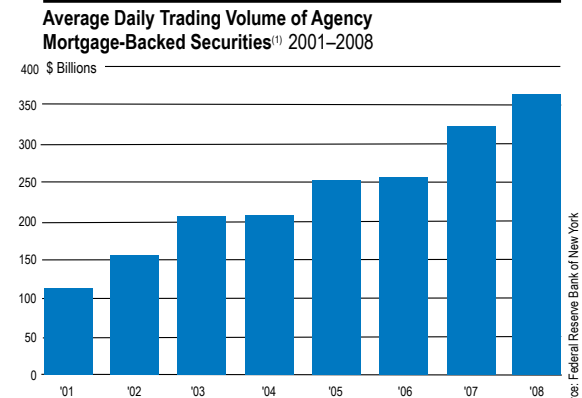
Sources: Fed Agencies, Thompson Reuters, Inside MBS & ABS, Bloomberg Finance, L.P.



Sources: GNMA, FNMA, FHLMC



Source: Thomson Reuters



Source: Federal Reserve Bank of New York

(1) Primary dealer activity

## ABS Issuance Frozen

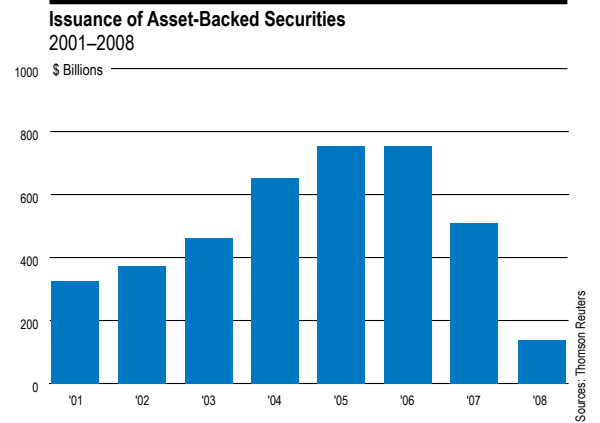
The asset-backed securities (ABS) market was extremely quiet going into year-end, as activity was limited to accounts, cleaning up their positions through small line-item bid lists. Despite the reduced level of participation, bids stayed fairly strong. Investors continue to monitor progress made in the design of the Term Asset-Backed Securities Loan Facility (TALF) program in hopes of taking advantage of opportunities that may follow in the New Year. The TALF is a \$200 billion lending program (that may be expanded to \$1 trillion) created by the Federal Reserve that will provide financing for U.S. entities that purchase newly issued ABS collateralized by credit card, auto, and small business administration loans, and potentially commercial mortgages.

ABS issuance fell to \$2.7 billion in the fourth quarter, down 86.7 percent from the previous quarter. Total issuance for 2008 was \$137.2 billion, a decline of 73.1 percent from the \$509.7 billion raised in all of 2007. In fact, the fourth quarter marked the first time ever that four of the major sectors (home equity, credit card, student loan, and equipment leases) had no issuance.

With consumer and corporate defaults accelerating, a higher preponderance of credit downgrades, and a general malaise about the future of the economy, industry experts expect ABS spreads to remain at their elevated levels for some time.

### Auto Loan ABS Leads Issuance Totals in Fourth Quarter

Auto loan ABS was the strongest of the reporting sectors at \$2.4 billion in the fourth quarter, 20.4 percent below issuance in the previous quarter and 87.3 percent below issuance in the fourth quarter of 2007. In 2008, auto loan ABS issuance was \$35.5 billion; nearly half of the \$74.1 billion recorded a year-earlier. The once-strong credit card and student loan market sector virtually dried up overnight, with zero issuance in the fourth quarter. The home equity ABS primary markets have all but ceased in the fourth quarter, along with equipment ABS. Home equity loan ABS issuance decreased 98.3 percent to \$3.6 billion in 2008 from \$216.9 billion in 2007. ABS issuance of equipment leases fell 46.8 percent to \$3.1 billion in 2008 from \$5.8 billion in the previous year. Student loan ABS issuance totaled \$28.2 billion in 2008, down 54.0 percent from 2007.



## Global CDO Issuance Continues to Decline

Global collateralized debt obligation (CDO) issuance fell once again as diminished liquidity, de-leveraging, and valuation uncertainties continued. Global funded CDO volume fell to \$5.0 billion in the fourth quarter of 2008, below the \$12.8 billion in the previous quarter, and significantly lower than the \$43.7 billion issued in the fourth quarter of 2007. For the twelve months of 2008, a total of \$56.1 billion in funded CDOs were issued globally, a significant drop from the \$481.6 billion issued in all of 2007. Cash flow and hybrid CDO issuance volume was \$3.0 billion in the fourth quarter, 70.7 percent below third quarter issuance volume and 89.7 percent below the same year-earlier period. The funded synthetic CDO primary market remained closed with no issuance for the second consecutive quarter. Market value CDO volume continued to decline in the fourth quarter to \$2.0 billion from \$2.5 billion in the previous quarter. Based on CDO purpose segmentation, arbitrage CDOs represented the largest segment at 63.3 percent of global volume in 4Q'08, despite global volume declining by 63.6 percent from the previous quarter and by 91.6 percent from a fourth quarter a year ago.

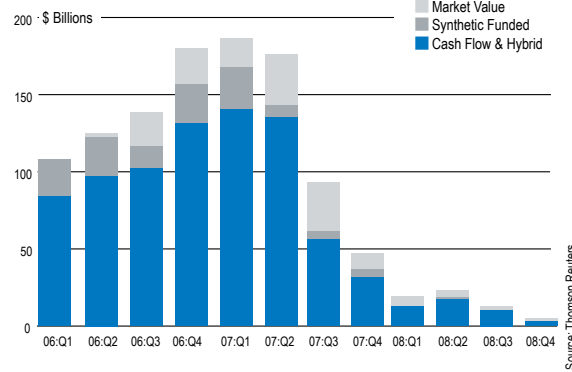
### Collateral and Currency Sectors

Although the structured finance (SF) collateral group encompasses a wide range of collateral types, it has been historically dominated by mortgage-related (largely subprime) and home equity collateral. Credit quality deterioration, diminished liquidity and a troubled housing market brought SF CDO issuance to a virtual halt in 2008, with \$1.8 billion issued in the fourth quarter compared to \$3.9 billion in the previous quarter, and \$18.8 billion in 4Q'07. CDOs backed by high-yield loans, or collateralized loan obligations (CLO), were the highest collateral CDO issuance sector in the fourth quarter at \$2.5 billion, a 48.5 percent decline from the previous quarter.

In 2007, the dollar-denominated segment of CDO issuance accounted for more than 70 percent of global issuance, but declined considerably in 2008. Euro-denominated issuance eclipsed US dollar issuance by the end of the second quarter of 2008. By the end of the fourth quarter, US dollar issuance accounted for only 17.9 percent of the total fourth quarter issuance of \$5.0 billion, whereas, euro-denominated issuance accounted for 47.0 percent. Euro-denominated issuance declined by 67.1 percent in 4Q'08 to \$2.4 billion and was well off the fourth quarter 2007 issuance total of \$14.4 billion. US dollar-denominated CDO volume totaled \$0.9 billion in the fourth quarter, down 80.9 percent from \$4.7 billion in the previous quarter.

Global CDO Issuance by Transaction Structure

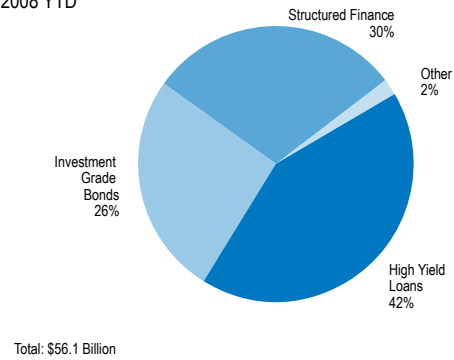
2006:Q1–2008:Q4



Source: Thomson Reuters

Global CDO Issuance by Underlying Collateral

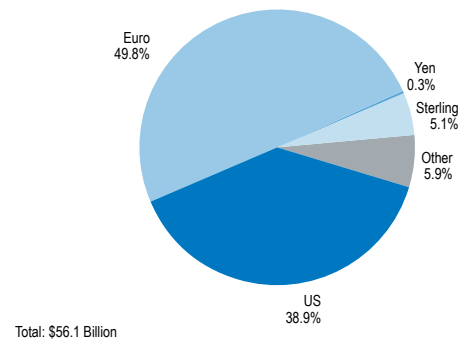
2008 YTD



Source: Thomson Reuters

Global CDO Issuance by Currency

2008 YTD



Source: Thomson Reuters

## Repo Daily Average Outstanding Amount Decreases by 40 Percent in 4Q

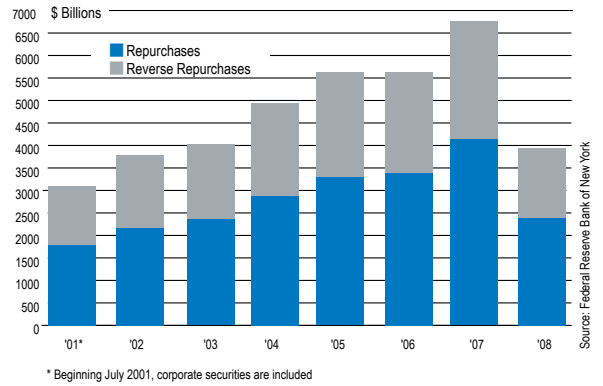
The average daily volume of total outstanding repurchase (repo) and reverse repo agreement contracts was \$3.9 trillion in 2008, a 41.9 percent decrease from the \$6.8 trillion in 2007. Daily outstanding reverse repo agreements averaged \$1.5 trillion, a decrease of 41.3 percent from the 2007 average of \$2.6 trillion. Average outstanding repo decreased by 42.4 percent 2008; totaling \$2.4 trillion compared to \$4.1 trillion 2007. This data represents financing activities of the primary dealers reporting to the Federal Reserve Bank of New York, which includes repurchase and reverse repurchase agreements involving U.S. government, federal agency, agency mortgage-backed, and corporate securities.

## CP and Money Market Outstandings Decline in the Fourth Quarter

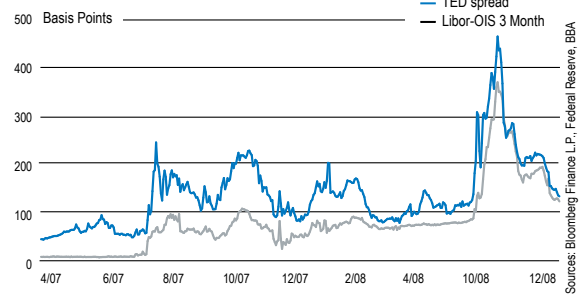
The outstanding volume of total money market instruments, inclusive of commercial paper (CP) and large time deposits, totaled more than \$4.01 trillion at the end of December 2008, a 3.5 percent decrease from the \$4.14 trillion outstanding at end-December 2007. CP outstanding totaled \$1.6 trillion at the end of 2008, which was a decline of 10.6 percent from the \$1.79 trillion totaled at the end of 2007.

Financial CP outstanding decreased 10.5 percent to \$731.2 billion at year-end 2008 from \$816.7 billion at the end of 2007. Non-financial CP outstanding increased 24.3 percent from 2007's total of \$162.7 billion to \$202.3 billion at the end of December 2008.

Financing by U.S. Government Securities Dealers  
Average Daily Amount Outstanding 2001–2008



TED Spread and Libor-OIS 3 Month Spread  
Apr. 2007–Dec. 2008



### Corporate Bond Issuance: Worst in 9 Years

Corporate bond issuance significantly decreased in the third quarter, and fell further in the fourth quarter of 2008. Credit market uncertainty, increased volatility, lower profits and widening corporate bond spreads were among the main reasons for an anemic fourth quarter. Total corporate bond issuance fell 11.9 percent to \$73.2 billion in the fourth quarter of 2008 from \$83.1 billion in the third quarter and was 69.1 percent below the \$236.7 billion in the same year-earlier period. In full year 2008, issuance was \$702.4 billion, a 37.7 percent decline from the \$1.1 trillion issued in the previous year. In an effort to add liquidity in the markets, on December 16, the Federal Open Market Committee reduced the federal funds target rate to a range between zero to 0.25 percent.

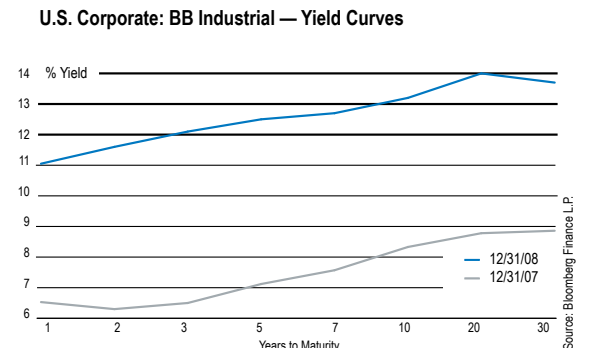
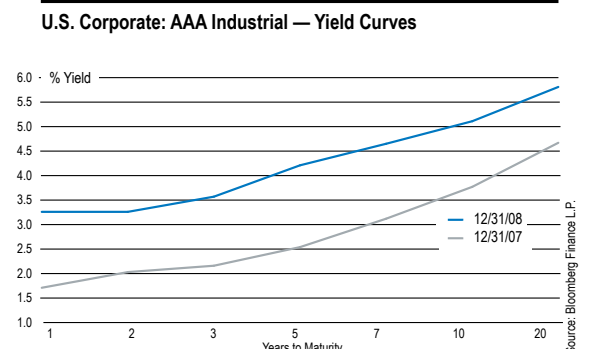
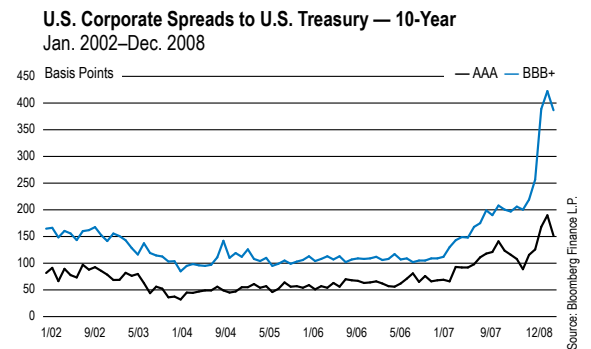
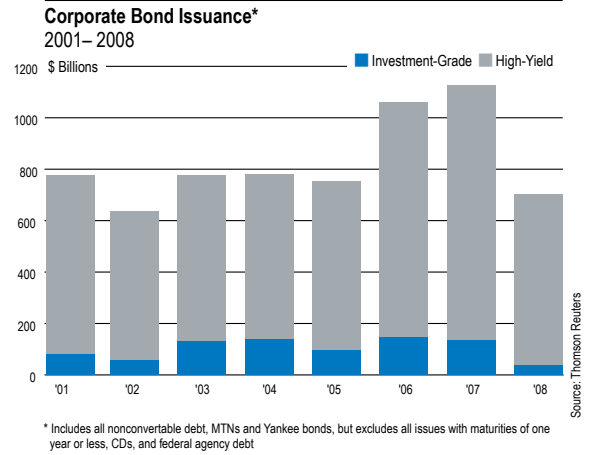
U.S. high-yield issuance was dismal again in the fourth quarter of 2008, reflecting investors' increasing sensitivity to risk in the current economic environment. Fourth quarter issuance of \$1.3 billion was 71.1 percent lower than the previous quarter's level of \$4.5 billion and 95.9 percent lower than the same year-earlier period. Full-year 2008 issuance of \$37.0 billion was 72.8 percent lower than the year-earlier and marked the lowest level of issuance in nine years, when in 2000 issuance totaled \$34.3 billion. According to S&P Global Fixed Income Research, high yield issuance will most likely continue to remain low due to stricter lending standards and slim likelihood of underwriters taking on additional risk.

### Credit Quality Remains Weak; Speculative-grade Widening

Corporate credit quality has been declining in aggregate during 2008 and is expected to continue to remain poor. The amount and pace of downgrades increased in the fourth quarter compared to the previous quarter and is expected to persist. A weakening economy contributed to the overall increase in downgrades. S&P reported that the U.S. speculative-grade spread rose to 1,647 basis points (bps) at the end of 2008, up from 919 bps at the end of 3Q'08 and 561 bps at the end of 2007. Consumer-dependent sectors such as retail, entertainment and auto are considered most vulnerable in a weak economy, and are expected to record more defaults in relation to other sectors.

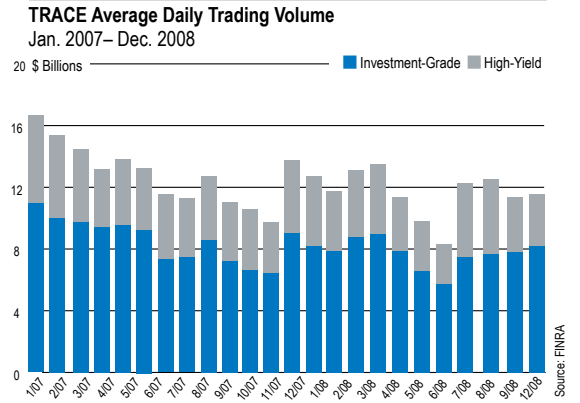
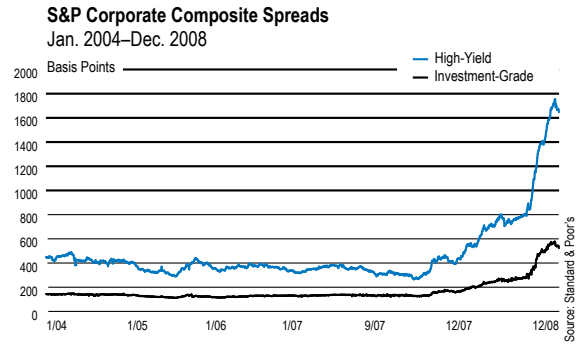
According to S&P's Global Fixed Income Research, 55 issuer downgrades to speculative grade from investment grade were recorded in 2008, 13 more than in 2007. This affected debt worth \$226.4 billion, which is 72% more than the \$131.3 billion of total debt affected in 2007. The Lehman Brothers Holdings Inc. default accounted for \$79.5 billion, nearly a third of the total. Further, the number of downgraded issuers is the highest since 2003 and the third highest since the S&P series began in 1987 (the record high was recorded in 2002, shortly after the last recession). The homebuilders/real estate sector led 2008's downgraded issuers in number terms with six entities downgraded, followed by a four-way tie at five entities in the banks, forest products and building materials, insurance, and media and entertainment sectors.

Corporate spreads remained under pressure and continued to widen in the fourth quarter. As of December 31, the JP Morgan U.S. Liquid Index spread, or JULI, was 475 bps, compared to 355 bps in the immediately preceding quarter and 124 basis points at the end of 2007. The Merrill Lynch high yield index spread closed 2008 at 1,812 bps, 716 bps wider than at the end of September. The credit derivative swap (CDS) market followed a similar pattern, with Markit's CDX.NA.HY spread widening to 1,143 bps, up 345 bps from the end-September spread of 798 bps.



### Trading Volume

According to the NASD's TRACE system, estimated investment grade average daily trading volume increased in the fourth quarter to \$7.89 billion, up 18.7 percent from the \$6.6 billion average traded in the third quarter and 12.7 percent above the fourth quarter 2007 average. The fourth quarter high yield average daily trading volume of \$3.96 billion marked a 12.4 percent increase from the previous quarter's \$3.5 billion, and was 4.8 percent higher than the average in the same year-earlier period.



## Underwriting Declines; Trading Volume Rises; Volatility Soars

The fourth quarter was a period of many noteworthy events, not least of which was the Federal Funds Rate target being cut to a range of zero to 0.25 percent on December 16, eclipsing the previous low of 1.00 percent set on June 25 of 2003. The last time the Fed Funds target was this low was in the early 1950's. As part of government efforts to stabilize the financial system, the US Treasury made equity investments in over three hundred US banks and bank holding companies. The Treasury and Fed also introduced a variety of liquidity facilities and guarantee programs aimed at stabilizing funding and liquidity.

The equity markets had a disastrous fourth quarter: The Dow Jones Industrial Average (DJIA) declined by 19.1 percent, the S&P 500 by 22.5 percent and the NASDAQ by 24.3 percent from end-third quarter levels. For full-year 2008, the DJIA was down 33.8 percent, S&P 500 down 38.5 percent and the NASDAQ down 40.5 percent closing the year at 8,776.39, 903.25, and 1,577.03, respectively. The DJIA set its 2008 intraday low of 7,773.71 on October 10, a 44.4 percent decline from the record closing high of 14,164.53 set on October 9, 2007.

### Share Trading Volume Sets Another Record Year

The New York Stock Exchange's (NYSE) fourth quarter average daily share volume was 2.83 billion shares, up 0.8 percent above the third quarter average, and NASDAQ average volume rose 2.7 percent to 2.28 billion shares. Compared to the fourth quarter a year ago, NYSE and NASDAQ volume rose 34.2 percent and 8.0 percent, respectively. The twelve month DJIA average daily volume is up 23.6 percent, to 2.61 billion shares, and the NASDAQ is up 6.0 percent at 2.26 billion shares. The ARCA/AMEX average daily share volume, ended 2008 at 569.7 million shares, up 176.1 percent from 2007 close.

The NYSE's average daily dollar trading volume fell to \$65.1 billion in the fourth quarter, down 26.8 percent from the previous quarter and down 25.3 percent from the fourth quarter of 2007 average. NASDAQ average daily dollar trading volume was \$46.4 billion in the fourth quarter, down 22.9 percent from the previous quarter, and the third consecutive quarterly dollar volume decline. Compared to the fourth quarter a year ago, NASDAQ dollar volume fell by 32.3 percent. For the full year, the average daily dollar trading volume on the NYSE was off only 5.0 percent from the record \$82.4 average set in 2007.

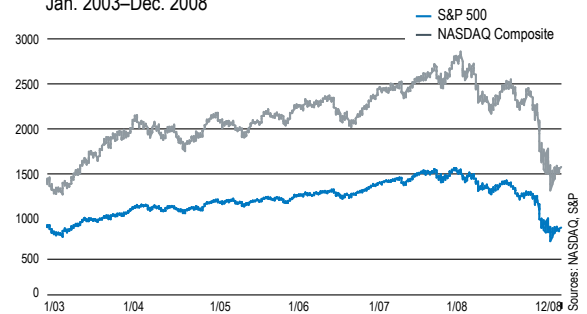
### Short Interest Continues to Drop in Fourth Quarter

NYSE short interest closed the fourth quarter at 13.3 billion shares, down 10.4 percent from the end of the third quarter and 28.5 percent from the record high 18.61 billion shares set on July 15. The 2008 year-end level was 4.4 percent above the year-end 2007 level of 12.74 billion shares, and represented 3.5 percent of the total shares outstanding on the NYSE.

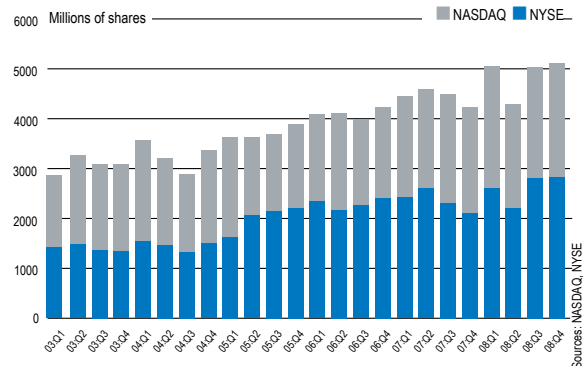
### Total Corporate Underwriting Falls

Fourth quarter total underwriting volume was \$122.6 billion on 157 deals, down 26.1 percent from the \$166 billion on 316 deals in the third quarter and 73.5 percent in the fourth quarter of 2007. Equity underwriting declined in the fourth quarter to \$44.5 billion, down 12.4 percent from the third quarter and 37.6 percent from the same year-earlier period. Sustained only by secondary offerings, initial public offerings evaporated entirely in the months of October and December. Preferred stock underwriting dried

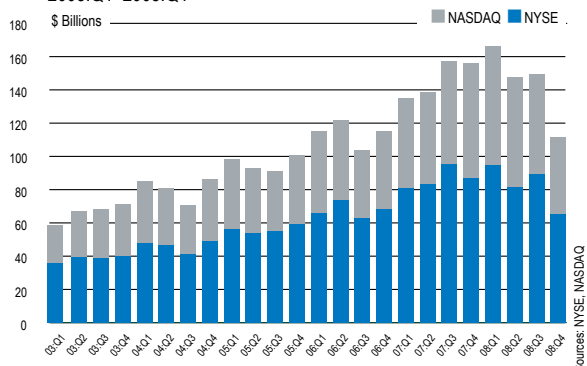
Daily Closing Stock Prices  
Jan. 2003–Dec. 2008



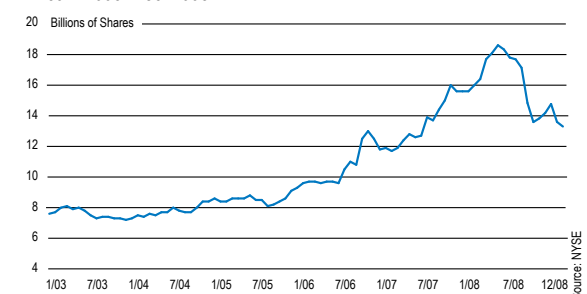
NYSE and NASDAQ Average Daily Share Volume  
2003:Q1–2008:Q4



NYSE and NASDAQ Average Daily Dollar Volume  
2003:Q1–2008:Q4



NYSE Short Interest  
Jan. 2003–Dec. 2008



up in the fourth quarter to \$0.1 billion, down 97.9 percent from the third quarter and 99.7 percent from fourth quarter 2007.

Combining corporate debt (straight bonds and securitizations) and equity underwriting, the securities industry raised \$1.17 billion in the year 2008, a decrease of 61.0 percent from the previous year. The decrease can be attributed to straight corporate debt (down 37.5 percent), asset-backed securities (down 86.7 percent), non-agency mortgage-backed securities (down 89.3 percent), and total equity offerings (down 1.9 percent). The one area up for the year was preferred issuance, up 29.8 percent, setting an all time record for issuance of \$77.9 billion, breaking last year's mark of \$60 billion.

**Only 1 IPO in the Fourth Quarter**

“True IPO’s,” which exclude closed end fund IPOs, totaled \$0.1 billion, an 86.1 percent decline from the previous quarter and was down 99.3 percent from the level in the third quarter. “True IPO” issuance on \$7.2 billion in full-year 2008 recorded its lowest yearly total since \$4.5 billion was raised in 1990, ending 17 years of \$10 billion or more of issuance. There were no IPOs in the months of October and December – only the fourth and fifth months in the past 18 years recording no IPOs. The IPO backlog declined to \$13.2 billion on 56 deals at the end of the fourth quarter, from \$18.5 billion on 88 deals at the end of the previous quarter.

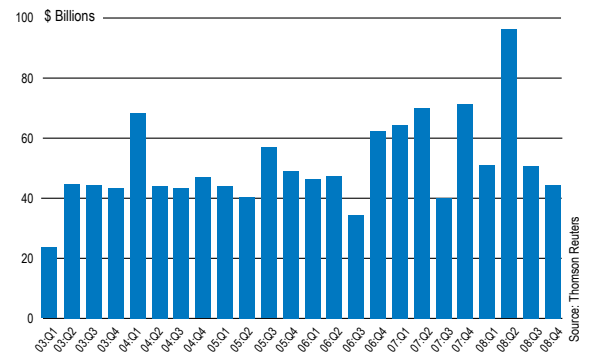
**Full Year Secondary Offerings Set Record**

The fourth quarter secondary underwritings totaled \$44.2 billion, down 1.2 percent from the record-setting pace of the previous quarter, but 89.4 percent above that in the same year-earlier period. The full-year 2008 secondary issuance total of \$153.7 billion shattered the previous record of \$112.9 billion set in 2000 by 36.1 percent. However, at 263, the number of deals was well below the 427 completed in 2007 and the 429 in 2000.

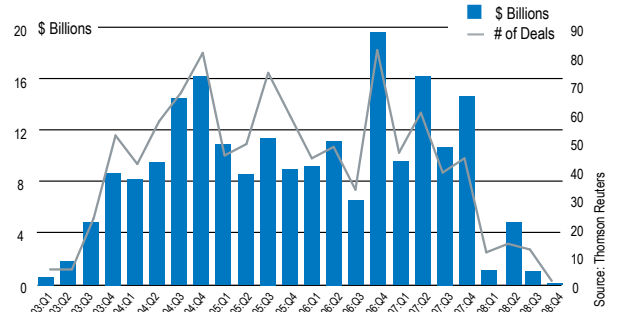
**U.S. Mergers and Acquisition (M&A) Volume Halved**

U.S. M&A announced volume slipped for the second consecutive quarter to \$135.8 billion in the fourth quarter, 51.0 percent below the third quarter level and 55.5 percent below that in the fourth quarter of 2007. The 2008 total of \$953.9 billion was 36.8 percent below the \$1.5 trillion recorded in 2007 and broke a three year string of trillion dollar years for domestic M&A. According to Thomson Reuters, there were \$323.6 billion worth of U.S. deals involving targets in the United States that were withdrawn in 2008, including the \$46.8 billion BCE leveraged buyout, the largest announced LBO of all time, and Microsoft’s \$41.9 billion unsolicited bid to acquire Yahoo.

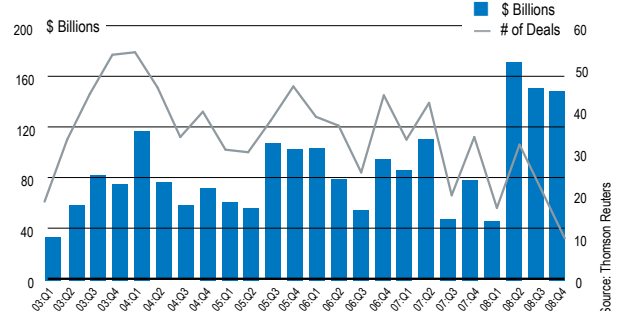
**Total Equity Underwriting**  
2003:Q1–2008:Q4



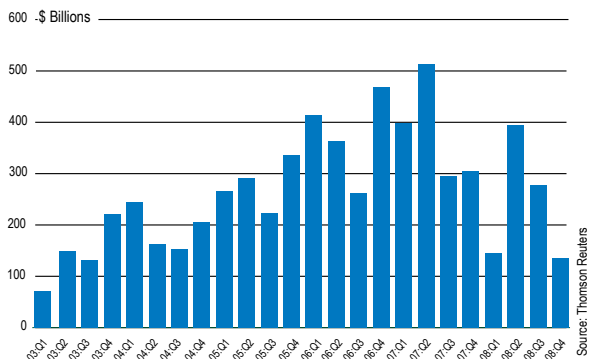
**“True” IPO - Excluding Closed-End Funds**  
2003:Q1–2008:Q4



**Secondary Stock Offerings**  
2003:Q1–2008:Q4



**U.S. Mergers and Acquisitions Announced Deals**  
2003:Q1–2008:Q4



### P/E Remains Above the 5-year Average

The P/E ratio of the S&P 500 stood at 19.20 at the end of 2008, down 20.0 percent from the end of the previous quarter but up 3.0 percent from year-end 2007. It is the third consecutive quarter to close above the 5-year average of 18.83; the P/E ratio remained below the 10-year average of 26.91.

### Share Buyback Volume Drops

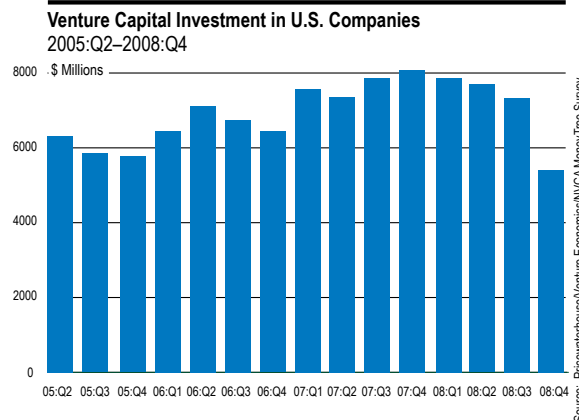
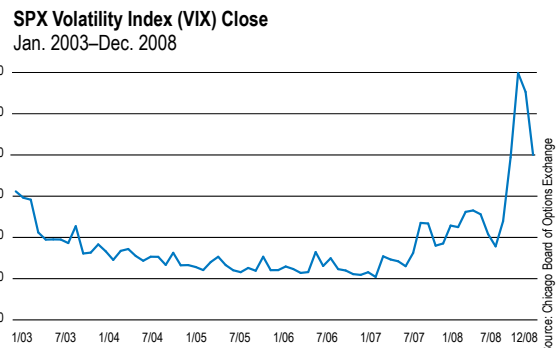
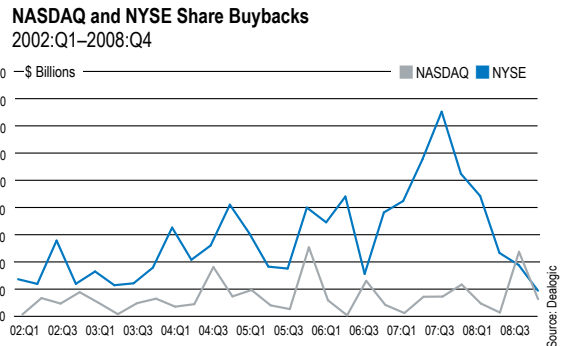
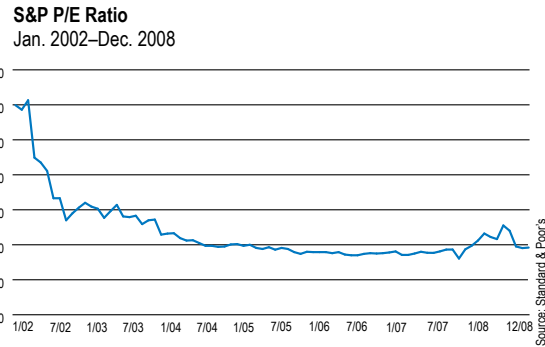
Corporate share repurchases declined for a fifth straight quarter, with fourth quarter buyback volume falling 13.4 percent on the NYSE and 73.4 percent on the NASDAQ. Announced buyback volume on the NYSE was \$18.9 billion on 39 share repurchase programs, while NASDAQ share buyback volume was \$12.6 billion on 26 share repurchase programs. The sharply fourth quarter decline in the NASDAQ buyback volume did not hinder the year total of \$72.3 billion from eclipsing the 2007 yearly record of \$53.9 billion.

### CBOE Volatility Index Reaches Record Heights

The Chicago Board Options Exchange Volatility Index (VIX) closed the fourth quarter at 40.0, 1.5 percent above the third quarter close of 39.39 and the highest quarterly close in over six years. The previous quarter-end high was 39.69 in third quarter 2002; before was in third quarter-end 1998, when the VIX closed at 40.95. The fourth quarter-end level exceeded the 5-year and 10-year averages by 119.3 percent and 85.0 percent respectively. Volatility never fell below 40 in the fourth quarter. This volatility index reached never-before-seen heights, recording an intra-day high of 89.53 on October 24, and set an all-time high daily close of 80.06 on October 27.

### Venture Capital/Private Equity

Venture capital investments in the U.S. declined for the fourth straight quarter, totaling \$5.4 billion on 818 deals, down from \$7.4 billion on 959 deals in the third quarter and \$8.1 billion on 1,051 deals in the fourth quarter of 2007. The two strongest sectors were software and biotechnology, as both reached investment totals of \$1.0 billion, on 194 and 109 deals, respectively, in the fourth quarter of 2008. The full-year 2008 total was \$28.3 billion, down 8.4 percent from the \$30.9 billion raised in 2007.



## Review of the Secondary Loan Market: 2008

While the year 2007 will be remembered for the subprime mortgage meltdown that fueled a massive credit crunch, 2008 will go down in history as the year the U.S. economy was sent spiraling into a recession that now looks to be the worst of its kind since America's Great Depression. Our banking system has experienced, and will experience a complete upheaval – a sweeping course of government intervention that when finalized will represent the biggest regulatory overhaul of Wall Street in a lifetime. The process of unwinding massive leverage from the financial system (including that of the leveraged loan market) and ridding balance sheets of troubled assets has brought on severe losses. Fourth quarter 2008 earnings, marked by massive write-downs, were dismal to say the very least but certainly did not constitute the end of the devaluation process, nor did it include the selling of “toxic” assets from severely strained balance sheets.

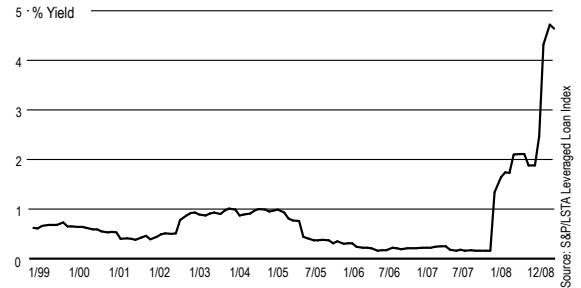
Within the leveraged loan market, 2008 will be more closely remembered as the year of the negative return – The S&P/LSTA Leveraged Loan Index (LLI) recorded a negative 29.1 percent on the year, representing the loan market's first annual loss after 11 straight years of positive returns, dating from the start of the LLI in 1997. While returns plummeted to historical lows, volatility reached all-time highs. The S&P/LSTA Leveraged Loan Index average 12-month lagging standard deviation of returns shot up a record 4.72 percent during November, prior to retracting to 4.64 percent by year-end. To put those figures in better perspective, one year ago the standard deviation was 1.34 percent and a mind-boggling 0.16 percent at the end of 2006. Once more, the combination of higher volatility and lower returns gutted the risk-adjusted return of the loan market, sending the 1997-2008 Sharpe ratio of the LLI to negative 0.29, according to S&P LCD. In comparison to the LLI, closed-end exchange-traded loan funds performed far worse in 2008 at negative 49.6 percent. The difference in returns can be simply summarized by one word: leverage. It magnified unrealized losses through increased exposure, and subsequently produced severe realized losses as funds were forced to sell those levered positions into a secondary market that didn't find its perceived bottom until year-end.

Prior to analyzing secondary performance, one must first look to the primary market. On the supply side, or lack thereof, the repercussions of the credit crunch and subsequent recession became extremely clear. Leveraged loan issuance fell to a paltry \$38 billion during fourth quarter 2008, a year-over-year decline of 71 percent, while 2008 total leveraged volume slipped to \$294 billion, a 57 percent fall from 2007's \$689 billion. Institutional lending fell even more dramatically. Fourth quarter 2008 volume was reported at slightly more than \$2 billion, while 2008 total institutional volume totaled \$70 billion. Those figures represent historic declines of 97 percent and 84 percent, respectively, according to Reuters LPC.

As supply dwindled, so did demand. For the first time in a decade, the number of total institutional loan investor groups and portfolios shrank year-over-year while new collateralized loan obligation (CLO) issuance remained negligible at best. Whether through self-imposed decisions or a lack of leverage, the number of manager groups fell 20 percent in 2008 to 246, while the number of active loan investment vehicles under their management shrank 7 percent to 816 – numbers that many industry insiders suggest are actually far worse. Still, 2008 secondary trading volume totaled \$510 billion following the record \$520 billion of the previous year, according to the LSTA Trade Data Study.

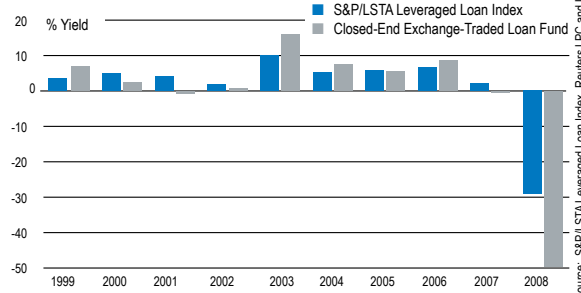
S&P/LSTA Leveraged Loan Index Average 12-Month Lagging Standard Deviation of Returns

Jan. 1999–Dec. 2008



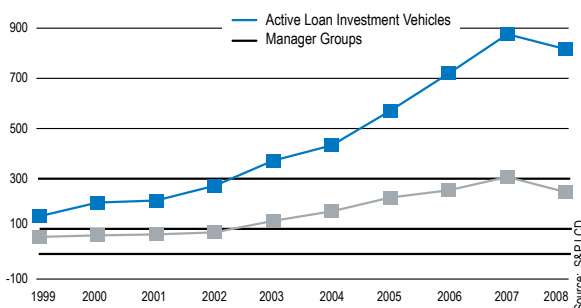
Source: S&P/LSTA Leveraged Loan Index

Annual Loan Returns 1999–2008



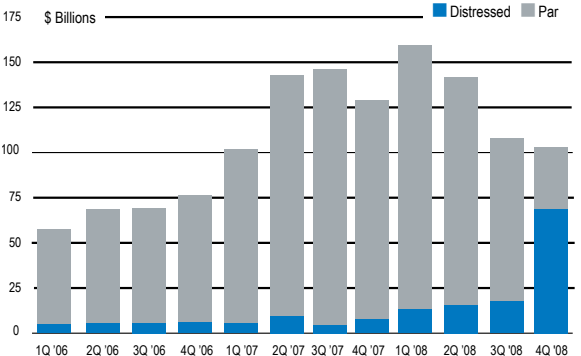
Source: S&P/LSTA Leveraged Loan Index, Reuters LPC and Lipper

Total Institutional Loan Investor Groups & Portfolios 1999–2008



Source: S&P LCD

Secondary Trade Volume 2006:Q1–2008:Q4



Source: LSTA Trade Data Study

The author of the Leveraged Loan discussion is Ted Basta, Loan Syndication and Trading Association (LSTA), Vice President of Market Data & Analysis

By the end of first quarter 2008, conditions across credit markets deteriorated, while the economy teetered on recession. The secondary loan market found itself mired in a more volatile but less liquid market condition. Prices in the secondary market fell hard and fast as total return swap (TRS) transactions began to face potential forced unwinds while hedge funds confronted similar margin calls. By month-end March, the mean Mark-To-Market (MTM) price fell below 89, off more than 6 points since January while bid-ask spreads widened to 145 bps from a sub-100 bps context. When the 1Q'08 dust cleared, 50 percent of loans were priced below 90 and the LLI Index generated a 5.7 percent loss. Despite the downturn, market participants traded through the volatility at a historic rate. Secondary trade volume totaled a record high for a quarter at more than \$158 billion.

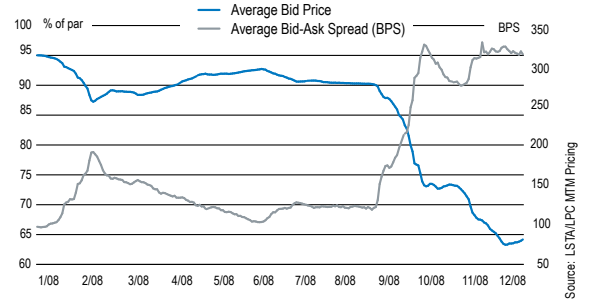
Following what was then considered its worst performance ever, the secondary market rallied back amid the global economic downturn to post record returns. As non-traditional lenders scooped up the advantageous yields available in the secondary market, loan prices improved off their 1Q'08 lows, which propelled the percentage of loans priced below 90 lower to 29 percent. Even after June's month-end plunge, bids still rose by more than 3 points to a 92 level, as bid-ask spreads tightened to 115 bps by the end of 2Q'08. The LLI went on to produce the best quarterly loan market return ever at 4.94percent.

Taking a cue from the last week of June, prices weakened during each month of the third quarter; falling precipitously at the tail-end of September. By third quarter's end, any and all MTM price gains of the previous quarter gave way to MTM losses. The average MTM bid fell 7 points to 85 while bid-ask spreads expanded by 80 bps to 200 bps. As of this point in time, investors had never witnessed this type of volatility in the secondary loan market. As bids fell across the entire secondary market, the percentage of loans priced below 90 reached a then-record high of 69 percent. By the end of September, previous sources of demand, such as hedge funds, faced redemptions, while some market value CLOs and TRS lines were forced to unwind, which flooded an already slumping secondary with still more supply. As a result of this loss in demand and systemic liquidity strain, the LSTA 3Q'08 Trade Data Study reported a 24 percent decline in quarterly trading volume of \$107 billion.

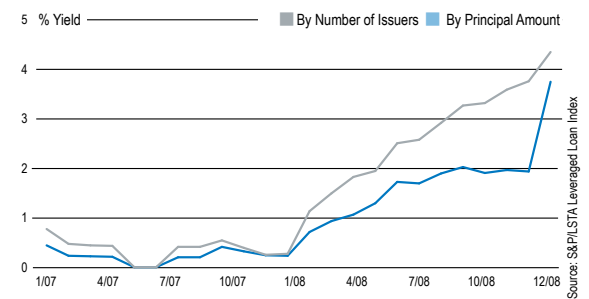
The secondary loan market's price declines of the third quarter proved to be pale in comparison to the metamorphic price drops that reverberated through the secondary during October. The lagging 12-months default rate by a number of issuers had already increased to a 5 and a half-year high of 3.32 percent, while the trend of forced selling accelerated within the secondary market as investors who faced price triggers and margin calls were forced to sell holdings quickly through "Bids Wanted In Competition" (BWIC). According to LCD, year-to-date BWIC volume totaled \$10 billion, with more than one third of that (\$3.3 billion) occurring in the month of October. As a direct result of this liquidity gap, the average MTM price fell 12 points to 73, while bid-ask spreads gapped out almost a full point to 290 bps by month-end. During this October bloodshed, price decliners outpaced advancers by a ratio of 99 to 1. October's record price deterioration pushed the percentage of loans priced below 90 to a record high of 95 percent, from 69 percent just one month earlier. October's loan returns unceremoniously tumbled to their worst reading in history - the LLI reported a record-shattering negative 13.22 percent.

November and December brought little relief for investors as the worst year in two generations came to a close. The trend of earnings shortfalls and mounting credit concerns continued to soften bids, while a steady flow of BWICs (volume totaled \$1.1 billion) pressured the reeling market. Daily

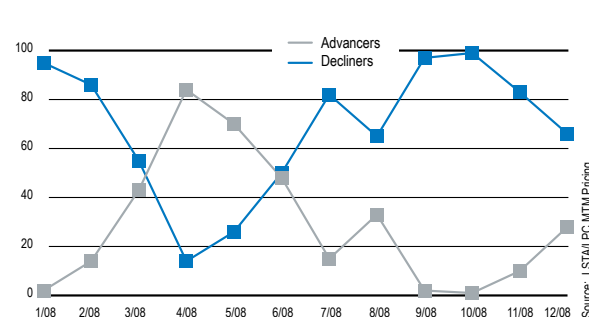
Secondary Price Performance 2008



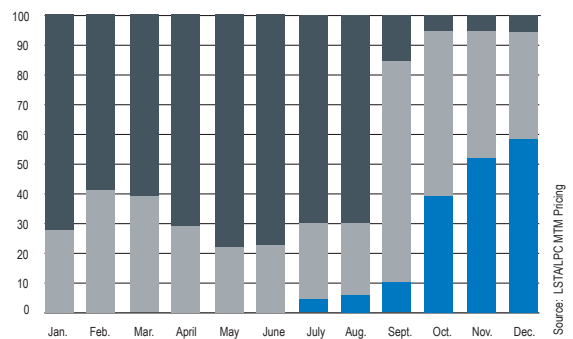
Lagging 12-Month Loan Default Rate Jan. 2007-Dec. 2008



MTM Monthly Price Volatility 2008



MTM Price Distribution Jan. 2008-Dec. 2008



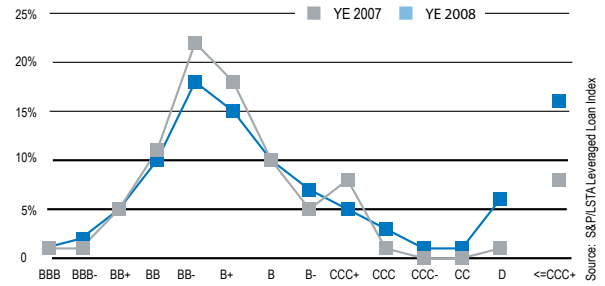
bid levels repeatedly fell below previous lows until December 17, when MTM prices bottomed at an all-time low of 63.29. In the midst of all the 4Q'08 doom and gloom, secondary price declines were far less painful in December than reported during the previous several months, and an average of four percent of loan prices advanced month-over-month from September through November. Throughout December, 26 percent of MTM prices advanced, while 66 percent declined. By year-end the average bid fell to 64 with a bid-ask spread of 315 bps – figures never thought imaginable, and simply unfounded given that default rates stood at 4.35 percent and 3.75 percent by number of issuers and principal amount, respectively.

All told, MTM prices declined 25 percent during fourth quarter 2008 and 32 percent across all of 2008. Fourth quarter 2008 trade volume fell \$7 billion to \$101 billion with an astounding 66 percent of trades occurring at a price below 80. Furthermore, the percentage of loans priced below 70 hit a record 57 percent by year-end. Only three months ago, this percentage stood at 10 percent. From a total return perspective, the performance of the S&P/LSTA LLI exemplified the trials and tribulations of the leveraged loan investor in 2008 by logging its sixth consecutive month of negative returns – the longest streak on record. Following December's 2.95 percent loss, the index recorded a negative 24.7 percent return in the fourth quarter, bringing 2008's annual return to negative 29.1 percent.

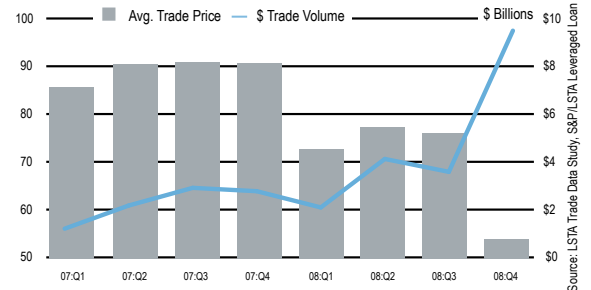
As of press time, prices rebounded almost 400 bps; but did so on very light trading volume and despite fears that cash flow CLO's face unforeseen troubles. For example, the percentage of loans rated CCC+ or worse within the LLI doubled to 16 percent over the past 12 months. This problem was then exacerbated by the massive declines in price levels. The CCC+ and below cohort was trading an average price of 89 through 2007 and 75 during the first 3 quarters of 2008. By the end of fourth quarter 2008, however, the average trade price had fallen to 54 on unprecedented volume. Quarterly trade volume within the rating cohort rose to almost \$10 billion; surpassing 2007's total volume figure and almost equaling that of the previous 3 quarters combined. As loans continue to be downgraded into the CCC+ bucket and are then mandated to be marked-to-market (instead of priced at par), cash flow CLO could very well begin to trip their overcollateralization (or OC) test, which in turn might create the next wave of forced unwinds – similar to, but much broader than the selling witnessed by market value CLOs during previous months.

Amid the extreme market uncertainty, some investors made opportunistic investments over the past few weeks, but most remained as sideline observers, wondering whether the market had reached rock bottom. The lender base may be at an inflection point: given today's depressed prices (and implied default and recovery rates), should they bid up the secondary market while compelling buying opportunities are still available? Or, given the extreme market uncertainty and lack of leverage, should they sit on whatever cash might still remain on hand? The rally that pushed the S&P/LSTA LLI higher by 2.85 percent between December 17 and 31 was the biggest two-week advance on record, suggesting that investors will choose the former.

S&P/LSTA Leveraged Loan Index Rating Distribution



CCC+ and Below Trade Activity 2007:Q1-2008:Q4



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