UNCONVENTIONAL TIMES CALL FOR AN UNCONVENTIONAL FED

EXECUTIVE SUMMARY:

From administering aggressive interest rate cuts to providing longer-term liquidity to financial firms; from accepting non-traditional asset collateral to assisting the Bear Stearns takeover by JPMorgan Chase; this Federal Reserve is unlike any we have seen in recent history. By throwing out the rulebook of central banking, some pundits say the Fed sets the precedence of taking on credit risk and creating bigger asset bubbles in the future. Others argue that the Fed was so behind the curve that nothing it does now can save the economy from a deep recession. The arguments notwithstanding, what might these Fed measures mean to the cash investors among us? How does it affect our potential yield and investment outlook?

While no one has a crystal ball to look into the future, certainly not in these precarious times, we feel the Fed is taking some extraordinary measures to avert a financial system meltdown. And while individual credit issues and risks are by no means behind us, we think we may have seen the worst of the nail-biting, cliff-hanging financial events of recent months.

Our macro investment strategy, being more conservative than we can remember, draws comfort from a Federal Reserve determined to stabilize the financial system. While we were disappointed with the Fed's early misjudgment of the worsening mortgage crisis, what we saw in the series of unconventional Fed measures led us to the conclusion… don't count the Fed out.

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LENDER OF LAST RESORT

The Federal Reserve system was created in 1913 in part to be the "lender of last resort" during crises such as the one now sweeping through the financial system. The new challenge to the Fed is that the non-bank financial firms and institutional investors have increasingly taken on the role traditionally reserved for depository institutions, those commercial and thrift banks and credit unions to which the Fed was equipped to provide credit. As such, the Fed has taken ever more innovative steps since last August to push its remedies beyond the banking system. For example, prior to the recently instituted Primary Dealer Credit Facility, the Fed had not lent emergency cash to non-bank financial firms since the Great Depression, though it has the authority to do so if five of its seven governors approve the measure.

The Fed, however, had intervened from time to time through various measures in specific situations to avert major financial crises. These periods included the rescue of the **Long Term Capital Management** hedge fund in 1998. Looking in the rearview mirror, there can be no doubt that our current financial system was and is riddled with complex financial instruments. The boundaries between banks and other financial firms have blurred. Securitization of assets and derivative contracts made credit risks more difficult to measure and hedge. And, market events since last August once again put the Fed to the test as the lender of last resort.

Table 1: Chronology of Fed Actions

Date	Fed Actions
Aug. 17, 2007	0.50% cut in the discount rate
	Extended term financing for as long as 30 days
Sept. 18, 2007	0.50% cuts in both the discount and Fed funds rates
Oct. 31, 2007	0.25% cuts in both the discount and Fed funds rates
Dec. 11, 2007	0.25% cuts in both the discount and Fed funds rates
Dec. 12, 2007	Announced 2 Term Auction Facility (TAF) programs of $20 billion each
Jan. 4, 2008	Increased the TAF programs to $30 billion ($60 billion)
Jan. 22, 2008	0.75% surprise inter-meeting cuts in the discount/Fed funds rates
Jan. 30, 2008	0.50% cuts in both the discount and Fed funds rates
Mar. 7, 2008	Increased the TAF programs to $50 billion each ($100 billion)
	Initiated 28-day term repurchases with primary dealers ($100 billion)
Mar. 11, 2008	Announced the $200 billion Term Securities Lending Facility (TSLF)
Mar. 16, 2008	0.25% cut in the discount rate
	Created the Primary Dealer Credit Facility (TSLF)
Mar. 18, 2008	0.75% cuts in both the discount and Fed funds rates

THE CONVENTIONAL MEASURE - AGGRESSIVE INTEREST RATE CUTS

As most market participants anticipated, the Fed went through an aggressive round of interest rate cuts once it realized the threats of the subprime mortgage credit crisis. Since the first discount rate cut on August 17, 2007, it has cut the discount window rate that banks can borrow from the Federal Reserve Banks seven times for a total of 3.75%, lowering it from 6.25% to 2.50%. The aggressive easing regimen took place over the short span of seven months through March 18, 2008 (See table 1). The central bank also lowered the target Fed funds rate six times by a total of 3.00% during the same period.

We suspect that, after the first two to three rate cuts, the Fed learned that interest-rate cuts alone were not going to solve the current liquidity crisis. It needed to be creative in using all available ammunition in its arsenal to supply as much liquidity as needed to stabilize the financial market, and it did. Out came a series of unconventional funding programs designed not to save individual players but to prevent the financial market from going into a tailspin. These measures were met with varying degrees of success, but their pace and increasing volume were quite breathtaking (See tables 1 and 2).

Table 2: The Fed's Unconventional Liquidity Programs

Program	Size	Form	Term	Participants	Collateral
Term Auction Facility (TAF)	$100 bln	Cash	28 Days	Deposit Institutions (Disc. Window)	Broad range
Term Repurchase Agreements	$100 bln	Cash	28 Days	Primary Dealers (Open Mkt. Op.)	Treasury, Agency/MBS only
Term Securities Lending Facility (TSLF)	$200 bln	Treasury Securities	28 Days	Primary Dealers	Agency & AAA-rated private label mortgages
Primary Dealer Credit Facility (PDCF)	No limit	Cash	1 Day	Primary Dealers (Disc.Window)	Investment grade securities of which a price is available

UNCONVENTIONAL REMEDIES – VARIOUS TERM LENDING FACILITIES

To understand the Fed's creative approaches, one must understand that much of the discount window borrowing, Fed funds lending, and dealer repurchase agreements are for the term of one day. Since August 2007, concerns with potential asset-backed commercial paper (ABCP) programs' subprime exposure resulted in most of the $900 billion ABCP debt to come due within seven days. The reluctance to lend beyond a very short time frame created tremendous near-term anxiety and longer-term uncertainty in the market.

Another important backdrop was that a number of market factors caused most non-government guaranteed debt to suffer marked-to-market valuation losses,

although the majority of prime mortgage, asset-backed, and corporate securities had yet to experience fundamental credit deterioration. Since securities dealers rely on the overnight repurchase agreement (repo) market in lieu of bank deposits to fund operations, the declining value of these assets as repo collateral put moderately capitalized securities firms such as Bear Stearns, acting as a repo counter-party, at a greater risk of a “bank run” when clients pulled assets and caused further liquidity losses.

The Fed’s unconventional approach to pump liquidity into the financial system clearly followed a measured path. It started with freeing liquidity to banks, and then extended the reach to investment banks, and finally expanded the types of collateral from Government and AAA-rated assets to include most investment-grade securities.

The Term Auction Facility (TAF) sought to solve short-term credit market liquidity by extending the overnight discount window borrowing to one month. Citibank, Bank of America and JPMorgan Chase were among the first major banks to borrow from the program to break the stigma associated with tapping the discount window. The size of the TAF grew from $40 billion in December 2007 to $100 billion in March 2008.

Similarly, the Fed extended the borrowing terms with securities firms such as Goldman Sachs and Morgan Stanley (primary dealers) from overnight to one month in its Open Market Operations. The size of the term repo facility amounts to another $100 billion.

After the market value declines of mortgage collateral caused another round of market contagion in March, the Fed instituted the Term Securities Lending Facility (TSLF) to provide well regarded Treasury collateral to primary dealers in exchange for Agency and Agency-backed mortgages for the dealers to use in repo transactions. This non-cash liquidity facility totaled $200 billion. In retrospect, Bear Stearns might have been the intended beneficiary of the TSLF. Unfortunately the first swap effective date was still 10 days away when Bear Stearns was forced into liquidation by rumors and trading counterparties.

The liquidity crisis at Bear Stearns and the potentially catastrophic effect of its fall on many firms that do business with it forced the Fed to scramble and reach deep into its toolbox for something more dramatic. In a hastily convened Board of Governors meeting on Sunday March 16, the Fed launched the Primary Dealer Credit Facility (PDCF) to lend directly to primary dealers “to promote orderly market functioning.” This facility allows the Fed to lend to primary dealers, including those who are not considered banks or depository institutions. This is

the first time since the Great Depression that the Fed has extended financing to non-banks.

Unlike previous programs, this is an overnight lending facility. However, it went beyond the previous AAA credit rating collateral requirement for primary dealers and will accept as collateral all investment-grade corporate securities, municipal securities, mortgage-backed securities and asset-backed securities for which a price is available. Unlike TSLF, dealers will receive cash reserves, not just US Treasuries. Neither will they have to wait for the weekly TSLF auction to tap the Fed.

The rapid introduction of these measures was in response to an escalating counterparty risk, or the risk of a securities dealer failing to honor the terms of a repo agreement. In the end, the acceptance of private-label mortgage securities and the accessibility of the discount window to securities firms may help to remove a major asset class in the financial system punished by a vicious cycle of margin calls.

WHAT'S LEFT FOR THE FED TO DO

The well-received market response to the assumption of Bear Stearns' counterparty risk by JPMorgan Chase and the tepid reaction to higher projections of credit losses suggest that the Fed's rapid-fire measures to inject liquidity at least partially worked. Goldman Sachs and Morgan Stanley were among the first to tap the PDCF "to test the water". As time passes, we expect the lagging effect of such measures to kick in, further stabilizing the liquidity situation.

Should new events develop or the risk of additional dealer defaults rise, we believe that the Fed will take more steps as necessary to contain market contagion. One such step may be the direct purchase of mortgage-backed securities. However, the Fed may exhaust other avenues first, as direct participation in the credit markets will introduce more credit risk onto the Fed's balance sheet, something that the Fed has already started by financing $29 billion of JP Morgan's acquisition of Bear Stearns.

CONCLUSION – CAPITAL PRESERVATION REMAINS THE GOAL

This eight-month-old credit market crisis, which began last August, is by no means over. On the "real" economy front, there must be definitive signs of stabilization in housing, labor and consumer data to confirm that we have

reached the bottom. In the market for cash investors, near-term credit and liquidity risk should drive investment decisions.

Despite the high probability of more interest rate cuts, the pricing disparity between Treasury securities and everything else reduces the attractiveness of extending portfolio maturities unless one is willing to take on more credit risk, an approach not advisable in the current environment. With expected higher credit losses and continued lack of market liquidity, we believe that capital preservation remains the primary goal, at least for the next three to nine months for most cash investors.

We think that the series of unconventional Fed measures provided investors with additional comfort in the viability of the top-tier financial firms. The Fed's intervention in preventing the failure of Bear Stearns suggests the vital role played by banks and securities firms larger and more diversified than the venerable Bear, not the least among which are the Government Sponsored Enterprises. We believe that more systematic support will be forthcoming from the Federal Reserve and the legislative and executive branches of the Federal government, should such support be required.

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