An Overview Of The Fed's Intervention In Equity Markets Via The Primary Dealer Credit Facility

"Although the main interests of the Federal Reserve are macroeconomic in nature, well-functioning financial markets are ancillary to good economic performance. Conversely, financial instability can compromise economic growth and price stability. Because of this intimate connection with economic performance, the Federal Reserve has a clear interest in promoting the stability of financial markets."

- Former Fed Governor Fred Mishkin, 2007

col·lat·er·al / k'lat'r'l; k'latr'l/ • n. **1.** something pledged as security for repayment of a loan.

Recently, Zero Hedge presented a snapshot analysis of the various securities that made up the triparty repo agreement involving JPM, Lehman and the Fed. We uncovered numerous bankrupt companies' equities that were being pledged as collateral for what ultimately was taxpayer exposure. To our surprise, this discovery is not an exception, and in fact in the days immediately preceding the collapse of Bear Stearns first, and subsequently, Lehman Brothers, the Federal Reserve established and refined a program that permitted banks to pledge virtually any security as collateral, including not just investment grade bonds and higher ranked securities, but also stocks of companies, the riskiest investment possible, and a guaranteed way for taxpayer capital to evaporate in the context of a disintegrating financial system, all with the purpose of bailing out Wall Street's major institutions. On two occasions last year: on March 16, 2008, and subsequently on September 14, 2008, the Federal Reserve first established what is known as the Primary Dealer Credit Facility (PDCF), and subsequently amended it, so that the Fed, in *becoming the lender of last resort*, would allow **any collateral, up to and including stocks,** to be funded by the Federal Reserve's credit facility, in order to prevent the $4.5 trillion repo financing system from imploding. By doing so, the Federal Reserve effectively gave a Carte Blanche to primary dealers to purchase any and all equities they so desired, with such purchases immediately being funded by the US taxpayer, via the PDCF. **In essence, this was equivalent to the Fed purchasing equities by itself through a Primary Dealer agent.**

Readers who have been concerned with the moral hazard provided by the Fed's monetization of Treasury and Mortgage debt, should be doubly concerned by this Fed action which sent three key messages to Wall Street: i) it made sure that Primary Dealers would generate massive profits on risky assets as the Fed would provide the funding to acquire any and all stocks (keep in mind the cost of funding of the PDCF to primary dealers was negligible); ii) it tipped its hand as to the existence and *modus operandi* of the rumored "plunge protection team," iii) and it made clear that the much maligned, by none other than Chairman Bernanke, concept of "moral hazard" is the one and only systemically relevant doctrine as long as the Fed's Chairman is in control, and not subject to any auditing auspices. The fact that PDs used over $140 billion of taxpayer money within a few weeks of the program's expansion in September to fund what one can assume were exclusively equity purchases, demonstrates that the American financial system got the message.

The (Triparty) Repo System

Before we get into the details of the Fed's Primary Dealer Credit Facility, it is prudent to present the beating heart of the American financial system, more so than securitizations or money markets, all of which went into cardiac arrest on several occasions in 2008: the Triparty Repo system.

As the name implies, a triparty repo transaction involves three parties: a cash lender (the investor), a borrower that will provide collateral against the loan, and a triparty clearing bank. The triparty clearing bank provides cash and collateral custody accounts for parties to the repo deal and collateral management services. These services include ensuring that pledged collateral meets the cash lenders' requirements, pricing collateral, ensuring collateral sufficiency, and moving cash and collateral between the parties' accounts.

Both the investor and the borrower must have accounts at the clearing bank, and all three parties are bound by legal documentation called the triparty repo agreement. In the United States, there are two triparty clearing banks: the **Bank of New York and J.P. Morgan Chase**. One of the operational benefits of triparty repos is that, regardless of the term of the loan, the clearing bank unwinds the transaction each morning, returning the cash to the investor's account and the collateral to the borrower's account. Then at the end of the day, the borrower pledges qualifying collateral back to the deal, which once priced, determined as eligible, and deemed sufficient to meet the terms of the deal by the clearing bank, is moved to the investor's account while the cash is placed in the borrower's aaccount. In this way, no specific collateral is committed for more than overnight. This arrangement allows borrowers to pledge whatever eligible collateral they have on hand each day, thus enabling them to manage their securities portfolios more effectively.

An important implication of this daily unwinding, however, is that the counterparty risk for the investor shifts from its repo counterparty to the triparty clearing bank, and the clearing bank becomes exposed to the borrower. Overnight, the cash investor has the borrower's collateral in its account and the borrower has the cash. If the borrower defaults overnight— say, by filing for bankruptcy—the lender has the collateral in its account and thus is covered and the clearing bank is not affected. Once the collateral and cash are returned in the morning, however, the clearing bank, which has extended credit to the borrower to finance the original collateral purchase, becomes exposed to the borrower. Consequently, the clearing bank needs to determine each morning if it is comfortable accepting the exposure to the borrower that the reversal of the transaction will create.

As readers will recall, the reason why Jamie Dimon blew up in his letter to Barclay's John Varley and in fact threatened with litigation, is that the latter attempted to stuff JPMorgan, as the Lehman triparty clearing house, with about $7 billion in collateral for which Barclays had suddenly gotten buyers remorse and decided it had no desire for, after prices plunged in the days after the Lehman bankruptcy.

Triparty repos are a subset of the broader repo market. As the name implies, a repo is a simple transaction where the holder of a security obtains funds by selling that security to another market participant with the understanding that the security will be repurchased at a fixed price on some future date. Very much like a simple mortgage transaction, the seller is borrowing funds against the security, usually as a means of financing the original purchase of the security. The buyer is

traditionally a pension fund, a money market mutual fund, or a bank, which makes what it assumes is a safe collateralized investment (using haircuts, more on that shortly), and in exchange it is paid a spread on the money forwarded. In today's economy most repos occur as triparty contracts, in which the clearing bank assesses the value of the collateral and imposes a haircut, or the difference between the estimated market value and a downside case for how much a lender can borrow. Logically, the size of the haircut reflects the collateral's riskiness. The following table which we presented previously discloses that haircuts determined by JPMorgan in the JPM/Lehman/Fed triparty repo. As one can see, the amount of haircut wiggle room is huge, and even when the taxpayer's money is on the hook for the full repo amount, the haircuts are still relatively tame. Yet if the fair value of the collateral is not properly determined for in a downside case, it pressures accelerated unwinds as banks are fully aware that what they have marked their securities making up their repos for an above FV. What results is a scramble for the exits as everyone attempts to unwind their repos first thereby causing a feedback loop where selling begets more selling, and the entire repo market grinds to a halt.

Chase Triparty Haircut Summary
Trades Maturing Sep 15, 2008
as of Sep 12, 2008

Collateral Allocated Summary	Prin ($Bn's)	Current Haircut	Fed Haircut	Variance	Impact
ASSET BACKS - INVESTMENT GRADE	1.1	15%	20%	5%	0.1
ASSET BACKS - NON-INVESTMENT GRADE	0.9	33%	20%	-13%	(0.1)
C1 - INVESTMENT GRADE CONVERTIBLES	0.0	15%	20%	5%	0.0
C2 - NON-INVESTMENT GRADE CONVERTIBLES	0.2	5%	20%	15%	0.0
CORPORATES - INVESTMENT GRADE	5.8	7%	20%	13%	0.7
‘RPORATES - NON-INVESTMENT GRADE	1.6	15%	20%	5%	0.1
JITIES	3.1	6%	20%	14%	0.4
"ERNMENT AGENCY	12.7	2%	6%	4%	0.6
[illegible]	20.7	2%	6%	4%	0.8
MONEY MARKETS	3.9	9%	20%	11%	0.4
MUNI	1.9	8%	20%	12%	0.2
OTHER	0.0	7%	20%	13%	0.0
PRIVATE LABELS - HIGH YIELD	0.6	19%	20%	1%	0.0
PRIVATE LABELS - INVESTMENT GRADE	1.8	13%	20%	7%	0.1
TREASURIES	21.2	1%	4%	3%	0.5
Grand Total	75.5	4%	9%	5%	3.9

<u>Why are haircuts an issue?</u>

The repo market is huge. At its peak it was bigger than the Money Market. At the Bear Stearns collapse in March 2008, there was over $4.5 trillion in repos (contrast that to Money Markets which peaked at around $3.8 trillion), of which the bulk is in overnight repos (we will get into the maturity variation on repos in a second). The chart below indicates the phenomenal growth of the repo system, as the banking system glutted itself on free and excessive credit over the past decade. From 1997, through its peak just over ten years later, the amount of outstanding repos at Primary Dealers increased by over 400%!

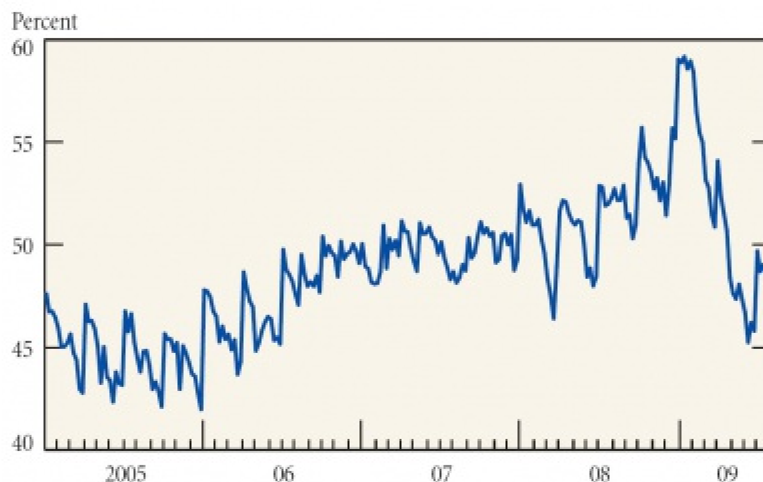
A critical observation is that beginning in about 2005, the amount of overnight repos quickly overtook the term repo outstandings. Why is this relevant? As the share of overnight repos increased and hit nearly 75% in 2008, it created a significant duration funding risk.

The urgent shift to shorter term financing meant that much more of the Primary Dealers' funding had to be rolled each day, at terms satisfactory to the clearing bank. With loans coming due

quickly, in a downward asset price spiral, dealers have to scramble to raise capital necessary to pay back creditors. Coupled with lenders tightening credit standards and suddenly imposing larger haircuts on loans (compare the Lehman to Fed haircuts above), and it become immediately obvious how the vicious cycle of deleveraging can accelerate without any natural breaking mechanism. In fact, a staggering $2 trillion worth of repos were extinguished in just over a year between the repo peak of $4.5 trillion in March 2008 and the latest reading of $2.5 trillion in July 2009.

A last side-effect of the credit bubble, was the increasing use of subpar and illiquid securities to make up the collateral of repo transactions. With only *so many* quality securities outstanding, banks found themselves scratching their heads how to legally continue the providing cheap credit against worse and worse assets. What resulted was an explosion in toxic junk backing repo agreements. In fact, according to estimates, "less liquid" collateral hit almost 60% of all repos at the peak in early 2009.

Prevalence of Less Liquid Collateral in Primary Dealers' Repo Transactions
January 5, 2005 – July 22, 2009



Sources: Federal Reserve Bank of New York; authors' calculations.

Notes: The chart reports repo transactions secured by less liquid collateral as a percentage of repo transactions secured by liquid collateral. Less liquid collateral includes corporate securities and mortgage-backed and other asset-backed securities.

The deterioration in underlying collateral quality made the subsequent repo implosion a virtual certainty. Originally focused on the highest quality collateral - Treasurys and Agency debt (ironically, Agencies and MBS are not more shunned by the entire investing community than CCC-rated HY paper, compliments of the Fed's market intervention efforts), by 2008 repos were using junk bonds, whole loans, trust receipts and even equities for collateral purposes. A side effect of more distressed collateral is less liquidity, and of course, when one most needs access to liquidity, i.e., unwinds of distressed positions, is when the liquidity is gone: in the event of the guaranteed crisis which the Federal Reserve completely failed to anticipate, the selling of illiquid securities would take time and occur and major losses to lenders.

The crisis

The repo market hit an all time high days before Bear Stearns was expected to file for bankruptcy, and then froze. In the first week of March 2008, liquidity in the repo market became strained. Creditors were worried not just about extended counterparty risk, but also about the actual creditworthiness of the collateral posted in repos: for the first time ever the banking system was forced to look at not just its own balance sheet, but those of competitors, and recoiled at what it saw. An immediate escalation saw repo haircuts increase dramatically, with the one security impacted the most being mortgage-backed securities for obvious reasons, but even traditionally safe securities such as Treasurys saw their haircuts grow substantially.

As the spike in haircuts forced dealers to shun the repo market entirely, they turned to other sources of short-term funding, namely the Eurodollar market (LIBOR). While the LIBOR market did not become the go to conduit for short-term arrangements during the Bear debacle, following the bankruptcy of Lehman Brothers all repo bets were off and dealers scrambled to satisfy their near-terms funding needs using LIBOR. The Resulting spike in the LIBOR rate can be seen in the chart below. Once 3M LIBOR was at about 5%, even the Eurodollar market was no longer attractive, leaving the only other option: massive asset firesales.

And here is the liquidity crunch in its full flow-chart glory:

1. If can not obtain short-term (overnight or term) funding in repo market, go to Eurodollar market
2. If can not obtain short-term funding in Eurodollar market (LIBOR), go to asset sales
3. If asset sales are impossible due to lack bids, illiquid markets, and collateral consists of toxic MBS and CCC-rated junk bonds, yet margin calls are streaming and repo counterparties are demanding their cash back, go to bankruptcy
4. File for bankruptcy

This would be natural chain of events in a normal capitalist country. However, America in times of stress is anything but - which is why enter 3.5 (after 3 and before 4): the Federal Reserve.

What the Fed did was to basically extend credit, first to Bear Stearns (through JP Morgan which ended up acquiring Bear's toxic asset mess, now better known as Maiden Lane as it continues to reside on the Fed's balance sheet), and second to Lehman Brothers (here JPMorgan was not the ultimate beneficiary of the "good bank," and instead it was merely the clearing agent of the triparty repo which had a very nervous Fed on one side, stuck with nearly $70 billion in worthless securities consisting of anything from defaulted CRE whole loans, to stock in hundreds of bankrupt companies.

Keep in mind this is not the first time the Fed has found itself in this situation: in 1998, when LTCM blew up, it was a dress rehearsal to the dot, along with the same feedback-loop driven evaporation of liquidity, as haircuts collapsed and nobody wanted to be on contingent to anyone else making rash decision. Yet there was one notable difference between 1998 and 2008: roughly $3.5 trillion (or 350% more) in outstanding repos: a number equally to about 30% of the US GDP, and a number sufficient to bring down the entire financial ponzi house of cards. Enter the Federal Reserve and the doctrine of encouraged moral hazard.

The Primary Dealer Credit Facility

On March 16, 2008, finding itself in a quandary as to how to unclog frozen repo markets, the Federal Reserve Board announced the Primary Dealer Credit Facility. Most notably from the press release is the disclosure on collateral: "Credit extended to primary dealers under this facility may be collateralized by a broad range of **investment-grade debt securities**." Note: not junk bonds, equities or any other toxic trash. At least at this point the Fed, while acting to preserve liquidity, still retained some semblance of fiduciary responsibility to the U.S. taxpayer.

A formulaic definition of the PDCF is provided below:

The PDCF program is based on the triparty repo legal and operational infrastructure that the Federal Reserve uses to conduct its repo operations. To access the PDCF, primary dealers communicate a demand for overnight funding to their clearing banks, typically by 5 p.m. ET on business days. The clearing bank verifies that a sufficient amount of eligible collateral has been pledged to the loan by the primary dealer and notifies the Federal Reserve Bank of New York accordingly. **Once the New York Fed receives notice that a sufficient amount of margin-adjusted eligible collateral has been assigned to its account, it transfers the amount of the loan to the clearing bank for credit to the primary dealer.**

The pledged collateral is valued by the clearing banks using vendor pricing services. Loans are limited to the amount of margin-adjusted eligible collateral pledged by the dealer and assigned to the New York Fed's account at the clearing bank. While loans under the PDCF are collateralized, they are loans made under recourse; thus, the primary dealer is responsible for repayment even if the collateral loses value overnight.

PDCF loans made to primary dealers increase the total supply of reserves in the banking system, in the same way that discount window loans do. When the Federal Reserve's Open Market Trading Desk was targeting a non-zero federal funds rate, the reserve impact of PDCF loans was offset using a number of tools, including, but not necessarily limited to, reverse repurchase

agreements, outright sales or redemptions of Treasury securities, a reduction in the size of conventional repo transactions, and use of the authority to pay interest on reserves. However, when the FOMC reduced the target fed funds rate to a range from zero to 25 basis points, there was no longer any need to offset or "sterilize" these loans.

As it does for loans made to depository institutions through the discount window, the Federal Reserve makes information on PDCF borrowing available each Thursday, generally at 4:30 p.m. ET, through its Statistical Release H.4.1, "Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks." The H.4.1 release reports the total amount of PDCF credit outstanding at the close of business on the previous business day as well as the average daily amount of credit outstanding for each week.

The legal authority to establish the PDCF is based on Section 13(3) of the Federal Reserve Act of 1913. Section 13(3), passed in 1932, allows the Federal Reserve to provide credit to individuals, partnerships, or corporations on an emergency basis. The central bank applied it to primary dealers for the purpose of establishing the PDCF.

So far so good: the Fed was concerned about maintaining liquidity and while one could find fault with some of its proposed haircuts on various security classes (see table above), overall due to the exclusion of risky assets, the Fed was mortgaging purchases of IG-rated collateral and above.

The twist

All through the spring and summer of 2008, the Fed was confident it had managed to glue the pieces together, and retain some semblance of stability. Then came that fateful weekend of September 13th about which so much has been written. In advance of the Lehman collapse, and what the Fed knew would quickly become a lock-up of not just money markets (which nearly occurred), but of the entire repo system, bringing practically all leveraged institutions to a halt and prompt liquidation, the Federal Reserve announced this little discussed amendment to the Primary Dealer Credit Facility:

For immediate release

The Federal Reserve Board on Sunday announced several initiatives to provide additional support to financial markets, including enhancements to its existing liquidity facilities.

"In close collaboration with the Treasury and the Securities and Exchange Commission, we have been in ongoing discussions with market participants, including through the weekend, to identify potential market vulnerabilities in the wake of an unwinding of a major financial institution and to consider appropriate official sector and private sector responses," said Federal Reserve Board Chairman Ben S. Bernanke. "The steps we are announcing today, along with significant commitments from the private sector, are intended to mitigate the potential risks and disruptions to markets."

"We have been and remain in close contact with other U.S. and international regulators, supervisory authorities, and central banks to monitor and share information on conditions in

financial markets and firms around the world," Chairman Bernanke said.

The collateral eligible to be pledged at the Primary Dealer Credit Facility (PDCF) has been broadened to closely match the types of collateral that can be pledged in the tri-party repo systems of the two major clearing banks. Previously, PDCF collateral had been limited to investment-grade debt securities.

The collateral for the Term Securities Lending Facility (TSLF) also has been expanded; eligible collateral for Schedule 2 auctions will now include all investment-grade debt securities. Previously, only Treasury securities, agency securities, and AAA-rated mortgage-backed and asset-backed securities could be pledged.

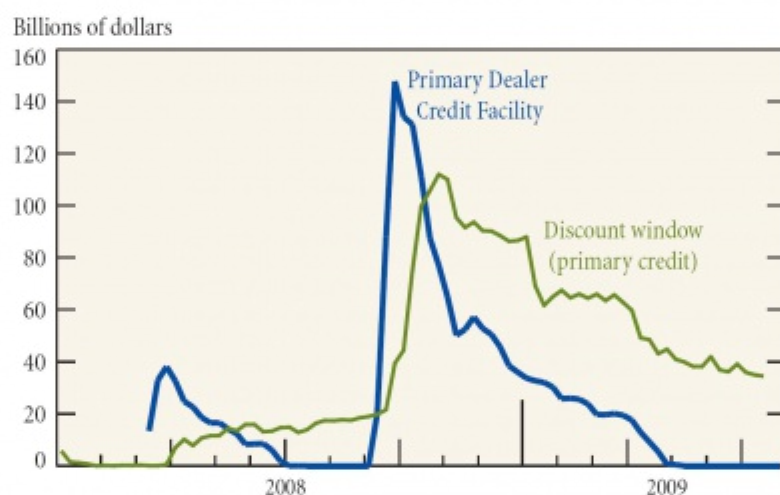
These changes represent a significant broadening in the collateral accepted under both programs and should enhance the effectiveness of these facilities in supporting the liquidity of primary dealers and financial markets more generally.

Also, Schedule 2 TSLF auctions will be conducted each week; previously, Schedule 2 auctions had been conducted every two weeks. In addition, the amounts offered under Schedule 2 auctions will be increased to a total of $150 billion, from a total of $125 billion. Amounts offered in Schedule 1 auctions will remain at a total of $50 billion. Thus, the total amount offered in the TSLF program will rise to $200 billion from $175 billion.

The Board also adopted an interim final rule that provides a temporary exception to the limitations in section 23A of the Federal Reserve Act. It allows all insured depository institutions to provide liquidity to their affiliates for assets typically funded in the tri-party repo market. This exception expires on January 30, 2009, unless extended by the Board, and is subject to various conditions to promote safety and soundness.

The bolded text is all you need to know to find the smoking gun for any and all allegations of "plunge protection" or however one wishes to frame the invisible market bid. On September 14th, 2008 the gloves cames off, when the Fed, stated in a press release no less, that it would provide virtually free taxpayer capital to banks so that they could go to the market and purchase equities!

What was the response? In a word: astounding, as bank after bank rushed to purchase however many equities they needed, funded by the Federal Reserve, as PDCF lending skyrocketed from $0 to $150 in a matter of days (and $59.7 billion overnight on Wednesday, September 17th, a day before the Reserve Fund's breaking the buck caused a near-run on money market accounts). The demand for Fed backstopped equity purchasing was so large that borrowings under the costless PDCF promptly surpassed those of the Fed's actual Discount Window which did not go much higher than $100 billion in the days after the Lehman bankruptcy.



Implications

Gradually the use of the Primary Dealer Credit Facility moderated and around April of 2009 there were no additional borrowings on the program. However, by this time, none more were needed, as banks did not need to use the PDCF-intermediated mechanism for the Fed to purchase stocks. Beginning in March 2009, the Fed was now running the capital markets directly, by pushing prices of "riskless" assets ever higher through its $1.7 trillion Quantitative Easing program, thereby making it all too clear to PDs and other financial institutions that moral hazard was once again tolerated and encouraged, as the Fed in essence announced that banks should be acquiring risky assets, as it was the "purchaser of last resort" of *riskless* ones. Furthermore, by being a self-professed "lender of last resort" as well, providing a perpetual backstop for an indirect way to bid up equities at a 50 bps funding cost, **the Federal Reserve has now managed to singlehandedly take over the entire capital market.**

With regards to moral hazard, the Fed had this to say with respect to whether it was encouraging this phenomenon by the promotion of the PDCF:

"Concerns have been raised that the PDCF, by offering primary dealers a liquidity backstop, encourages risky behavior. In this view, the facility effectively invites primary dealers to delay raising equity because they can instead borrow from the Federal Reserve. These "moral hazard" issues are similar to those that arise in the context of emergency lending to banks. The countervailing view, however, is that the PDCF functions to protect prudently managed institutions from the damaging consequences of the risks taken by highly leveraged firms. In the period following the Bear Stearns crisis and again after the collapse of Lehman Brothers, the liquidity provided by the PDCF helped reduce the spillover of distress to more conservatively

managed firms by enabling these firms to maintain their securities inventories and to fulfill their obligations to creditors and clients."

Alas, Mr. Bernanke, that has to be the weakest non-explanation explanation ever proffered by the Federal Reserve. Far from answering the question, it avoids it entirely by stating that the PDCF makes lives tolerable for those who, when the next credit implosion comes around, were not as greedy as the new Bears and the Lehmans of Credit Crunch v2. Yet in the meantime, PDs and banks should take full advantage of the Fed's market manipulating generosity courtesy of such middle-class devaluing constructs as Quantititve Easing, which all it does is kick the can down so the consequences of dealing with Wall Street's near collapse can be the next administration's problem, and the PDCF. We ask when, along with such other financial system crutches as TARP and TLGP, will the Fed finally eliminate the PDCF. After all the Fed has repeated many times that its sole purpose is to strengthen the US dollar and to work on behalf of America's hundreds of millions of taxpayers, not the thousands of kleptocrats working on Wall Street. It would be nice once in our lifetime to see the Fed actually put its (ironically, that would be our) money where its mouth is.

Lastly, the bigger question is when will Gramm-Leach-Bliley finally be repealed. As long as commercial banks and dealers are allowed to commingle their balance sheets, and as long as firms like Goldman which have yet to open even one deposit branch exist and have a riskless balance sheet courtesy of the American taxpayer, nothing will ever change. The Gramm-Leach-Bliley act from 1999 was the precursor for the current symptom of Too Big To Fail. And the administration's response to date has been to make the firms at the top, even more systematically critical, when it should be focusing only on how to disintermediate them from the very fabric of America's capital markets.

The CPDF provides a glimpse into the Fed's, up to now speculative, and hereby confirmed, willingness to (in)directly manipulate equity markets via its Primary Dealer network. If there is no risk associated with borrowing practically free taxpayer money, it is obvious that banks will manipulate stock prices to the point where nobody but other Primary Dealers who enjoy the same Fed backstop benefits will remain in the market. As more and more American retail and institutional investors realize the magnitude of the scam, the risk that equity markets will remain an isolated bubble in perpetuity where Primary Dealers simply play around with the Fed's excess capital, becomes tangible. And as long as there is no regulatory reform to commence the split of TBTF institutions, as long as financial system crutches persist and as long as the opportunity cost of being wrong is zero (and borne only by US taxpayers), US equity markets will continue to be a scam. Therefore, Zero Hedge advises all readers to immediately remove all their capital from the stock market, until such time as proactive steps are taken to remedy these numerous concerns, or alternatively suffer the consequences of not only another Fed inflated market bubble, but the even sadder consequences of its unwind.

h/t Richard