# Bank Recapitalization in the United States

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***Summary***

1. Debt and equity prices for U.S. banks at the close on Friday, November 21, indicated that the market is testing the resolve of the government to support the banking system. Allowing major banks to fail is not an option, as was made explicit in the G7 statement in mid-October. Significant recapitalization will be necessary to stem the pace of global deleveraging (the contraction of loans and sale of assets by banks around the world). However, the administration's strategy is not clear.

2. While full bank recapitalization is not a panacea, it is an important part of the policy mix that will get us through mid-2009, at which point a broader set of expansionary fiscal and – most important – monetary policies can begin to take effect.

3. The response this weekend by the U.S. authorities in providing financial support to Citigroup is a partial, overly generous, and nontransparent recapitalization, including a large guarantee for distressed assets – which is very close to the asset purchases that Treasury only last week said it would not do. This U-turn confuses the market (again), leaves the fate of other major banks unclear, and implies much larger contingent liabilities and little upside for the taxpayer. This approach will be difficult to repeat multiple times because of likely political backlash.

4. The most important goal now is to put in place a stable, transparent set of rules for bank recapitalization, with sufficient political support and limits on the scope for further policy changes. Mr. Paulson's seemingly haphazard approach has become a part of the system problem.

5. While all recapitalization options have problems, the "least bad" is requiring firms to raise more capital and, for those that cannot, injecting capital through substantial purchases of common stock by the government. These can be managed through a special purpose agency or control board, which is designed to keep credit from becoming politicized and to sell the equity stakes when market conditions are sufficiently supportive.

6. Another TARP-type round, on slightly tougher terms than October, may serve as an emergency stop-gap measure, but it will not solve the underlying problems and any positive effects could be short-lived.

Below, we briefly review the current situation, discuss important considerations in any scheme, and then run through what appear to be viable alternatives. Finally, we make our own "least bad" proposal.

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## 1. Current Situation

We published a broad assessment of the situation and policy options early on November 20 (Thursday) on WSJ.com: http://blogs.wsj.com/economics/2008/11/20/guest-post-markets-test-us-resolve/. On Thursday and Friday the outlook deteriorated significantly. Citigroup received the most attention, but credit default swap (CDS) spreads increased throughout the banking sector, suggesting that we (again) face a system problem.

U.S. authorities responded with a Citigroup bailout on Sunday night. The terms of this bailout are startlingly generous. Essentially Citi is partitioning off $300 billion of "bad" assets, and the government is absorbing 90% of the losses on these assets after the first 9.5%, in exchange for non-convertible preferred stock; this amounts to buying Citi's troubled assets at a high price, since they are probably being handed over using book values as of September 30, which means those assets have already fallen in value. Treasury is also injecting $20 billion under similar terms to the first TARP round. This looks like a great deal for shareholders (and Citi's stock gained 57% on Monday).

Unfortunately, this is far from a definitive solution to problems at Citi, let alone in the banking sector overall. Although Citi may be able to claim a larger amount of new capital, it only receives $20 billion in cash, and it faces up to $29 billion in losses on the guaranteed assets and an unknown amount of losses on the remainder of its assets (over $2 trillion, including off-balance sheet entities). Creditors need to see something sustainable and scalable to the entire system. The potential hole in U.S. financial balance sheets remains large.

*Insolvency of the banking system*

The underlying problem is that the banking system is severely undercapitalized if we mark to market banks' loan portfolios. The recent sharp fall in bank stock prices reflects rapid deterioration in asset prices on secondary markets and growing concerns that banks are already, in reality, insolvent. For example, AAA subprime debt issued in first half 2006 fell in value by 23% during the last month. This was previously considered "safe" subprime debt. Commercial backed mortgages and consumer debt fell sharply in November. Banks have also not provisioned for the implied losses in their hold to maturity portfolios. For example, Citigroup has provisions equal to 1.2% of total (on balance sheet) assets.

In the medium term, the best thing for the banking system will be overall macroeconomic improvement, which will improve expectations for the assets on bank balance sheets. In this context, an aggressive stimulus package can reduce the amount of money that will be required to protect core banks.

*Inconsistent policy*

American banks have been hurt by the inconsistent policy responses to bankruptcies so far. Despite being more leveraged, having less Tier 1 capital, and being backed by weaker sovereigns, the cost of funding to European banks (measured by credit default swaps) has remained relatively low because creditors are confident the governments will recapitalize banks without hurting the value of debt.

Citigroup's default swap rose to 492 basis points on Friday, implying a high risk of default over the next five years. Even after Monday it was still priced at 249 bp.

By contrast, European banks such as Barclays and UBS default are substantially below US levels, at 147 and 160 basis points respectively. This US-Europe difference reflects nervousness that future US bailouts may be similar to those of Lehman or AIG, in which creditors lost a substantial amount. Because the US government lacks a clear, stable strategy for dealing with banks both now and in the future when they have capital shortfalls, creditors do not understand exactly what risk they are taking.

**2. Elements for Any Potential Recapitalization Scheme**

Direct recapitalization is the purchase of common or preferred equity by the government (as TARP has been used since mid-October). An indirect approach would involve the government buying troubled assets (as in the original TARP proposal). Here are some issues to consider for each element of these potential approaches.

*Equity Injection*

The market capitalization of the major banks is now so low that any recapitalization program in which the government buys common equity at market prices will effectively lead to nationalization. For example, if the government provides Citigroup with new equity equal to 33% of book value ($41bn at end 2Q), the government will receive a majority of the equity. If the government injects similar new equity into Bank of America (pre-merger with Merrill) or JPMorgan it would own 30-45% of the bank.

If the government takes preferred equity, it would need to be at a fairly low (below-market) coupon in order to ensure that the banks can afford to pay the coupon without depleting capital. Since the coupons on preferred equity reduce future cash flows of the bank, these payments increase the cost of borrowing for the bank compared to common equity. It should be possible to provide a mix of common and preferred for some banks, but if the problem worsens, the balance will need to shift towards common equity.

It is impossible to know how much equity is needed given the current economic uncertainty. The more severe the coming recession, the more equity will be needed; any deflation would exacerbate the problem by causing the value of collateral at banks to fall. If we err on the side of providing a large amount of capital, the government will be the major source of capital to most banks. In any case, there needs to be a satisfactory pricing mechanism for common stock.

Some alternatives for common equity pricing are:

1. Price the capital well below market in order to avoid taking large ownership stakes in banks. This would be a major gift to shareholders and probably cause bank equities to rally sharply, easing access to capital in the equity markets.
2. Price the capital at market, but with a clause which permits the banks to buy back the equity at a reasonable return to the government in, say, five years time. This would help ensure that the

taxpayer gets a decent return, while also leaving upside for bank shareholders if the banks can repay the government. The main negative is that it could encourage excess savings by banks in order to conserve capital to repay the government at the end of the five years. In this scenario, the government would then have temporary control of most of the banking sector.

3. Price the capital at market and own effective controlling stakes in most large banks. The government would get full value today for taxpayer money at market prices. It would leave the government with effective control of most of the banking sector.

*Injecting Capital By Buying Assets*

The government could inject capital into banks by buying assets from banks. By removing nontransparent, illiquid assets, asset purchases should increase confidence in bank solvency. However, the government would take more risk since pricing of these assets would be unclear.

One means of reducing the risk of losses would be requiring contingent equity allocations to the government which are triggered if the assets do not achieve a reasonable return for the government over five years. This would mean that the government does not effectively control banks initially; however, in reality the government would still be a major source of capital.

*Overall: Reducing Uncertainty is Key*

Whatever form of recapitalization is chosen, a long term strategy with a credible structure is needed to remove uncertainties caused by policy U-turns. Clear, credible institutional structures for recapitalizing banks would allow all authorities to have a clear understanding as to what the obligations of taxpayers are. It would also provide markets with a clear statement as to how the government plans to deal with banks now and in the future, and it would reduce the uncertainty that has resulted from changes in policy direction.

One possibility is to create an entity similar to the Resolution Trust Corporation which is mandated to recapitalize banks via a chosen scheme. The key point is that the RTC was rules-based. (Of course, it was for financial institutions that had failed or had been taken over, and the situation today is not at that stage.)

The existing TARP program is an example of what not to do. The leeway provided to Treasury gives market participants and banks little understanding as to what terms will be, who has access, etc. TARP is fine for emergency temporary relief, but a clear formal structure is needed in the future.

## 3. Specific Options

Three specific options are below. In each case we are assuming that the regulators initially determine whether the bank is a going concern. If they are, clear rules need to be published to determine the extent and terms of access to funds.

OPTION ONE: EXPAND THE TARP PROGRAM <u>AND</u> MAKE IT PERMANENT

The most simple and least obtrusive solution would be to continue with TARP but make the program far more clear about terms for funds, who is eligible, application procedures, etc. The government could provide equity to banks via preferred shares at a low interest rate, and a small number of warrants. TARP is cheap financing for banks, so shareholders will benefit. New terms could be added to make small improvements to the program, such as prohibiting shareholder dividends or requiring specific lending commitments. Because the shares are non-convertible, this avoids the prospect of government control.

It is critical in this option that the program be made permanent; otherwise, it is only a stop-gap solution. For example, Treasury just gave Citigroup $20 billion. However, investors might plausibly believe that Citi is looking at $100 billion in future writedowns, and will have to come back again and again. If the market does not have confidence that the government will be willing to buy preferred shares on the same terms for as long as is necessary, it will continue to have doubts about Citigroup's future.

Potential problems:

1. Financial institutions which do not receive TARP funds are at a disadvantage, so by choosing who does and does not receive funds the Treasury is picking winners and losers.
2. Some banks will need more funds than others to survive. Banks that require a large amount of funds may not be able to afford the 5% (or 8%) interest on the preferred shares; payments may have to be accrued but delayed for some period of time.
3. Subsidized assistance to banks can distort incentives if the program lasts for a long time.
4. Perhaps most importantly, taxpayers are effectively subsidizing the recipients since funds are at attractive terms, which weaken political support.

OPTION TWO: PROVIDE COMMON EQUITY TO RECAPITALIZE BANKS

Another simple option is to continue with a version of TARP in which the government buys common equity at or below market prices. This approach prices the assistance appropriately, so taxpayers will be better remunerated. The government could then decide whether it wants to appoint independent directors to the board to represent its interests. In the UK the government will not appoint directors; however, there are clear signs that the Treasury aims to influence the decisions of state-controlled banks. It would make sense to create an independent institution that manages the shareholdings on behalf of the taxpayer, as an investor, with a mandate to sell all stakes within, say, ten years. Based on European experience, this would provide confidence that the banks will be safe from default, and so reduce funding costs to banks.

Potential problems:

1. While an independent institutional structure to manage shareholdings will reduce conflict with politicians, the structure of governance is not very attractive.

2. There is a danger that credit will become politically directed and that this will lead to substantial new problems down the road.
3. Given the current market values of major banks, this could quickly constitute effective nationalization, which may undermine political support. Creating an independent institution to manage the government's stakes will help defuse this charge.
4. Government support will ensure that share prices will not go to zero, which will put a floor under share prices. However, because this option does dilute existing shareholders - and because it is not especially generous - it could hurt the share price of participating banks.

OPTION THREE: CREATE A NEW RESOLUTION TRUST CORP MANDATED TO PROVIDE EQUITY TO BANKS IN RETURN FOR ASSETS

A third option is to create a new Resolution Trust Corporation with a mandate to buy assets from banks; this would be similar to the original TARP concept. In order to protect taxpayers from mispricing (perhaps the biggest single gap in the original proposal), the RTC could demand contingent compensation through an equity issue. For example, it could receive warrants to purchase shares in the banks, at 1 cent per share, equal in value to the assets purchased. These warrants would be returned to the bank once the assets are sold by the RTC if the assets earn a minimum return (say 7% per year). If the assets do not earn that return, the bank can pay in enough cash to reach the target return; if the bank does not pay the cash, the RTC sells the warrants to achieve that return. The RTC would appoint an independent asset manager to manage those assets, with a mandate to sell them after five years, but before ten years, from the purchase date.

For example, suppose the RTC buys 5% of Citigroup's assets. It would pay $100bn for these assets, and the RTC would receive warrants on 83% of Citigroup's equity (based on the market value at Friday's close). In five years' time it would be clearer what these assets are truly worth. If the assets generate more than a 7% return, then Citigroup does not have to do anything. If the assets generate less than a 7% return, Citigroup can pay enough cash to get the RTC to 7% and the RTC will return the warrants. If Citigroup does not make the payment, the RTC can sell the 83% stake to strategic investors.

The main advantage of this scheme is that it permits banks to remove toxic and illiquid assets from their portfolios, while providing taxpayers with substantial protection against losses with the contingent equity. The equity also means there is less concern about pricing, since the government can always sell equity to cover losses after five years. It also gives banks the opportunity to avoid large dilutions if the economic situation turns out well, while if the economy is weak they will have made share issues at current market prices to finance losses on the assets they sell to the RTC.

Potential problems:

1. The asset purchases do less for capital ratios than direct capital injections, so more funding is needed. In some case the equity needs are so large that it would only make sense to combine this with capital injections.

2. The large contingent share issue which overhangs banks may make it more difficult to access equity markets, at least until there is greater clarity regarding the underlying asset values and solvency of banks' balance sheets.
3. This scheme is relatively complex and hard to explain. Under today's circumstances, it may not garner sufficient political support.

**4. Our Recommendation**

A large-scale, well-defined, rules-based recapitalization program for U.S. banks is urgently needed. However, repeating TARP on its original terms is unlikely to have political support, and the latest Citigroup bailout is too small, is too nontransparent, and has too little value for taxpayers to be scalable. A comprehensive asset purchase scheme with protection for taxpayers is promising on paper, but is too complex for the moment and will not get political support.

In order to create long-term confidence in the banking sector, major banks should be required to raise a substantial amount of equity, either from the private market or from the government. For banks that raise capital from the government, the taxpayer will need to put in so much money relative to the existing market value of banks that effective government control over banks will result. It would be better to be honest about this and immediately set up structures to limit political influence over credit. In addition, this recapitalization program will require the release of the second $350bn tranche of TARP money.

Bank recapitalization will not solve the larger economic and financial problems, and even a massive fiscal stimulus will, at this point, only have limited effects. (A more coordinated fiscal stimulus within the G7 would be better, but there is little sign that Europe is moving in this direction.) Only a substantial further easing of monetary policy, with the explicit goal of creating inflation, offers a reasonable prospect of avoiding a deep and long recession, or worse.

If comprehensive bank recapitalization cannot work in the current political environment, another TARP round (on tougher terms compared with October, but still fairly generous terms to existing equity holders) could serve as a stop-gap measure until the new administration takes office. But it should not be confused with a real solution.