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BUYING TROUBLED ASSETS

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*Lucian A. Bebchuk**

Abstract

This paper analyzes how government intervention in the market for banks' troubled assets is best designed, and also uses this analysis to evaluate the public-private investment program announced by the U.S. government in March 2009. I begin by presenting the case for using government funds to restart the market for troubled assets. I then discuss the advantages of providing government capital to competing privately managed funds, a strategy I have advocated in past work, and I outline the key elements that such a plan should include.

Based on this analysis, I propose three improvements to the government's current plan:

- Introducing a competitive mechanism that would ensure that the government's subsidy to participating private parties is kept at a minimum;
- Redesigning the plan to provide such private parties with incentives aligned with those of taxpayers rather than highly skewed incentives to overpay for troubled assets; and
- Precluding banks that hold significant amounts of troubled assets from participating as managers or private investors in funds set up under the program.

The proposed changes would address most of the concerns that have been raised by critics of the administration's program. In particular, they would reduce costs to taxpayers, prevent excessive and unnecessary gains by private parties, and produce market prices that can be relied on for valuing assets that remain on banks' books.

JEL classification: E5, G1, G2, H3, H5, H6, K2, N2
Key words: Troubled assets, toxic assets, public-private investment program, bailout, financial crisis, banks, financial stability, U.S. Treasury.

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* William J. Friedman and Alicia Townsend Friedman Professor of Law, Economics, and Finance, Harvard Law School; Research Associate, National Bureau of Economic Research. This paper builds on and incorporates elements of my September 2008 and February 2009 working papers on using privately managed funds for buying troubled assets, "A Plan for Addressing the Financial Crisis" (Harvard Law and Econ. Discussion Paper No. 620) and "How To Make TARP II Work" (Harvard Law and Econ. Discussion Paper No. 626).

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I. INTRODUCTION

An attempt to restart the market for the "troubled assets" clogging banks' balance sheets—mainly housing-related loans and securities—has been a central element of the plans of the Bush and Obama administrations for dealing with the major financial crisis that erupted in the fall of 2008. The Bush administration proposed in September 2008 to spend $700 billion of public funds on direct purchases of these assets, but abandoned this plan after encountering fierce objections that it would be difficult for the Treasury to value troubled assets.[1] The Obama administration, in turn, announced in March 2009 a plan ("the public-private investment program") for investing up to $1 trillion to finance competing and privately managed funds dedicated to buying troubled assets.[2]

In both a white paper and a *Wall Street Journal* op-ed piece published in September 2008,[3] I put forward the use of such competing and privately managed funds as an alternative to the Bush administration's plan for direct purchases of troubled assets by the government. Subsequently, in February 2009, following Treasury Secretary Geithner's announcement that the current administration was seeking to develop a program to partner public and private capital, I issued a discussion paper putting forward a detailed design for a program of public-private funds for buying troubled assets.[4] As will be discussed, the design announced by the administration in

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[1] *See* Press Release, U.S. Dep't of the Treasury, Fact Sheet: Proposed Treasury Authority to Purchase Troubled Assets (Sept. 20, 2008), *available at* http://www.treas.gov/press/releases/hp1150.htm; *see also* LEGISLATIVE PROPOSAL FOR TREASURY AUTHORITY TO PURCHASE TROUBLED ASSETS, http://graphics8.nytimes.com/packages/pdf/topics/paulsontext.pdf**.**

[2] *See* Timothy Geithner, Editorial, *My Plan for Bad Bank Assets*, WALL ST. J, Mar. 23, 2009, at A15; Press Release, U.S. Dep't the Treasury, Treasury Department Releases Details on Public Private Partnership Investment Program, (Mar. 23, 2009), *available at* http://www.ustreas.gov/press/releases/tg65.htm.

[3] *See* Lucian Bebchuk, "A Plan for Addressing the Financial Crisis" (Harvard Law and Econ. Discussion Paper No. 620), *reprinted* as "A Better Plan for Addressing the Financial Crisis" in 5 *The Economists' Voice*, Issue 5, Article 6 (2008) and *in* 12 *Wall Street Lawyer* 10 (2008); Lucian Bebchuk, Editorial, *How to Pay Less For Distressed Financial Assets*, WALL ST. J, Sept. 26, 2008.

[4] See Lucian Bebchuk, *How To Make TARP II Work* (Harvard Law and Econ. Discussion Paper No. 626, 2009). This discussion paper is summarized in Lucian Bebchuk, Editorial, *Jump-Starting the Market for*

March 2009 both overlaps substantially with, and differs significantly from, the design that I proposed and continue to support.

Building on my earlier work, this paper presents the case for devoting public funds to restarting the market for troubled assets, discusses the key elements that an effective and economical program for doing so should have, and puts forward proposals for fixing significant problems with the administration's current design. These proposals, I show, would effectively address key concerns that have been raised by critics of the administration's current design.

Section II starts by discussing why government intervention in the market for troubled assets may be warranted. I take issue with claims by Paul Krugman and others that any belief that the fundamental value of troubled assets could exceed the low prices currently offered for them must represent wishful thinking. Because lack of sufficient capital that is committed for a long period may currently be preventing arbitrageurs from taking hold-to-maturity positions in the market for troubled assets, I argue, current prices may fall below the fundamental value of troubled assets.

Section II then puts forward three key elements that an effective program for restarting the market for troubled assets should have. First, at the level of buying such assets, the program should focus on establishing many competing funds that are privately managed, not one aggregator bank. Second, the program should attract not only private management but also private contributions of capital, and it should be carefully designed to align the interests of the private side in each fund—the private manager and private investors coming with it—with the interests of taxpayers. Third, to keep costs to taxpayers at the minimum level necessary to induce the desired level of private participation, the terms offered to the private side should be set using a competitive process in which private parties bid to participate in the program.

Based on Section II's analysis, Section III puts forward three proposals for improving the administration's current design significantly. The current plan should be supplemented with a competitive mechanism to prevent excessive and unnecessary costs to taxpayers. In addition, the

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Troubled Assets, FORBES.COM, Mar. 3, 2009, http://www.forbes.com/2009/03/03/troubled-assets-relief-opinions-contributors_bad_bank.html.

plan should be redesigned to provide the private side with incentives aligned with taxpayers' interests rather than with highly skewed incentives to overpay for assets at taxpayers' expense. Finally, in contrast to the current design, banks that already have large holdings of troubled assets clogging their balance sheets should not be permitted to participate as either managers or investors in funds set up to buy troubled assets under the program.

The proposed improvements would address fully many of the concerns that have been raised by critics and opponents of the administration's program. They would reduce the program's costs to the necessary minimum, prevent private parties from reaping excessive and unnecessary gains, and produce prices that can be reliably used to value assets remaining on banks' books. Unlike most of the criticisms of the administration's plan, the critique offered in this paper does not oppose the program altogether. Rather, I seek to offer a constructive review aimed at improving the program's current design and enabling it to address key criticisms.[5]

Throughout, I stress that, even though the program for buying troubled assets could make a valuable contribution, it cannot be relied on exclusively to solve the financial sector's problems. The plan should be supplemented by, and will nicely complement, a program for facilitating injections of capital into banks that will remain undercapitalized even if their assets are fairly valued. The need to reserve some of the government's ammunition for such capital injections makes the proposed improvements all the more necessary.

II. THE COMPETING FUNDS APPROACH: VALUE AND BASIC PRINCIPLES

A. The Case for Intervening in the Troubled Assets Market

The premise underlying the Obama administration's plan, as well as the prior administration's plan, is that the banks' current problems are at least partly due to the freezing

[5] For other work that seeks to improve the design of the administration plan, see Lawrence M. Ausubel & Peter Cramton, A Two-Sided Auction for Legacy Loans (Mar. 2009), *available at* http://www.cramton.umd.edu/auction-papers.htm, and Lawrence Ausubel et al., Common-Value Auctions with Liquidity Needs: An Experimental Test of a Troubled Assets Reverse Auction (Dec. 2008)**,** *available at* www.cramton.umd.edu/auction-papers.htm.

up of the market for many kinds of troubled assets. Banks currently can sell these "troubled assets" only at a very deep discount from face value.[6] Banks have largely avoided selling assets at such low prices, and the market for troubled assets has seized up, making it difficult to attach a "market value" to many of these assets. The Treasury believes that the substantial uncertainty about the value of banks' illiquid troubled assets makes it difficult for banks to raise additional capital and weakens their ability to carry out their important lending roles effectively.

There is general agreement that the fundamental economic value of most troubled assets—the discounted present value of their hold-to-maturity payoffs—has declined below face value due to declines in the value of houses and other asset classes in the economy. Thus, many troubled assets can be expected to be priced below face value in a well-functioning market. The premise underlying the Treasury's plan, however, is that the market for troubled assets is not well-functioning at present, and that banks may be unable to sell such assets at prices reflecting fundamental economic values.

Critics of the administration's plan claim that the Treasury has no basis for believing that troubled assets have fundamental values exceeding the low prices banks can now get for them. Paul Krugman and Tim Duy argue that policymakers "seem incapable of envisioning a world in which this is not the case" and that "[f]or Bernanke and Geithner, there are no bad assets, only misunderstood assets."[7] According to James Kwak, the belief that troubled assets have fundamental values exceeding current market prices is "wishful thinking."[8]

But although policymakers may not be justified in assuming that current prices *must* be substantially below fundamental value levels, they are justified in believing that this *could* be the case. To begin with, to the extent that the financial crisis was preceded by a bubble in which market participants attached valuations *exceeding* fundamental values to what are now labeled

[6] In one transaction that received significant attention, Merrill Lynch sold a portfolio of CDOs to hedge fund Lone Star for 22 cents on the dollar. See *Thain Takes the Pain*, THE ECONOMIST, July 31, 2008, at _.

[7] See Paul Krugman, *Zombie Financial Ideas*, The Conscience of a Liberal, Mar. 3, 2009, http://krugman.blogs.nytimes.com/2009/03/03/zombie-financial-ideas/; Paul Krugman, *Despair over Financial Policy*, The Conscience of a Liberal, Mar. 21, 2009, http://krugman.blogs.nytimes.com/2009/03/21/despair-over-financial-policy/.

[8] See James Kwak, The Geithner Interview, The Baseline Scenario, Mar. 1, 2009 http://baselinescenario.com/2009/03/01/tim-geithner-planet-money-interview/.

troubled assets, we should be similarly prepared to accept the possibility that market processes once again are not working well – but now in the opposite direction.

The "limits to arbitrage" literature teaches us that asset prices can deviate substantially from fundamental values.[9] This can happen when money managers with the expertise to value such assets are unable to obtain sufficient capital from investors committed to leaving that capital with them until fundamental values are realized. In the aftermath of the financial crisis of 2008, obtaining capital that can be locked in for several years in funds dedicated to buying housing-related loans and securities is difficult. If money managers raise only capital that investors are allowed to withdraw after, say, a year, such managers may well be reluctant to invest in troubled assets – even in those they know will produce high returns after several years – out of fear that they will have to liquidate their portfolios at a loss after one year.

If "limits to arbitrage" thus lead to prices below fundamental values, then a governmental program that introduces into the market a large amount of "patient" capital— capital that is willing to commit for a long period of time—will be useful. The government does not have the same liquidity problems as private investors, and thus can easily bear the liquidity costs of investing money in funds from which capital may not be withdrawn for a significant number of years.

B. Key Feature I: Competing and Privately Managed Funds

Let us now turn to examine how a government program to provide funding for the purchase of troubled assets should best be structured. Direct purchases of such assets by the government would require public officials – who do not have market discipline and market incentives – to decide which assets to buy and how much to pay. Therefore, as I argued in earlier work, a government program for buying troubled assets, should seek to have such decisions made by private managers with appropriate market incentives.[10]

[9] See, e.g., Andrei Shleifer and Robert W. Vishny, *Equilibrium Short Horizons of Investors and Firms*, 80 AM. ECON. REV. PAPERS AND PROCEEDINGS 148 (1990).
[10] See sources cited in *supra* notes 3 and 4.

After the current administration subsequently announced its interest in working with private parties, one approach under consideration has been that of setting up a privately managed large "aggregator" bank, referred to as a "bad bank."[11] Under this strategy, an aggregator bank would be funded with, say, $500 billion, in public and private money, for use in purchasing troubled assets. Because the bank would be run by private managers, the argument goes, it could be expected to make better purchasing decisions, and produce a lower risk of overpayment, than could direct purchases by the government.

But even though involving private parties is desirable, an aggregator bank is not a good way to do so. The key problem is that an aggregator bank adds only one additional buyer, albeit a big one, to the market. Suppose that, due to the current lack of buyers, banks can sell troubled assets of a certain type only at a low price – say, twenty cents on the dollar – that is substantially below fundamental economic value. To the extent that the aggregator bank is run in a profit-maximizing way, the bank will push for a price as close as possible to twenty cents on the dollar, and introducing the aggregator bank would not bring about the prices that effective competition on the buyers' side would be expected to produce. Alternatively, if the aggregator bank is structured to seek to pay the "right price" rather than drive as hard a bargain as possible, we are faced again with the problems of arbitrary valuation outside a market context – the very problems that rightly led to the rejection of the Bush administration's plan for direct governmental purchases of troubled assets.

Thus, to avoid problems of arbitrary price-setting, introducing only one additional buyer, even if that buyer is privately managed, is not sufficient. Rather, it is necessary to introduce a significant number of competing privately managed buyers armed with sufficient additional capital.

Assume that the government wishes to introduce an additional $500 billion of capital into the buying side of the market for troubled assets. And suppose that, rather than establishing an

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[11] See, e.g., Douglas J. Elliott, The Administration's New Financial Rescue Plan (The Brookings Institution Initiative on Business and Public Policy Working Paper, 2009), *available at* http://www.brookings.edu/~/media/Files/rc/papers/2009/0210_bank_rescue_elliott/0210_bank_rescue_elliott.pdf; Lawrence M. Ausubel and Peter Cramton, Making Sense of the Aggregator Bank, 6 ECONOMISTS' VOICE _ (2009).

aggregator bank with $500 billion, the government sets up a significant number – say 25 – of "bad bank" funds, each with a capital of $20 billion and each run by a private manager compensated with a share of the fund's ultimate value. The existence of a significant number of privately managed buyers armed with substantial capital will restore a vibrant market for troubled assets.

With such a program in operation, we will have a market in which many potential sellers (banks) face a significant number of potential buyers (the funds). The funds' private managers will have incentives to pay as little as possible for troubled assets, while the selling banks will have incentives to get as much as possible for these assets. The market for troubled assets will no longer be plagued by the problems on the buying side that the government seeks to address.[12]

C. Key Feature II: Attracting Private Capital Aligned with Taxpayer Interests

I have thus far discussed the value of having funds set under the government's program managed by private parties. In addition to management, however, it might also be useful to induce private parties to contribute capital to the competing and privately managed funds.

This private capital may be contributed by the private manager (to the extent that the manager has sufficient capital). Alternatively, the private manager may line up investments from other private parties, which is what the administration's plan contemplates. To do so, the private manager may conclude with these private parties contractual arrangements that will govern the relationship between them. Even if the private manager and the affiliated private investors do not enter into contractual arrangements that enable the manager to receive some of the benefits captured by the private investors, prior relationships or expectations of future relationships may well align the interests of the private manager and those of the private investors. Therefore, for

[12] The market might still suffer from an unwillingness of banks' managers to sell troubled assets even if the prices offered reflect fundamental values. This problem arises from (1) accounting rules that enable such managers to avoid recognizing losses on assets whose fundamental value declined below face value as long as they do not sell them, and (2) the managers' alignment of interests with banks' shareholders which may be wiped out if recognition of losses requires raising additional capital. I analyze these problems and how they should be addressed – issues that are beyond the scope of this paper – in a forthcoming paper with Holger Spamann, "Regulating Bankers' Pay."

the purposes of most analyses, it is useful to think of the private manager and the affiliated private investors as a group, and I therefore refer to them collectively as "the private side" in funds set under the program.

Having the private side contribute some capital is useful even if the lion's share of the funds' capital is financed with public money. Requiring the private side to put up some capital will help with the screening of private managers. Private investors will tend to join with those potential managers whom they view as best in running the considered funds. Furthermore, once a fund is set, the private investors may contribute to monitoring the manager's performance and to strengthening the manager's incentives to perform well.

Whether the presence of private capital will have a socially beneficial effect, however, depends on whether the interests of the private side are aligned with those of taxpayers. To the extent that such alignment exists, the private parties that make up the private side will have incentives to seek outcomes that maximize the value of the fund – and thus best serve the interests of taxpayers. Conversely, when the private side's interests diverge from those of taxpayers invested in the fund, the private side will have distorted incentives and may seek outcomes that adversely affect, not serve, taxpayers. As will be discussed in Section III.C, the administration's current design suffers from a problem of misaligned interests that should be fixed.

D. Key Feature III: Competition among Private Parties for Participation in the Program

The third key feature concerns setting the terms of participation in the funds established under the government's program—and thus the magnitude of subsidy—for the private side. To ensure that the program's costs to taxpayers are kept at a minimum, these terms should be set using a process in which private parties compete for participation in the program.

Because private capital has not yet flowed in large amounts into the market for troubled assets, the Treasury believes it is necessary to provide the private side with more favorable terms than those that could be obtained by establishing private funds unaffiliated with the program. That is, to attract private capital to funds dedicated to buying troubled assets with a long lock-in period for invested capital, the private side must be granted a "subsidy" or "sweetener." The important question is how to do so *only* to the minimum extent necessary to induce the desired level of private participation.

The best way to ensure that the program's costs are kept at a minimum, I submit, is to set up a competitive process in which 1) potential private managers (and any affiliated private investors) submit bids indicating (i) the minimum terms acceptable to them, as well as (ii) the size of the fund they would establish if admitted into the program, and 2) the government sets the terms for all funds in the program at the level most favorable to taxpayers and still consistent with private participation at the desired level of aggregate capital. Without such a competitive mechanism, any *ad hoc* setting of the program's terms that attracted sufficient participation by private parties would raise substantial concerns that the government is overshooting, possibly by a large margin, the level of subsidy necessary to induce private participation.

This general approach can be implemented in a simple and effective way under many of the alternative structures that the funds may take. As the discussion in Section III.A will illustrate, for any given chosen structure, one can generally find a key dimension that determines the level of subsidy to the private side, and then have potential managers compete over the level of this key dimension. A mechanism ensuring that costs to taxpayers do not substantially exceed the minimum necessary amount would substantially improve the administration's current design, which lacks this important feature.

E. Beyond Buying Troubled Assets

It should be stated at the outset that making the market for troubled assets well-functioning would not by itself return the banking sector to normalcy. A well-functioning market will convert some of the troubled assets held by banks into cash and, importantly, provide more reliable valuations for troubled assets that banks keep. Although these outcomes might confirm the claims made by some banks about the value of their assets, they may also lead to a clear recognition that other banks are insolvent or undercapitalized.

As stressed earlier, critics of the administration's plan should accept that the fair value of some troubled assets may exceed the low prices now paid for them and that restarting the market for such assets may consequently improve the financial position of some banks. At the same time, however, the Treasury should also recognize the serious possibility that many banks may well remain insolvent or undercapitalized even when their assets are valued fairly. Although the administration is now in the process of conducting "stress tests" to determine which banks fit this description, I share expressed concerns that it has not yet prepared sufficient resources and detailed plans for dealing with such situations.

While I support government funding for restarting the market for troubled assets, I also believe that the troubled-assets program should not be the sole or even central element of the government's effort to stabilize and invigorate the banking sector. The troubled-assets plan should be supplemented by a program that injects capital into banks that will remain insolvent or undercapitalized even if their assets are valued fairly. Indeed, the troubled assets plan will nicely complement the program for recapitalizing banks by providing a clearer picture of which banks are insolvent or undercapitalized and thus making it easier to target capital injections to banks most in need of capital.

The fact that restarting the market for troubled assets may not obviate the need for substantial capital injections into some banks makes it all the more important to minimize the costs imposed on taxpayers by the program for buying troubled assets. It is important to reserve as much of the government's ammunition as possible for the other tasks that still lie ahead.

III. IMPROVING THE DESIGN OF THE ADMINISTRATION'S PLAN

The administration's public-private investment plan for buying troubled assets is complex.[13] There are in fact two separate programs: the legacy securities program, and the legacy loans program. The legacy securities program will facilitate funding for purchases of real-

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[13] Comprehensive information about the administration's plan can be found on the Treasury webpage devoted to the public-private investment program. For a good review of the details of the program's current design, see Davis Polk & Wardwell, The Public-Private Investment Program, Mar. 25, 2009, *available at* http://www.dpw.com/1485409/clientmemos/2009/03.25.09.PPIP.pdf.

estate-related securities, with public support coming in the form of financing from the Treasury (using TARP funds) and the Federal Reserve. The legacy loans program will facilitate funding for purchases of pools of loans held by financial institutions, with public support coming in the form of funding from the Treasury (again, using TARP funds) and from FDIC guarantees for debt issued to finance these purchases. The programs differ somewhat from each other, and there is some complexity and variation within each. Three key features, however, run across the programs and also depart from the principles put forward in Section II:

(1) Ad hoc setting of terms for the private side's participation: Under the current design, the government sets the extent to which the private side will enjoy favorable terms in an *ad hoc* fashion; there is no assurance that the level of subsidy that private parties will enjoy will not greatly overshoot what is necessary to induce their participation.

(2) Divergence between the interests of the private side and those of taxpayers: In funds and purchases financed under the program, the terms set by the current design will produce a substantial divergence between the interests of the private side and the interests of the taxpayers.

(3) Favoring managers with large investments in troubled assets: The qualifications currently set for the managers and the investors in the funds allow, and indeed encourage and favor, participation by banks that currently own massive amounts of troubled assets.

Below I discuss the problems arising from each of these three features, and I explain how the program's current design can and should be amended to address these problems.

A. Adding a Competitive Process to Minimize Costs to Taxpayers

One major problem with the program's current design is the lack of any mechanism to ensure that private parties do not make excessive gains at taxpayers' expense. This problem, however, can be fully addressed by adding to the administration's current design a mechanism – along the lines advocated in Section II.D – for keeping the level of subsidy to the private side at a minimum.

Concerns that the administration's program may unnecessarily enrich private parties have figured prominently in recent criticisms. Joseph Stiglitz described the program as "a partnership in which one partner robs the other" and that enables "huge transfers of wealth."[14] Jeffrey Sachs argued that the plan could "rob the taxpayer" and amount to a "grab of taxpayer money for Wall Street interests."[15] Similar concerns about the enrichment of Wall Street players have been expressed by Simon Johnson and Allan Sloan, among others.[16] With the current design contemplating a purchasing capacity of up to $1 trillion and providing the private side with half of the upside, private sides could undoubtedly end up with enormous gains.

The prospect of such gains has also prompted concern that they would generate a political backlash and perhaps even to congressional initiatives to undo the terms that produced such gains. Indeed, some observers have argued that, despite the highly favorable terms, some private parties might be discouraged from participating in the program by fears of such an ex post political backlash. A *Wall Street Journal* editorial argued that private investors might be discouraged by fears that Congress will not settle for only half of the upside if the asset purchases pay off in big profits,[17] and Peter Wallison expressed similar concerns.[18]

Adding a competitive process for setting the level of subsidy provided to private parties, as advocated in Section II.D, will address both the concern that the program can *ex ante* be expected to shower excessive fortunes on private parties and the concern that its outcomes will be difficult to defend politically *ex post*. Such a process would ensure that the gains captured by private parties are kept at a minimum. Furthermore, because the private parties participating in the program will be the ones that beat other parties in their willingness to accept the least favorable terms *ex ante*, any gains that they will make *ex post* can be expected to be much easier to justify and defend politically.

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[14] Joseph Stiglitz, Editorial, *Obama's Ersatz Capitalism*, N.Y. TIMES, Apr. 1, 2009, at A31.

[15] *See* Jeffrey Sachs, *Obama's Bank Plan Could Rob the Taxpayer*, FT.COM, Mar. 25, 2009, http://www.ft.com/cms/s/0/b3e99880-1991-11de-9d34-0000779fd2ac.html; Jeffrey Sachs, *The Geithner-Summers Plan is Even Worse than We Thought*, The Huffington Post, Apr. 8, 2009, http://www.huffingtonpost.com/jeffrey-sachs/the-geithner-summers-plan_b_183499.html.

[16] *See* Simon Johnson, Did Goldman Sachs Just Win Big?, The Baseline Scenario, Mar. 3, 2009, http://baselinescenario.com/2009/03/03/did-goldman-sachs-just-win-big/; Allan Sloan, Outrageous Fortune, WASH. POST, Aug. 31, 2009, at A13.

[17] *See* The Geithner Asset Play, WALL ST. J., Mar. 24, 2009, at A16.

[18] Peter J. Wallison, *New Plan, Old Fears*, THE AMERICAN, Mar. 24, 2009, http://www.american.com/archive/2009/march-2009/new-plan-old-fears.

Under the administration’s current design, the private side will capture 50% of the upside but will have to contribute a much smaller fraction of the invested capital – as little as 8% under one of the programs. In that particular case, for example, the private side investing 8% of the capital will bear half of any losses up to 16% of the capital invested, but will be insulated from any losses that go beyond that level.[19]

Treasury’s choice of such terms could theoretically result in subsidy levels that are “just right”—inducing the desired level of private participation, yet not leaving private parties with any gains beyond the minimum necessary for inducing their participation. But such an outcome would be sheer luck, and we would have no way of knowing how close or far we are to the right subsidy level. If the 50%-of-upside/8%-of-capital deal attracts enough private participation, we would not be able to rule out the possibility that sufficient participation could have been induced by giving private parties much less than 50% of the upside in return for 8% of the capital or by getting from them much more than 8% of the capital in return for 50% of the upside.

The above choice of terms could be improved by adding a process in which private parties compete to be in the program. For example, assuming that the private side's share of total capital invested is to be fixed at 8%, the government should seek to keep the highest fraction of the upside that would be consistent with inducing such participation. To this end, potential private managers would submit bids indicating the minimum share of the fund's upside they would be willing to accept for investing 8% of capital, as well as the size of the fund they would establish if they were accepted into the program. Treasury officials should then set the share of the upside that goes to the private side at the lowest level consistent with establishing funds that collectively have the target amount of capital.

By insulating the private side from bearing any losses beyond 16% of the invested capital, the administration’s current design essentially grants the private side a free “put option” to have the fund sell to taxpayers the troubled assets it has purchased at a price equal to 84% of their purchase price. Providing this put option completely for free (not even for a “subsidized”

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[19] See U.S. Treasury Department, Fact Sheet, available on the Treasury’s webpage devoted to the public-private investment program (describing a sample investment under the legacy loans program in which the private side contributes $6 of the $84 investment (about 7.5%) in a pool of loans and gets 50% of the upside).

price) may or may not be necessary to induce sufficient private participation. A competitive process in which private parties submit bids with respect to the minimum level of the upside share that would be acceptable to them would enable the taxpayers to get the highest value for the granted put option that is still consistent with inducing the necessary private participation. If the process ends up with the private parties getting less than 50% of the upside, the taxpayers will be getting a positive price for the put option rather than giving it away for free.

Alternatively, assuming that the private side's share of the upside is to be fixed at 50%, the government should seek to get the largest possible contribution of private capital. Under this scenario, each potential private manager will submit bids indicating both the size of the fund that it would establish if admitted into the program and the maximum fraction of the fund's capital that it would commit to raising privately in return for 50 percent of the upside. Based on the bids, the government will set the fraction of capital provided by the private side at the highest level consistent with establishing funds that have the target amount of aggregate capital.[20]

Using any one of the alternative versions described above would strictly dominate the current design's setting of terms at 8%-of-capital/50%-of-upside. If the 8%-of-capital/50%-of-upside terms are just right —neither the slightest bit below nor above what is necessary to induce the desired level of private participation—the proposed competitive processes would also produce 8%-of-capital/50%-of-upside outcome. But if the 8%-of-capital/50%-of-upside terms are more favorable to the private side than is necessary to induce the desired participation level, the competitive processes would produce a better outcome for taxpayers. Furthermore, in the (perhaps unlikely) event that the 8%-of-capital/50%-of-upside terms are not favorable enough to induce the desired level of private participation, the competitive processes would result in terms that would ensure the necessary participation.

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[20] This second scenario would not only keep the government's subsidy at a minimum but might also increase the amount of private capital contributed to financing the funds set up under the program, thus conserving some of the government's gunpowder that the program's current design would otherwise use.

B. Aligning the Interest of Private Parties and Taxpayers

The administration's plan has been widely criticized for providing the private side with highly skewed incentives to select assets with volatile value and to overpay for such assets at taxpayers' expense.[21] The program's current design does suffer from this problem, but the problem can and should be addressed by redesigning the plan to fix incentives.

Under the plan's current design, the private side will face highly asymmetric payoffs, expecting to capture half of any upside but to bear a smaller fraction of any losses exceeding a certain level. Such asymmetric payoffs would indeed provide powerful incentives to seek and overpay for assets with volatile value. Although such overpaying would be consistent with the private side's interests, it would impose losses—which could well exceed the private side's profits—on the public capital used in the program. Moreover, the overpaying would undermine the objective of producing market prices that provide reliable information about the value of troubled assets remaining on the banks' books.

Rather than receiving asymmetric payoffs, with the resulting large distortions, the private side should get, as discussed in Section II.C, payoffs aligned with those of the public capital invested in the funds. To this end, the private side should get a specified fixed percentage of the fund's final value, capturing the same share of the upside as the share borne on the downside. To the extent that the public capital comes in the form of both equity and debt, the private side should participate in both debt and equity and do so in the same proportions as the public capital.

But isn't the partial insulation of the private side from downside risks essential for attracting private capital? Not at all. Even if the private side needs to receive somewhat favorable terms to participate, such a "subsidy" can be given in forms do not distort subsequent incentives and adversely affect the management of funds.

Suppose the government wishes to stick with having the private side contribute 8% of the fund's capital. Rather than entice the private side with unequal shares of the upside and the

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[21] *See e.g.*, Sachs, Obama's Bank Plan Could Rob the Taxpayer, *supra* note 15; Stiglitz, *supra* note 14 ; Peyton Young, Editorial, *Why Geithner's Plan is the Taxpayers' Curse*, FT.COM, Apr. 1, 2009, http://www.ft.com/cms/s/0/3e985de0-1ee7-11de-a748-00144feabdc0.html

downside, the private side could be given a percentage of the fund's final value that exceeds 8%. If the private side receives, say, 11% of the fund's final value in return for its investment of 8% of the initial capital, the extra 3% will represent a subsidy meant to induce the private side's participation. And once the private side agrees to join, its incentives will be fully aligned with those of taxpayers – which is not the case under the administration's current design.

Applying the principle of setting the level of subsidy to private parties through a competitive process, the private side's fixed share of the funds' final value (and hence the size of the subsidy) should be determined through such a process. Each potential private manager will submit a bid indicating the minimum fraction of the fund's final value that it would accept in return for contributing 8% of a fund's initial capital, as well as the size of the fund it would establish if admitted into the program. The government will then set the private side's fixed share of payoffs in funds set up under the program at the lowest level that is still consistent with attracting private participation in funds that collectively have the aggregate target capital.

Note that, under the proposed approach, the government would be getting a much higher share of the upside than the 50% specified by the administration's current design. Even more important, taxpayers will benefit from the improved incentives to maximize the value of the funds and purchases in which public funds are so heavily invested.

It might be argued that, even though the proposed fix would eliminate incentives to overpay for troubled assets, such overpaying is what the administration seeks in order to bolster banks' capital. But overpaying, which can easily be avoided by the proposed redesign, should not be a goal, or an acceptable outcome, of the program. The government should inject capital at taxpayers' expenses only into those banks that need it and should do so in exchange for securities. The government should not confer benefits without consideration on all banks holding troubled assets.

C. Precluding Banks with Troubled Assets from Participating

Media reports have indicated that banks now owning massive amounts of troubled assets, including CityGroup and JPMorgan Chase, are considering participating on the buying side in the funds established under the administration's program.[22] Under the current design, such participation is perfectly permissible. The current design does not impose any restrictions on the participation of such banks as private equity investors in funds set up under the program. Furthermore, the qualifications for managers making purchasing decisions under the program encourage, rather than discourage, participation by such banks as managers. In the legacy securities program, managers must own at least $10 billion in certain mortgage-backed securities and residential mortgage-backed securities,[23] and this high bar is one that some of the banks burdened with toxic paper will meet but that some large hedge funds active in this area will be unable to meet.[24]

One problem with allowing banks now clogged with troubled assets to participate on the buying side is that it defeats one of the program's main goals—to cleanse the balance sheets of these banks of troubled assets and thereby remove the uncertainty about the value of these assets that may currently impede the banks' operations. Allowing these banks to participate on the buying side in the program's activities will increase, rather than decrease, the troubled assets of uncertain value that the bank owns directly and indirectly; it thus will increase the amount of assets with uncertain value on the banks' books, thus delaying rather than accelerating the banks' return to normal operations.

The second problem with the participation of banks with large holdings of troubled assets on the buying side is that it will undermine the objective, discussed in Section II.C, of setting up funds in ways that align the interests of the private side with those of the taxpayers. Even assuming that the program is redesigned to have managers capture and bear the same share of the upside and downside, banks acting as managers under the program may still have distorted incentives.

If a bank holding large amounts of toxic securities is selected as a fund manager in the legacy securities program, and the fund subsequently pays excessively high prices for troubled

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[22] *See* Francesco Guerrera & Krishna Guha, *Bailed-out Banks Eye Toxic Asset Buys*, FIN. TIMES, Apr. 2, 2009, at A22.
[23] *See* U.S. Dep't of Treasury, Application for Treasury Investment in a Legacy Securities Public-Private Investment Fund, http://www.treas.gov/press/releases/reports/legacy_securities_ppif_app.pdf.
[24] *See* Treasury's Very Private Assets Fund, WALL ST. J., Apr. 1, 2009.

assets, the bank may derive from such high prices benefits not shared by the taxpayers invested in the fund. To be sure, the program's current design prohibits transactions that are blatantly conflicted, barring each fund from purchasing assets from affiliates of its manager or from 10%-plus private investors in the fund.[25] But to the extent that prices paid for troubled assets affect the valuation of other troubled assets, a bank managing a legacy securities fund may have distorted incentives to overpay for troubled assets even when buying them from other banks.

It follows that banks holding significant amounts of troubled assets— the intended sellers under the program—should not be allowed to participate on the buying side either as fund managers or as investors in funds. Their incentives are likely to be especially distorted, and their purchase of additional troubled assets either directly or indirectly would go against what the program seeks to accomplish.

To be sure, participation by banks on the buying side could provide them with significant profits, especially if the problems of the current design discussed earlier are not fixed, and it thus would strengthen the banks' capital positions. As already emphasized, however, transferring value to banks holding troubled assets in order to bolster their capital should not be a goal of the program for buying assets; such injection of capital should be made only for consideration in securities and should be targeted at those banks that need additional capital, not banks holding troubled assets in general.

IV. CONCLUSION

Responding to critics' claims that using public funds for restarting the market for bank troubled assets is misguided, this paper has made the case for a government intervention in this market and for basing it on competing and privately managed funds. Building on my earlier work, the paper has presented the key elements that an effective and economical program for restarting the market for troubled assets should include. The paper has furthermore identified three important problems with the administration's current design, and has showed how each of them can and should be fixed.

[25] See Davis Polk memorandum, *supra* note 19, at 6.

Before concluding, I wish to stress that the program for buying troubled assets should be supplemented with a program for recapitalizing the banks that will remain undercapitalized (or even insolvent) when their assets are fairly valued. By keeping the program's costs to taxpayers at a minimum, and by enhancing its effectiveness, the proposals put forward in this paper will leave the government with more resources for such recapitalizations and for the other challenges created by the financial crisis.