Pitfalls of the Paulson Plan

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How to buy hundreds of billions of dollars of highly illiquid, hard-to-value securities? This is a key issue for the Paulson plan or any other proposal that tries to use government money to buy our way out of the current financial crisis. Unless it is solved, such plans will either fail to stem the credit crisis, end up as one of history's greatest boondoggles, or both. Since it is impossible to come up with reliable model-based valuations, the Treasury appears to rest its hopes on an auction-based approach in which sellers compete by submitting prices at which they are willing to sell.

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Many auction advocates point out that, in absence of a bailout plan, holders of subprime have very low valuations for these assets. If the Treasury auction could buy the assets at investors' current valuations, then it might have a chance to make a tidy sum for taxpayers.

While this might be tempting, it is also irrelevant. Any auction-based purchase program that is of sufficient scale to give the markets confidence that financial institutions no longer have large subprime and real estate exposures will inevitably force the Treasury purchase at prices well above these "no-bailout" valuations.

The central point is that the bidder's auction valuation will not be its "no bailout" valuation. Instead it will be the bidder's opportunity cost for not selling the asset in the auction. Regardless of the auction format, this opportunity cost will be the amount that the bidder could get by selling the asset on the open market immediately after the auction.

If the Treasury wants to give the markets confidence that almost all subprime mortgages and real estate exposures have been removed financial institution balance sheets, it will need to buy a very large proportion of the total amount of subprime outstanding.

Suppose, for example, the Treasury commits to purchase 90% of the subprime outstanding to restore market confidence. Then, up front, the seller knows that the government will remove 90% of the supply of this paper from the market, dramatically increasing the open market value of the remaining paper not sold in the auction and thus greatly inflating each seller's auction valuation above its "no bailout" valuation.

If current holders of subprime paper know that the government is committed to removing

a large fraction of subprime from the market, they will have little to fear from submitting what would otherwise have been viewed to be an exceptionally high offer in the Treasury auction.

To avoid this, the Treasury might instead only buy small proportions of each class of subprime, but this will not give investors confidence that they can now deposit money in and invest in financial institutions. Large amounts of subprime would still be in circulation and investors would have no way to be certain that large subprime exposures were not still lurking on the balance sheet of any particular financial institution.

Auction mechanisms cannot solve the dilemma that it will not be possible to give investors confidence that financial institutions have solved their subprime woes without dramatically inflating the auction valuations of those currently holding the assets.

Anything that gives investors confidence that financial institutions will be safe from subprime will also give sellers confidence that the post-auction value of subprime assets will be greatly inflated from their "no bailout" valuations.

One might think that it would be safe to use an auction mechanism on a smaller scale. But this would have the same problems. If one is going to use a small scale program, then, for it to have any effectiveness, it must target the worst of the worst and buy up essentially all of these "worst of the worst" asset classes. But if current holders of these asset classes know this, then they know they will be essentially able to name their price in the auction and the Treasury will likely end up buying the worst of the worst for the price of standard subprime securities. On the other hand, if the small-scale program is not targeted to the worst asset classes, it has no chance of having any impact on investor confidence.

The Treasury can also impose price ceilings in the auction process but given the inability to generate reliable model-based prices the ceiling is likely to be either far too low, causing the auction to fail, or far too high and thus have little impact on the performance of the auction mechanism.

The fundamental problem is that subprime assets are illiquid, meaning that their market price is very sensitive to overall supply. To see this, imagine that the government artificially created an extra $700 billion of subprime (some would say the government did this and more with Fannie Mae and Freddie Mac over the past several years) and dumped all of it for sale on the market. The market response would be price collapse! While these effects are not perfectly symmetric, the same intuition makes it clear that artificially pulling $700 billion of subprime off the market will dramatically increase market prices and auction valuations.

Currently subprime trades at a discount to fundamental value in that investors worry that some highly-levered institutions may need to dump their subprime to raise cash. If the government pulled large amounts of subprime off the market, these banks would have much more cash and much less subprime. The market would no longer fear that banks might need to dump their remaining subprime on the market. This would dramatically increase the market price of subprime and auction valuations.

SIZE MATTERS: ASSET CLASS SIZE, CORRELATION & MARKET RISK PREMIA

Some academics may object stating that they were taught that an efficient market keeps market price constant regardless of supply. If so, they were taught wrong. Once again an example should make the point clear. There are many other assets such as gold which are much

riskier than subprime. Similarly, many equities are riskier than subprime. Why is subprime the asset class endangering financial stability and not gold or automotive stocks? The reason is that in the last few years, the financial sector loaded up on tremendous amounts of subprime thinking it was a moderately low risk asset class that offered good returns.

However, it turns out that subprime default rates are highly correlated with real estate, another asset class indirectly underpinning the value of much of the financial sector. When real estate collapsed and the economy weakened, the volatility of both subprime and real estate shot up while increasing their already high correlation.

In most models, an entity's risk premium rises in the square of the size of the exposure. The financial markets never loaded up on gold or automotives because they knew these were risky asset classes and their supply was limited based on the total amount of capital needed in the real economy in these areas. Thus a shock to the volatility of gold or automotive stocks has very limited effect on the proper discount rate for these assets: much of this risk is diversifiable.

But given its correlation to real estate, an upward shock in the volatilities of subprime default rates and real estate causes a massive increase in the proper discount rate for subprime. This causes the price of these assets to drop substantially even if market efficiency were the relevant paradigm for these markets.

On the other hand, if the government were to pull a large proportion of these assets off the market, then the subprime exposure of the marginal investor would drop as would the new market risk premium for subprime risk, causing prices and auction valuations to rise in a similar manner. But this drop in the market risk premium would be artificial. The economy as a whole would still be bearing the systematic risk of the original inventory of subprime. However now it would be borne, without proper compensation, by the taxpayers.

IN SEARCH OF THE MARKET FOR LEMONS

Ideally, trading in private markets should move risky subprime assets from fragile, highly-levered institutions to deep-pockets investors. To the extent that the market mechanism has failed to do this, there may be room for government intervention to aid in price discovery, which will enable the markets to carry out trades moving assets from fragile entities with high risk premia to deep-pockets investors with lower risk premia.

After a bit of reflection, I think it becomes clear that asymmetric information should be a relatively minor issue in these markets. Most subprime has been securitized and is no longer held by the originator or the servicer of the subprime mortgages. The originator may have had some extra information about the characteristics of the mortgage borrowers in a certain pool. But given the originator no longer holds any stakes in the pool, this is not relevant. Both current holders of subprime mortgages and potential buyers have the same access to the original information released by the originator concerning the mortgage pool characteristics. So this cannot be a source of asymmetric information.

What about default rates? Perhaps there is asymmetric information regarding the payment history of loans in the pool. Perhaps this is the source of asymmetric information. But mortgage servicers keep track of the cash flows paid by the mortgages it services. This payment history is available to all potential buyers. Current mortgage holders have no additional information

about payment rates beyond that known by the mortgage servicer. So this cannot be a source of asymmetric information either.

The only potential asymmetric information issue involves default modeling. There was a time when the proprietary default models of some investment banks and "quant" desks were thought to give them an edge in using this common data set to predict default. Perhaps there is some truth to this. But the groups with the most well-regarded default models tended to be the ones with the largest subprime holdings and some of the largest losses. The current default experience has been sufficiently unlike any past time period that even the best of these proprietary default models appears to provide little edge in valuing these mortgages.

Based on this, the lemons problem does not appear to lie in asymmetric information about individual subprime securities. Instead the lemons problem has to do with asymmetric information about the holders of these securities. While banks may disclose the total amount of their mortgages or subprime mortgages in their financial statements, subprime is a very heterogeneous asset class. Financial statement disclosures don't provide any information about how much of this subprime is relatively high grade and how much is the worst of the worst. This lemons problem is the reason that depositors and commercial paper and interbank investors might shy away from putting their funds in the banking system. It explains the troubles banks have in raising long-term unsecured debt and equity capital. And it also may explain market failure in the subprime market.

Suppose a bank wants to sell a sizeable block of subprime and starts to solicit bids. This is likely to indicate to other market participants that the bank selling the subprime has a dangerously large inventory of subprime that it needs to unload, pushing down the market value of the seller. This chain of reasoning makes banks reticent to sell their subprime, unless they are in a dire situation, reinforcing the belief structure at the heart of the problem.

This, rather than buyer ignorance, is likely to be the asymmetric information shutting down the subprime market. It also makes investors in the market concerned that there may be large pent-up subprime holdings that may be dumped on the market at some future day of reckoning.

It's hard to see how even a well-designed subprime auction mechanism can resolve these issues. The lemons problem is not with the securities: It is with the banks holding the securities.

IS IT WORTH IT?

The discussion above suggests that the Treasury would be very unlikely to turn a profit on these operations but instead would likely go through its $700 billion very quickly with very little to show for it. Large amounts of subprime, Alt-A, and suspect real estate assets would still be in the banking system. The result would simply be to recapitalize the banking system with taxpayer money.

Beyond this, the primary effect would be to shatter any possible political support for a dynamic entrepreneurial financial industry. Our current financial system would be replaced by a bureaucratic, highly-regulated system at the cost of long-run economic growth.

While the financial system that will be born in the wake of such a deal may remain solvent for a while, it will certainly fail in its deeper mission to shift capital from mature segments of the economy to growing segments. This is the primary cost of the Paulson plan and like-minded proposals.

On the one hand we have to weigh the prospect of a recession, possibly a relatively deep one, versus the cost of losing a dynamic financial sector: a core of the free market system which has vastly contributed to US and global growth over the last 3 decades. Even putting aside the $700 billion, which is the greater danger for long-run prosperity?

Recessions are nasty things. But we've learned from painful experience that there is no "new era" and that recessions happen in the natural course of events. In the past, we understood that recession sometimes is the price we have to pay to maintain the economy's long-run health. In the early 1980's America was willing to accept a relatively deep recession as the price we needed to pay to stem the inflation of the 1970's. In 1990-1991, the Fed chose to raise rates to the point of bringing on a recession merely because it suspected that inflation might re-emerge otherwise.

Now policymakers tell us that a potentially deep recession is an unacceptable price to pay to keep something that many would argue is a much more important ingredient than low inflation in generating long-run economic growth.

It is hard to point to a past recession which could not have been bought off for $700 billion. Should we try to buy this one off at the price of the vitality of our financial system plus $700 billion?

If we decide to pay the price this time, what will we be forced to pay next time recession comes calling?

Letters commenting on this piece or others may be submitted at http://www.bepress.com/cgi/submit.cgi?context=ev.

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