



Troubling Research on Troubled Assets: Charles Zheng on the U.S. Toxic Asset Auction Plan

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Charles Zhoucheng Zheng's "The Default-Prone U.S. Toxic Asset Auction Plan" (Zheng 2009) seems to be a simple case of getting reality wrong when claiming relevance for a model.

The paper claims to model the policy announced by the U.S. Treasury on March 23, 2009, to buy up to \$500 billion to \$1 trillion of toxic assets through a Public Private Investment Partnership (PPIP). In the model, "moderately poor bidders outbid rich bidders in such auctions," because Zheng assumes that all of a borrower's assets are at risk if they default on the government loan. Thus, says Zheng: "After defeating their rich rivals and acquiring the toxic assets, such bidders will default on government-provided loans whenever the toxic assets turn out to be unsalvageable" (abstract). The chief trouble with the paper is that the assumptions do not fit reality. In reality, the government-provided loans used to buy toxic assets are *nonrecourse*, allowing the borrower to walk away from the loan with no penalties besides ceding the asset that the loan purchased. Thus, there is nothing to make rich bidders less ready to win the auction, and Zheng's equilibrium in which less well endowed borrowers win toxic asset auctions is irrelevant.

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Further Zheng's use of auctions to model these plans is largely inappropriate since only one of the three government toxic asset plans has government backed investors bid for the same toxic asset in an auction format.

The paper's misrepresentation of actual policy is quite noteworthy. The paper is published in *The B.E. Journal of Economic Analysis & Policy*, which, as the title suggests, aims to use microeconomics to tackle policy issues. Apparently, the journal sometimes publishes analysis about policies that do not exist.

Zheng's Treatment of Reality

A remarkable feature of Zheng's paper is how little it says about reality. The opening paragraphs reads:

The United States Treasury Department (2009) has recently published two plans to rescue the financial sector by auctioning off its "toxic assets." One is the Legacy Loan Program (LLP) for risky home loans. The other is the Legacy Securities Program (LSP) for risky mortgage-backed securities. The main feature of the plans is to subsidize the buyers of the toxic assets with government-provided loans and equities.

There then follow three paragraphs that commence his interpretation of the situation. And then he dives directly into the model, and never returns to actual policy. The model leaves out the core feature of reality, that the loans are non-recourse. Had Zheng given just one or two sentences about the key features of the programs he purports to address, he surely would have found the need to mention that the loans are nonrecourse. Instead, the word *nonrecourse* does not appear in his article.

Nonrecourse Loans

The PPIP program is deliberately structured so that it is easy for investors to walk away from loans provided by taxpayers to purchase troubled assets. The loans in all the U.S. Treasury's toxic asset plans were nonrecourse, so the investors need not worry about their assets if they default on those loans. Evidently, *The B.E. Journal of Economic Analysis & Policy's* editors and referees were completely in the dark about the structure of government loans to investors in these asset purchase plans. The nonrecourse loans only allow the government to go after the troubled assets purchased with the loans. The borrower's other assets are comp-

letely safe in the event of default. Thus, there is no extra incentive for less-creditworthy borrowers to buy toxic assets in these programs.

Toxic assets for the purposes of these programs were distressed real-estate bonds or loans. The U.S. Treasury, the Federal Reserve, and the Federal Deposit Insurance Corporation (FDIC) had hatched plans to band together to provide nonrecourse loans to investors to buy the troubled assets. The online “Fact Sheet” (U.S. Treasury 2009), which is cited by Zheng in his opening paragraph, says, “Through this new program, non-recourse loans will be made available to investors to fund purchases of legacy securitization assets. Eligible assets are expected to include certain non-agency residential mortgage backed securities (RMBS) that were originally rated AAA and outstanding commercial mortgage-backed securities (CMBS) and asset-backed securities (ABS) that are rated AAA.”

Zheng must not have read the Fact Sheet or not understood the meaning of “non-recourse.” Zheng (2009, 1) writes in his introduction “a private investor who has bought the toxic asset does not necessarily walk away from the loss, as to walk away he needs to default thereby forfeiting as least part of his own assets including the good ones.” He continues, “The equilibrium analysis presented below shows that, unless bidders initially endowed with moderately poor assets can be excluded from the auction, such bidders will outbid their richer rivals...” This is what is offered as the paper’s core contribution. Yet, in actual government sponsored toxic asset purchases the private investor has no assets at risk except for what that investor contributed to buy the toxic assets.

The key variable in the equations of Zheng’s model is the investor’s endowment, w . This endowment features prominently in all the propositions, lemmas, and corollaries, but it plays no role in the toxic asset programs run by the U.S. Treasury (the Legacy Securities Program, or LSP), by the FDIC (the Legacy Loans Program, or LLP), or by the Federal Reserve (the Term Asset Lending Facility, or TALF). In all three cases, the investor losses are limited to the equity, or haircut, that he or she contributed to the purchase prices of the toxic asset financed with the U.S. government’s money.

A quick perusal of the news when the program was announced would have probably prevented the author and editors from their error. For example, an article from page A1 in *The New York Times* says: “To entice private investors like hedge funds and private equity firms to take part, the F.D.I.C. will provide non-recourse loans—that is, loans that are secured only by the value of the mortgage assets being bought—worth up to 85 percent of the value of a portfolio of troubled assets” (Andrews et al. 2009). Also, the word *nonrecourse* was a standard theme of the blogs debates about PPIP.

Zheng (2009) expends a great deal of effort to show how a bidder with less wealth will be advantaged by a toxic asset auction. This is because the investor is

assumed to give up some or all of his or her assets in the event of default. Yet, the PPIP program only makes the investor give up the troubled assets purchased with the government loan upon default. The private investor gets to keep the rest of his or her assets, less any equity contribution to the public-private investment fund.

A Hammer for a Nonexistent Nail

The other, less serious misconception held by Zheng (2009) is that he is assuming that there will be competitive auctions between government sponsored participants for toxic assets. This is the case for neither the U. S. Treasury sponsored Legacy Securities Program (LSP) nor the Fed sponsored Term Asset Loan Facility (TALF) for commercial mortgage backed securities (CMBS). These programs were originally conceived as auctions in the fall of 2008 (see Board of Governors 2008 or Paulson 2010, 267). In the latter case, reverse auctions—where sellers submit bids—were often mentioned. This is in contrast to the mechanism appearing in Zheng’s model, a second-price auction. Yet, we know that Zheng (2009) is writing after March 23, 2009, because he cites the March 23, 2009 fact sheet for the PPIP represented by U.S. Treasury (2009). At that time, only the FDIC’s Legacy Loans Program (LLP) was organized in an auction format (for a description of the FDIC’s first legacy loans auction see Wilson 2010c). The TALF and LSP programs allow the private investors freedom over which assets to buy within the program parameters. The spreads on both TALF CMBS loans and LSP loans were fixed by the Federal Reserve and the U.S. Treasury, respectively, when the programs were rolled out in 2009 (see Wilson 2010a). In no sense do those programs hold auctions to purchase a particular bundle of toxic securities with government sponsored loans as modeled by Zheng. Mr. Zheng is an accomplished auction model-builder. Evidently he is using the hammer he knows, regardless of whether it pertained to programs he purports to speak to.

Zheng (2009) may have been more interested in extending some analysis from one of his papers, Zheng (2001), than understanding the program that he was criticizing. I believe there is plenty to criticize about the government’s plans to buy toxic assets, if you understand them.² Zheng only cites four references. They are Zheng (2001), an op-ed piece (Krugman 2009), the fact sheet from the PPIP program (U.S. Treasury 2009), and (Yeon-Koo Che and Gale 1998).

2. My criticisms of the government’s plans are contained in Wilson 2010a, 2010b, 2010c, and Wilson and Wu 2010. My criticisms are also noted in press articles such as Condon 2010, Dash 2010, and Keehner and Mattingly 2010.

Conclusion

Tens of billions of taxpayer dollars are still at stake with the toxic asset purchase programs of the U.S. Treasury, the Federal Reserve, and the FDIC. Through July 2010, these programs had spent \$16.2 billion, \$7.3 billion, and \$11.5 billion, respectively, to buy toxic assets. Over \$13.2 billion more is slated to be spent by the former program (Wilson 2010a). Most of the money used to buy those toxic assets came from nonrecourse loans from the government. Nonrecourse loans allow borrowers to walk away from their investments without losing their other assets, which were not posted as collateral for the loan. Yet, analysis such as (Zheng 2009) will only confuse any scholar embarking on the topic. We need research in these big ticket government programs, which mark unprecedented interventions into financial markets. Yet, the confusion of Zheng may be magnified by the fact that he is one of the few authors who have published academic papers purporting to analyze the programs.

References

- Andrews, Edmund, Eric Dash, and Graham Bowley.** 2009. Toxic Asset Plan Foresees Big Subsidies for Investors. *New York Times* March 21: A1. [Link](#)
- Board of Governors of the Federal Reserve.** 2008. Term Asset-Backed Securities Loan Facility (TALF), Terms and Conditions. *Board of Governors of the Federal Reserve.* [Link](#)
- Condon, Christopher.** 2010. PPIP Funds Surge 36% in First Year, Treasury Says (Update1). *Bloomberg*, October 22. [Link](#)
- Dash, Eric.** 2010. A Big Surprise: Troubled Assets Garner Rewards. *New York Times*, August 27: B1.
- Keehner, Jonathan, and Phil Mattingly.** 2010. Taxpayers May Get a Piece of the FDIC Action. *Bloomberg Businessweek*, May 3-May 9: 45. [Link](#)
- Krugman, Paul.** 2009. Financial Policy Despair. *New York Times*, March 23: A21. [Link](#)
- Paulson, Henry J.** 2010. *On the Brink: Inside the Race to Stop the Collapse of the Global Financial System.* New York: Business Plus.
- U.S. Treasury.** 2009. Press Release, Fact Sheet: Public Private Investment Partnership. *U.S. Treasury*, March 23. [Link](#)
- Wilson, Linus.** 2010a. A Binomial Model of Geithner's Toxic Asset Plan. *Social Science Network Working Paper Number 1428666.* [Link](#)

- Wilson, Linus.** 2010b. The Put Problem with Buying Toxic Assets. *Applied Financial Economics* 20(1-2): 31-35.
- Wilson, Linus.** 2010c. Slicing the Toxic Pizza, an Analysis of FDIC's Legacy Loans Program for Receivership Assets. *International Journal of Monetary Economics and Finance* 3(3): 300-309.
- Wilson, Linus, and Yan Wendy Wu.** 2010. Common (Stock) Sense about Risk-Shifting and Bank Bailouts. *Financial Markets and Portfolio Analysis* 24(1): 3-29.
- Yeon-Koo Che and Ian Gale.** 1998. Standard Auctions with Financially Constrained Bidders. *Review of Economics Studies* 65(1): 1-21.
- Zheng, Charles Zhoucheng.** 2001. High Bids and Broke Winners. *Journal of Economic Theory* 100(1): 129-171.
- Zheng, Charles Zhoucheng.** 2009. The Default-Prone U.S. Toxic Asset Auction Plan. *The B.E. Journal of Economic Analysis & Policy* 9(1): Article 21. [Link](#)

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