Oral Testimony of

Luigi Zingales

on
"Examining the GAO Study on Government Support of Bank
Holding Companies"

Before the
Senate Committee on Banking, Housing and Human Affairs
Financial Institutions and Consumer Protection Subcommittee

United States Senate
January 8, 2014

Chairman Sen. Brown, ranking minority Sen. Vitter, members of the Committee, thank you for inviting me.

I have been asked to comment on the GAO study on the government support of bank holding companies and in particular 1) on my estimates of the financial benefits enjoyed by the BHCs as a result of the extraordinary government actions during the financial crisis; 2) on my views of how to address the issues identified in the GAO report using the authorities provided in the Dodd-Frank Act.

Regarding the estimate of the financial benefits it is important to distinguish two components: pure transfer of value from taxpayers to bank's investors and value created as a result of a reduction in the probability of a costly bankruptcy.

Veronesi and Zingales (2010) calculate the expected government cost of the two main programs (CPP and TLGP) to be $39.9bn.[1] By using this estimate and by making reasonable assumptions on the cost of the other programs, I obtain that the total expected cost of these programs was between $59bn and $89bn (see Figure 1). This represents the pure transfer of value from taxpayers to BHC financial claimholders.

Veronesi and Zingales (2010) also estimate that in case of bankruptcy, 22% of the enterprise value of a BHC vanishes. Thus, we can assess the value saved by computing the changes in the probability of bankruptcy triggered by the government interventions. These estimates, however, will depend crucially on what counterfactual hypothesis we are willing to entertain, i.e. what we assume would have happened to the BHCs had the government not intervened.

---

[1] Pietro Veronesi and Luigi Zingales, "Paulson's Gift", *Journal of Financial Economics*, 2010: 97 (3): 339-368.

I present two extreme scenarios. The lower bound, analyzed in Veronesi and Zingales (2010), only considers the differential benefit of the set of interventions announced Columbus day weekend 2008. Since even before that weekend the market was expecting the government to intervene, these estimates only capture the effect of an increase in the probability of a government intervention. Overall, this set of government interventions saves $99bn, setting the total financial benefit enjoyed by BHCs at between $158bn and 188bn.

To obtain an upper bound, I make the Jamie Dimon's hypothesis that without government intervention all the top ten BHCs would have failed (see Ross Sorkin (2009)).[2] In this case the value saved overall would be $1,461bn, with a total financial benefit enjoyed by BHCs between $1,520bn and $1,550bn. The wide range of these estimates shows how dependent the results are on the counterfactual used.

On the second issue, I would like to classify the Dodd-Frank's interventions in three groups:

i)   Restrictions to interventions in case a BHC is in trouble (such as restrictions on the Federal Reserve 13(3) authority);

ii)   Reduction in the potential cost in case of bankruptcy (such as Living Wills);

iii)   Restrictions to risk taking in normal conditions (such Liquidity Requirements and Debt to Equity Ratio).

I regard the first set of tools to be not only useless, but also harmful. As the "no bailout clause" of the European Union Maastricht Treaty has shown, these restrictions are routinely bypassed when the need arises. If they are not,

---

[2] Andrew Ross Sorkin, *Too Big To Fail*, Penguin Books, October 20, 2009

it can be dangerous, since by the time a major BHC is in trouble, the cost of not intervening becomes very high.

I regard the second set of tools as wishful thinking. A BHC's incentive to design a proper "living will" equals the desire of a man, sentenced to death by hanging, to find the right tree at which to be hung.

The only effective tool to eliminate a subsidy to large BHCs is to design a mechanism of prompt intervention, which is triggered much before a BHC becomes insolvent. Such mechanism, described in Hart and Zingales (2012), can be implemented using the authorities provided in Dodd-Frank.[3] It is sufficient that, by using its authority to set leverage standards, the Fed imposes a maximum price for the Credit Default Swap of BHC's junior debt. A CDS price subsumes both the leverage position and the riskiness of the underlying assets. Every time the CDS price exceeds the predetermined threshold for, let's say, 30 days, the bank should be required to issue equity. If it does not, it should be taken over by the regulator and liquidated using the Ordinary Liquidation Authority under Dodd-Frank. The system works like a margin loan, made safe by the occasional margin calls. This is the most effective way to eradicate the "Too Big To Fail" problem.

---

[3] Oliver Hart and Luigi Zingales, "A New Capital Regulation For Large Financial Institutions" , *American Law and Economic Association Review*, 2012.

Table 1: Government Cost of the Various Programs

For the first four programs the conservative cost estimates are obtained assuming that the average use was half the peak level for a year and that the benefit was 100 basis points (the Libor –OIS spread before Lehman's bankruptcy). The aggressive estimates are obtained assuming that the average use was the peak level for a year and that the benefit was 300 basis points (the Libor –OIS spread just before Columbus day 2008). The cost estimates of CPP, DGP, and TAGP are from Veronesi and Zingales (2010).

Program Name	Peak amount bn $	Conservative estimates		Aggressive estimates	
		% benefit to BHC	Value transferred BHC	% benefit to BHC	Value transferred BHC
TAF	493	1.0%	2.5	3.0%	14.8
PDCF	130	1.0%	0.7	3.0%	3.9
TSLF	236	1.0%	1.2	3.0%	7.1
CPFF	348	1.0%	1.7	3.0%	10.4
CPP	205	22.7%	46.6	22.7%	46.6
DGP	346	1.6%	5.7	1.6%	5.7
TAGP	835	0.1%	0.7	0.1%	0.7
Total			59.03		89.21

Table 2: Value Created by the Various Programs

Veronesi and Zingales (2010) estimate that the net percentage change in the value of a BHC ($\frac{V_1 - V_0}{V_0}$) due

to a government intervention is $\frac{V_1 - V_0}{V_0} = -0.025 + 0.22 * \Delta \pi$, where $\Delta \pi$ is the change in the

discounted value of the (risk neutral) probability of bankruptcy due to the government intervention (see p. 356 Veronesi and Zingales (2010)). Status quo ante is the probability prevailing October 10. "All failed" corresponds to a probability of bankruptcy without government intervention equal to one.

	Enterprise Value	Prob of default 10-Oct	Prob of default 14-Oct	Vis-à-vis status quo ante		Vis-à-vis all failed	
				Delta Pi	Bankrupcty Costs Saved	Delta Pi	Bankrupcty Costs Saved
Citigroup	2,026	5.08	2.16	0.17	23.85	0.76	287.40
Bank of America	1,803	1.43	0.76	0.10	-6.61	0.78	263.47
JP Morgan	2,257	1.42	0.77	0.08	-17.54	0.80	342.31
Wachovia	735	4.05	1.66	0.14	4.61	0.79	110.08
Wells Fargo	672	1.45	0.69	0.11	-0.68	0.79	99.61
Bank of NY Mellon	280						
StateStreet	297						
Goldman	1,089	9.74	3.72	0.25	32.05	0.72	144.15
Morgan Stanley	976	30.33	8.26	0.38	57.98	0.55	94.29
Merrill Lynch	867	7.69	3.26	0.14	5.56	0.74	120.13
Total	11,002				99.2		1,461