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TARP Repayment, Lobbying and Political Connectivity

Ian Simmons
Utah State University

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Ian Simmons

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1. Introduction

In their paper "Corporate Lobbying, Political Connections, and the Bailout of Banks," Blau, Brough, and Thomas (2012) present significant evidence that firms that engaged in lobbying and maintain political connection with the federal government were more likely to receive funds from the Troubled Asset Relief Program (TARP), received more funds on average, and received the funds earlier than those firms that did not lobby or maintain political connections. These results fit into a large body of work showing similar results showing that lobbying has positive economic benefits to lobbying firms (Chen and Yang, 2010; Cooper and Ovtchinnikov, 2010; Faccio, 2010; Facio, Masulis and McConnell, 2006; Fisman, 2001; Goldman and Rocholl, 2009; Igan, Mishra and Tressel, 2009; Langbein and Lotwis, 1990). Li (2012) also found that political connections led to increased probability of receiving TARP funds.

Less attention has been paid to the behavior of firms that lobbied after receiving government bailouts; Duchin and Sosyura (2011) do show that banks that received bailouts look less risky due to better capitalization ratios; however, bailed out banks also tend to increase risky lending and therefore show an increase in volatility and default risk. However, to our knowledge, no study has been done that attempts to isolate the difference in repayment behavior between connected and non-connected banks following a widespread bailout.

In this study, we extend the literature by studying the factors that led to repayment of TARP funds, specifically comparing those banks that did and did not maintain political connections in the years leading up to the 2008 financial crisis.

Political engagement is approximated in two ways. Following Faccio, Masulis, McConnel (2006) we proxy political engagement of firms by the number of employees at a firm that were previously employed with the federal government or vice versa. Following Yu and Yu (2010), political engagement is also proxied by lobbying expenditures.

We find no evidence that firms that engaged in lobbying or maintaining political connections via employees showed any difference in the likelihood of repaying TARP. The primary determinants appear to be volatility (negatively), price, and the size of the firm, particularly relative to the size of the bailout received. In both statistical and economic terms, the most important factor found is volatility.

2. Data

Data is gathered for the 237 publicly traded firms that received bailout money under TARP. The amount of money received by each firm is taken from the Department of the Treasury. Firm characteristics are compiled from multiple sources. From the Center for Research on Security Prices (CRSP) daily stock prices and market capitalization are gathered. Quarterly balance sheets obtained from Compustat are used to determine debt to equity ratios and total assets. All time specific variables are averaged over the time period ranging from January 1,

2007 to the date each individual firm signed the contracts accepting TARP funds.

Lobbying amounts come from the Center for Responsive Politics (CRP), and are the total expenditure on lobbying by firms over the five years prior to TARP. Blau et al (2012), drawing from Kroszner and Stratmann (1998) argue that the use of aggregate data of this manner is justified, as the makeup of contributions across firms is very similar. The same assumption is taken here. Data on political connectedness also comes from CRP, specifically from its Revolving Door Database. It is a dummy variable equal to one if a firm employs someone formerly employed by the federal government, the federal government currently employs someone previously employed by the firm, or an employee is concurrently employed by the firm and the federal government.

Table 1 reports summary statistics for the sample. The average firm had a stock price *(Price)* of $20.65, market capitalization *(size)* of $4.97 billion, turnover *(Turn)* of 9.43%, and debt-to-equity ratio *(DE)* of 10.69. The average idiosyncratic volatility *(Volatility)*, which is the standard deviation of daily CAPM residuals, was .0299. The average firm had total assets *(TotAssets)* of 45,374 (reported in millions). The size of the average baiout *(Bailout)* was roughly 681 million. Eight percent of firms engaged in lobbying activity *(LobDum)*, the average amount spent by those firms being $8.8 million. Roughly seven percent of firms were politically connected *(connected),* as previously defined.

Table 2 reports the difference in means between those firms that have paid back versus those that have not. Firms that paid back had higher prices, were larger, less volatile and had higher turnover. They also were more likely to have lobbied and been politically connected. Table

2 also shows that the difference in the size of the bailout relative to the size of a firm is more statistically significant than absolute size of the firm or bailout alone. The differences in means of all other variables were not statistically different from zero.

3. Analysis and Results

First, a baseline model was estimated by probit using all variables from table 2 that exhibited statistically different means between firms that had and had not paid back, excluding interaction terms. For both size and total assets, the log transformation was taken. A dummy variable *(lobDUM)* was used for lobbying instead of the total amount, as Table 2 did not show a large difference between lobbying amounts for firms that had repaid versus those that had not. Probit regressions were used to estimate the following model:

$$Payback_i = \beta_0 + \beta_1 Price_i + \beta_2 ln(Size_i) + \beta_3 Vol_i + \beta_4 turn_i + \beta_5 Connected_i + \beta_6 lobDUM_i + \varepsilon_i \quad (1)$$

The size of the sample is 237. Of those 34 had paid back and 203 had not. Payback is equal to one if firm *i* paid back, zero otherwise.

The results are found in table 3. In equation 1, only volatility is statistically significant, with a large negative effect (p-value <.0001). To deal with multicolinearity and provide robustness, a variety of additional models are presented. Equation 2 is a simple expansion of 1; Debt to Equity, the size of the bailout (in millions) and the log of total assets are included. In this model size does appear to be significant, with a value of 1.056915 (p-value 0.0243). However, as 3 and 4 show,

the significance of absolute size disappears when an interaction term between size of the firm and size of the bailout is included. Equation 3 drops absolute size of bailout, which was insignificant in equation 2, but interacts the size of bailout with both total assets and size of the firm. Equation 4 drops the interaction between bailout size and total assets, as total assets alone appear to be more significant. Equation 5 intentionally stacks the odds in favor of finding that political connections are significant; instead of testing separately for lobbying expenditure and employee connections, it compares those firms which engaged in both against all others. Even then, no statistical significance is found.

Table 4 reports the marginal probabilities calculated from the results of the probit regressions. We can see that political connections and lobbying don't appear to be any more economically significant than statistically. Political connectivity's effects are largest in Column 2, where connected banks appear to be roughly 6.7 percent less likely to have paid back their TARP funds; Lobbying's effects appear even more meager. The sign is inconsistent across models, being positive in model 1 and negative everywhere else. The absolute value of the marginal probability to pay back from lobbying never exceeds 2.3 percent.

The main results are consistent across models: Volatility has a large negative impact on likeliness to pay, as does the size of the bailout relative to a firm's size. No model specification was able to show that either lobbying or political connectivity had a statistically significant effect on likeliness to pay. An interaction term representing firms that had both lobbied and maintained political connections also failed to exhibit statistical significance. It is concluded that we are

completely unable to reject the null hypotheses that lobbying and political connectivity had no effect on likelihood of paying back TARP.

4. Conclusions

The majority of the results are largely unsurprising. Firms whose prices exhibited great volatility struggled to pay back. If volatility represents uncertainty about a firm, this would be expected. Further, the larger the bailout a firm received relative to the firm's size, the less likely they were to have paid back. This result perfectly follows intuition. Reassuringly, firms with high levels of political engagement do not exhibit lower likelihoods of paying back. Although Duchin and Sosyura (2011) do show that bailed out firms do tend to take on riskier portfolios, our study suggests that this effect does not appear to be more pronounced in connected firms than non-connected. Though firms that engage in lobbying have been shown to be more likely to receive bailout funds in economically turbulent times, it does not appear that they received any preferential treatment in terms of pressure from the government to repay TARP funds.

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Table 1
Summary Statistics

	Mean	Medians	Std. Deviations	Min	Max
Price	20.65	16.46	16.79	3.37	195.74
Size	4,976,183,629	188,478,536	22,673,269,829	13,329,695	192,007,473,183
Volatility	0.0299	0.0285	0.0092	0.0145	0.0640
Turn	0.0943	0.0363	0.1124	0.0033	0.5997
D/E	10.69	10.25	3.03	4.47	30.26
Bailout	681,171,106	37,000,000	3,107,414,910	2,009,300	25,000,000,000
Lobby	8,895,847	679353	12,619,793	6363	41,787,619
Total Assets	45374	1733	231066	139	2162584
Connected	0.071	NA	NA	NA	NA
LobDum	0.080	NA	NA	NA	NA

Total Assets reported in millions

Table 2
Univariate tests of Repayment

	Banks that Repaid	Banks that have not Repaid	Difference
Price	27.68	19.47	8.20662883***
			(2.86598006)
Size	17,257,904,099	2,919,146,703	14338757396*
			(1.899256365)
Volatility	0.0223	0.0312	-0.008885341***
			(-9.226664645)
Turn	0.1340	0.0877	0.046323056**
			(2.639955175)
Bailout	1,712,967,382	508,357,936	1204609445
			(1.376612083)
D/E	10.91	10.66	0.256184044
			(0.346411357)
LobAmnt	12,515,936	6,398,789	6117146
			(0.865758905)
TotAssets	152,451	27,440	125010.6467
			(1.681670419)
Connected	0.205	0.049	0.156621269**
			(2.174825213)
LobDum	0.205	0.059	0.146769052*
			(2.029527234)
Bailout/Size	0.1506	0.2451	-0.094542044***
			(-6.252183634)
Bailout/TotAssets	20,292	23,916	-3624**
			(-2.656856983)

Values in () report t-statistic. *, **, and *** represent 10%, 5% and 1% significance levels respectively. TotAssets is reported in millions. Connected and LobDum are both dummy variables previously defined. The associated entries represent the ratio of firms that took on the value one for the relevant dummy variable.

Table 3 Probit Regression					
	Dependent variable is 1 if repaid – 0 otherwise				
	[1]	[2]	[3]	[4]	[5]
Intercept	0.3175	-12.083842	-6.589292	-5.312076	-5.948122
	(0.906)	(0.0486)	(0.5407)	(0.4591)	(0.4000)
Price	-0.01049	-0.012625	-0.013015	-0.012898	-0.012396
	(0.2102)	(0.1918)	(0.1555)	(0.1570)	(0.1712)
ln(Size)	0.0847	1.056915	0.702730	0.596394	0.627141
	(0.511)	(0.0243)	(0.4131)	(0.2681)	(0.2407)
Volatility	-110.47	-102.33340	-97.923256	-98.701514	-97.82702
	(<0.0001)	(0.0002)	(0.0004)	(0.0003)	(0.0004)
turn	0.3750	-0.352228	0.692177	0.670857	0.471083
	(0.835)	(0.8620)	(0.7240)	(0.7318)	(0.8113)
Connected	0.3620	0.411125	0.186428	0.198326	
	(0.602)	(0.5741)	(0.8003)	(0.7868)	
LobDUM	-0.0592	0.043692	0.137120	0.124642	
	(0.931)	(0.9484)	(0.8450)	(0.8577)	
Bailout		-0.000386			
		(.)			
ln (TotAssets)		-0.954725	-0.704204	-0.599754	-0.600067
		(0.0505)	(0.4044)	(0.2585)	(0.2597)
DE		0.078374	0.068505	0.067756	0.070822
		(0.1005)	(0.1560)	(0.1594)	(0.1401)
Bailout/Size			-2.668331	-3.336203	-3.318543
			(0.5605)	(0.0797)	(0.0788)
Bailout/TotAssets			-6.093485		
			(0.8732)		
LobDUM* Connected					0.113659 (0.8731)
Likelihood Ratio	44.94	52.512	54.749	54.926	54.951

P-values reported in (). For the calculation of "Bailut/TotAssets," total assets were listed in billions. All other variables as previously defined.

Table 4

Marginal probabilities from probit regression

	[1]	[2]	[3]	[4]	[5]
Price	-0.00183	-0.00208	-0.002104	-0.0020867	-0.0020105
ln(Size)	0.01479	0.17451	0.1135881	0.0964902	0.1017132
Volatility	-19.2826	-16.89731	-15.8281443	-15.9688674	-15.8661297
Volume	0.06546	-0.05816	0.1118822	0.1085376	0.0764029
Connected	0.06320	0.06788	0.0301339	0.0320871	
Lobbied	-0.01034	0.00721	0.0221638	0.0201658	
ln (TotAssets)		-0.000006	-0.1138263	-0.0970339	-0.0973222
DE		0.15764	0.011073	0.0109621	0.0114863
Bailout/Size			-0.4313043	-0.5397626	-0.5382197
Bailout/TotAssets			-0.9849406		
Connected and Lobbied					0.0184339