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Quantifying the Value of the Subsidy for Systemically Important Financial Institutions

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Abstract

We provide evidence on the value of expected government support for a large sample of banks worldwide. Claimants to systemically relevant financial institutions receive ex post transfers from taxpayers when governments are forced into bail-outs and the expectation for government support lowers funding costs of such institutions. We estimate funding cost differentials by exploiting expectations of state support embedded in credit ratings. The distinct advantage of this methodology is that it allows us to estimate the expected subsidy in tranquil as well in turbulent times. We find that the estimated subsidy was already sizable, 60 bp, before the crisis (as of end-2007) and increased further to 80bp by end-2009, after key governments validated bail-out expectations.

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I. INTRODUCTION

One of the most troubling legacies of the financial crisis is the problem of "too-systemically important-to-fail" financial institutions (SIFIs). In theory, public policy had long recognized the dangers that systemically relevant institutions pose for the financial system and for public sector balance sheets but in practice this problem was not deemed to be extremely pressing. It was mainly dealt with by creating some uncertainty (constructive ambiguity) about the willingness of government intervention in a crisis. The recent crisis provided a real life test of this willingness to intervene. After governments have now proven their wiliness to extended large scale support, constructive ambiguity has given way to the near certainty that sufficiently large or complex institutions will not be allowed to fail. Thus, countries have emerged from the financial crisis with an even larger-sized problem; banks are much larger and so are implicit government guarantees. The international community is addressing the problem of SIFIs with a two-pronged approach.[1] On the one hand, the probability of SIFIs failure is to be reduced through higher capital buffers and tighter supervision.[2] On the other hand, SIFIS are to be made more "resolvable" by subjecting them to special resolutions regimes. A number of countries have already adopted special regimes at the national level or are in the process of doing so. However, it remains highly doubtful whether these regimes would be operable across borders.[3] Indeed, it seems highly likely that cross-border problems will not be dealt with adequately and that therefore the resolution of any SIFIs will remain highly unlikely. The consequence of this regulatory failure would be that creditors of SIFIs continue to enjoy a subsidy through implicit guaranties.

Implicit guarantees constitute an incentive for financial institutions to become large and complex. Institutions with a state backing can borrow more cheaply and earn higher profits at the expense of not-guaranteed institutions. This distortion affects the competitive behavior of both the subsidized

[1] See FSB (2010a and b)

[2] An alternative approach to would be to internalize systemic risk externalities with a levy (Pigouvian taxation) as suggested inter alia by.Acharya et.al. (2009), Doluca et. Al. (2010), FSB (2010), IMF (2010), Kocherlakota (2010), and Perotti and Suarez (2010).

[3] See, for example, Claesens et.al. (2010).

and the non-subsidized financial institutions.[4] Furthermore, the value of this state guarantee is a tangible private benefit to the subsidized financial institutions, which however, increases both the probability and the social cost of bailouts. Hence, eliminating the value of the state guarantee should contribute to reducing both the probability and magnitude of (future) financial crises. Market participants tend to dismiss these concerns by stating that these effects may be there in theory but are very small in practice. Therefore, it requires an empirical study to quantify the value of state subsidies to SIFIs. This is the aim of this paper.

We provide estimates of the value of the subsidy as of end-2007 and end-2009, using rating agencies' expectations of state support. Some rating agencies (e.g., Fitch) provide regular quantitative estimates of their expected probability of support that a particular financial institution would receive in case of crisis. The overall rating (and funding cost) of financial institutions have two constituent parts: their own financial strength and on the expected amount of external support.

The use of rating might be considered problematic because rating agencies have been known to make mistakes in their judgments. For instance, they have been under heavy criticism for overrating structured products in the wake of the financial crisis. However, whether rating agencies assess default risks correctly is not important for the question at hand. All that matters is that markets use ratings in pricing debt instruments and therefore ratings influence funding costs. This has been the case.[5] Hence, we can use the overall credit ratings of banks as a proxy for their funding costs. Our empirical approach is to extract the value of state subsidy from support ratings, while taking into account bank-specific factors that determine their own financial strength as well as country-specific factors that determine their fiscal ability to offer support.

We find that the estimated subsidy is already sizable as of end-2007 and increased substantially by the end-2009 apparently after key governments confirmed bail out expectations. On average, banks

[4] In fact, the effect on competitive behavior and risk taking of the non-subsidized firms may be even larger than the one on subsidized firms. See Gropp, Hakenes and Schnabel (2011).

[5] See, for example, Morgan and Stiroh (2006) and Resti and Sironi (2005) for studies of how ratings determine spreads of European and U.S. banks.

in major countries enjoy the credit rating inflation of 1.8-3.4 at the end-2007 and 2.5-4.2 at the end-2009. This can be translated into a funding cost advantage of to around 60bp and 80bp.

A related study by Baker and McArthur (2009) obtains a somewhat lower value of the subsidy, in the range from of 9 bp for the low of 49 bp. However, the difference in results can be explained by different empirical strategies: Baker and McAthur use the *change* in the difference in funding costs between small and large US banks before and after TARP. With this technique they identify the *change* in the value of the SIFIs subsidy, which is assumed to be created by the government bail-out intervention. However, they cannot account for a possible *level* of bail-out expectations that may have been embedded in prices long before the financial crisis. This is a drawback of all studies that use bail-out events to quantify the value of subsidy: they can be quite precise in estimating the change in the subsidy due to a particular intervention but they will underestimate the total level of the subsidy if this is positive even in tranquil times.[6] In other words, they cannot establish the value of funding cost advantages accruing from expected state support even before the crisis. [7]

This is the distinct advantage of the rating approach. It allows us to estimate not only the change of the subsidy during the crisis but also the total value of the subsidy before the crisis. As far as we are aware there are only two previous paper which use ratings. Soussa (2000), Rime (2005), and Morgan and Stiroh (2005) used similar approaches to back out the value of the subsidy. However, our study is more comprehensive, by including a larger set of banks, countries and also covering the 2008 financial crisis.

[6] Moreover, as an event study, Baker and McArthu's result might not be so precise. Because they use only quarterly averages of funding rates, their estimates are likely to be contaminated by other polices and factors within a quarter.

[7] Neverthless, event studies can be instructive. In a companion paper Ueda and Weder di Mauro (2010), we also use an event study approach which is similar in spirit to Baker and Mc Arthur to single out at the effect of individual bail-out events. Our events study methodology, however, differs from Baker and McArthur by focusing on a small window, and thus eliminating possible contamination with other policy changes. We also control for bank specific factors that may affect the funding differences, such as differences in bank's own financial strength. This could influence results, since large banks may have been hurt more from the sharp fall in the value of complex financial instruments (i.e., the competitive distortion might have become wider). A further paper using the event study methodology is Veronesi and Zingales (2009) who analyze the effects of the Paulson Plan (10/13/2009).

II. RATINGS DATA DESCRIPTION

To study the value of state support embedded in ratings we collect a data set of all banks for which Fitch provides the necessary ratings data. The advantage of Fitch is that it provides ratings for several different dimension of the creditworthiness of issuers. In particular they distinguish between overall credit ratings and ratings with and without support from government or from parent banks. This allows us to isolate the effect of state support on banks overall ratings.

The best known rating is the overall rating, which reflect Fitch's views on the issuers overall vulnerability to default. This is based on the issuer's capacity for payment of the financial commitments and its capacity to withstand adverse business and economic events.[8] We use as our primary variable *long term credit ratings*, which are graded from AAA to D. We assign 1 to 16 numeric values with 16 denoting the highest rating (AAA).

Individual ratings are designed to assess a bank's financial strength on a stand-alone basis. The rating scale runs from A to E, with gradations like A/B, or B/C. For instance a D is assigned to a bank that has considerable weaknesses of internal or external origin, including concerns on balance sheet integrity, franchise, management, profitability, and so forth. A bank with an F rating is either in default or would have defaulted if did not receive external support (see Appendix Table 2). We assign 1 to 11 numeric values with 11 denoting the highest rating (A).

The *Support Rating* that Fitch provides runs from 1 to 5, with 1 indicating an extremely high probability of external support and 5 a weak probability of external support, which cannot be relied upon (see Appendix Table 2). However, the supporters can be either a government or a parent bank.

Fitch provides also a rating for a government's ability to provide support: the *Support Rating Floor*. This is given whenever the *Support Rating* is based on potential sovereign support and the absence of a *Support Rating Floor* means that external support is expected from a parent bank. We use this information to construct a dummy variable for the support from parent banks (*Parent*). The *Support*

[8] See Fitch (2010).

Rating Floor is expressed on the 'AAA' long-term scale and indicates the level below which the agency would not expect the rating to fall. Again, we assign the numeric values 1-16.

In addition to the bank level ratings we also use sovereign ratings for two purposes. First, they serve as a general controls (in addition to county fixed effects) for differences in the macroeconomic environment of countries. Second, we make government support ratings to interact with sovereign ratings to control for the financial ability of sovereigns to credibly provide support to ailing banks.[9] We convert sovereign ratings to numeric representation with higher numbers representing better ratings.

Only the most recent data can be accessed directly online, while historical data has to be collected individually. We assembled data for two points in time, the end of 2007, that is, before the large scale eruption of the financial crisis and the end of 2009, after the peak of the financial crisis, the adoption of TARP, and other large government rescue programs for financial institutions. After cleaning up the data, we have complete data for 541 banks in 2007 and for 602 banks in 2009.[10]

Table 1 shows some summary statistics for the ratings in 2007 and 2009. As one would expect long term credit ratings as well as individual ratings are on average somewhat lower after the crisis than before. On the other hand, support ratings and support rating floors have gone up on average. Figure 1 shows the shift in the support ratings: For instance, before the crisis only 2 percent of banks had a support rating floor of A+. After the crisis 13 percent of banks are expected to receive this high level of support from their respective governments.

Table 2 shows some illustrative evidence for support ratings in selected countries with large banking centers.[11] The three countries with the highest level of potential government support (*Support*

[9] In principle the support rating should already take the financial capacity of the sovereign into account. However, we also control for this directly.

[10] In particular, we eliminate duplicates within countries (due to holding structures, or because are incorporated in various states within the U.S.). Also, to avoid overestimating the effect of government support, we eliminate junk bonds (i.e., the category of long term ratings with *C*). They are large outliers and would introduce an upward bias in the estimates.

[11] See Appendix Table 1 for the full list of countries.

Rating Floor) are France, Germany and Switzerland. The expected government support in the U.S is now also quite elevated for large banks (top 45). Moreover this is the country with by far the largest *increase* in government support between 2007 and 2009. By contrast, for example, in Japan government support for banks has remained unchanged and on average is now below the one in the U.S.

III. Estimating the Impact of Government Support on Overall Ratings

A. Benchmark Estimation

To estimate the value of support we first run the following benchmark regression. Our dependent variable is the overall long term rating of the bank (*LT*). Because this takes the categorical values from 1 to 16, we conduct ordered probit regressions. The overall rating is explained by two factors: the individual bank's financial strength (*INDV*) and the expected support (*Spprt*). In addition, we control for the macroeconomic environment by including the sovereign rating (*Sovrgn*) and country fixed effects. Our coefficient of interest is α_2 on *Spprt* in the following test equation:

$$LT_{ik} = f\left(\alpha_{0k} + \alpha_1 INDV_{ik} + \alpha_2 Spprt_{ik} + \alpha_3 Svrgn_k + \varepsilon_{ik}\right). \quad (1)$$

Column 1 of Table 3 shows the result for end-2007. It shows that an increase in the support rating of one notch causes a right shift within the domain of the normal probability density of about $\alpha_2 =$ 0.68. Because the long term rating is categorical, for each rating, 1 to 15, the intercept (cut) is estimated. Cut1 to cut15 show the intercept differentials for each level of the overall rating. Because cut1 is 5.1 and cut15 is 15.7 (the difference is 10.6), stepping up one notch in the overall *LT* rating requires about 0.76 (=10.6/14) of additional combined score from three factors, individual strength, expected support, and sovereign rating. This is the similar magnitude as our coefficient of interest α_2 on *Spprt.* Hence, if expected support was the only factor that changed, a one notch higher support rating would increase the overall long-term rating by 0.9 (=0.68/0.76) notches on average.

As Tables 1 and 2 show, the support rating takes a numerical (integer) value between 1 and 5 with a cross-country mean of around 4 at the end-2007. This implies that compared to no support (support rating 1), governments inflated ratings by about 3 notches (support rating 4) on average. For the U.S., the mean support was 3.2 at the end-2007, implying the support was worth 2 notches.

The effect of state support slightly increased at the end-2009. Column 5 of Table 3 shows that the coefficient of interest α_2 on *Spprt* is now 0.83, while the difference between cut1 and cut15 is almost unchanged (i.e., 10.6). Now, a one notch increase in the support rating increases the overall long term rating by 1.1 notches on average.

B. Robustness Check

Our sample includes a number of banks from middle income countries, which may have a lower ability to support their banks or higher willingness to support them. Here, we introduce a dummy variable *Dev* for the middle income countries to allow them to have different impacts.

$$LT_{ik} = \alpha_{0k} + \alpha_1 INDV_{ik} + \alpha_2 Spprt_{ik} + \alpha_3 Svrgn_k + \alpha_4 Dev + \alpha_5 Dev * Spprt + \varepsilon_{ik}. \quad (2)$$

Column 2 and 6 of Table 3 report the results and there is not much difference for our coefficient of interest α_2 on *Spprt*. But now, this is the effect of government support in the advanced economies only. The interaction coefficient α_5 represents the additional effect in developing countries, and it is almost half of the base effect at the end-2007. That is, a one notch increase in the support rating increases the overall long term rating of banks in developing countries by 1.5 notches. At the end-2009 this differential effect between advanced and developing countries is no longer significant, possibly implying that the two sets of countries have become more similar in the capacity and willingness to support their banks.

In some cases, in particular in developing countries, banks are subsidiaries of larger banks of advanced economies.[12] To isolate the effect of state support from parental support, we include the control variable for the presence of a parent of a bank (*Parent*) which we interact with the level of support provided by this parent. By doing this, the coefficient α_2 on *Spprt* captures only the effect of government support.

$$LT_{ik} = \alpha_{0k} + \alpha_1 INDV_{ik} + \alpha_2 Spprt_{ik} + \alpha_3 Svrgn_k + \alpha_6 Parent + \alpha_7 Parent * Spprt + \varepsilon_{ik}. \quad (3)$$

Again, the results are almost unchanged: our coefficient of interest α_2 on *Spprt* (see columns 3 and 7 of Table 3) declined marginally. Parental support is about two thirds of the sovereign support at the end-2007 but not significant at the end-2009.

We combine these two considerations into one regression because parental support is more likely present in the developing countries and thus needs to be disentangled from the sovereign support. The coefficient α_2 on *Spprt* now captures only the effect of government support in the advanced economies.

$$\begin{aligned} LT_{ik} = {} & \alpha_{0k} + \alpha_1 INDV_{ik} + \alpha_2 Spprt_{ik} + \alpha_3 Svrgn_k + \alpha_4 Dev + \alpha_5 Dev * Spprt \\ & + \alpha_6 Parent + \alpha_7 Parent * Spprt + \alpha_8 Dev * Parent * Spprt + \varepsilon_{ik}. \end{aligned} \quad (4)$$

Once again, the estimated α_2 on *Spprt* are virtually the same (columns 4 and 8 of Table 3). TBTF banks in developing banks enjoy higher support (but only at 10 percent level significance) at the end-2007. Parental support is significant everywhere and strong also at the end-2007. These effects become less strong or insignificant at the end-2009, but the combined effect, that is, parental support in developing countries is has become significant and adds 20 percent to the base effects. Note that the difference between cut1 and cut15 increased only marginally at the end-2007.

[12] Some banks in advanced economies are also subsidiaries.

Dropping Samples with NF in Support Rating Floor

We use the *Support Rating Floor* and in particular the *No-Floor* ratings as an additional robustness check. When Fitch is not sure about the lowest level of supports a government is willing to offer it assigns a *No-Floor* "NF" rating. The existence of a NF rating implies that the potential support comes from a government not from a parent bank, but the degree of potential support is highly uncertain or likely to be low. Because of this possibly ill-defined value, we check the robustness of our estimates by dropping all banks which have a NF rating from the regression analysis (Table 4).

The coefficient estimates for *Spprt* becomes larger but so does the difference between cut1 and cut15. Overall, the impact of increases in the support on the overall credit rating is almost unchanged in the simplest specifications (columns 1 and 5). A one notch increase in the support rating increases overall rating at the end-2007 by 0.9 and by 1.2 notches at the end-2009. Effects from developing countries and parental supports are more significant, however, in the more elaborative specifications (columns 4 and 8) due to a larger difference between cut1 and cut15 estimates. In other words, SIFIs in advanced economies appear to have benefitted less from their governments than suggested by the simple specification. At the same time, the change between 2007 and 2009 becomes more sizable. A one-notch increase in the support rating increases long term ratings by 0.5 notches on average at the end-2007 and by 1.0 at the end-2009.

Interpreting these results is complicated by the fact that it involves making a judgment about the meaning of "not making a judgment" as practiced by Fitch. On the other hand, this specification could be a more precise estimate since it eliminates observations where Fitch is not willing to make a judgment about the expected level of support, On the other hand, if there was true "knightian uncertainty" this would imply that measurement errors are high. Furthermore, be this estimate would be downward biased, if a "No-Floor" rating is more likely to be assigned when the government support is considered low (and uncertain). In this last interpretation these estimates would be a lower bound on the level of the subsidy to SIFIs.

Listed Firm Samples Only

One hypothesis could be that listed banks might enjoy a higher level of support from governments since they tend to be more widely followed in the news and held publicly. For the same reason governments might be more timid to bail out listed banks. To test the hypothesis that there may be large differences between listed and non-listed banks, we run the regression above for a restricted sample of listed banks only. The benchmark results are not much affected by this restriction (Table 5). A one notch increase in the support rating increases the overall long term rating by 0.7 on average at the end-2007 and by 0.9 at the end-2009. The developing country effect is not significant and the parental support is significant (and large) only at the end-2007, again suggesting that the differences between the two country groups have leveled.

Using Firm Balance Sheet Information for Listed Firms

A further concern could be that in the rating process the individual financial strength rating (*INDV*) may well be artificially correlated with the overall credit ratings (*LT*) as estimated by Fitch. Therefore we use firm balance sheet data to model the stand alone financial strength of the bank rather than using the individual strength rating. As proxies for the financial strength of the bank we use the return on asset (RoA), debt to asset (D/A), and the size (total asset to GDP ratio, TA/GDP). This information is commercially available for listed firms from Thomson Reuter.. Figure 2 shows the relationship between the *Support Rating Floor* and these variables. It shows that the support clearly depends on the size of banks but does not depend on profitability or indebtedness.

The benchmark results still hold (Table 6).[13] The simple specification (columns 1 and 5) suggests that a one notch increase in the support rating increases the overall long term rating by 0.75 notches on average at the end-2007 and by 0.9 notches at the end-2009. These effects are 0.6 and 0.8 for 2007 and 2009, respectively, according to the most inclusive specification (columns 4 and 8). The developing country effect is as large as the base effect at the end-2007 but becomes insignificant at the end-2009. Parental support is not significant as somewhat expected for the listed firms.

[13] Note that in 2007 there is no lowest rating listed banks in our data and the cut estimates can be provided only to cut1 through cut14. In 2009, there is no more AAA listed banks in our data and the cut estimates can be provided only through cut13.

IV. CONCLUSION

This paper provides an estimate of the value of the subsidy to SIFIs in terms of the overall ratings. In summary, a one unit increase in government support for banks in advanced economies has an impact equivalent to 0.5 to 0.9 notches on the overall long term credit rating at the end-2007. And, this effect increased to 0.7 to 1.1 notches by the end-2009. This result is robust for a number of sample selection tests, such as testing for differential effects across developing and advanced countries, listed and non-listed banks, correcting for bank parental support and alternative estimations of individual banks strength.

In interpreting these results it is important to note, that the averages mask large differences across countries. For instance, mean support in Japan is unchanged at 3.9 in 2007 and 2009. This implies that overall ratings of systemically relevant banks profited by 2.0-3.5 notches from expected government support in 2007, with the value of this support increasing to 2.7-4.3 notches in 2009. For the top 45 U.S. banks, the mean support rating increased from 3.2 in 2007 to 4.1 in 2009. This translates into an 1.6-2.9 overall rating advantage for TBTF banks in 2007 and a much higher 2.9-4.5 notch impact in 2009. Germany started high at 4.4 in 2007 and slightly increased to 4.6. This suggests a 2.2-4.1 overall rating advantage for TBTF banks in 2007 and a 3.2-5.1 notch rating inflation in 2009. For selected countries that have large banking center and/or have been affected by the financial crisis, government support ratings are about 3.6 in 2007 and 3.8 in 2009 on average (see Table 2, based on U.S. top 45 banks). Thus the overall rating advantage for TBTF banks in this sample of countries are 1.8-3.4 in 2007 and 2.5-4.2 in 2009.

Our 3-notch impact on average for advanced countries is comparable to the results found by by Soussa (2000) and Rimes (2005), although their studies are less rigorous and based on smaller sample. In addition, Soussa (2000) reports structural annualized interest rate differentials among different credit ratings based on the average cumulative default rates (percent) for 1920-1999 calculated by Moody's.[14] According to his conversion table, when issuing a five-year bond, a three

[14] Moody's and Fitch ratings are comparable.

notch rating increase translates into a funding advantage of 5 bp to 128 bp depending on the riskiness of the institution.[15] On average, it is 65 bp for 3-notch improvement, or 22bp for one-notch improvement. Using this, we can evaluate the overall funding cost advantage as 40bp-75bp at the end-2007 and 55bp-92bp at the end-2009. Taking the midpoint of both ranges the funding cost advantage of SIFIs was around 60bp in 2007 and 80bp in 2009.

This is helpful information, for example, if one would like to design a corrective levy on banks which extracts the value of the subsidy. One caveat to such an exercise is that our estimate may well be an overestimate of the required tax rate that would neutralize the (implicit) TBTF subsidy, since the competitive advantage of a guaranteed firm versus a nonguaranteed firm can be magnified—the former gains market share and the later looses market share. One possibility is that the advantages and disadvantages are equally distributed between the two firms. Then, the levy rate that would eliminate the competitive distortion is smaller than the estimated difference in the funding costs. In this simple example it would be half of the values given above. Nevertheless, the corrective tax required to correct of the distortion of government support remains sizable.

[15] That is, a5-8bp for an A rated bank, 23 bp for a BBB rated bank, 61 bp for a BB rated bank, and 128 bp for a B rated bank.

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Table 1. Summary Statistics for Ratings

2007

Variable	Obs	Mean	Std. Dev.	Min	Max
LT Rating	806	9.416873	3.484826	1	16
Individual Rating	815	7.522699	1.762052	3	11
Support Rating	824	3.050971	1.571256	1	5
Support Rating Floor	393	7.13486	3.010972	1	16

2009

Variable	Obs	Mean	Std. Dev.	Min	Max
LT Rating	895	8.596648	3.502858	1	16
Individual Rating	895	6.52514	1.756797	1	11
Support Rating	895	3.113966	1.618674	1	5
Support Rating Floor	444	7.740991	3.357957	1	16

Table 2. Summary Statistics for Support Ratings for selected countries that have large banking center and/or have been affected by the financial crisis

		2007				2009			
		Support Rating		Support Rating Floor		Support Rating		Support Rating Floor	
	Count	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
Australia	11	3.45	1.04	6.86	2.85	4.09	1.14	7.88	3.44
Brazil	18	2.44	0.89	4.00	1.26	2.78	1.26	5.29	1.38
France	23	4.41	1.22	9.75	0.50	4.35	1.37	11.50	1.22
Germany	27	4.42	1.03	9.65	2.74	4.59	0.69	10.17	2.39
Greece	7	3.43	1.13	8.00	1.22	3.57	1.13	7.00	0.00
Hong Kong	7	3.71	0.95	5.80	2.39	3.86	1.07	6.00	2.24
Ireland	8	4.13	0.99	8.00	2.35	4.75	0.46	9.00	1.55
Italy	23	3.50	1.10	6.19	2.14	3.65	1.11	6.35	2.18
Japan	28	3.85	1.17	7.64	2.25	3.86	1.24	7.81	2.87
Netherlands	10	3.43	1.62	8.17	3.92	4.00	1.49	9.71	3.95
Portugal	11	3.89	1.05	7.17	3.37	3.82	1.25	7.33	2.58
Spain	42	3.29	0.64	6.21	1.20	3.29	0.64	6.35	1.42
Switzerland	10	3.50	1.96	10.00	0.00	3.50	1.96	13.00	2.65
Turkey	20	2.45	0.76	3.60	0.55	2.95	1.00	5.57	0.53
United Kingdom	39	3.68	1.45	7.81	2.48	3.74	1.45	8.81	3.54
United States	213	1.97	1.55	6.03	3.72	2.17	1.77	9.70	4.09
(U.S. top 45)	*45*	*3.20*	*1.49*	*4.05*	*3.37*	*4.09*	*1.43*	*8.62*	*4.63*
Average	31.9	3.46	1.18	6.99	2.14	3.71	1.20	8.24	2.39
(Using U.S. top 45)	*20.6*	*3.55*	*1.16*	*7.06*	*2.04*	*3.81*	*1.17*	*8.15*	*2.29*

Table 3. Benchmark Ordered Probit

	end-2007				end-2009			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INDV	0.8420***	0.8587***	0.8911***	0.8981***	0.6426***	0.6295***	0.6405***	0.6324***
	[13.923]	[13.221]	[14.063]	[13.543]	[15.405]	[15.128]	[15.179]	[14.999]
Spprt	0.6769***	0.6488***	0.6043***	0.5981***	0.8347***	0.8343***	0.8190***	0.8330***
	[14.565]	[14.687]	[12.861]	[13.073]	[24.457]	[20.653]	[23.607]	[20.281]
Svrgn	0.1586***	0.1580***	0.1496***	0.1505***	0.2043***	0.1862***	0.2034***	0.1888***
	[7.596]	[5.661]	[7.017]	[5.319]	[15.867]	[9.528]	[15.375]	[9.454]
Dev		-1.0502**		-0.8090		-0.2942		-0.1139
		[-2.061]		[-1.548]		[-0.913]		[-0.346]
Dev*Spprt		0.3413***		0.2349*		0.0411		-0.0673
		[3.122]		[1.818]		[0.524]		[-0.795]
Parent			-1.4963***	-1.3474***			-0.4807	-0.7939*
			[-3.598]	[-2.802]			[-1.379]	[-1.812]
Parent*Spprt			0.4485***	0.3912***			0.1304	0.1682*
			[4.621]	[3.614]			[1.557]	[1.775]
Dev*Parent*Spprt				0.0581				0.1491***
				[0.880]				[2.764]
cut1	5.1438***	4.7261***	5.1591***	4.8311***	4.6659***	4.3349***	4.6057***	4.3688***
	[13.138]	[7.660]	[12.621]	[7.864]	[18.550]	[10.552]	[17.593]	[10.248]
cut2	5.6144***	5.2603***	5.6267***	5.3506***	5.4591***	5.1070***	5.3929***	5.1293***
	[14.130]	[8.749]	[13.540]	[8.909]	[22.052]	[12.840]	[20.849]	[12.391]
cut3	6.2440***	5.9880***	6.2347***	6.0347***	6.0067***	5.6760***	5.9359***	5.6919***
	[15.100]	[10.181]	[14.423]	[10.175]	[24.079]	[14.737]	[22.636]	[14.126]
cut4	7.0020***	6.9135***	6.9829***	6.9280***	6.3882***	6.0827***	6.3148***	6.0937***
	[15.560]	[11.533]	[14.898]	[11.432]	[24.181]	[15.886]	[22.737]	[15.153]
cut5	7.7227***	7.6818***	7.7201***	7.6966***	6.9726***	6.6471***	6.8986***	6.6562***
	[15.807]	[12.323]	[15.165]	[12.261]	[24.629]	[17.059]	[23.232]	[16.334]
cut6	8.0699***	8.0927***	8.0856***	8.1140***	7.4864***	7.1676***	7.4154***	7.1813***
	[15.857]	[12.680]	[15.226]	[12.690]	[25.182]	[18.207]	[23.976]	[17.556]
cut7	8.8427***	8.8983***	8.9097***	8.9569***	8.3101***	7.9549***	8.2455***	7.9843***
	[15.776]	[13.174]	[15.091]	[13.161]	[25.602]	[19.567]	[24.588]	[19.005]
cut8	9.5181***	9.5750***	9.6097***	9.6537***	9.0993***	8.7386***	9.0371***	8.7785***
	[16.108]	[13.729]	[15.441]	[13.732]	[26.427]	[20.599]	[25.480]	[20.100]
cut9	10.1986***	10.2607***	10.3152***	10.3616***	9.7689***	9.3845***	9.7077***	9.4296***
	[16.495]	[14.239]	[15.822]	[14.242]	[27.238]	[21.584]	[26.344]	[21.102]
cut10	11.2063***	11.3023***	11.3602***	11.4391***	10.5526***	10.1858***	10.4958***	10.2416***
	[16.840]	[14.814]	[16.159]	[14.823]	[27.772]	[22.368]	[26.943]	[21.921]
cut11	11.9928***	12.0593***	12.1686***	12.2192***	11.2286***	10.8511***	11.1723***	10.9120***
	[17.041]	[15.094]	[16.373]	[15.113]	[28.393]	[22.988]	[27.627]	[22.552]
cut12	12.6501***	12.7082***	12.8473***	12.8895***	12.3060***	11.9222***	12.2510***	11.9899***
	[17.247]	[15.468]	[16.538]	[15.463]	[28.760]	[23.428]	[28.013]	[22.977]
cut13	13.7266***	13.7854***	13.9701***	14.0093***	13.6824***	13.2893***	13.6336***	13.3626***
	[17.488]	[15.919]	[16.745]	[15.856]	[27.436]	[23.149]	[26.774]	[22.705]
cut14	14.7401***	14.8605***	14.9819***	15.0838***	15.0518***	14.6514***	14.9996***	14.7263***
	[16.568]	[15.501]	[15.999]	[15.438]	[27.044]	[23.621]	[26.511]	[23.301]
cut15	15.6582***	15.7382***	15.8251***	15.9054***	15.2666***	14.8644***	15.2088***	14.9382***
	[17.376]	[16.165]	[16.776]	[16.066]	[24.419]	[21.838]	[24.151]	[21.639]
Obs.	767	738	767	738	860	822	860	822
Wald Chi2	305.6	298.9	279.6	283.4	894.8	847.7	930.3	904.6
Prob>Chi2	0	0	0	0	0	0	0	0
Pseudo R2	0.349	0.360	0.359	0.368	0.348	0.348	0.348	0.350

Table 4. Dropping Samples with NF in Support Floor Rating

	end-2007				end-2009			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INDV	0.7117***	0.7116***	0.7614***	0.7486***	0.5377***	0.5285***	0.5313***	0.5242***
	[10.788]	[10.209]	[10.758]	[10.334]	[13.578]	[13.345]	[13.339]	[13.259]
Spprt	0.7524***	0.6224***	0.6092***	0.5120***	1.1960***	1.1366***	1.1518***	1.0863***
	[8.676]	[8.186]	[6.990]	[6.803]	[18.688]	[15.173]	[18.357]	[14.841]
Svrgn	0.2018***	0.2028***	0.2047***	0.2039***	0.2682***	0.2561***	0.2695***	0.2679***
	[7.450]	[6.113]	[7.243]	[6.058]	[14.555]	[9.588]	[14.295]	[9.932]
Dev		-2.3885**		-2.0458*		-1.8105**		-1.5614**
		[-2.292]		[-1.801]		[-2.560]		[-2.213]
Dev*Spprt		0.6554***		0.5103*		0.4671***		0.3558**
		[2.820]		[1.909]		[2.742]		[2.025]
Parent			-2.2050***	-2.3364***			-0.7300	-1.4003*
			[-4.386]	[-3.972]			[-1.369]	[-1.935]
Parent*Spprt			0.5985***	0.5936***			0.1716	0.2832*
			[5.114]	[4.549]			[1.413]	[1.883]
Dev*Parent*Spprt				0.0887				0.1481**
				[1.334]				[2.191]
cut1	3.6635***	2.2083***	3.2336***	1.8381**	3.5287***	2.2814***	3.2393***	1.9816***
	[6.011]	[2.901]	[5.768]	[2.310]	[8.314]	[3.434]	[7.673]	[3.147]
cut2	4.4863***	3.1524***	4.2879***	3.0437***	5.3231***	4.3345***	5.0909***	4.1182***
	[7.976]	[4.447]	[7.180]	[4.169]	[15.663]	[6.618]	[15.009]	[6.701]
cut3	5.6116***	4.4846***	5.3615***	4.2803***	6.4094***	5.5256***	6.1761***	5.3317***
	[10.134]	[7.107]	[9.088]	[6.472]	[19.805]	[10.121]	[17.797]	[9.673]
cut4	6.7472***	5.8354***	6.4561***	5.5485***	7.1030***	6.3371***	6.8641***	6.1348***
	[11.272]	[9.127]	[10.245]	[8.355]	[21.003]	[12.035]	[18.803]	[11.182]
cut5	7.5645***	6.7822***	7.2937***	6.4915***	7.8613***	7.1633***	7.6227***	6.9618***
	[11.682]	[10.198]	[10.743]	[9.571]	[22.623]	[13.901]	[20.605]	[13.114]
cut6	8.0367***	7.3819***	7.8104***	7.1144***	8.7094***	8.1753***	8.4835***	7.9966***
	[11.697]	[10.566]	[10.803]	[10.168]	[23.462]	[16.068]	[22.015]	[15.344]
cut7	8.8291***	8.3469***	8.6875***	8.1545***	9.8252***	9.3910***	9.6165***	9.2585***
	[11.628]	[10.841]	[10.749]	[10.491]	[23.887]	[17.976]	[22.824]	[17.254]
cut8	9.3034***	8.8065***	9.1956***	8.6445***	10.5599***	10.1110***	10.3571***	9.9947***
	[11.749]	[10.980]	[10.900]	[10.669]	[24.542]	[18.742]	[23.534]	[18.058]
cut9	10.0806***	9.6128***	10.0279***	9.5126***	11.4063***	10.9415***	11.2078***	10.8360***
	[11.994]	[11.248]	[11.162]	[10.976]	[24.976]	[19.663]	[24.095]	[18.997]
cut10	11.0101***	10.5889***	11.0231***	10.5578***	12.2920***	11.8298***	12.0991***	11.7408***
	[12.242]	[11.592]	[11.402]	[11.352]	[25.462]	[20.447]	[24.613]	[19.811]
cut11	11.9133***	11.4426***	11.9633***	11.4478***	13.1112***	12.6184***	12.9164***	12.5330***
	[12.495]	[11.902]	[11.663]	[11.689]	[26.225]	[21.204]	[25.429]	[20.587]
cut12	12.5487***	12.0488***	12.6253***	12.0776***	14.3461***	13.8195***	14.1452***	13.7323***
	[12.671]	[12.199]	[11.812]	[11.982]	[26.799]	[21.896]	[26.002]	[21.281]
cut13	13.6056***	13.0613***	13.7349***	13.1330***	15.6739***	15.1248***	15.4710***	15.0304***
	[12.969]	[12.588]	[12.121]	[12.369]	[26.463]	[22.159]	[25.721]	[21.570]
cut14	14.6481***	14.0657***	14.7693***	14.1333***	16.9499***	16.3903***	16.7405***	16.2911***
	[12.684]	[12.463]	[11.978]	[12.292]	[26.487]	[22.759]	[25.947]	[22.343]
cut15	15.5081***	14.9093***	15.5517***	14.9165***	17.1565***	16.5953***	16.9427***	16.4956***
	[13.354]	[13.118]	[12.580]	[12.901]	[24.726]	[21.622]	[24.343]	[21.288]
Obs.	550	533	550	533	615	597	615	597
Wald Chi2	168.6	192.2	151.1	179.0	704.4	666.5	715.2	688.7
Prob>Chi2	0	0	0	0	0	0	0	0
Pseudo R2	0.344	0.353	0.360	0.367	0.388	0.395	0.389	0.399

Table 5. Listed Firm Samples Only

	end-2007				end-2009			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INDV	0.8435***	0.8889***	0.9035***	0.9464***	0.8434***	0.8428***	0.8443***	0.8427***
	[7.953]	[7.418]	[8.259]	[7.754]	[9.411]	[8.997]	[9.368]	[8.848]
Spprt	0.5808***	0.6056***	0.5291***	0.5559***	0.7449***	0.7742***	0.7277***	0.7530***
	[8.864]	[9.577]	[8.029]	[8.648]	[12.844]	[10.775]	[12.378]	[10.475]
Svrgn	0.2202***	0.2302***	0.2075***	0.2146***	0.2408***	0.2201***	0.2407***	0.2168***
	[6.831]	[4.958]	[6.186]	[4.641]	[9.985]	[6.569]	[9.917]	[6.357]
Dev		-0.4927		-0.4546		0.2696		0.2080
		[-0.522]		[-0.460]		[0.501]		[0.368]
Dev*Spprt		0.1650		0.1509		-0.1625		-0.1586
		[0.806]		[0.669]		[-1.236]		[-1.131]
Parent			-2.1273***	-1.7560***			-0.8011	-1.0445
			[-4.747]	[-3.651]			[-1.115]	[-1.281]
Parent*Spprt			0.5580***	0.4890***			0.2050	0.2576
			[4.561]	[3.860]			[1.189]	[1.414]
Dev*Parent*Spprt				-0.0413				0.0210
				[-0.434]				[0.260]
cut1	4.6655***	4.7707***	4.7625***	4.8753***	5.6843***	5.6716***	5.6321***	5.5295***
	[6.650]	[3.512]	[6.739]	[3.570]	[9.807]	[7.589]	[9.628]	[7.028]
cut2	5.4136***	5.5330***	5.4834***	5.6176***	6.3593***	6.2773***	6.3004***	6.1281***
	[8.749]	[4.808]	[8.608]	[4.840]	[11.725]	[8.751]	[11.606]	[8.239]
cut3	6.1755***	6.3970***	6.1734***	6.4024***	6.8729***	6.7930***	6.8159***	6.6467***
	[9.757]	[6.183]	[9.407]	[6.064]	[13.456]	[10.160]	[13.185]	[9.442]
cut4	7.1998***	7.5817***	7.1613***	7.5450***	7.2714***	7.1926***	7.2102***	7.0411***
	[10.391]	[7.469]	[10.057]	[7.299]	[13.533]	[10.627]	[13.187]	[9.792]
cut5	8.2031***	8.5320***	8.2104***	8.5325***	8.0943***	7.8834***	8.0308***	7.7322***
	[10.984]	[8.405]	[10.656]	[8.328]	[14.141]	[11.679]	[13.760]	[10.811]
cut6	8.5294***	8.9505***	8.5676***	8.9719***	8.8013***	8.5563***	8.7422***	8.4172***
	[10.979]	[8.814]	[10.632]	[8.778]	[14.413]	[12.488]	[14.091]	[11.702]
cut7	9.3231***	9.9089***	9.4142***	9.9697***	9.8333***	9.6083***	9.7836***	9.4896***
	[11.031]	[9.526]	[10.710]	[9.516]	[14.907]	[13.489]	[14.631]	[12.764]
cut8	10.1391***	10.7166***	10.2606***	10.8011***	10.7780***	10.5555***	10.7381***	10.4484***
	[11.288]	[9.978]	[10.988]	[9.997]	[15.325]	[13.950]	[15.083]	[13.275]
cut9	10.8961***	11.4522***	11.0602***	11.5714***	11.4422***	11.1589***	11.4074***	11.0568***
	[11.644]	[10.473]	[11.368]	[10.534]	[15.650]	[14.374]	[15.430]	[13.724]
cut10	11.7658***	12.3834***	11.9885***	12.5546***	12.3016***	12.0626***	12.2756***	11.9714***
	[11.847]	[10.891]	[11.602]	[10.990]	[16.063]	[14.690]	[15.850]	[14.052]
cut11	12.3790***	13.0049***	12.6249***	13.1964***	13.0196***	12.7872***	12.9951***	12.6967***
	[11.936]	[11.075]	[11.695]	[11.155]	[16.389]	[15.001]	[16.192]	[14.373]
cut12	13.1025***	13.7542***	13.3604***	13.9577***	13.9580***	13.7342***	13.9300***	13.6375***
	[12.198]	[11.409]	[11.938]	[11.464]	[16.627]	[15.089]	[16.425]	[14.484]
cut13	14.2294***	14.9596***	14.5063***	15.1814***	15.6972***	15.4993***	15.6591***	15.3870***
	[12.376]	[11.927]	[12.098]	[11.912]	[15.714]	[14.178]	[15.616]	[13.756]
cut14	15.1437***	16.1091***	15.4480***	16.3680***	16.6779***	16.4863***	16.6339***	16.3665***
	[11.701]	[12.068]	[11.425]	[11.990]	[15.601]	[14.365]	[15.497]	[13.941]
cut15	16.5383***	17.3918***	16.8275***	17.6299***	16.9420***	16.7507***	16.8937***	16.6259***
	[12.193]	[12.179]	[11.914]	[12.100]	[14.761]	[13.736]	[14.696]	[13.392]
Observations	297	283	297	283	324	304	324	304
Wald Chi2	156.4	214.4	156.1	207.4	304.3	295.7	320.7	311.0
Prob>Chi2	0	0	0	0	0	0	0	0
Pseudo R2	0.346	0.366	0.358	0.376	0.355	0.355	0.357	0.357

Table 6. Using Firm Balance Sheet Information for Listed Firms

	end-2007				end-2009			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
RoA	0.1453***	0.1893***	0.1405***	0.1927***	0.3589***	0.3793***	0.3664***	0.3948***
	[2.949]	[3.960]	[2.815]	[3.885]	[4.516]	[4.467]	[4.560]	[4.576]
D/A	-0.0044	-0.0062	-0.0042	-0.0058	-0.0003	-0.0005	-0.0001	-0.0001
	[-0.995]	[-1.266]	[-0.921]	[-1.154]	[-0.059]	[-0.098]	[-0.018]	[-0.015]
TA/GDP	0.5891***	0.7020***	0.6102***	0.7281***	0.4622**	0.4993**	0.4845**	0.5317**
	[3.150]	[3.635]	[2.763]	[3.150]	[2.032]	[2.214]	[2.081]	[2.331]
Spprt	0.4715***	0.4294***	0.4393***	0.3944***	0.5523***	0.5175***	0.5406***	0.4960***
	[7.393]	[6.121]	[6.597]	[5.281]	[9.102]	[7.591]	[8.424]	[6.946]
Svrgn	0.3530***	0.3159***	0.3477***	0.3076***	0.3576***	0.3145***	0.3559***	0.3075***
	[12.912]	[7.914]	[12.619]	[7.629]	[12.322]	[8.962]	[12.162]	[8.854]
Dev		-2.1776**		-2.3090**		-0.9205		-1.1461*
		[-2.313]		[-2.261]		[-1.453]		[-1.785]
Dev*Spprt		0.5378**		0.5857**		0.1593		0.2242
		[2.539]		[2.463]		[1.031]		[1.402]
Parent			-0.8438**	-0.4947			-1.0065	-1.0733
			[-2.056]	[-0.869]			[-1.520]	[-1.301]
Parent*Spprt			0.2472**	0.1812			0.2307	0.2510
			[2.169]	[1.351]			[1.388]	[1.372]
Dev*Parent*Spprt				-0.0964				-0.0509
				[-0.974]				[-0.552]
cut1	1.2503***	-0.1289	1.1348***	-0.2898	2.6584***	1.9285***	2.6170***	1.7591**
	[2.907]	[-0.117]	[2.634]	[-0.253]	[5.690]	[2.810]	[5.604]	[2.564]
cut2	1.8945***	0.5417	1.7646***	0.3689	3.1353***	2.3407***	3.0885***	2.1695***
	[5.840]	[0.619]	[5.264]	[0.400]	[8.121]	[3.745]	[7.916]	[3.472]
cut3	2.3896***	1.1730	2.2396***	0.9798	3.3489***	2.5674***	3.2973***	2.3946***
	[7.587]	[1.576]	[6.712]	[1.231]	[9.529]	[4.433]	[9.192]	[4.143]
cut4	3.2137***	2.2217***	3.0454***	2.0158***	3.6194***	2.8580***	3.5597***	2.6815***
	[9.560]	[3.241]	[8.695]	[2.759]	[9.669]	[5.107]	[9.315]	[4.799]
cut5	4.0114***	3.0207***	3.8502***	2.8292***	4.1208***	3.3980***	4.0550***	3.2233***
	[11.079]	[4.693]	[10.389]	[4.208]	[10.381]	[6.072]	[10.059]	[5.887]
cut6	4.2486***	3.3672***	4.0907***	3.1833***	4.6721***	3.9283***	4.6114***	3.7678***
	[11.168]	[5.276]	[10.537]	[4.832]	[11.145]	[7.119]	[10.853]	[6.976]
cut7	4.8768***	4.2073***	4.7246***	4.0338***	5.4787***	4.7641***	5.4259***	4.6185***
	[11.528]	[6.545]	[10.983]	[6.154]	[12.185]	[8.320]	[11.938]	[8.195]
cut8	5.4419***	4.7581***	5.2899***	4.5866***	6.1543***	5.4310***	6.1054***	5.2917***
	[11.712]	[7.221]	[11.234]	[6.869]	[12.970]	[9.034]	[12.731]	[8.932]
cut9	6.0378***	5.3633***	5.8871***	5.1923***	6.6821***	5.9216***	6.6355***	5.7851***
	[12.218]	[7.948]	[11.785]	[7.633]	[13.390]	[9.631]	[13.165]	[9.543]
cut10	6.5886***	5.9557***	6.4449***	5.7888***	7.3772***	6.6291***	7.3357***	6.4962***
	[12.605]	[8.582]	[12.220]	[8.299]	[13.725]	[10.208]	[13.519]	[10.111]
cut11	7.0716***	6.4366***	6.9354***	6.2743***	8.0350***	7.2814***	7.9976***	7.1500***
	[13.047]	[9.145]	[12.693]	[8.872]	[14.054]	[10.780]	[13.874]	[10.691]
cut12	7.6400***	7.0129***	7.5098***	6.8540***	8.7876***	8.0193***	8.7517***	7.8862***
	[13.253]	[9.605]	[12.936]	[9.359]	[14.207]	[11.171]	[14.028]	[11.090]
cut13	8.6028***	8.0065***	8.4814***	7.8536***	10.1237***	9.3320***	10.0900***	9.1963***
	[13.193]	[10.198]	[12.916]	[9.943]	[15.350]	[12.357]	[15.160]	[12.274]
cut14	9.4545***	9.0626***	9.3545***	8.9419***				
	[12.251]	[10.351]	[11.921]	[10.052]				
cut15								
Observations	263	250	263	250	264	255	264	255
Wald Chi2	178.9	174.8	174.4	170.4	218.8	219.3	217.1	215.0
Prob>Chi2	0	0	0	0	0	0	0	0
Pseudo R2	0.250	0.277	0.253	0.280	0.251	0.250	0.253	0.252

Appendix Table 1. Country List for the Rating Study

	Freq.	Percent		Freq.	Percent
Albania	1	0.11	Latvia	1	0.11
Andorra	3	0.34	Lithuania	3	0.34
Argentina	1	0.11	Luxembourg	2	0.22
Armenia	2	0.22	Macao	1	0.11
Australia	11	1.23	Macedonia	1	0.11
Austria	6	0.67	Malaysia	7	0.78
Azerbaijan	7	0.78	Malta	2	0.22
Bahrain	6	0.67	Mexico	11	1.23
Belarus	6	0.67	Mongolia	2	0.22
Belgium	4	0.45	Morocco	1	0.11
Bermuda	1	0.11	Netherlands	10	1.12
Bosnia & Herzegovina	1	0.11	New Zealand	8	0.89
Brazil	18	2.01	Nigeria	8	0.89
Bulgaria	7	0.78	Norway	7	0.78
Canada	9	1.01	Oman	4	0.45
Channel Islands	1	0.11	Panama	6	0.67
Chile	4	0.45	Peru	4	0.45
China	5	0.56	Philippines	8	0.89
Colombia	1	0.11	Poland	7	0.78
Costa Rica	1	0.11	Portugal	11	1.23
Croatia	1	0.11	Puerto Rico	1	0.11
Cyprus	3	0.34	Qatar	5	0.56
Czech Republic	3	0.34	Romania	5	0.56
Denmark	2	0.22	Russia	47	5.25
Dominican Republic	3	0.34	San Marino	1	0.11
Egypt	2	0.22	Saudi Arabia	10	1.12
El Salvador	3	0.34	Serbia	1	0.11
Finland	3	0.34	Singapore	3	0.34
France	23	2.57	Slovakia	2	0.22
Gabon	1	0.11	Slovenia	7	0.78
Georgia	3	0.34	South Africa	8	0.89
Germany	27	3.02	South Korea	11	1.23
Greece	7	0.78	Spain	42	4.69
Guam	1	0.11	Sweden	4	0.45
Guatemala	1	0.11	Switzerland	10	1.12
Hong Kong	7	0.78	Taiwan	35	3.91
Hungary	2	0.22	Thailand	10	1.12
India	8	0.89	Togo	1	0.11
Indonesia	6	0.67	Trinidad & Tobago	2	0.22
Ireland	8	0.89	Tunisia	1	0.11
Israel	2	0.22	Turkey	20	2.23
Italy	23	2.57	Ukraine	8	0.89
Jamaica	1	0.11	United Arab Emirates	12	1.34
Japan	28	3.13	United Kingdom	39	4.36
Jordan	3	0.34	United States	213	23.8
Kazakhstan	6	0.67	Uzbekistan	5	0.56
Kenya	1	0.11	Venezuela	7	0.78
Kuwait	8	0.89	Total	895	100

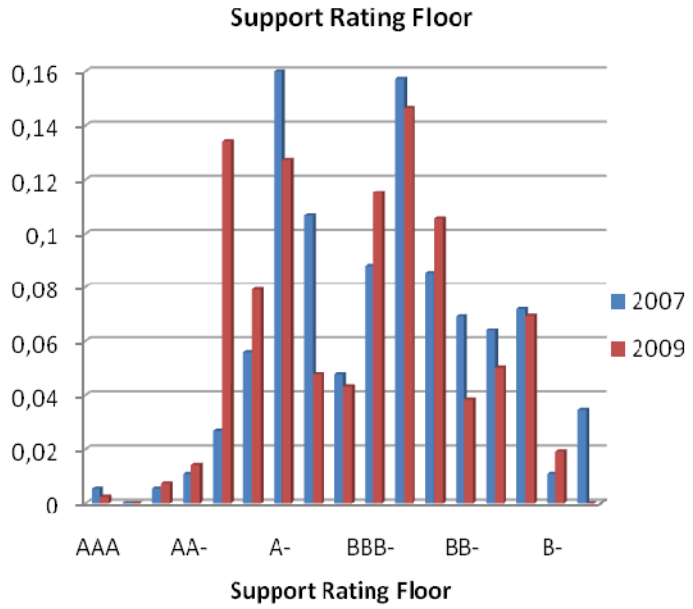
Appendix Table 2. Individual Ratings and Support Ratings

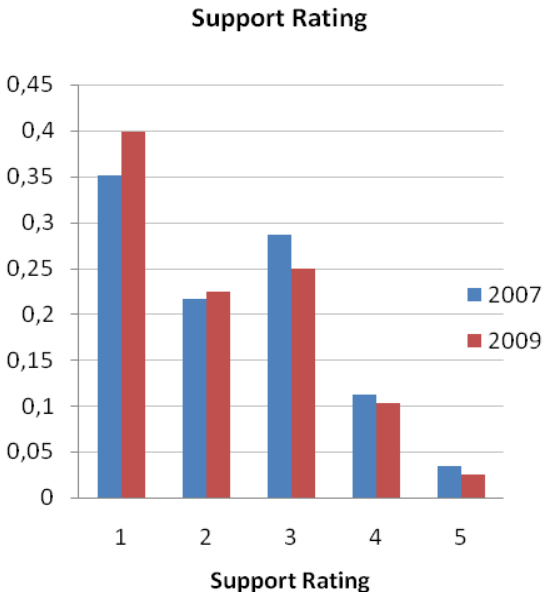
Rating	Definitions Individual Ratings
A	A very strong bank. Characteristics may include outstanding profitability and balance sheet integrity, franchise, management, operating environment or prospects.
B	A strong bank. There are no major concerns regarding the bank. Characteristics may include strong profitability and balance sheet integrity, franchise, management, operating environment or prospects.
C	An adequate bank, which, however, possesses one or more troublesome aspects. There may be some concerns regarding its profitability and balance sheet integrity, franchise, management, operating environment or prospects.
D	A bank that has weaknesses of internal and/or external origin. There are concerns regarding its profitability and balance sheet integrity, franchise, management, operating environment or prospects. Banks in emerging markets are necessarily faced with a greater number of potential deficiencies of external origin.
E	A bank with very serious problems, which either requires or is likely to require external support.
F	A bank that has either defaulted or, in Fitch Ratings' opinion, would have defaulted if it had not received external support. Examples of such support include state or local government support, (deposit) insurance funds, acquisition by some other corporate entity or an injection of new funds from its shareholders or equivalent.

Gradations may be used among the ratings A to E: i.e. A/B, B/C, C/D, and D/E.

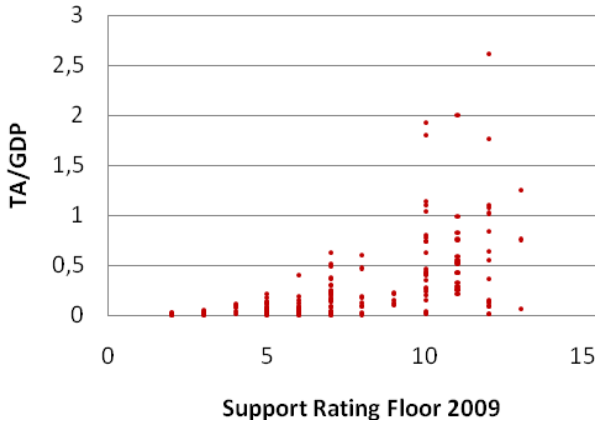
Rating	Definitions Support Ratings
1	A bank for which there is an extremely high probability of external support. The potential provider of support is very highly rated in its own right and has a very high propensity to support the bank in question. This probability of support indicates a minimum Long-Term Rating floor of 'A-'.
2	A bank for which there is a high probability of external support. The potential provider of support is highly rated in its own right and has a high propensity to provide support to the bank in question. This probability of support indicates a minimum Long-Term Rating floor of 'BBB-'.
3	A bank for which there is a moderate probability of support because of uncertainties about the ability or propensity of the potential provider of support to do so. This probability of support indicates a minimum Long-Term Rating floor of 'BB-'.
4	A bank for which there is a limited probability of support because of significant uncertainties about the ability or propensity of any possible provider of support to do so. This probability of support indicates a minimum Long-Term Rating floor of 'B'.
5	A bank for which there is a possibility of external support, but it cannot be relied upon. This may be due to a lack of propensity to provide support or to very weak financial ability to do so. This probability of support indicates a Long-Term Rating floor no higher than 'B-' and in many cases, no floor at all.

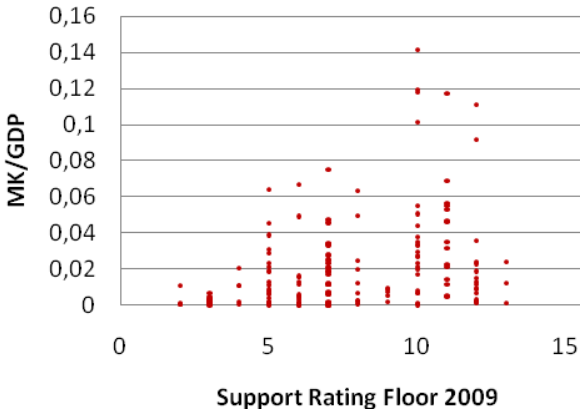
Figure 1. Distribution of Support Ratings and of Support Floor Ratings (in percent)

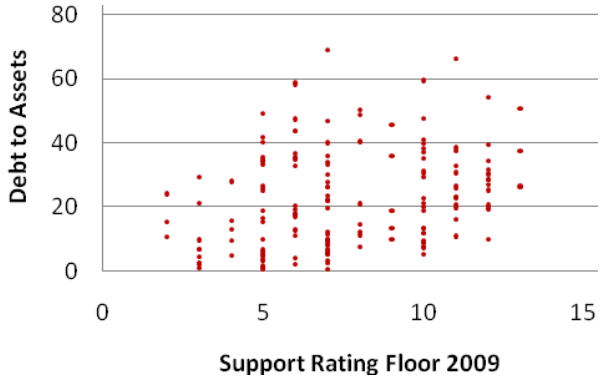


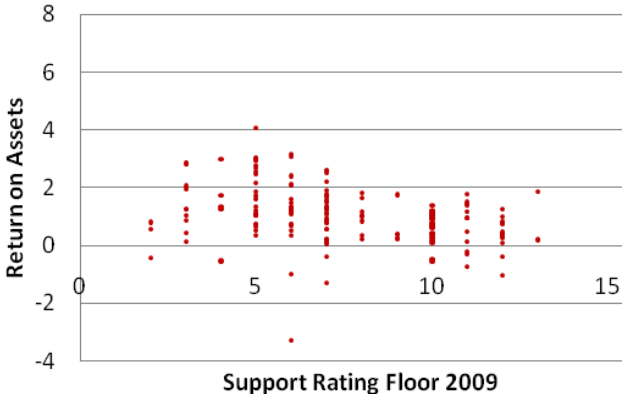


Figures 2.


TA/GDP
3
2,5
2
1,5
1
0,5
0
0
5
10
15
Support Rating Floor 2009


MK/GDP
0,16
0,14
0,12
0,1
0,08
0,06
0,04
0,02
0
0
5
10
15
Support Rating Floor 2009


Debt to Assets
80
60
40
20
0
0
5
10
15
Support Rating Floor 2009


Return on Assets
8
6
4
2
0
-2
-4
0
5
10
15
Support Rating Floor 2009