Market Discipline at Thai Banks before the Asian Crisis

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Abstract

This paper tests the effect of systemic risk on deposit market discipline by interacting proxies for systemic risk with bank-specific default-risk variables. Discipline is measured by estimating a supply of deposit funds function at Thai banks from 1992 to 1997. The results show that supply decreases as bank-specific risk increases. Also, the sensitivity of funds to changes in bank-specific risk increases as systemic risk rises. Additionally, depositors decrease their sensitivity to deposit rates, decreasing the ability of banks to offset deposit drains by raising rates. Although banking system risk increases, discipline decreases the share of deposits at the riskiest banks.

JEL Classifications: E53, E44, G28, G21
Key Words: Market discipline, market monitoring, systemic risk, banking and currency crises

1. Introduction

Economists often promote the ability of market discipline to mitigate banking system risk. However, as systemic risk rises it can affect the degree of market discipline (see Gilbert, 1983, for theory and empirical evidence). Exploring effects of systemic risk on discipline is important to stability. As systemic risk rises, one would hope that discipline is maintained. However, there is no evidence on whether discipline changes under this environment. Despite the likelihood of a connection between systemic risk and discipline, systemic risk is usually treated as a control variable in the literature. The present study tests the effect of increasing systemic risk on market discipline at Thai banks before the 1997 currency crisis.[1] Discipline has been traditionally defined as risk pricing of banks by liability holders. Recently discipline has included the quantity responses of the market to bank-specific measures of default risk. At least one of these two concepts of discipline is imbedded into almost every market discipline study (e.g., see Flannery, 1998; Flannery and Nikolova, 2004 for reviews of the literature). More recent literature has distinguished market monitoring from market influence, where the latter reduces risky behavior, leading to lower banking system risk (Bliss and Flannery, 2001). Furthermore, Covitz *et al.* (2004) find the evidence that market discipline only appears in the periods after government guarantees are reduced. Even though our paper shows evidence of depositor monitoring, banking system risk increases. However, this does not mean that monitoring has not mitigated systemic risk to some extent. Additionally, we do show that depositors pulled funds from the riskiest banks, decreasing their share of banking system deposits. This decreases banking system risk from what it would have been in the absence of monitoring. This is the sense in which we define discipline. Discipline in this form can contribute to preserving the soundness of the banking system.

In this paper, we emphasize the risk of withdrawal of short-term deposits from the banking system. The focus on this type of risk follows from the financial crisis literature, which argues that systemic risk arising from heavy short-term borrowing contributed to the financial and currency crises in Latin America and East Asia (Bernard and Bisignano 2000). Although this borrowing differs among countries in these regions, Thailand is often cited as an example. Thus, this paper's focus on Thai banks should be appropriate.

The effect of the withdrawal of short-term funds on any particular bank depends not only on its exposure to those funds, but on its overall condition. Thus, as systemic risk increases depositors have incentives to monitor banks more in an attempt to sort out the

[1] Partour and Plantin (2008) examine the impact of securitization on bank incentives to monitor borrowers, which is the other side of market discipline. Additionally, Cerasi and Rochet (2014) construct a model where banks play an active role in monitoring borrowers. However, this is beyond our scope of analysis, and we leave it for future research.

effect of this risk on individual banks. Discipline in this environment can take two forms, depending on how systemic risk rises or whether it reaches some critical level.

First, depositors might attempt to use bank-specific risk measures to discipline banks more intensely. Second, to gauge bank-specific condition as systemic risk rises, depositors might require more accurate and timelier information. This can lead depositors to increase monitoring of ratios with the highest information content under a high risk environment (Levy et al. 2010).[2]

Using data on the Thai banking system in the pre-crisis period from 1992Q4 to 1997Q2,[3] we measure discipline by estimating a supply function for deposit funds. Unlike other discipline studies, estimating a supply function allows a test of the consistency of the results with theoretical models of a deposit market (Park and Peristiani 1998).[4]

The next section introduces four measures of systemic risk for Thailand. Section 3 presents the econometric model of deposit funds supply, the data and the results. The last section concludes the paper.

2. Systemic Risk of Withdrawal of Short-Term Funds in Thailand

The adverse effect of short-term funds withdrawal can be measured through the product of exposure to short-term borrowing and the probability of these funds being withdrawn. Exposure can be measured as short-term interbank deposits at each bank. Exposure increased from 4.5% of banking system liabilities in1992 to 20% in 1997 at 15 Thai

[2] Abandoning monitoring would mean the complete withdrawal of funds from banks. This is a type of discipline, but can only be measured relative to deposit alternatives at other institutions. We do not directly address deposit shifting among institutions, but controls for these shifts econometrically by utilizing time-fixed effects.

[3] While it might be interesting to examine the post-crisis period to see how depositors sorted out bank risk as banks continued to deteriorate, the government give full guarantees to all banks and some banks were taken over by the government. Consequently, the measurement of discipline would be complicated. See Peria and Schmukler (2001) for a pre-crisis and post-crisis comparison of discipline in three Latin American countries.

[4] Park and Peristiani (1998), argue that risk pricing reflects depositor monitoring responses if information on bank condition is transparent, accurate and timely. If information is not transparent and depositors do not all have equal access to the same information on bank-specific risk, deposit quantities may also reflect default risk. A positive-sloped supply of deposit funds results from this dispersion of information..

banks. To test the hypothesis that rising systemic risk affected discipline, we interact our four measures of probability of default with bank-specific measures of default risk, including exposure. The first measure of probability of default is a time dummy variable for the last year before the crisis (DUMYR). The second indicator is the implicit rate on short-term borrowing for the banking system ($IMPLBORRT_{t-1}$).[5] The third indicator is the index of Thai bank stock prices ($SETBANK_t$).[6] Finally, we use the 6-month Thai baht forward rate ($THBFOR_t$) as a fourth indicator of the systemic risk of withdrawal.

3. Empirical Model, Data and Results

3.1 Empirical Model

We test whether systemic risk affects depositor discipline. We also interact the above-mentioned proxies of systemic risk with indicators of bank-specific default risk. We use a market supply and demand framework specified as follows,

$$(DEPGR_{it})^{\text{supply}} = \beta_1(DEPRATE_{\text{it}}) + \gamma_1(BANK\text{-}SPECIFIC\ RISK_{it-1}) + \delta_1(CONTROL_{it-1,\,i,\,t})$$
$$+ \beta_2[(DEPRATE_{\text{it}})(\text{SYSTRISK}_t)] + \gamma_2[(BANK\text{-}SPECIFIC\ RISK_{it-1})(\text{SYSTRISK}_t)]$$
$$+ \delta_2[(CONTROL_{it-1})(\text{SYSTRISK}_t)] + \varepsilon_{\text{it}} \qquad (1)$$

where the four-quarter real growth of deposits ($DEPGR_{it}$) is a function of the rate on deposits of 6-month maturity ($DEPRATE_{it}$) for the i^{th} bank.[7] Deposit growth is also a function of a vector of bank-specific default risk indicators ($BANK\text{-}SPECIFIC\ RISK_{it-1}$) that are lagged one period to mitigate endogeneity problems. This vector includes a measure of general bank risk (return on equity [ROE_{it-1}]), three measures of asset risk

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[5] This is calculated as banking system interest expenses on short-term funds divided by the average value of short-term borrowing in the banking system.

[6] This index is a weighted average of the market capitalization of Thai banks.

[7] Ideally, the econometric model should use data on the quantities of 6-month deposits. However, only data for total bank deposits are available. We use two proxies for DEPGR: the four-quarter growth rate in total real deposits (DEPGR2) and an implicit deposit growth rate (DEPGR1), computed by taking total deposit interest expenses for each bank and dividing this by a bank's posted 6-month deposit rate. The latter measure is probably a better indication of interest-sensitive deposit growth than the former. The latter measure is used in Tables 2-6. DEPGR2 yields qualitatively similar results. The correlation coefficient between the two measures is 0.555. The deposit rate is used instead of the spread between the deposit and risk-free rate because use of the spread implicitly assumes that the coefficient on the risk-free rate is unity.

(loan-to-asset ratio [$LNAS_{it-1}$], foreclosure-to-asset ratio [$FORCLSAS_{it-1}$], and cash-to-asset ratio [CAS_{it-1}]) and a measure of leverage (a bank's computed franchise value [$FRANK_{it-1}$]).[8] This vector also includes a measure of bank-specific exposure to short-term funds (the ratio of foreign interbank borrowing-to-liabilities [$EXPOS_{it-1}$]). We employ a vector of firm-specific and time-specific control variables ($CONTROL_{it-1,\ i,\ t}$). The control variables include the logarithm of real assets ($LOGAS_{it-1}$), firm-fixed effects dummy variables ($DUMFF_i$) and time fixed-effects dummy variables ($DUMTIME_t$).[9]

To test the hypothesis that discipline changes with changes in systemic risk, the above-mentioned bank-specific measures are interacted with each of the four measures of systemic risk ($SYSTRISK_t$). Since each of these four measures are a proxy for the systemic risk of short-term funds withdrawal, only one measure at a time is included in each of four regression equations. These measures consist of a time-dummy variable for the last year before the crisis (DUMYR), the implicit borrowing rate for short-term foreign funds ($IMPLBORRT_{t-1}$), the stock price index of Thai commercial banks ($SETBANK_t$), and the 6-month forward rate on the Thai baht ($THBFOR_t$).[10]

The deposit supply function is estimated using the two-stage least squares (TSLS) technique. Since all 15 of the Thai banks included in the sample are engaged in a similar

[8] The franchise value of capital is computed as in Keeley (1990). The balance sheet measure of capital is probably not an appropriate measure of leverage monitored by depositors. There is little variation in this ratio between banks or over time. This ratio also rises in the last year before the crisis, whereas and the franchise value and the market capital-to-asset ratio fall. When included in our estimates of deposit supply, the leverage ratio often yields a wrong sign or is insignificant. This is a typical result in the literature (see e.g., Mondschean and Opiela 1999). We used the franchise value in the reported regression estimates. Coefficients on the market capital-to-asset ratio are of similar sign and significance. The ratio of provisions for loan losses to total loans is more than likely not a good measure of loan quality. As Table 1 indicates, this ratio was extremely small and varied little over time and across banks. Provisioning standards forced banks to set aside loan loss reserves only after a loan had not been repaid for 1 year. Provisioning regulations were changed to meet international standards only in the last year before the crisis. Initial attempts to use this ratio yielded the wrong sign or an insignificant coefficient. Interacting a dummy variable for the last year when provisioning laws changed yields the correct sign. As an alternative proxy for loan quality we use the ratio of foreclosures to assets. This ratio represents actual foreclosures on properties. As Table 1 indicates, this ratio is much larger than provisioning to loans and its standard deviation among banks changes substantially in the last year before the crisis. The correlation between the loan-loss provisions ratio and foreclosures ratio is near zero.

[9] The time-fixed effects play an important role. If there are shifts in deposit funds between institutions, time-fixed effects should control for this shift. Thus, even if deposits are not fleeing the banking system as systemic risk increases, estimates of equation (1) should still measure discipline among banks.

[10] The reciprocal of SETBANK is used in regression equation (1).

business, they are more than likely affected by common shocks. Although several bank-specific and systemic variables are included, it is reasonable to assume that these banks form a set of imperfectly-pooled seemingly unrelated (SUR) regressions. Using the SUR technique should mitigate omitted variable bias and provide more efficient estimates. A test of the correlation matrix of residuals formed from the least squares regressions shows that the assumption of zero contemporaneous cross-correlations among the residuals can be rejected at the 1% level. Consequently, we use cross-section SUR weights in each stage of a TSLS process to estimate the supply of deposit funds.

The variables DEPGR and DEPRATE are assumed to be endogenous. All other variables are assumed to be exogenous. Three exogenous bank-specific deposit demand shifters are included. The deviation of a bank's quoted prime loan rate from the industry average ($MLRDEV_{it}$) is a proxy for the bank's loan opportunities. An increase in this rate should increase the demand for deposits. The ratio of non-interest expenses to total assets ($NIEXPAS_{it}$) is a proxy for operating costs of the bank per baht of assets. An increase in this cost decreases the demand for deposits.[11] The share of liabilities that a bank has in deposits ($DEPLIAB_{it}$) is an indicator of a bank's dependence on deposits for funding assets. An increase in this variable should increase the demand for deposits in the current period. Since all three demand shifters are known by banks in the current period, but revealed to the public only in the subsequent period, there is little likelihood that they affect deposit supply. These three demand shifters are used along with all other exogenous variables as instruments in the first stage of the TSLS/SUR regressions.

3.2 Data

We employ a quarterly panel from 1992Q4 to 1997Q2 that includes 15 Thai commercial banks. Real quantities are computed using the CPI for all items. Balance sheet and income statement data for Thai banks and the market capitalization of each bank was used to compute the franchise value and market capital leverage ratio, and were obtained from the Stock Exchange of Thailand. Deposit rates on 6-month savings at commercial

[11] This ratio could also be viewed as a measure of efficiency or a measure of services provided. With any of these interpretations, increases in this ratio should decrease a bank's demand for deposits.

banks were obtained from the Bank of Thailand. The Thai bank stock index and the baht/USD 6-month forward rate were obtained from Bloomberg.

3.3 Results

Tables 1-4 report the results of the four estimated deposit funds supply functions, where each regression interacts one of the four measures of systemic risk with all bank-specific variables. Initially, we focus on the total monitoring response by depositors for evidence of discipline when systemic risk is included in the regressions.

TABLE 1
Supply of Deposit Funds Estimation (TSLS/SUR), Dependent Variable = DEPGR1
DUMYR is interacted with Bank-Specific Variables
(DUMYR, =1 for period 1996Q3-1997Q2 and = 0 otherwise))

Independent Variable[a]	Coefficient / (t-statistic) 1st Period Effect 1993Q1-1996Q2	Coefficient / (t-statistic) Interaction w/ DUMYR	Coefficient/ (Chi-Square statistic) Total Effect
Bank-Specific Risk Variables			
FRANK (t-1)	63.960* (1.758)	107.749** (2.192)	171.709*** (17.301)
CAS(t-1)	365.940*** (5.727)	150.218* (1.731)	516.158*** (7.281)
ROE(t-1)	55.578*** (2.855)	-28.274 (-1.170)	27.304** (4.898)
FORCLSAS (t-1)	-1586.583*** (-5.351)	1566.881** (2.194)	-19.702 (0.000815)
EXPOS(t-1)	-134.851*** (-4.518)	-25.677 (-0.565)	-160.528*** (12.894)
LNAS(t-1)	103.115 (1.150)	-26.666 (-0.220)	76.449 (0.445)
Control Variables			
LOGAS(t-1)	57.964** (2.418)	-1.341 (-0.294)	56.622** (4.316)
Slope of Deposit Supply			
DEPRATE(t)	28.393** (2.308)	-23.742** (-2.247)	4.651 (0.898)
Hypothesis Test[b]			
Null Hypothesis: Bank-specific risk variables=0	(283.788)***	(12.051)*	(66.799)***

[a] t-statistics are in parentheses in columns 2 and 3. Chi-Squared statistics are in parenthesis in column 4. * = significant at 10% level, ** = significant at 5% level and *** = significant at 1% level. Coefficient estimates on the firm and time-fixed effects regressors are not included in the above table, but are available on request.
[b] Chi-squared statistics in parentheses.

This total effect, appearing in the last column of Tables 1-4, is of the correct sign and significant for almost every bank-specific default risk variable. The hypothesis test of whether the bank-specific risk variables are jointly equal to zero, appearing at the bottom of each table, is rejected for each of the four regressions. This is evidence of discipline.

TABLE 2
Supply of Deposit Funds Estimation (TSLS/SUR), Dependent Variable = DEPGR1
($IMPLBORRT_{t-1}$ is interacted with Bank-Specific Variables)

Independent Variable [a]	Coefficient / (t-statistic) Own Effect	Coefficient /(t-statistic) Interaction w/ IMPLBORRT	Coefficient/ (Chi-Square statistic) Total Effect
Bank-Specific Risk Variables			
FRANK (t-1)	-111.817*** (-2.808)	74.057*** (5.146)	62.538*** (15.976)
CAS(t-1)	368.829*** (2.811)	-9.767 (-0.203)	345.835*** (55.447)
ROE(t-1)	27.585 (0.811)	3.470 (0.248)	35.755*** (22.441)
FORCLSAS (t-1)	970.983 (1.486)	-782.477*** (-2.927)	-871.245*** (13.960)
EXPOS(t-1)	-135.239*** (-7.380)	-7.076* (-1.920)	-151.898*** (88.371)
LNAS(t-1)	130.054 (1.507)	-25.450 (-0.755)	70.136** (5.546)
Control Variables			
LOGAS(t-1)	51.643*** (7.079)	-4.112*** (-3.443)	41.960*** (25.071)
Slope of Deposit Supply			
DEPRATE(t)	27.592*** (3.148)	-7.192*** (-3.248)	10.660** (5.357)
Hypothesis Test [b]			
Null Hypothesis: Bank-specific risk variables=0	-----	(56.276)***	(316.315)***

[a] t-statistics are in parentheses in columns 2 and 3. Chi-Squared statistics are in parenthesis in column 4. * = significant at 10% level, ** = significant at 5% level and *** = significant at 1% level. Coefficient estimates on the firm and time-fixed effects regressors are not included in the above table, but are available on request.
[b] Chi-squared statistics in parentheses.

Next, we turn to the effect of increasing systemic risk on depositor discipline, which is the main focus of this paper. This effect is measured by observing the coefficients associated with the interaction of our proxies for systemic risk with each bank-specific measure of risk. This effect is reported in the second column of Tables 1-4. An increase in systemic risk strengthens the direct relationship between deposit growth and, both the franchise value (FRANK) and the cash-to-asset (CAS) ratios. This can be seen from the positive and significant coefficients in each of the four regressions for the proxy for capital and three of the four regressions for the cash ratio. This result is consistent with the often cited expectation that depositors flee to banks with the highest capital and

TABLE 3
Supply of Deposit Funds Estimation (TSLS/SUR), Dependent Variable = DEPGR1
(SETBANK $_t$ is interacted with Bank-Specific Variables)

Independent Variable [a]	Coefficient / (t-statistic) Own Effect	Coefficient /(t-statistic) Interaction w/ SETBANK	Coefficient/ (Chi-Square statistic) Total Effect
Bank-Specific Risk Variables			
FRANK (t-1)	-136.460*** (-4.051)	187.329*** (5.015)	33.382** (5.361)
CAS(t-1)	-1322.822*** (-11.211)	1970.688*** (14.657)	463.903*** (157.122)
ROE(t-1)	139.799*** (4.990)	-99.166*** (-3.863)	49.890*** (50.482)
FORCLSAS (t-1)	-4205.571*** (-5.577)	3043.040*** (4.230)	-1446.600*** (54.114)
EXPOS(t-1)	-190.263*** (-14.597)	31.686*** (3.251)	-161.535*** (158.304)
LNAS(t-1)	0.239 (0.00363)	25.495 (0.403)	23.353 (0.858)
Control Variables			
LOGAS(t-1)	38.092*** (4.254)	-3.841* (-1.826)	34.610*** (15.035)
Slope of Deposit Supply			
DEPRATE(t)	36.112*** (7.272)	-18.791** (-6.992)	19.075*** (36.027)
Hypothesis Test [b]			
Null Hypothesis: Bank-specific risk variables=0	-----	(295.284)***	(569.019)***

[a] t-statistics are in parentheses in columns 2 and 3. Chi-Squared statistics are in parenthesis in column 4. * = significant at 10% level, ** = significant at 5% level and *** = significant at 1% level. Coefficient estimates on the firm and time-fixed effects regressors are not included in the above table, but are available on request.
[b] Chi-squared statistics in parentheses.

liquidity, as systemic risk rises and the banking system weakens (see e.g., Kaufman and Scott 2003, and Nier and Baumann 2003).

Increases in systemic risk weaken the relationship between deposit growth and both foreclosures to assets (FORCLSAS) and the return on equity (ROE). This result is apparent by the positive and significant coefficients on the interaction term of FORCLSAS in two of the four equations, and a negative coefficient for ROE in two of the regressions. It is intuitive that the monitoring of these ratios decreases given that they contain dated information, which probably lacks relevance in gauging bank-specific default risk in an environment of rapidly increasing systemic risk. This result is consistent with other discipline studies. For example, Jagtiani and Lemieux (2001) show that as

TABLE 4
Supply of Deposit Funds Estimation (TSLS/SUR), Dependent Variable = DEPGR1
(THBFOR $_t$ is interacted with Bank-Specific Variables)

Independent Variable [a]	Coefficient / (t-statistic) Own Effect	Coefficient /(t-statistic) Interaction w/ THBFOR	Coefficient/ (Chi-Square statistic) Total Effect
Bank-Specific Risk Variables			
FRANK(t-1)	-1515.977** (-2.279)	61.144** (2.371)	63.846*** (28.258)
CAS(t-1)	-4428.854 (-1.456)	184.095* (1.755)	327.710*** (62.895)
ROE(t-1)	1171.797** (2.202)	-43.150** (-2.135)	56.900*** (23.295)
FORCLSAS (t-1)	-21481.130*** (-2.839)	778.623* (1.846)	-1120.126*** (30.293)
EXPOS(t-1)	-337.046** (-2.340)	7.040 (1.272)	-155.151*** (120.870)
LNAS(t-1)	2423.655** (2.251)	-93.076** (-2.218)	18.796 (0.547)
Control Variables			
LOGAS(t-1)	-6.751 (-0.221)	2.523** (2.127)	58.426*** (15.035)
Slope of Deposit Supply			
DEPRATE(t)	95.410** (2.382)	-3.158** (-2.117)	13.816*** (51.398)
Hypothesis Test [b]			
Null Hypothesis: Bank-specific risk variables=0	-----	(67.635)***	(493.938)***

[a] t-statistics are in parentheses in columns 2 and 3. Chi-Squared statistics are in parenthesis in column 4. * = significant at 10% level, ** = significant at 5% level and *** = significant at 1% level. Coefficient estimates on the firm and time-fixed effects regressors are not included in the above table, but are available on request.
[b] Chi-squared statistics in parentheses.

banks in the U.S. weaken, ROE becomes insignificant in monitoring. Levy, Peria *et al.* (2004) show that as risk rises in Argentina and Uruguay, non-performing loans lose their predictive power in monitoring. As argued earlier, this result should not be viewed as a decrease in monitoring, but rather a shift in depositor emphasis from those variables that have little information content under rising systemic risk to those variables that do. In the case of this study, depositors are shifting away from FORCLSAS and ROE and, towards

CAS and FRANK. The remaining two bank-specific risk variables (EXPOS and LNAS) show no definite pattern of change as systemic risk rises.

The results in our paper show that depositor funds are responsive to bank-specific measures of risk. This characterizes what we call market discipline, which is also consistent with the results of other studies of discipline.[12] Additionally, increasing systemic risk increased the rate at which depositors pulled funds from the riskier banks. In particular, deposits were more sensitive to differences in bank net worth and liquidity as systemic risk rose. Depositors also moved away from the use of variables that, in general, contained little information in a rising systemic risk environment (i.e., return on equity and a dated measure of loan quality). However, as systemic risk rose, the sensitivity of deposit growth to deposit rates decreased. This indicates that depositors forced banks to pay higher rates than before to maintain deposit growth in the face of deposit drains due to deteriorating bank health. This further supports the contention that depositors intensified their demands on banks as systemic risk increased.

4. Conclusion

This paper tests the hypothesis that systemic risk affected deposit market discipline at Thai banks in the pre-crisis period from 1992 to 1997. We choose measures of systemic risk that proxy for the probability of the withdrawal of short-term foreign funds from the banking system. In this paper we estimate the effect of systemic risk on discipline by interacting these measures of systemic risk with bank-specific default risk variables. Additionally, market discipline is measured in the context of estimating a function for the supply of deposit funds. This latter approach allows a test of the consistency of the results with theoretical models of a deposit market and facilitates testing the effect of systemic risk on discipline.

[12] After the financial crisis, we expect that market discipline will be weakening if there are regulatory changes in the banking system. This phenomenon is reported by Hadad *et al*. (2011) who find that market discipline at Indonesian banks decreases after introducing new regulations.

The results of this paper show that market discipline exists at banks in pre-crisis Thailand. That is, the supply of deposit funds decrease at the riskiest banks. There is also strong evidence that increases in systemic risk increase the rate at which depositors pull funds from the riskiest banks. In particular, as systemic risk increases, depositors move their funds to banks that have higher net worth and are more liquid than other banks. Additionally, depositors place less emphasis on profitability and measures of asset quality -dated measures that often convey little information about bank condition as systemic risk rises. There is no evidence that depositors flee to large banks, which questions the conventional wisdom that depositors perceive increasing government guarantees as the crisis approaches. Finally, the sensitivity of deposit growth to deposit rates is positive, but decreases as systemic risk increases. This is a further sign that depositors force banks to pay higher premia for bank efforts to maintain deposits in the face of deteriorating fundamentals.

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