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INTERNATIONAL DEBT CRISES AND U.S. BANK STOCK RETURNS*

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(Abstract)

This study compares the information and investor contagion effects of the Mexican moratorium announcement of August 19, 1982 with those of the Brazilian moratorium announcement of February 20, 1987. It is found that there were significant negative effects on the share prices of U.S. banks as a result of the moratoria announcements by Mexico and Brazil. The size of the effect was larger in the case of Mexico. While there was no correction by the market prior to the Mexican announcement, there was some market adjustment prior to Brazil announcement. Weak contagion effects are also found during the two moratoria announcement periods when the market was irrational in pricing bank stocks. The contagion effect was stronger in the case of Mexico.

국제금융위기에 대한 미국은행의 주가반응

유범준
경영학과

(요 약)

본 연구는 국제금융시장에서 멕시코 국제금융채무지불불능선언(1982.8.19)과 브라질 국제금융채무지불불능선언(1987.2.20)이 미국 상업은행의 시장가치에 미친 영향을 새로운 정보에 대한 시장효율성과 산업파급효과를 중심으로 하여 실증적으로 분석하였다. 대체로 미국은행의 주가는 멕시코와 브라질의 국제금융채무지불불능을 선언하기 이전에는 특별한

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변동을 보이지 않았다 그러나 브리질선언의 경우에는 은행주가가 사전에 누설된 정보에 이미 적응하여 해당은행의 관련여부에 따른 차별적 반응을 보여 주었다. 또한 국제금융지불불능을 선언한 기간중에는 모든 은행주식이 전반적인 가격불균형을 보이는 산업파급효과가 발생하였다.

I. INTRODUCTION

On August 19, 1982, Mexico declared a moratorium on its external debt principal payments, and sought additional funds from U.S banks and the International Monetary Fund to service its huge external debt in order to remain technical solvent. Since the Mexico announcement in 1982, Peru, Venezuela, Argentina, Chile and more recently, Brazil became the latest borrower to default when it announced that it would also halt payments on its $100 billion external debt.

Given their potential to disrupt the U.S banking industry and the world monetary order, it is important to analyze and understand the effects of sovereign debt defaults from the creditor's perspective. The primary objective of the creditor bank, like any other publicly-held firm, is to maximize the wealth of its shareholders. The events that are considered in this study are significant, with the potential to cause financial distress and failure, not only to the individual banks, but to the whole banking industry.

The purpose of this study is to compare the market efficieny and industry contagion effects of the market's response to the Mexican moratorium announcement in 1982 with those of the Brazilian moratorium announcement in 1987. The two major, similar and sequential events separated by a five year time period provide a unique situation that allows us to test the market's ability to anticipate debt defaults by major third world borrowers. At the same time, there is enough a time lag for the market to learn form the first event and forget before the second one to be unable to anticipate it Between the two events, an efficient market should have become increasingly aware of the likelihood of Latin American borrower defaults, and should have impounded the learning that occurs in the forms of anticipations. These anticipations would have been reflected the market's being able to deal more effectively with the latter events.

While several studies have attempted to measure the market reaction to the Mexican moratorium announcement by studying the bank stock price adjustment before and after the event, very few have looked at the maket reaction following the Brazilian moratorium announcement. This research analyzes the bank stock price behavior for an extended period of time around both the Mexican and industry contagion effects, the learning that took place in the period between the two announcements is also analyzed by comparing the bank share price changes during the two events.

Section II reviews the findings of some of related studies mentioned above In

Section III, the hypotheses to be tested are detailed. Section IV describes the methodology and data sources The empirical results are presented in Section VII. The final section presents the summary and conclusions of this paper.

II. MARKET EFFICIENCY IN THE BANKING INDUSTRY: A REVIEW OF LITERATURE

The empirical evidence on the efficiency of the markets for bank stocks is mixed. If the banking market is efficient, information about the events that have adverse effects on creditor banks, such inefficiencies due to asymmetric information between the affected banks and the market participants, there should be no significant adjustments to the market prices of the stocks.

Bank regulators tend to defend regulation by rejecting the notion of efficient markets for bank stocks, although academic researchers [Pettway and Sinkey (1980), Murphy(1979), and Pettway (1980) among others] find the market for large bank stocks to be efficient. Regulators argue that the market for bank equities lacks the necessary information to price correctly bank obligations and portfolio of assets consistent with their risk. The imperfect information on the part of some market participants results in inefficiencies in bank equity markets.

Several studies have attempted to determine if the default announcements by Mexico and other Latin American borrowers had any significant impact on the market prices of bank equities and shareholder wealth. They have also tried to detect any adjustments prior to and long after the anouncements. They have focused on the announcement effects of the default and subsequent regulatory responses. Other studies have concentrated on the rapidity with which the market reacted to the announcement and its ability to price securities proportionate with the risk of the banks issuing the securities The latter has important implications for the policies implemented by regulating agencies. If the market is mispricing securities due to asymmetric information, the regulators are justified in mandating more disclosure by banks in order to improve the operational efficiency of capital markets.

One of the first studies to analyze the U S. stock market responses to the Mexican default announcement in 1982 was begun by Cornell and Shapiro (1986). They use a cross-sectional regression approach to test for a Latin American exposure effect on annual, bi-annual and monthly returns of exposed U S banks. Implicitly, they test the extent to which the market incorporates the riskiness of foreign loans in valuing bank stocks They also test the degree to which investors are able to discriminate between with different exposures in the absence of disclosures Their data consists of 43 NYSE listed banks employed in a cross-sectional test. Cornell and Shapiro find Lation American exposure to be a significant determinant of announcement of annual returns, but insignificant in determining monthly returns around the announcement day. Hence, they conclude that information about the Mexican debt crisis had been arriving prior to the announcement date, and that the market had been impounding this information

continually into bank stock prices. This, they contend, is the reason why Latin American exposure is a significant determinant of annoual and bi-annual returns but not of monthly returns.

Schoder and Vankudre (1986) test for a Mexico exposure effect on the announcement date returns. They use the classical event study methodology to a sample of 45 banks and find an insignificant negative effect on the announcement day. They also test for a relation between bank stock price adjustment and foreign loan exposure to Mexico. Schoder and Vankude conclude that the bank stock prices around the announcement date did not reflect the exposure to Mexico of individual banks This conclusion suggests either informational ineffciency or pure information contagion effect for the entire U.S. banking industry. The existence of informational inefficiency or the persistence of a contagion effect during shocks to the banking system may significantly influence access to capital markets and arbitrage opportunities.[1]

Smirlock and Kaufold (1987) also test for a Mexico exposure effect on bank stock returns around the event date. They test whether investors were able to distinguish between banks with varying degrees of exposure. Since the stock return residuals of affected firms are cross-sectionally correlated regressions to conduct their tests The model involves a series of regression equations, one for each bank in the sample. The sample of 60 banks are divided into two groups - 23 exposed and 37 non-exposed banks - and regressions are analyzed separately. Stock price returns for a period of 60 days on either side of the announcement day are computed and tested. Exposure is measured by the ratio of book of loans to the book value of equity

Smirlock and Kaufold conclude that there was a significant relationship between exposure and returns during the announcement period. They also suggest that the investors were able to differentiate between banks with different exposures. The authors contend that the market was able to discriminate between those banks with extensive Mexican loan portfolios, those with lower levels of exposure, and those with no Mexican exposure, even in the absence of disclosure rules. This implies that there is no justification for the regulators' opinion that there should be increased regulation in the area of public disclosure by banks.

In contrast to the above studies, Bruner and Simms (1987) test for the rapidity or the market's response to the actual deterioration in asset quality caused by Mexican exposure the information following the August 19 announcement on or after the event date (the new information hypothesis), or whether it had already anticipated the adverse event and had previously impounded it in the market price of the bank stocks (the information leakage hypothesis). The second set of hypotheses tests to see if the size of the investor response to the Mexican announcement is related to the degree of exposure of the bank (the rational pricing hypothesis), or whether investors were unable to differentiate among the banks with varying exposures and uniformly penalize all banks (the investor contagion hypothesis).

Bruner and Simms employ the classical event study methodology on a sample of 48 banks They find support for the new information hypothesis and conclude that the market impounded the information hypothesis and conclude that the market impounded

the information quickly in the share prices of the exposed banks. They find that initially the market penalizes all banks regardless of their degree of exposure. But later on, the market recognizes the varying exposure levels and prices of stocks based on this information. It is found that there was a four-day lag on average between the event and the market's recognition of the exposure level

While the above studies have analyzed the different aspects of the stock market reaction to the Mexican moratorium announcement of 1982, no study has looked at the stock market reaction to the Brazilian moratorium annoucement of 1987. The present study analyzes the market responses to both the Mexican and Brazilian moratoria announcements and compare the two for differential effects and compare the two for differential effects by three degrees of exposure.

III. STATEMENT OF HYPOTHESES

Both the Mexican and the Brazilian moratorium announcements were adverse signals to the market, but the informational contents and market setting for the two events were different. The Mexican moratirium was the first of its kind that the U.S. market encountered Prior to this event, there were no major debt defaults that had a potential catastrophic effect on the U S. economy was unanticipated by the U S. market. The Mexican crisis, other Lation American borrowers have taken the cue from it, and have stressed their inability to meet some or all of their debt obligations to the U.S. banks. Peru, Chile, Argentina and other borrowers have arranged for debt rescheduling with their creditors. Peru has declared an outright moratorium on the U.S banks' asset portfolio. The next moratorium was announced by Brazil on February 20, 1987. The U S. banks were heavily exposed to Brazilian loans at the time of the moratorium announcement Between the two moratoria, an efficient market should have become increasingly aware of the likelihood of Latin American borrower defaults, and shoud have impounded the learning that occurs in the form of anticipations. These anticipations would have been reflected in the market's being able to deal more effectively with the latter event, other things being equal The purpose of comparing the effects of the two events is to make inferences about market equilibrium and the market's effiuency in learning from prior events. Two sets of hypotheses are tested for each of the two events.

The first set of two hypotheses tests whether the market recognizes the adverse information generated by the event, the public announcement of a moratorium on the debt payments by the borrower, and incorporates it into the market valuation of bank stocks. The first hypothesis, the new information hypothesis, states that as a result of the deteriorating quality of the loan assets of th banks, the market prices of the shares of the affected banks will be lowered. The second hypothesis, the information leakage hypothesis, states that the market has anticipated the deterioration in the quality of loan assets and has already impounded the information in the stock prices of the affected banks prior to announcement.

The second set of two hypotheses is relatd to the size of the stock price reaction to the moratorium announcement. The first hypothesis, the rational pricing hypothesis, states that the size of the share price response is related to the actual exposure of the bank to external loans It assumes that the market is efficient and rational in impounding and applying information to the appropriate bank stock price of the affected banks, but the size of the response does not discriminate the exposure level of the bank. There is a contagion effect which results in the market penalizing all banks regardless of their degree of exposure.

Ⅳ. METHODOLOGY AND DATA

A. Methodology

As is common in event-type of studies, this study employs the market model. The daily excess returns for each individual bank stock over an interval of around the event date are computed as follows:

$$(r_{it} - r_{ft}) = \alpha_i + \beta_i (r_{mt} - r_{ft}) + \varepsilon_{it}, \quad (1)$$

where r_{it} return for securityion day t
r_{mt} return for the market on day t
α_i, β_i coefficients of the parameters
ε_{it} white noise disturbance term[3]

The estimation of the parameters α_i and β_i involves the selection of a sufficiently large prior period during which no major events have occurred that could bias the estimates of the parameters. The period should also be sufficiently near to the event period so that there is no major change in the nature of the systematic risk of the bank. This study will use an estimation period of 120 days, beginning 150 days before the announcement date and ending 30 days before the annuncement date.

The daily excess returns are cross-sectionally averaged over the sample and over subgroups of the sample. The average residual for day t is given by

$$AR_t = 1/N \sum_{i=1}^{N} \varepsilon_{it}, \quad (2)$$

Tests of significance are conducted on the average residuals for each day around the event date to detect any significant market reaction to the event The cumulative average residuals over different time intervals are also computed and tested for significant market reaction The pre-announcement prediod over the 30 days prior to the announcement date, and the post-announcement period over the 30 days following

the announcement Various intervals of different lengths, beginning on each day of the pre-announcement periods, are formed The average residuals for each day of the interval are cumulated to obtain the cumulative average residual for that interval.

$$CAR_{pq} = \sum_{p}^{q} AR_t \,, \tag{3}$$

where CAR cumulative average residuals
p, q the beginning and end of the interval

If the new information hypothesis holds, then the average residuals of the excess returns for the event day and the cumulative average residuals for the interval starting on the event day should be significant. If there are no significant excess returns on or after the event day, we would infer that the market had already anticipated the deterioration of the quality of the loan assets and the market prices of the bank stocks reflect this information. In this case, the cumulative residuals for the intervals prior to the event period will be significant, which indicates that the information leakage hypothesis holds.

If the inverstor contagion hypothesis holds, the market will not be able to price the stocks correctly based on the degree of exposure of the bank The test of the second set of the hypothesis is done for the post-announcement period. If the average residuals of the excess returns and the cumulative average residuals between the exposed banks and the non-exposed banks are not different, the investor contagion hypothesis holds

B. Data

The day on which a specific debtor nation announced that it would stop principal and debt service on its external debt was used as the event date. *The Wall Street Journal* reported that the Mexican announcement was made on August 19, 1982, and the Brazilian announcement on February 20, 1989. These two days were used as the event dates for the two event studies. Not all investors became immediately aware of events as they occurred and news about them arrived on the wire. Some investors were informed about the events only when they read about them in the print media the following day. Hence, the event period focuses on two trading days

The study uses all the banks listed in the Center for Research in Security Prices (CRSP) tape that are traded in the NYSE, the ASE and the OTC markets for which data is available. The data are screened to eliminate from the sample banks whose returns might have been affected by other contaminating events, such as merger and stock split, during the parameter estimation or during the event period. Estimates of loan exposures to third world borrowers are obtained from various sources including bank SEC filings (10-K reports), FDIC Call and Income reports, bank annual reports and checked for accuracy and consistency The exposure of a bank to a particular

country is defined as the ratio of the external loans outstanding to that country to total assets of the bank.

Ⅶ. EMPIRICAL RESULTS

As stated earlier, this study tests two sets of hypotheses for two separate events. The first event is the announcement made by Mexico on August 19, 1982, which stated that it would stop all principal repayments on its external dedt The second event is a smaller announcement by Brazil on February 20, 1987. The first set of hypotheses tests the market efficiency in anticipating the events and attempts to determine when the market impounds the new information about default annonuncement The second set of hypotheses tests the presence or absence of a contagion effect as a result of the adverse information conveyed by the announcement

If the U.S bank stock market is semi-strongly efficient, then the new information hypothesis should hold This implies that the average abnormal returns across the sample of banks, represented by the cross-sectional average residuals for the two-day event period are significantly negative. The abnormal return should be negative because the announcement conveys an adverse signal which the market recongnizes. The market revises downward its evaluation of the bank stocks on this signal. Prior to the Mexican default announcement. The market has very little information about the magnitude of the financial problems related to external lending. The market did not anticipate the event, and thus the effect on the stock returns on the event day should be highly statistically significant This does not rule out to the infromation leakage hypothesis as adjustments prior to the event can still occur. In other words, the two hypotheses are not mutually exclusive. If both the hypotheses hold, it means that the market did not adjust prior to the event but further adjustments were made following the event.

Since the Mexican crisis, the market has been continually receiving information about the financial problems of the debtor nations and the lending practices of the creditor banks Given some awareness of the weak financial position of the Latin American borrowers, the Brazilian default announcement on the bank stock returns should not be as strong as the earlier effect The time-series diffusion of information about borrower defaults is likely to lead to an increased level of learning on the part of the market participants. This would imply that the market is becoming increasingly efficient in anticipating debt defaults by major third world borrowers form one crisis to the next. Eventually, other things equal, the market should be able to anticipate perfectly the actions of the debt nations the danger of an unanticipated crisis is diminished

If the rational pricing hypothesis holds, then the cumulative returns should be negatively related to the exposure, with the high exposure banks showing more return sensitively compared to low exposure banks On the other hand, if the investor

contagion hypothesis holds, the market should not behave rationally in its reaction to the adverse event The market should penalize the banks inconsistently with their exposure levels Bruner and Simms (1987) find support for the investor contagion hypothesis immediately following the event. Subsequenty, the market reverts back to rational behavior by adjusting the size of this stock price response to reflect the degre of exposure

The cross-sectionl diffusion of information regarding the actual levels of exposure of individual banks should move the market in the direction of increased efficiency. It should be expected that the speed with which the market overcomes the contagion effect and moves towards efficiency increases from one crisis to the next Here again, there is a learning process taking place in the market The higher levels of learning with each crisis should result in the market's being better informed and more efficient. The time period during which the market exhibits a contagion effect should be much shorter for the Brazilian debt than for the Mexican debt crisis. Eventually, the potential for an event such as the debt default announcement causing a catastrophe in the banking industry would be diminshed due to increasing market efficiencies.

A. Mexican Moratorium Announcement

The daily average excess returns and cumulative average excess returns for the samples of all banks, exposed banks, and non-exposed banks during the Mexican moratorium announcement are presented in Tables 1 and 2. The sample of exposed banks is broken into two groups of high and low exposure and the daily average excess returns and cumulative average excess returns are presented in Table 3.

The daily average excess returns are predominantly positive prior to the Mexican moratorium announcement for the whole sample and the individual sub-samples The cumulative average residuals are also positive and statistically significant, showing support for the information leakage hypothesis for the 30 days prior to the announcement. This result corroborates the Bruner-Simms study, but is contrary to the conclusions of the Cornell-Shapiro study, which supports the information leakage hypothesis for the 30 days prior to the announcement. This result corroborates the Bruner-Simms study, but is contrary to the conclusions of the Cornell-Shapiro study, which supports the information leakage hypothesis.

The announcement period returns for the whole sample is -1.80; the corresponding return for the sample of exposed banks is -2.50. This result is consistent with the new information hypothesis, which holds that the moratorium announcement conveyed new information reacted to the event by impounding this information quickly in the share prices of banks.

Tables 1 and 2 show the presence of a weak contagion effect in the market for bank equities. While the market correctly penalized banks with exposure to Mexico by pricing their shares lower immediatly following the announcement, the effect spilled over into the group of banks without any exposure, which also experienced a downward revision in share prices But while the cumulative excess returns for the

exposed banks remained negative for 19 days following the event, it remained so for only 5 days for the non-exposed banks. These results suggest that initially the market was irrational in penalizing banks without exposure along with the exposed banks. But from day 6, the market seemed to be rationally repricing bank stocks according to the presence or absence of exposure. At first, the non-exposed banks are penalized which is contrary to the rational pricing hypothesis and consistent with the investor contagion hypothesis But after a time lag, the investor contagion effect wears off and investors seem to price securities rationally.

The results from Table 3 are less conclusive. The results seem to show that the market is predominantly rational in pricing the equities of high and low exposure banks, except on day 0 when both groups of banks experience approximately the same downward revision in prices (-2.38 and -2.02). Bruner and Simms (1980) find more conclusive of an investor contagion effect among high and low exposure banks. Perhaps, increasing the sample size in our study would generate results that are consistent with the Bruner-Simms study.

B. Brazilian Moratorium Announcement

Tables 5 to 7 present the test results for the sample of 43 banks used in the Brazilian moratorium announcement event study. The announcement period return for the whole sample is -1.43 and is significant. The cumulative average return for the 30 days prior to the event is positive (+0.60) though not significant This suggests that the information leakage hypothesis does not hold in the case of the Brazilian moratorium, too. A closer look at Table 6 which disaggregates the sample into exposed and non-exposed banks suggests something different. The cumulative average excess return for the 30 days prior to the event for the exposed group of banks is negative (-2.37), while for the non-exposed group it is positive (+3.40) though not significant. Not only does this seem to support the information leakage hypothesis, but it also suggests that the market might have been able to discriminate between exposed and non-exposed banks.

As shown in Table 6, the cumulative average excess returns for all the sample and exposed banks are negative for several days following the announcement, and significant for 4 and 5 days respectively. Again, this is consistent with the new information hypothesis. The market perceived the Brazilian announcement of February 1987 as new information about the quality of assets held by U.S. commercial banks and quickly impounded it in the stock prices.

The cumulative excess returns for non-exposed banks suggests the presence of a weak contagion effect, though not significant Non-exposed banks experience a small drop in returns immediately following the Brazilian announcement along with the exposed banks. But, from day 2, the market started pricing bank qualities rationally when only exposed banks were penalized. While the cumulative average residuals remain negative for more than 30 days after the event for exposed banks, it is negative for only 2 days in the case of the non-exposed banks.

As in the case of the Mexican announcement, Table 6 shows that the market is predominantly rational in pricing shares of high and low exposure banks, except that the information leakage hypothesis is stronger for banks with low exposure.

C. Comparative Statics

The two moratoria events by Mexico in 1982 and by Brazil in 1987 are similar in many areas, especially the potential magnitude of their consequences on the U.S. banking sector The Mexican announcement was the first of its kind; since then many of the smaller borrowers have stressed their inability to meet some or all the debt obligations. The next major defauter was Brazil. The two events are separated by a 5 year period during which the market was exposed to the possibility of defaults by Latin American borrowers An efficient market should have become increasingly aware of this probability, and should be able to better anticipate borrowers defaults and be rational in pricing securities based on exposure levels.

The information leakage hypothesis tests for the two events show that while there was no significant information leakage prior to the Mexican announcement, the market did partially anticipate the Brazilian announcement as a result of lending by creditor banks.

While the new information hypothesis holds in both the events, the cumulative negative effects are larger and last longer in the case of the Mexican default. The cumulative excess returns for the combined sample of exposed and non-exposed banks is negative and significant for up to 5 days after the Mexican announcement, while it is so for only 4 days after the Brazilian announcement. Similary, the cumulative excess returns for the exposed banks is negative and significant for 7 days after the event for Mexico, compared to 5 days in the case of Brazil. The results of the information leakage and new information hypotheses for the two sequential events show that there exists in the market a learning effect associated with the time-series diffusion of information from one default to the next. Investors do learn from past events related to debt defaults, which is consistent with the behavior of efficient markets.

The results of the investor contagion and rational pricing hypotheses for the two events again show a learning effect. Initially, the market is irrational in pricing securities immediatly following the events. With the cross-sectional diffusion of information, the contagion effect wears off and the market becomes rational in pricing securities. In the case of Mexico, it took the market 6 days to overcome the contagion effect and price shares of exposed and non-exposed banks rationally (Table 1). In the case of Brazil, the contagion effect lasted for shorter period of time. Beginning on day 3, the market started pricing securities rationally (Table 5).

Ⅶ. CONCLUSIONS

This study compares the information and investor contagion effects of the Mexican moratorium announcement with those of the Brazilian moratorium announcement of February 20, 1987. Both announcements were major events that seriously affected the U.S. banking industry and the international monetary system. We find that there were significant negative effects on the share prices of U.S. banks as a result of the moratoria announcements by Mexico and Brazil. The size of the effect was larger in the case of Mexico. We also find that while there was no correction by the market prior to the Mexican announcement, there was some market adjustment prior to the Brazilian announcement.

Weak contagion effects are also found during the two moratoria announcement periods when the market was irrational in pricing bank stocks. The contagion effect was stronger in the case of Mexico. These results imply that the market is learning not only from the cross-sectional diffusion of information about the quality of assets held by banks, but also from the time-series flow of information about debt defaults by third world borrowers.

End Notes

1. Smirlock and Kaufold (1987) contend that the study by Schoder and Vankudre (1982) has some shortcomings that it is difficult to draw the correct conclusions. Schoder and Vankudre use book value of loans and market value of equity to measure exposure. This makes the loan exposure figures inaccurate as they fluctuate with changes in bank stock prices.
2. Similar implications derive from the Cornell and Shapiro study regarding the omniscience of the market, despite the absence of publicly available information about Latin American loan exposure by banks.
3. This implies that under ordinary least squares estimation the following statements hold: (i) it is normally distributed; (ii) it has a mean value of zero, $E(\varepsilon_{it})=0$; (iii) $Var(\varepsilon_{it})=\sigma^2(\varepsilon_{it})$; (iv) the disturbance terms are cross-sectionally independent; $Cov(\varepsilon_{it}, \varepsilon_{jt})=0$; and (v) r_{mt} is non-stochastic, $Cov(\varepsilon_{it}, r_{mt})=0$.

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Table 1

Daily Average Excess Returns of the Samples of All, Exposed and Non-Exposed Banks during the Mexican Moratorium

Day	Excess Returns		
	All Banks	Exposed Banks	Non-Exposed Banks
t -5	- 0.38	- 0.90*	0.47
t -4	0.06	0.48	- 0.63
t -3	1.38**	2.05*	0.29
t -2	0.95**	1.23	0.49
t -1	0.92**	0.65	1.38*
t 0	- 1.36**	- 2.21**	0.04
t +1	- 0.44*	- 0.29	- 0.71
t +2	0.20	0.37	- 0.08
t +3	0.19	0.18	0.23
t +4	- 0.16	- 0.32	0.10
t +5	- 0.20	0.04	- 0.60
t +6	0.51*	0.16	1.07*
t +7	- 0.62*	- 0.71*	- 0.46*
t +8	0.65*	0.51	0.86
t +9	0.02	0.08	- 0.08
t +10	- 0.50*	- 0.68	- 0.20
t +11	- 0.96	- 1.71*	0.28
t +12	- 0.24	- 0.46	0.13
t +13	0.31	0.44	0.10
t +14	0.71*	0.79	0.58
t +15	- 0.34	- 0.01	- 0.89
t +16	0.34	0.53	0.04
t +17	1.29**	0.12	0.95
t +18	1.08**	1.68*	0.95
t +19	1.36	1.19	1.62
t +20	0.46	0.38	0.58

* significant at the level of 0.01
** significant at the level of 0.05

Table 2

Cumulative Excess Returns for the Samples of All, Exposed and Non-Exposed Banks for the Mexican Moratorium

Day		Excess Returns All Banks	Exposed Banks	Non-Exposed Banks
-30,	-1	5.84	9.26*	0.37*
-5,	-1	2.93*	3.51*	2.00*
0,	1	-1.80**	-2.50**	-0.67
0,	2	-1.60**	-2.13	-0.75
0,	3	-1.41*	-1.95	0.52
0,	4	-1.57*	-2.27	-0.42
0,	5	-1.77*	-2.23	-1.02
0,	6	-1.26	-2.07	0.05
0,	7	-1.88	-2.78	-0.41
0,	8	-1.23	-2.27	0.45
0,	9	-1.21	-2.19	0.37
0,	10	-1.71	-2.87	0.17
0,	11	-2.67	-4.58	0.45
0,	12	-2.91	-5.04	0.58
0,	13	-2.60	-4.60	0.68
0,	14	-1.89	-3.82	1.26
0,	15	-2.23	-3.81	0.37
0,	16	-1.89	-3.29	0.41
0,	17	-0.60	-3.17	1.36
0,	18	0.48	-1.49	2.31
0,	19	1.84	-0.30	3.93
0,	20	2.30	0.08	4.51
0,	30	4.24	2.43	6.21

* significant at the level of 0.01
* * significant at the level of 0.05

Table 3

Daily Average Excess Returns of the Samples of High and Low Exposure Banks during the Mexican Moratorium

Day	Excess Returns	
	High Exposure Banks	Low Exposure Banks
t -5	-1.72 *	-0.01
t -4	0.85	0.07
t -3	1.91 *	2.22 *
t -2	1.65 *	0.79
t -1	0.17	1.16 *
t 0	-2.38 **	2.02 *
t +1	-1.24 *	0.75 *
t +2	1.09	-0.41
t +3	-0.39	0.79
t +4	-0.58	-0.04
t +5	0.13	-0.05
t +6	-0.81	1.22
t +7	-1.11 *	-0.29
t +8	-0.60	1.74 *
t +9	0.35	-0.22
t +10	-1.53 *	0.23
t +11	-1.64 *	-1.79 *
t +12	-0.45	-0.46
t +13	0.70	0.16
t +14	1.01	0.56
t +15	-0.11	0.10
t +16	-0.22	0.34
t +17	1.51	0.47 *
t +18	2.18 *	1.13
t +19	0.52	1.94 *
t +20	0.83	0.11

* significant at the level of 0.01
* * significant at the level of 0.05

Table 4

Cumulative Excess Returns for the Samples of high and Low Exposure Banks for the Mexican Moratorium

Day	Excess Returns	
	High Exposure Banks	Low Exposure Banks
-30, -1	9.22*	9.33*
-5, -1	2.86**	4.23*
0, 1	-3.62*	-1.27*
0, 2	-2.53*	-1.68*
0, 3	-2.92*	-0.89*
0, 4	-3.50	-0.93
0, 5	-3.37	-0.98
0, 6	-4.18*	0.24
0, 7	-5.29	-0.05
0, 8	-5.89	1.69
0, 9	-5.54*	1.47
0, 10	-7.07	1.70
0, 11	-8.71	-0.09
0, 12	-9.16	-0.55
0, 13	-8.46	-0.39
0, 14	-7.45	0.17
0, 15	-7.56	0.27
0, 16	-7.78	1.61
0, 17	-6.27	3.08
0, 18	-4.09	4.21
0, 19	-3.57	6.15
0, 20	-2.74	6.04
0, -30	1.89	8.21

* significant at the level of 0.01

* * significant at the level of 0.05

Table 5

Daily Average Excess Returns of the Samples of All, Exposed and Non-Exposed Banks during the Brazilian Moratorium

Day	Excess Returns All Banks	Exposed Banks	Non-Exposed Banks
t -5	0.25	-0.09	0.77
t -4	0.14	0.24	-0.16
t -3	-0.43	-0.90 *	0.13
t -2	1.18	1.06 *	0.60
t -1	0.62	0.85 *	0.35
t 0	-0.23	-0.33	0.01
t +1	-1.20	-1.46 **	0.78
t +2	0.08	-0.04	0.36
t +3	-0.19	-0.73 *	0.61
t +4	0.08	-0.48 *	0.98 *
t +5	0.58 *	0.53 *	0.76
t +6	0.75 *	0.55 *	1.16 *
t +7	-0.06	-0.28	0.18
t +8	-0.49 *	-0.63 *	0.26
t +9	0.18	-0.13	0.61
t +10	-0.01	-0.26	0.26
t +11	-0.03	-0.16	0.68
t +12	0.04	-0.19	0.41
t +13	-0.12	-0.37	0.34
t +14	0.37	0.19	0.35
t +15	0.28	0.27	0.37
t +16	0.01	-0.36	0.76
t +17	-0.59 *	-0.74	-0.54
t +18	0.04	0.05	0.13
t +19	-0.04	-0.42	0.70
t +20	-0.02	-0.04	0.10

* significant at the level of 0.01
** significant at the level of 0.05

Table 6

Cumulative Excess Returns for the Samples of All, Exposed and Non-Exposed Banks for the Brazilian Moratorium

Day	Excess Returns All Banks	Exposed Banks	Non-Exposed Banks
-30, -1	0.60	-2.37	3.40
-5, -1	1.76	1.16	1.69
0, 1	-1.43	-1.79 **	-0.77
0, 2	-1.35	-1.83 *	-0.41
0, 3	-1.54 *	-2.56 *	0.20
0, 4	-1.46 *	-3.04 *	1.18
0, 5	-0.88	-2.51 *	1.94
0, 6	-0.13	-1.96	3.10
0, 7	-0.19	-2.24	3.28
0, 8	-0.68	-1.96	3.02
0, 9	-0.50	-3.00	3.63
0, 10	-0.51	-3.26	3.89
0, 11	-0.54	-3.42	3.21
0, 12	-0.50	-3.61	3.62
0, 13	-0.62	-3.98	3.96
0, 14	-0.25	-3.79	4.31
0, 15	-0.03	-3.52	4.68
0, 16	-0.04	-3.88	5.44
0, 17	-0.55	-4.62	4.90
0, 18	-0.51	-4.57	5.03
0, 19	-0.55	-4.99	5.73
0, 20	-0.57	-5.04	5.83
0, 30	-2.79	-9.38	7.24

* significant at the level of 0.01
* * significant at the level of 0.05

Table 7

Daily Average Excess Returns of the Samples of High and Low Exposure Banks during the Brazilian Moratorium

Day	Excess Returns	
	High Exposure Banks	Low Exposure Banks
t -5	0.01	-0.04
t -4	0.38	-0.04
t -3	-0.11	-0.11
t -2	-0.55	0.51
t -1	1.81 **	0.75
t 0	0.75	0.43
t +1	-0.44	-0.23
t +2	-0.29	0.20
t +3	-1.30 *	-0.56
t +4	0.40	-0.11
t +5	0.57	0.43
t +6	1.66 **	-0.02
t +7	0.07	-0.51
t +8	0.44	0.00
t +9	-0.28	0.73
t +10	-0.12	0.28
t +11	-0.58	0.40
t +12	0.62	-0.26
t +13	-0.26	-0.51
t +14	0.97	-0.05
t +15	0.19	0.08
t +16	-0.52	-0.11
t +17	0.30	-0.68
t +18	-0.54	0.81
t +19	0.09	0.17
t +20	-0.60	0.14

* significant at the level of 0.01
* * significant at the level of 0.05