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I. INTRODUCTION

President Reagan and Canadian Prime Minister Brian Mulroney signed the Canada-United States Free Trade Agreement ("FTA")[1] on January 2, 1988, following nearly three years of negotiations.[2] The FTA, which became effective on January 1, 1989,[3] will ultimately result in the elimination of tariffs and other barriers to trade and investment between the United States and Canada. That portion of the FTA dealing with financial services is especially significant because it represents the first bilateral agreement with the United States covering the entire financial services industry.[4]

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1 Canada-United States Free Trade Agreement, Dec. 22, 1987-Jan. 2, 1988, — U.S.T. —, — T.I.A.S. No. —, *reprinted in*, 27 I.L.M. 281 (1988) [hereinafter FTA].

2 *See* Statement on the Canada-United States Free Trade Agreement, 24 WEEKLY COMP. PRES. DOC. 4 (Jan. 2, 1988).

3 The FTA was approved by both houses of the U.S. Congress with ease. *See* Wash. Post, Aug. 10, 1988, at D10, col. 5; Wall St. J., Sept. 20, 1988, at 4, col. 1. In Canada, however, the FTA sparked heated controversy, resulting in the calling of a national election regarding the issue. On November 21, 1988, however, Canadian Prime Minister Brian Mulroney won the parliamentary majority necessary to assure approval of the FTA. N.Y. Times, Nov. 23, 1988, at A1, col. 6.

4 *United States-Canada Free Trade Agreement: Hearings Before the Subcomm. on Trade of the*

The basic principle underlying the banking component of the FTA is that of "national treatment."[5] In essence, the FTA provides that U.S. banks doing business in Canada will be awarded the same rights and privileges as Canadian banks, and conversely, Canadian banks doing business in the United States will be treated the same as domestic U.S. banks.[6] These provisions represent a fundamental change in the nature of bank regulation in the United States and Canada, a change that should alter the competitive position of banks in both countries. While the U.S. commercial banks operating in Canada received substantially greater powers as a result of the FTA provisions, Canadian banks operating in the United States received only a fairly limited increase in the permitted scope of their operations.

This Article explains the effects of the FTA on the wealth position of shareholders of major U.S. and Canadian banks. Following the argument that stock prices in an efficient market should capture the effects of changes in regulation (both domestic and international), one would expect the prices of Canadian banks to decrease as they face substantial new competition.[7] Likewise, the stock prices of U.S. banks operating in Canada should either rise or remain unchanged as a result of the FTA. If the greater power associated with Canadian operations is expected to add to risk-adjusted profits, stock prices of these U.S. banks should increase. To the extent that these potential profits are expected to be competed away in the Canadian markets, or are seen to be of a relatively insignificant nature, the prices of U.S. banks will not change.

The Article is organized as follows. After this introduction, Section II provides a brief discussion of the dimensions of the FTA as it relates to the financial services industry. Section III describes the data used, and Section IV presents the methodology. The results are then set forth in Section V, and Section VI contains concluding remarks.

II. THE FTA AND THE FINANCIAL SERVICES INDUSTRY

Prior to 1980, the ability of foreign banks to operate subsidiaries in

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Comm. on Ways and Means, 100th Cong., 2d Sess. 11 (1988) (statement of James A. Baker, III, Secretary of the Tresury).

[5] *See Financial Concerns React Favorably to U.S.-Canadian Trade Agreement*, Am. Banker, Nov. 19, 1987, at 2, col. 3.

[6] For example, under the FTA, Canadian banks in the United States will be permitted to sell Canadian government securities, and U.S. banks will be given the reciprocal right. FTA, *supra* note 1, art. 1702(1).

[7] Schwert, *Using Financial Data to Measure Effects of Regulation*, 24 J. L. & ECON. 121, 122 (1982).

Canada was very limited.[8] In 1980, the Canadian Parliament enacted legislation permitting full-scale foreign banking subsidiaries, known as "Schedule B banks."[9] The 1980 legislation limited, however, the total domestic assets of all Schedule B foreign bank subsidiaries to 8% of the domestic assets of the Canadian banking system.[10] In addition, each individual Schedule B bank was subject to an individual asset ceiling of twenty times the amount of the authorized capital prescribed for and set by the Canadian Finance Ministry.[11] This leveraging ratio is lower than that permitted Canadian banks, although the gap has narrowed in recent years.[12] In 1984, the domestic asset ceiling for Schedule B banks as a group was raised to 16% of the total domestic assets of the Canadian banking system.[13]

The FTA specifically exempts U.S. bank subsidiaries, both individually and collectively, from the limitations on foreign bank subsidiaries imposed by the Canadian government.[14] One U.S. Treasury Department spokesman explained this FTA provision in the following manner:

> [T]he problem that U.S. commercial banks had in Canada operating as subsidiaries . . . before the agreement [went] into effect, [was] that they [were] limited in the amount of capital they [could] put into that subsidiary and limited in the amount of loans they [could] make. So what we attempted to do was get rid of those restrictions so that a subsidiary there, if they feel they can make a lot of loans in Canada, they can put all the capital they want into it and make all the loans they want to . . . .[15]

In other words, the FTA permits U.S. bank subsidiaries in Canada to make loans and otherwise grow, free from the restrictions placed by the Canadian government on other foreign bank subsidiaries.

The FTA banking provisions contain a number of significant implications for the operations of U.S. banks in Canada, and concomitantly for the competitiveness of the Canadian banking system. The Canadian subsidiaries of U.S. banks, currently quite small in terms of total assets, may now expand dramatically and become significant competitors to the major Canadian banks. Moreover, in the recently deregulated Canadian banking system, these U.S. bank subsidiaries may now provide a wide

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8 Lalonde, *Foreign Banks in Canada: Their Impact on the Canadian Banking System and Investment*, 4 DET. C.L. REV. 1151 (1985) [hereinafter Lalonde].

9 Banks and Banking Law Revision Act of 1980, ch. 40, § 5, 1980-83 Can. Stat. 317.

10 *Id.* § 302(7), 1980-83 Can. Stat. at 614.

11 *Id.* §§ 174(2)(e), 174(6), 1980-83 Can. Stat. at 474, 478.

12 Lalonde, *supra* note 8, at 1155.

13 *Id.* at 1153.

14 FTA, *supra* note 1, art. 1703(2).

15 *United States-Canada Free Trade Agreement: Hearings Before the Comm. of Banking, Finance, and Urban Affairs*, 100th Cong., 2d Sess. 21 (1988) (statement of Thomas J. Berger, Deputy Assistant Secretary for Int'l Monetary Affairs, U.S. Dep't of the Treasury).

range of securities and insurance products.[16] The effect of this "new entry" on the degree of market competitiveness and on the profitability of Canadian banks may be especially great in view of the existing oligopolistic structure of the Canadian banking system.[17]

In contrast to these significant changes to the competitive structure of the Canadian banking system, the effects of the FTA on the competitive position of Canadian bank subsidiaries operating in the United States are relatively minor.[18] The FTA contains four major commitments by the United States with respect to the operations of Canadian controlled financial institutions. These are:

1) to allow Canadian institutions operating in the United States, as well as U.S. banking institutions, to underwrite and deal in Canadian Government debt obligations;

2) to provide for the permanent "grandfathering" of the interstate locations of Canadian banks in the United States;

3) to allow Canadian banks to have the benefit of the same rules as are applicable to U.S. banks with respect to underwriting and dealing in securities; and

4) to provide for the continuation of the same national treatment rules as are now applicable to Canadian banks.[19]

The first commitment by the United States—to allow U.S. banking institutions to underwrite and deal in Canadian Government debt obligations—requires an amendment to the Glass-Steagall Act, which generally prohibits commercial banks from underwriting securities.[20] The indirect impact of this provision likely will be to increase the demand for, and liquidity of, Canadian government securities, thereby reducing the cost of debt financing to the Canadian government. The direct impact on Canadian and U.S. commercial banks, however, will be relatively minor.[21]

The United States' second commitment—to provide for permanent "grandfathering" of the interstate geographic location of Canadian banks in the United States—is of more direct relevance to both Canadian and U.S. banks. This portion of the FTA merely formalizes, however, further extant provisions of the International Banking Act of 1978.[22]

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[16] *See generally* Simon, *Canada Shakes the Four Pillars*, 137 BANKER 24, 25 (1987).

[17] *See* R. SHEARER, J. CHANT, & D. BOND, THE ECONOMICS OF THE CANADIAN FINANCIAL SYSTEM 292 (1984).

[18] Of course, it should be noted that the FTA as a whole should lead to increased U.S.-Canadian trade, which may help provide more business to Canadian banks operating in the United States. Getting a precise measure of these potential benefits, however, is obviously quite difficult.

[19] FTA, *supra* note 1, art. 1702.

[20] Glass-Steagall Act, 12 U.S.C. §§ 24, 78, 377 and 378 (1989).

[21] *See generally* Kessel, *A Study of the Effects of Competition in the Tax-Exempt Bond Market*, 79 J. POL. ECON. 706 (1971).

[22] International Banking Act of 1978, 12 U.S.C. § 3101(b) (1989).

The third commitment by the United States—to allow Canadian banks to benefit from the same rules applicable to U.S. banks with respect to underwriting and dealing in securities—also is directly relevant to commercial banks. Similar to the second commitment, however, it appears that pursuant to the International Banking Act of 1978, Canadian banks would have to be treated in a similar fashion to U.S. banks when the Glass-Steagall Act is modified or repealed, regardless of the contents of the FTA.[23]

Finally, the commitment by the United States to continue the same national treatment of Canadian banks as currently exists does nothing more than add additional formal protection to the status quo. In sum, by sharply increasing opportunities for U.S. banks operating (or wishing to operate) in Canada, the FTA seeems to negatively impact Canadian banks with respect to their competitive positions in their home country. This negative impact, however, does not appear to be offset by increased opportunities under the FTA for Canadian banks operating (or wishing to operate) in the United States, because the FTA's provisions in this regard are relatively insignificant. Overall then, Canadian banks appear to be negatively impacted by the FTA.

III. DESCRIPTION OF THE DATA

For this Article, daily stock returns were used to examine the differential impact of the FTA on U.S. and Canadian banks. There were three groups of banks. The first group consists of all U.S. banks operating Canadian subsidiaries for which data were available on the CRSP tape. The specific U.S. banks and the names of their Canadian subsidiaries are as follows:

1. Bank of Boston (Bank of Boston, Canada)
2. BankAmerica Corp (Bank of America, Canada)
3. Bankers Trust NY (BT Bank of Canada)
4. Chase Manhattan (The Chase Manhattan Bank of Canada)
5. Chemical Bank (Chemical Bank of Canada)
6. Citicorp (Citibank Canada)
7. Comerica (Comerica Bank Canada)
8. First Chicago (First National Bank Chicago, Canada)
9. First Interstate Bancorp (First Interstate Bank of Canada)
10. Irving Bancorp (Irving Bank, Canada)
11. Manufacturers Hanover (Manufacturers Hanover Bank of Canada)
12. Mellon Bank (Mellon Bank, Canada)
13. J.P. Morgan Co. (Morgan Bank of Canada)
14. NBD Corporation (National Bank of Detroit, Canada)

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[23] *Id.* §§ 3101-3108.

15. Republic Bancorp NY (Republic National Bank of New York, Canada)

16. Security Pacific (Security Pacific Bank, Canada)

In addition, we examined a sample of U.S. banks without Canadian subsidiaries which might be affected by the FTA due to their geographic proximity to Canadian markets. The FTA may, for example, provide U.S. banks previously operating from the U.S. side of the border with an opportunity to expand their Canadian business, by giving them a comparative advantage over their Canadian rivals.[24] It is also conceivable that these U.S. banks may become takeover targets of the larger Canadian banks attempting to take advantage of the greater integration between the U.S. and Canadian markets.[25] The banks in this subsample (with the state of corporate headquarters in brackets) include:

1. First American Bancorp (New York)
2. First Empire State (New York)
3. Keycorp (New York)
4. Manufacturers National (Michigan)
5. Michigan National (Michigan)
6. Puget Sound Bancrop (Washington)
7. U.S. Bancorp (Oregon)[26]

There are six publicly traded Canadian commercial banks, all of which were included in the sample of Canadian banks. These are:

1. Bank of Montreal
2. Canadian Imperial Bank of Canada
3. The National Bank of Canada
4. The Royal Bank of Canada
5. Scotiabank
6. The Toronto-Dominion Bank

Selection of an event date for a legislative or regulatory change is difficult due to the extended period over which such changes are frequently considered. This difficulty is compounded by the often extensive discussion of the proposed changes in the financial press.[27] In the case of the FTA, as shown in Table 1, the discussions between the United States and Canada took place over a period of almost three years. Formal negotiations between the two countries did not begin, however, until May

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[24] *Canadians Back Free Trade Pact Though U.S. May Get Better Deal*, Am. Banker, Mar. 18, 1988, at 2, col. 3.

[25] *See generally* Wall St. J., Feb. 7, 1989, at B12, col. 1; Wall St. J., Feb. 7, 1989, at C6, col. 5.

[26] U.S. Bancorporation is headquartered in Oregon, although it operates through bank subsidiaries in the state of Washington, which is adjacent to the Canadian border.

[27] *See* Aharony, Saunders, and Swary, *The Effects of the International Banking Act on Domestic Bank Profitability and Risk*, 17 J. MONEY, CREDIT & BANKING 493, 502 (1985).

21, 1986.[28]

TABLE 1[29]
CHRONOLOGY OF U.S.-CANADA FREE TRADE AGREEMENT

01/02/88 — Canada and the United States entered into a free trade agreement.

12/11/87 — Text of the Canada-U.S. free trade agreement was released.

10/03/87 — The United States and Canada signed an agreement in principle, creating a free trade area between the two countries. President Reagan notified Congress of his intention to enter into a free trade agreement with Canada on Jan. 2, 1988.

05/21/86 — The United States and Canada began negotiations on a free trade agreement.

04/23/86 — The Senate Finance Committee, in a 10-10 vote, did not object to free-trade negotiations with Canada under the fast-track procedure.

12/10/85 — President Reagan notified the Senate Finance Committee and the House Ways and Means Committee of the U.S. interest in free-trade negotiations with Canada.

09/26/85 — Prime Minister Mulroney informed the Canadian House of Commons that he would pursue a trade agreement with the United States and would "seek to negotiate the broadest possible package of mutually beneficial reductions in tariffs and nontariff barriers between our two countries."

03/17/85 — At the "Shamrock Summit" in Quebec City, Prime Minister Mulroney and President Reagan agreed "to give the highest priority to finding mutually acceptable means to reduce and eliminate existing barriers to trade in order to secure and facilitate trade and investment flows."

The event date used in this study was Saturday, October 3, 1987. This date was chosen not only because it was the date of the signing of an agreement in principle, but also because there is evidence from the financial press that the agreement was unexpected. For example, Canada broke off the talks on September 24, 1987, just ten days before congressional authority to draft the accord expired.[30] Moreover, as late as Friday, October 2, 1987, the *Wall Street Journal* reported, "U.S., Canada Trade Talks Yield No Major Progress."[31]

Daily returns for each trading day, from 100 days prior to the event date through the end of 1987, were computed for each of the banks.

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[28] CONG. RESEARCH SERV., REPORT ON U.S.-CANADA FREE TRADE AGREEMENT 16 (May 11, 1988).

[29] *Id.*

[30] Wall St. J., Sept. 24, 1987, at 2, col. 3.

[31] Wall St. J., Oct. 2, 1987, at 22, col. 5.

Price data for the U.S. banks and for the Standard & Poor's 500 were extracted from the CRSP tape, and price data for the Canadian banks and the corresponding Canadian market index were gathered from the *Wall Street Journal*. Because of the unusual U.S. market environment following October 19, 1987, returns from October 16, 1987, through October 31, 1987, were omitted for both U.S. and Canadian banks.[32]

IV. METHODOLOGY

In studies of the effects of regulatory change, event date clustering compromises the appropriateness of standard event study methodology. The assumption of the independence of residual returns may be violated in policy event studies when the event period is contemporaneous for all firms and all of the firms operate in the same industry. This problem is especially significant when the sample size is relatively small.[33]

To allow for potentially high cross-sectional correlation in the return residuals, we employ the seemingly unrelated regression ("SUR") method of joint generalized least squares ("JGLS") regression estimation. SUR methodology, as originally developed by Professor Arnold Zellner,[34] estimates parameters using a system of equations wherein the dependent variables in two or more of the equations are affected by one or more common, but excluded, factors. Estimates of the covariance of the residuals across the equations are used to increase the efficiency of the parameter estimates.

Extending the logic of standard market model event study methodology, the return generating process for a regulatory event is assumed to take the form:

$$R_{it} = \alpha_I + \beta_I R_{mt} + \sum_{a=1}^{a} \delta_{Ia} D_{at} + u_{It} \qquad (1)$$

In this system, event period excess returns, estimated by δ_{Ia}, are parameterized using a binary dummy variable. D_{at} equals one during the announcement period and zero otherwise for the A announcement periods, permitting formal consideration of multiple announcement periods. I denotes a portfolio of stocks in industry I, and u_{It} is a random component.

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[32] *See* Santoni, *The Great Bull Markets 1924-1929 and 1982-1987: Speculative Bubbles or Economic Fundamentals*, 69 FED. RESERVE BANK ST. LOUIS REV. 11 (1987).

[33] *See generally* Binder, *Measuring the Effects of Regulation with Stock Price Data*, 16 RAND J. ECON. 167, 175 (1985) [hereinafter Binder, *Measuring the Effects*]; Binder, *On the Use of the Multivariate Regression Model in Event Studies*, 23 J. ACCT. RES. 370, 371 (1985); Karafiath, *Using Dummy Variables in the Event Methodology*, 23 FIN. REV. 351 (1988) [hereinafter Karafiath].

[34] Zellner, *An Efficient Method of Estimating Seemingly Unrelated Regressions, and Tests for Aggregation Bias*, 57 J. AM. STAT. ASS'N 348 (1962).

Professor John Binder—noting that hypothesis tests concerning average abnormal returns will probably not be very powerful when the abnormal returns differ in sign across forms—has reformulated the model to account for asymmetric effects of regulation by disaggregating the equation above ("equation 1") into a system of multivariate regression equations with one equation for each firm.[35] This technique is well-suited to study of the FTA because the agreement is likely to have a differential impact on U.S. and Canadian banks. Canadian banks are expected to react negatively to the FTA announcement since the agreement permits U.S. banks to compete more aggressively in Canadian markets. The U.S. banks should react positively or neutrally to the FTA announcement, depending on the importance of its Canadian subsidiary(s) to the total organization, and on the ultimate changes in competition in the Canadian market.

Following Professor Binder, the estimation procedure in this study involves a system of seemingly unrelated multivariate return equations, with 29 equations (one for each of the $\underline{i}$ Canadian and U.S. banks) of the form:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \beta'_i R_{mt} D_0 + \delta_i D_{It} + u_{it} \qquad (2)$$

In this equation ("equation 2"), R_{it} is the return on stock i on day t, and R_{mt} is the return on the market. For U.S. banks, the market index is the Standard & Poor's 500; for Canadian banks, the Canadian market index is used.[36] The dummy variable D_0 allows β to shift in the period following the announcement as the market's policy expectations change.[37] D_0 takes a value of 1.0 for every observation from the announcement date through the last date in the sample. Excess returns over the event period are estimated by δ. The dummy variable D_1 equals 1.0 for each day of the event period and is zero otherwise. The coefficients β, β', and δ are JGLS regression coefficients. While the noncontemporaneous covariances between the error terms u_{it} are assumed to be zero, the contemporaneous covariance between the u_{it} within the SUR equation system can be nonzero. In this way, the SUR method provides a solution to the problem of event date clustering.[38]

To examine the differential impact of the FTA on U.S. and Cana-

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[35] *See* Binder, *Measuring the Effects, supra* note 33, at 172.

[36] The event was also modeled using two separate systems of equations, one for the 26 U.S. banks, and one for the Canadian banks. The results were essentially identical to those reported here, which are for a single system. The single system allows for common factors which may affect returns in both markets.

[37] U.S. βs may shift in anticipation of increased international exposure. Canadian βs may shift as the market's policy expectations change.

[38] *See* Karafiath, *supra* note 33.

dian banks, a linear system of equations based on equation 2 was esti-
mated over the entire sample period, from 100 trading days before the
event date through the end of 1987, excluding the volatile period during
the last two weeks of October. Because the announcement came on a
Saturday, a day on which the markets were closed, the event period was
defined as the week following the announcement of the agreement. This
period was chosen to allow the markets adequate time to assess the eco-
nomic and political implications of the FTA for current and possible fu-
ture Canadian bank market competitors.

V. EMPIRICAL RESULTS

Table 2 provides the results from the SUR estimates for equation 2
for the Canadian banks. The focus of our analysis is on the δ_i parameter,

TABLE 2
ESTIMATES OF MARKET MODEL AND EVENT PARAMETER
COEFFICIENTS FOR CANADIAN BANKS

Bank	Market Model Coefficients		Event Parameter Coefficients	
	$\hat{\alpha}_j$	$\hat{\beta}_i$	$\hat{\beta}_i{}'$	$\hat{\delta}_i$
Bank of Montreal	−0.0010	0.6289***	−0.4472***	−0.0052
Canadian Imperial Bank	0.0006	0.9046***	0.2583	−0.0136***
National Bank of Canada	−0.0008	0.6791**	0.5499**	−0.0050
Royal Bank of Canada	−0.0003	0.8680***	−0.4824	−0.0084*
Scotiabank	−0.0007	1.0435***	−0.2558	−0.0113*
Toronto-Dominion Bank	0.0015	1.1169***	−0.3086	−0.0102**

  * indicates significant at the 15 percent level.
  ** indicates significant at the 10 percent level.
  *** indicates significant at the 5 percent level.

which captures the effects of the FTA announcement. As shown in Ta-
ble 2, the sign of the coefficient is negative, as expected, for each of the
Canadian banks. The coefficient is statistically significant for four of the
six banks at least at the 15% level, and it is significant for two at least at
the 10% level. This result may be compared with that of Professors
Smirlock and Kaufold who, using a similar methodology, found statisti-
cal significance for eight of the twenty-three banks affected by the Mexi-
can debt crisis.[39] On average, the market value of the Canadian banks
was reduced by 1% by the announcement of the FTA.

In contrast to the effects of the FTA on the value of the Canadian

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[39] *See* Smirlock & Kaufold, *Bank Foreign Lending, Mandatory Disclosure Rules, and the Reac-
tion of Bank Stock Prices to the Mexican Debt Crisis*, 60 J. BUSINESS 347, 351 (1987).

banks, there appeared to be no perceptible market response to the FTA announcement for the stocks of U.S. banks wih Canadian subsidiaries, as shown in Table 3.

TABLE 3

ESTIMATES OF MARKET MODEL AND EVENT PARAMETER
COEFFICIENTS FOR U.S. BANKS WITH CANADIAN SUBSIDIARIES

Bank	Market Model Coefficients		Event Parameter Coefficients	
	$\hat{\alpha}_i$	$\hat{\beta}_i$	$\hat{\beta}_i'$	$\hat{\delta}_i$
Bank of Boston	−0.0011	1.5035***	−0.6275*	−0.0023
BankAmerica	−0.0013	1.1814***	−0.7084**	−0.0121
Bankers Trust NY	−0.0002	1.1975***	−0.0169	0.0001
Chase Manhattan	−0.0013	1.0257***	−0.1799	−0.0026
Chemical NY	−0.0020	1.0529***	−0.3029	−0.0001
Citicorp	−0.0005	1.2134***	−0.2102	−0.0041
Comerica	0.0017	0.5585***	−0.2395*	0.0005
First Chicago	−0.0017	1.3733***	−0.4027	0.0015
First Interstate	−0.0007	0.8271	−0.2863	−0.0042
Irving Bancorp	0.0031	1.6724	0.0245	−0.0023
Manufacturers Hanover	−0.0034***	0.5769***	−0.9622***	−0.0021
Mellon Bank	−0.0059	0.8703	−0.2051	0.0036
J.P. Morgan	−0.0001	1.1056***	0.1160	0.0010
NDB Bancorp	0.0010	1.0307***	0.0248	0.0040
Republic Bancorp NY	0.0012	0.1944	0.2427	−0.0026
Security Pacific	−0.0006	0.3555	0.1580	−0.0037

* indicates significant at the 15 percent level.
** indicates significant at the 10 percent level.
*** indicates significant at the 5 percent level.

The sign of the δ_i coefficient is negative in most cases, though not statistically significant for any of the banks. In order to explain more fully the lack of response of the U.S. banks to the FTA announcement, data was gathered on the total assets of the Canadian subsidiaries of U.S. banks. These data indicate that the existing Canadian subsidiaries are very small relative to the U.S. parent—usually under 1% of the total assets of the banking organization.[40] Hence, any potential effects of the FTA announcement on the market value of the U.S. banks may have been lost in the noise of daily market movements for these stocks. The

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[40] *See, e.g.,* RAND MCNALLY BANKERS DIRECTORY INTERNATIONAL 422 (1988); 2 RAND MC-NALLY BANKERS DIRECTORY UNITED STATES 2431 (1988) (outlining that Chase Manhattan Bank of Canada has $701 million in assets versus $77 billion in assets for its U.S. parent, Chase Manhattan Bank, N.A.).

data on the U.S. bank Canadian subsidiaries were also used to explore
the possibility that the excess returns were related to the size of the Cana-
dian investment by U.S. banks. In that regard, the excess returns for
each of the U.S. banks was regressed on the percentage of that bank's
assets that were invested in its Canadian subsidiary. The regression coef-
ficient was, however, statistically insignificant.

The results of estimating the SUR model for the sample of U.S. bor-
der banks (*i.e.*, banks near the Canadian border) are shown in Table 4.

TABLE 4

ESTIMATES OF MARKET MODEL AND EVENT PARAMETER
COEFFICIENTS FOR U.S. BANKS WITHOUT CANADIAN SUBSIDIARIES
BUT WHICH OPERATE IN MARKETS CONTIGUOUS WITH CANADA

Bank	Market Model Coefficients		Event Parameter Coefficients	
	$\hat{\alpha}_i$	$\hat{\beta}_i$	$\hat{\beta}_i'$	$\hat{\delta}_i$
First American	0.0039***	0.1386	−0.0043	−0.0068
First Empire State	0.0025**	−0.0365	0.4510**	0.0140**
Keycorp	−0.0004**	0.3136	0.1921	0.0113
Manufacturers National	0.0011	0.3556**	0.1415	−0.0067
Michigan National	0.0019**	0.3298**	0.1529	0.0098**
Puget Sound Bancorp	0.0001	0.2040	0.4320	0.0007
U.S. Bancorp	−0.0007	0.7036***	−0.4422	0.0026

   * indicates significant at the 15 percent level.
  ** indicates significant at the 10 percent level.
*** indicates significant at the 5 percent level.

There did appear to be some positive excess event-period returns for
this group, though only two of the border banks showed both positive
and statistically significant results. This may also be due to the effects of
daily noise in the stock price data, though the potential effects (positive
or negative) may be difficult to discern for this group of banks and may
differ from one bank to the other.

VI.   CONCLUSION

The FTA is not only the most significant economic agreement ever
reached between the United States and Canada, but it also represents a
major shift in the nature of banking regulations in the two countries.
Analysis of the terms of the FTA suggests that the competitive position
of Canadian banks was eroded by the agreement. If this is so, efficient
market principles suggest that the market value of the Canadian banks
should have declined at the time of the FTA announcement, while the

market value of U.S. banks operating in Canada should have increased or at least not declined.

Empirical evidence drawn from daily stock market prices on all publicly traded Canadian banks and on the two distinct samples of U.S. banks generally support these hypotheses. The Canadian banks experienced, on average, a 1% negative excess return at the time of the FTA announcement. In contrast, U.S. banks, on balance, experienced no statistically significant excess returns, although U.S. banks operating near the Canadian border did show some positive excess event period returns. The general lack of market response for the U.S. banks may reflect their relatively limited exposure to the Canadian market.