

Appendix D -

UNIVERSITY HONORS PROGRAM
SENIOR PROJECT - APPROVAL

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PROJECT TITLE: The Effects of the Graham-Leach-Bliley Act on the Stock Performance of the Financial Industry

I have reviewed this completed senior honors thesis with this student and certify that it is a project commensurate with honors level undergraduate research in this field.

Signed: M. Cary Collins, Faculty Mentor

Date: 5/1/2000

Comments (Optional):

The Gramm-Leach-Bliley Act and Its Effect on Financial Institutions

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The Gramm-Leach-Bliley Act of November 12, 1999 is just the latest example of a trend toward banking deregulation in the last twenty years. The Depository Institutions

Deregulation and Monetary Control Act of 1980, the Garn-St Germain Depository Institutions Act of 1982, and the Interstate Banking and Branching Efficient Act of 1994, are examples of recent federal legislation that has relaxed regulations on commercial banks and benefited the large money center banks. State legislation is also important.

The allowance of more and more interstate banking has impacted the way banks do business. The larger banks can now acquire smaller banks, and the smaller banks can sell their banks for healthy returns. The Gramm-Leach-Bliley Act contains two provisions. The first is that commercial banks and securities firms are now able to own one another. This allows banks to offer investment services and securities firms to offer checking and savings accounts. The other provision establishes a financial services holding company charter that allows for one charter for all of the areas of the financial institution. This can cut down on regulation and paperwork. The evidence suggests that the passage of such legislation usually has a significant effect on the stock performance of the institutions affected. This project documents the study of the effects of the Gramm-Leach-Bliley Act. This is accomplished by a regression analysis used to spot abnormal returns. A two-index market model is used to find the abnormal returns. The particular model used for the analysis of the three portfolios is shown below:

$$\begin{aligned}
 \tilde{R}_{1t} &= \alpha_1 + \beta_{11} \tilde{R}_{m_{t-2}} + \beta_{12} \tilde{R}_{m_{t-1}} + \beta_{13} \tilde{R}_{m_t} + \beta_{14} \tilde{R}_{m_{t+1}} + \beta_{15} \tilde{R}_{m_{t+2}} \\
 &\quad + \beta'_{11} \tilde{I}_{t-2} + \beta'_{12} \tilde{I}_{t-1} + \beta'_{13} \tilde{I}_t + \beta'_{14} \tilde{I}_{t+1} + \beta'_{15} \tilde{I}_{t+2} + \sum_{k=1}^K \gamma_{1k} D_{kt} + \tilde{\epsilon}_{1t} \\
 \tilde{R}_{2t} &= \alpha_2 + \beta_{21} \tilde{R}_{m_{t-2}} + \beta_{22} \tilde{R}_{m_{t-1}} + \beta_{23} \tilde{R}_{m_t} + \beta_{24} \tilde{R}_{m_{t+1}} + \beta_{25} \tilde{R}_{m_{t+2}} \\
 &\quad + \beta'_{21} \tilde{I}_{t-2} + \beta'_{22} \tilde{I}_{t-1} + \beta'_{23} \tilde{I}_t + \beta'_{24} \tilde{I}_{t+1} + \beta'_{25} \tilde{I}_{t+2} + \sum_{k=1}^K \gamma_{2k} D_{kt} + \tilde{\epsilon}_{2t} \\
 \tilde{R}_{3t} &= \alpha_3 + \beta_{31} \tilde{R}_{m_{t-2}} + \beta_{32} \tilde{R}_{m_{t-1}} + \beta_{33} \tilde{R}_{m_t} + \beta_{34} \tilde{R}_{m_{t+1}} + \beta_{35} \tilde{R}_{m_{t+2}} \\
 &\quad + \sum_{k=1}^K \gamma_{3k} D_{kt} + \tilde{\epsilon}_{3t}
 \end{aligned}$$

where

- $\tilde{R}_{jt}$ = the return on a portfolio, j ($=1, 2$ and 3), of commercial banks without Section 20 subsidiaries, of commercial banks with Section 20 subsidiaries, or investment banks, on day t ($T=504$ daily observations from January 1998 through December 1999);
- $\tilde{R}_{m,t}$ = the return on the S&P 500 equally weighted index on day t ;
- $\tilde{I}_t$ = the yield on the 30-year U.S. Treasury bond on day t ;
- α_j = an intercept coefficient for portfolio j ($=1, 2$ or 3);
- $\beta_{j1} - \beta_{j5}$ = risk coefficients for the j th portfolio ($=1, 2$ or 3);
- $\beta'_{j1} - \beta'_{j5}$ = interest-rate risk coefficient for the j th portfolio ($=1$ or 2);
- γ_{jk} = the effect of the K regulatory event changes on the j th portfolio ($K=12$ in this study);
- D_{kt} = binary variables which equal 1 during the period of the k th announcement and 0 otherwise; and
- $\tilde{\varepsilon}_{jt}$ = random disturbances which are assumed to be i.i.d. normal, independent of

the return on the market, the interest rate index, and the event announcement variable.

Three affected sectors of the financial services industry are used. Commercial banks without section 20 subsidiaries (which allow for the selling of nontraditional instruments through the bank holding company) totaling 25 institutions, 19 banks with section 20 subsidiaries, and 27 investment banks are compared to the 30-year T-bond return to measure abnormal returns over the period from January 1, 1998 to December 31, 1999. These abnormal returns are then compared to a list of 12 dates that are important in the passage of the Gramm-Leach-Bliley Act to see if any abnormal returns can be attributed to the passage of the act.

The portfolios were formed using stock returns and rankings. The 100 largest banks in America were compared to a list of the top banks with Section 20 subsidiaries. The Section 20 banks that appeared on the top 100 list were used to make the Section 20 portfolio. The top 25 remaining banks were used to create the portfolio of traditional

banks. The portfolio of top investment institutions was taken from a list of top investment companies that are publicly traded. The portfolios were also adjusted for companies without complete information. Such problems were infrequent trading activity, and mergers that took some stocks off the market.

The research suggests that investment banks saw the greatest effect. The market response for commercial banks without Section 20 subsidiaries was the weakest. The largest abnormal returns occur toward the end of the bill's life, when the Joint House Conference holds its last meeting, and on November 12, 1999, when President Clinton signs the bill into law. Previous stock behavior shows that stocks generally rise in value in anticipation of a merger or acquisition of a corporation. This would seem to show that the higher abnormal returns for investment banks are perceived by the market to be targets for a takeover by the larger banks. It remains to be seen what effect the legislation will actually have on the financial services landscape. Some feel that there will be a small effect because banks with Section 20 subsidiaries already offer basically the services that the legislation provides for. Banks without Section 20 subsidiaries could have established them, but chose not to. Investment banks also offer checking on some accounts. Some feel the legislation serves only to simplify what has already become a standard. At the very least the Act will make business easier for banks and securities firms. The Act could also contribute to the recent trend toward consolidation in the banking industry. The Gramm-Leach-Bliley Act is the most recent development in the modern American economy.

Table 1. Time line for the creation, passage and enactment of the Gramm-Leach-Bliley Act.

Event Number	Date	Event description
1	March 4, 1999	U.S. Senate Banking Committee approves the Financial Modernization Act of 1999
2	April 28, 1999	U.S. Senate Banking Committee formally files the Financial Services Modernization Act in the U.S. Senate
3	May 6, 1999	U.S. Senate approves Senate bill 900, Financial Services Modernization Act of 1999
4	July 1, 1999	U.S. House of Representatives approves H.R. 10, the House version of U.S. Senate bill 900
5	July 23, 1999	U.S. Senate Banking Committee's 20 members are named to the joint house conference on Financial Services Modernization
6	July 30, 1999	U.S. House of Representatives appoints members to the joint house conference on Financial Services Modernization
7	August 3, 1999	Joint House Conference committee holds its first meeting on Financial Services Modernization
8	October 12, 1999	Chairmen Gramm, Leach and Bliley release chairmen's remarks on Joint House Conference
9	October 22, 1999	Joint House Conference committee holds its final meeting, naming the bill Gramm-Leach-Bliley Act
10	November 2, 1999	Joint House Conference report signed by a majority of the conferees, clearing the way for votes in both the House and Senate
11	November 4, 1999	Gramm-Leach-Bliley Act passes the Senate by a 90-8 vote and the House by a 362-57 vote.
12	November 12, 1999	President Clinton signs Gramm-Leach-Bliley Act into law.

Panel A (N=25)
Commercial Banks without Section 20 Subsidiaries

Firm or Highest Holding Company Name	Ticker Symbol
AmSouth Bancorp	ASO
BancoPopular Incorporated	BPOP
BancWest Corporation	BWE
Charter One Financial Inc.	CF
Comerica Incorporated	CMA
Compass Bancshares Incorporated	CBSS
Fifth Third Bancorp	FITB
First Tennessee National Corporation	FIN
Firststar Corporation	FSR
Hibernia Corporation	HIB
M&T Bank Corporation	MTB
Marshall & Ilsley Corporation	MI
MBNA Corporation	KRB
Mercantile Bancorp	MBLA
Northern Trust Corporation	NTRS
Old Kent Financial Corporation	OK
Regions Financial	RGBK
Republic New York Corporation	RNB
State Street Corporation	STT
Summit Bancorp	SUB
Union Planters Corporation	UPC
UnionBanCal Corporation	UB
Wachovia Corporation	WB
Wells Fargo & Company	WFC
Zions Bancorp	ZION

Panel B (N=19)
Commercial Banks with Section 20 Subsidiaries

Firm or Highest Holding Company Name	Ticker Symbol
Banc One Corporation	ONE
Bank of New York Corporation	BK
BankAmerica Corporation	BAC
BB&T Corporation	BBT
BOK Financial Corporation[1]	BOKF
Chase Manhattan Corporation	CMC
Citicorp	C
First Security Corporation[1]	FSCO
First Union Corporation	FTU
Fleet Boston Financial Corporation	FBF
Huntington Bancshares, Incorporated[1]	HBAN
J. P. Morgan & Company, Incorporated	JPM
Key Corporation	KEY
Mellon Bank Corporation[1]	MEL
National City Corporation	NCC
PNC Bank Corporation[1]	PNC
SouthTrust Corporation[1]	SOTR
SunTrust Banks, Incorporated[1]	STI
U.S. Bancorp[1]	USB

Notes: [1] Indicates that the firm does not have Tier II underwriting authorities for corporate debt and equity underwriting and dealing powers.

Panel C (N=27)
Investment Banking Firms

Firm or Highest Holding Company Name	Ticker Symbol
Labranche & Company	LAB
Jefferies Group – NW	JEF
Web Street Incorporated	WEBS
Bear Stearns	BSC
National Discount Broker	NDB
Dain Rauscher	DRC
Wit Capital Group	WITC
Knight/Trimark	NITE
InvestTech-New	ITG
Legg Mason Incorporated	LM
Paine Webber Group	PWJ
TD Waterhouse	TWE
Schwab, Charles	SCH
Morgan Stanley Dean Witter	MWD
Lehman Brothers Holdings	LEH
SW Securities Group	SWS
Hoenig Group	HOEN
Merrill Lynch & Company	MER
Donaldson Lufkin	DLJ
Edward, A. G., Incorporated	AGE
E Trade Group	EGRP
Freedom Securities Corporation	FSI
Ameritrade Holdings	AMTD
Goldman Sachs	GS
Friedman Bill	FBR
DLJDirect	DIR
Raymond James Financial	RJF
Ragen McKenzie	RMG

Table 2. The abnormal (i.e., unexpected) stock returns for six portfolios of financial services firms. The portfolios are (1) Commercial banks without Section 20 subsidiaries; (2) Commercial banks with Section 20 subsidiaries; (3) Investment banking firms. (4) life insurance companies; (5) Multi-line insurance companies; (6) Property casualty insurance companies

	<i>Explanatory Variable</i>	<i>Expected Sign</i>	<i>Commercial Banks without Section 20 Subsidiaries</i>	<i>Commercial Banks with Section 20 Subsidiaries</i>	<i>Investment Banks</i>	<i>Life</i>	<i>Multi-line</i>	<i>Property-Casualty</i>	<i>Pr>F</i>
	Intercept		-0.004594 (0.005481)	0.001794 (0.006226)	0.00006 (0.000722)	-0.00214 (0.006148)	-0.00474 (0.00516)	-0.00971* (0.005151)	
	Lag-2 S & P 500 Market Index		-0.05364* (0.031503)	-0.04173 (0.036341)	0.035324 (0.058754)	0.046694 (0.034848)	0.021180* (0.029248)	0.02688 (0.029112)	
	Lag-1 S & P 500 Market Index		0.009165 (0.031364)	-0.05876* (0.036181)	0.199553*** (0.058551)	0.131208*** (0.034693)	0.089824* (0.029118)	0.073596** (0.028983)	
	S & P 500 Market Index	(+)	0.943717*** (0.031459)	1.16488*** (0.036288)	1.272816*** (0.058582)	0.6808040*** (0.0348)	0.622229 (0.029208)	0.498951*** (0.029072)	
	Lead-1 S & P 500 Market Index		0.048194 (0.031533)	0.042191 (0.036375)	0.006764 (0.058783)	0.085480** (0.034881)	0.041271 (0.029276)	0.035342 (0.029140)	
	Lead-2 S & P 500 Market Index		0.034748 (0.031432)	0.048738 (0.036257)	-0.05183 (0.058511)	0.060615* (0.034771)	0.02444 (0.029184)	0.026098 (0.029048)	
	Lag-2 30-year Treasury Bond Index		0.031882 (0.257491)	0.052058 (0.292444)	0.001496 (0.015819)	-0.43392 (0.288839)	0.087826 (0.242394)	0.014678 (0.241978)	
	Lag-1 30-year Treasury Bond Index		-0.12916 (0.331953)	-0.13782 (0.377014)		0.266120 (0.372365)	-0.21902 (0.312490)	-0.30551 (0.311954)	
	30-year Treasury Bond Index	(-)	-0.026596*** (0.3287)	-0.46546** (0.37332)		-0.17020 (0.368717)	0.016280 (0.30928)	0.092310 (0.308897)	
	Lead-1 30-year Treasury Bond Index		0.372533 (0.325518)	0.534881 (0.369705)		0.132247 (0.365147)	0.418124 (0.306432)	0.316943 (0.305906)	
	Lead-2 30-year Treasury Bond Index		-0.10479 (0.209142)	-0.03191 (0.237532)		0.223712 (0.234603)	-0.23521 (0.19688)	0.03689 (0.196541)	
Event No:	CALENDAR OF EVENTS and abnormal returns (%)								
1	March 4, 1999 Senate Banking Committee Approves Financial Modernization Act for work	(?)	-0.252 %	-0.566 %	0.149 %	-0.915%	-1.2%	-0.16%	0.7624
2	April 28, 1999 Senate Banking Committee files FMA in the U.S. Senate	(+)	1.69 %**	1.185 %*	0.0113 %	2.0 %**	0.697%	1.197%	0.2644
3	May 6, 1999 U.S. Senate approves FMA, as Senate bill 900	(+)	0.026 %	-0.316 %	-0.335 %	0.335 %	0.2 %	0.018%	0.9964
4	July 1, 1999 U.S. House approves H.R. 10, its version of Senate bill 900	(+)	0.27 %	0.0532 %	-2.99 %**	-0.064	0.077%	-0.936%	0.3929

*** Significant at the 0.01 level.

** Significant at the 0.05 level.

* Significant at the 0.10 level.

Table 2. The abnormal (i.e., unexpected) stock returns for three portfolios of financial services firms (continued).

	<i>Explanatory Variable</i>	<i>Expected Sign</i>	<i>Commercial Banks without Section 20 Subsidiaries</i>	<i>Commercial Banks with Section 20 Subsidiaries</i>	<i>Investment Banks</i>	<i>Life Insurance</i>	<i>Multi-Line Insurance</i>	<i>Property Casualty</i>	<i>Pr>F</i>
Event No:	CALENDAR OF EVENTS and abnormal returns (%)								
5	July 23, 1999 U.S. Senate Banking Committee names members to joint house Conference		-0.89%	-0.571	-1.128%	0.399%	-0.105%	-1.16%	0.7113
6	July 30, 1999 U.S. House Banking Committee names members to joint house conference	(?)	-0.30%	-1.196 %	0.243 %	0.26 %	0.47 %	1.187 %	0.4575
7	August 3, 1999 Joint House Conference committee holds first meeting	(?)	-0.093 %	-0.015 %	--2.33 %	-0.13 %	-0.63 %	-1.127 %	0.6152
8	October 12, 1999 Joint Conference chairmen release remarks	(+)	0.43 %	1.13 %	1.24 %	-0.363 %	1.01 %	-0.776 %	0.2562
9	October 22, 1999 Joint House Conference holds final committee meeting	(?)	1.4 65%*	2.386 %**	5.04 %***	8.0 %***	2.64 %***	3.68 %***	0.0001
10	November 2, 1999 Joint House Conference report signed by majority of conference members	(+)	1.8 %**	1.398 %	1.54 %	1.18 %	0.93 %	-0.23%	0.2899
11	November 4, 1999 U.S. Senate passes the now “Graham-Leach-Bliley Act” by 362-57 vote	(+)	0.46 %	0.86 %	3.34 %**	-0.34%	-0.52%	0.49%	0.2859
12	November 12, 1999 President Clinton signs Graham-Leach-Bliley Act into law	(+)	0.47 %	0.80 %	5.64 %***	1.97 %	0.011 %	-1.19%	0.0115
	Cumulative Event Effects ^[1] (March 4, 1999, April 28, 1999, ..., November 12, 1999)		0.466 %*	0.465 %* p=11%	0.867 %*	0.942%***	0.367%* p=11%	0.187%	
	System-weighted R ² (%)		32.25 %						
	Number of firms in each group		25	19	27	16	15	20	20

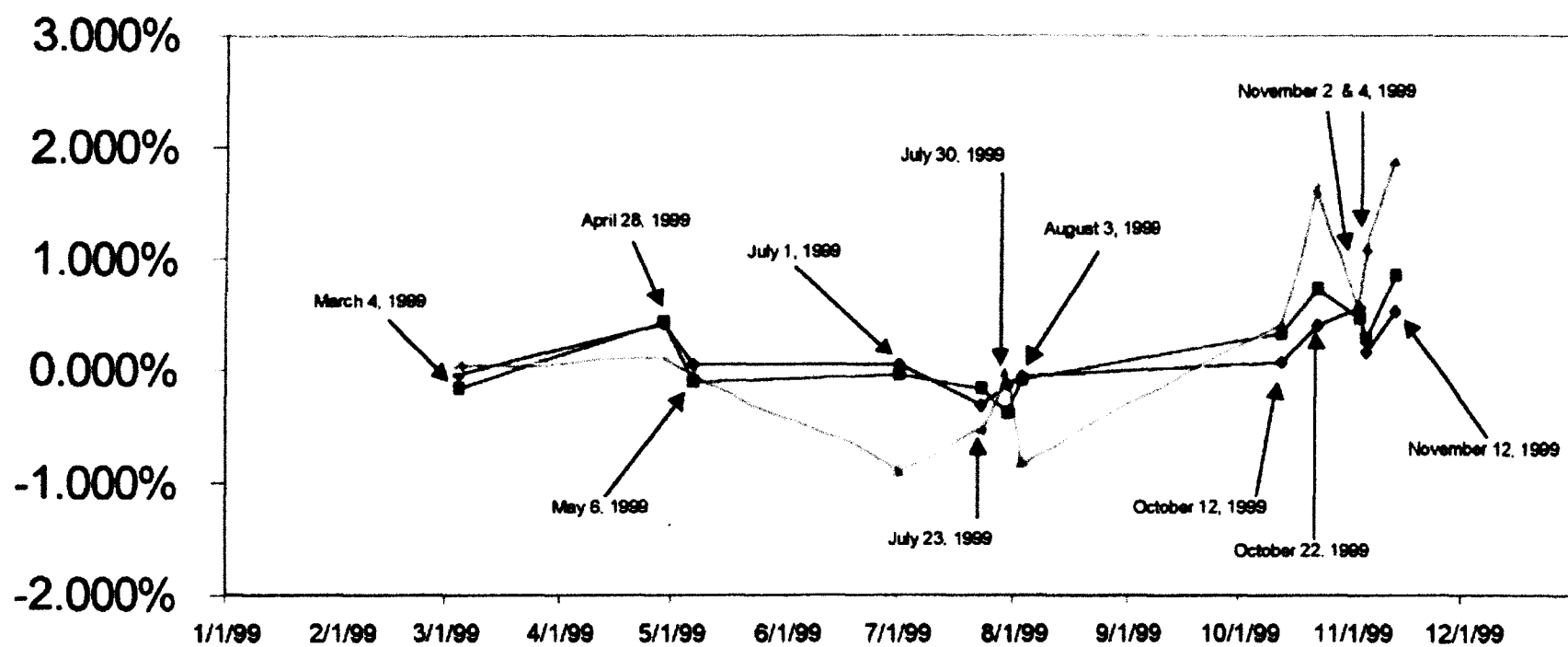
[1] The cumulative event effects are the result of re-running the models against a binary which represented each of the 12 event dates.

*** Significant at the 0.01 level.

** Significant at the 0.05 level.

* Significant at the 0.10 level.

Abnormal Returns for Financial Services Firms



Event Dates for Passage of Graham-Leach-Bliley Act

- Commercial Banks w/o Section 20
- Commercial Banks w/Section 20
- *- Investment Banks