THE GENERAL AGREEMENT ON TARIFFS AND TRADE: WORLD TRADE FROM A MARKET PERSPECTIVE

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1. INTRODUCTION

On April 15, 1994, the contracting parties to the General Agreement on Tariffs and Trade ("GATT")[1] finalized the "Uruguay Round" of trade negotiations.[2] The agreement reached as part of these negotiations is perhaps the most comprehensive in history,[3] lowering yearly global tariffs by over $700 billion,[4] while increasing world income by over $500 billion per year.[5]

The Agreement and the new World Trade Organization ("WTO")[6] it creates have already received considerable attention

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[1] *See* General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A11, T.I.A.S. 1700, 55 U.N.T.S. 194 [hereinafter GATT 1947].

[2] *See* Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, LEGAL INSTRUMENTS — RESULTS OF THE URUGUAY ROUND vol. 1 (1994), 33 I.L.M. 1125 (1994). [hereinafter GATT 1994].

[3] *See Results of the Uruguay Round Trade Negotiations: Hearings Before the Senate Comm. on Fin.*, 103d Cong. 211 (1994) (statement of U.S. Trade Representative Mickey Kantor).

[4] *See The New Trade Pact*, N.Y. TIMES, Dec. 2, 1994, at A22 (highlighting Clinton administration estimates that global tariffs will go down by $744 billion).

[5] *See* G. Richard Shell, *Trade Legalism and International Relations Theory: An Analysis of the World Trade Organization*, 44 DUKE L.J. 829, 831 & n.3 (1995). Shell cites a 1994 report by the GATT Secretariat projecting a $510 billion increase, measured in 1992 dollars, to occur before the year 2005. *See id.* (citing GATT SECRETARIAT, THE RESULTS OF THE URUGUAY ROUND — MARKET ACCESS FOR GOODS AND SERVICES: OVERVIEW OF THE RESULTS 12 (1994)).

[6] *See* GATT 1994, *supra* note 2, art. 1, 33 I.L.M. at 1144 (establishing the WTO). *See generally* Shell, *supra* note 5 (giving an overall analysis of the

in leading legal periodicals. This journal hosted a symposium on "Current Issues in the World Trade Organization" last spring to examine a number of controversial topics already created by the WTO.[7] Elsewhere, in recent articles in the *Harvard Law Review,* Professor Laurence H. Tribe and Professors Bruce Ackerman and David Golove debate the legitimacy of the process by which the U.S. Congress ratified the Uruguay Round of GATT and the general constitutionality of "congressional-executive agreements."[8] Additionally, in a recent article in the *Duke Law Journal,* Professor G. Richard Shell extensively examines the theoretical underpinnings of the new WTO and its dispute resolution system.[9]

Commentators have paid little attention, however, to the precise economic impacts of this massive change in international trade regulation. This Article focuses on these impacts. It does so by observing the nature of the changes affected by the Uruguay Round as well as the reactions in markets throughout the world to events leading up to Uruguay Round ratification. Section 2 outlines a theory of "event study analysis" involving observations of international stock market reactions to publicized events. Section 3 examines the major changes that the Uruguay Round makes in the international trade regime and predicts certain logical economic impacts. Section 4 reveals the results of applying the "event study analysis" to different regions and industries in the

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WTO).

[7] *See* Wesley A. Cann, Jr., *Internationalizing Our Views Toward Recoupment and Market Power: Attacking the Antidumping/Antitrust Dichotomy Through WTO-Consistent Global Welfare Theory,* 17 U. PA. J. INT'L ECON. L. 69 (1996); Steve Charnovitz, *Participation of Nongovernmental Organizations in the World Trade Organization,* 17 U. PA. J. INT'L ECON. L. 331 (1996); Philip M. Nichols, *Extension of Standing in World Trade Organization Disputes to Nongovernment Parties,* 17 U. PA. J. INT'L ECON. L. 295 (1996); G. Richard Shell, *The Trade Stakeholders Model and Participation by Nonstate Parties in the World Trade Organization,* 17 U. PA. J. INT'L ECON. L. 359 (1996); Jared R. Silverman, Comment, *Multilateral Resolution Over Unilateral Retaliation: Adjudicating the Use of Section 301 Before the WTO,* 17 U. PA. J. INT'L ECON. L. 233 (1996); *see also* Curtis Reitz, *Enforcement of the General Agreement on Tariffs and Trade,* 17 U. PA. J. INT'L ECON. L. 555 (1996) (offering commentary on and suggestions for improving the new enforcement mechanisms).

[8] *See* Bruce Ackerman & David Golove, *Is NAFTA Constitutional?,* 108 HARV. L. REV. 799 (1995); Laurence H. Tribe, *Taking Text and Structure Seriously: Reflections on Free-Form Method in Constitutional Interpretation,* 108 HARV. L. REV. 1221 (1995).

[9] *See* Shell, *supra* note 5.

world.   Ultimately, this Article concludes that the long-term nature of the impacts will redound mostly to the benefit of the Asian/Pacific economic region.

2. EVENT STUDY ANALYSIS

One of the best ways to gain insight into the economic implications of regulatory changes such as the GATT/WTO is through stock market event analysis.[10]   This type of analysis involves examining the impact of a given event or events on stock prices in various markets throughout the world.[11]   This analysis assumes, pursuant to the so-called "efficient markets hypotheses,"[12] that all present and future economic implications of given events are immediately reflected in stock prices throughout relevant markets.   Stock market event analysis is designed to measure the effect of an event on stock prices independently of the effects of other factors.   To achieve this goal, estimates of the normal "expected return" of stock prices are calculated and then compared with the actual post-event returns.   The difference, referred to as the "abnormal return," is attributed to the given event.[13]

In distinguishing between expected and abnormal returns, event analysis focuses on two time periods: (1) the "estimation period" prior to the event, during which a regression model designed to measure the normal relationship between the world stock index and the stock index of a particular country or

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[10] *See generally* ROBERT C. RADCLIFFE, INVESTMENT: CONCEPTS, ANALYSIS, STRATEGY (2d ed. 1987) (outlining a recommended process for investors to evaluate the advantages of capital investments requiring prospective speculation about the long-term impacts of current events); Leonard Bierman et al., *Denmark and the Maastricht Treaty: A Market Analysis*, 3 DUKE J. COMP. & INT'L L. 147 (1992) (conducting a similar empirical analysis of market reactions to the Danish vote ratifying the Maastricht Treaty).

[11] *See* Bierman et al., *supra* note 10, at 147.

[12] *See* SEHA M. TINIC & RICHARD R. WEST, INVESTING IN SECURITIES: AN EFFICIENT MARKETS APPROACH 278-79 (1979) [hereinafter TINIC & WEST] (explaining the "efficient markets" approach to investing); Eugene F. Fama et al., *The Adjustment of Stock Prices to New Information*, 10 INT'L. ECON. REV. 1, 12-16 (1969) (discussing the speed of adjustment of stock prices to specific kinds of new information); Daniel Seligman, *Can You Beat the Stock Market?*, FORTUNE, Dec. 26, 1983, at 82 (debating the efficient market hypothesis).

[13] Stock markets will always experience general price movements regardless of the given event or events. Thus, it is necessary to isolate the impact of the given event from the impact of other pricing factors.

industry is developed; and (2) the "analysis period," which encompasses a small number of days immediately surrounding the given event day. The market model version of the capital asset pricing model[14] is commonly used to estimate these relationships and is used in the study discussed in this Article.

There was considerable controversy in the U.S. Congress during 1994 regarding ratification of the Uruguay Round of the GATT.[15] This controversy extended far beyond the aforementioned constitutional debate between Professor Tribe and Professors Ackerman and Golove regarding whether the agreement was a "treaty" subject to two-thirds ratification by the U.S. Senate.[16] Concerns regarding congressional ratification of the Uruguay Round came from various sectors.

First, because the Uruguay Round reduces tariffs, critics expressed concern regarding the loss of approximately $10 billion in tariff revenue that the United States will experience during the first five years of the agreement.[17] Opponents of the agreement also noted the likely negative impact its less restrictive trade mandates would have on U.S. jobs, particularly in such industries

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[14] *See* TINIC & WEST, *supra* note 12, at 278-79 (discussing the theory behind the capital asset pricing model); *see also* William F. Sharpe, *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk*, 19 J. FIN. 425, 427 (1964) (presenting an example of a capital asset pricing model).

[15] *See, e.g.*, Peter H. Stone, *GATT-ling Guns*, NAT'L. J., July 2, 1994, at 1571 (discussing the lobbying efforts related to the ratification of the GATT); Michael J. Boskin, *Pass GATT Now*, FORTUNE, Dec. 12, 1994, at 137 (urging Congressional Republicans to put politics aside and pass GATT); *GATT Imperiled*, BUS. WEEK, Oct. 31, 1994, at 57 (detailing President Clinton's concern regarding GATT's chances for ratification success); *Senate Support for Pact on World Trade Is Low*, WALL ST. J., Nov. 14, 1994, at A2 [hereinafter *Senate Support*] (reporting on the statement of Senator Daniel Patrick Moynihan that GATT lacked the necessary support to achieve ratification).

[16] *See* Ackerman & Golove, *supra* note 8; Tribe, *supra* note 8; *see also* GATT *Implementing Legislation: Hearings on S. 2467 Before the Senate Comm. On Commerce, Science, and Transp.*, 103d Cong. 285-339 (1994) (containing statements and testimony of Prof. Laurence H. Tribe and Prof. Bruce Ackerman arguing that because the results of the Uruguay Round constitute a treaty, they must be subject to Senate approval by a two-thirds majority). Although the latter view finally prevailed, the pact's revenue-losing provisions required a larger majority (60 members) in the U.S. Senate. *See Senate Support*, *supra* note 15, at A2.

[17] *See* Boskin, *supra* note 15, at 138 (estimating the loss as likely to be $12 billion); Stone, *supra* note 15, at 1572 (citing a $10 billion loss).

as textiles,[18] and on the integrity of U.S. labor and environmental standards.[19] The most vociferous opposition to the agreement, however, focused on its creation of the WTO to regulate trade disputes, and the corresponding potential encroachment on U.S. legal "sovereignty."[20] An anti-ratification campaign entitled "Save Our Sovereignty" was launched in May of 1994.[21] This campaign enjoyed considerable success in convincing various legislators that the WTO and its dispute resolution process posed a major threat to the United States' ability to enforce and maintain its own laws.[22]

This political controversy throughout 1994 placed the Agreement's ultimate approval by the U.S. Congress, considered the linchpin for the agreement's ratification by other major countries,[23] in continual doubt. Indeed, resolution of the issue was not clear until the U.S. Senate's December 1, 1994, vote approving the Agreement.[24] The U.S. House of Representatives passed a similar resolution just two days earlier.[25] Throughout the process, the probability of ultimate congressional approval vacillated dramatically.

At least four dates prior to the final vote are noteworthy: (1) August 15, 1994, when major newspapers reported that the

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[18] *See* Stone, *supra* note 15, at 1572-74 (claiming that the textiles industry is likely to lose "hundreds of thousands" of jobs if the agreement is approved).

[19] *See id.* at 1572, 1574 (noting that many U.S. environmental and labor laws could suffer from legitimacy attacks under a strengthened GATT system).

[20] *See id.* at 1572 (stating that "[c]ritics fear that the WTO — where all 117 nations will have equal votes and vetoes will no longer be possible — could infringe on U.S. sovereignty").

[21] *See* John Harwood, *GATT Backers are Given Edge in the Senate*, WALL ST. J., Dec. 1, 1994, at A3 (quoting Senator Robert Byrd of West Virginia as stating that the WTO will be a "Tyrannosaurus" that will "ransack" U.S. laws); Stone, *supra* note 15, at 1574 (noting concerns of Senator John F. Kerry of Massachusetts regarding the impact of the WTO on U.S. laws).

[22] *See* Stone, *supra* note 15, at 1574.

[23] *See generally* Boskin, *supra* note 15, at 137 (noting that the European Community, Japan and other nations were waiting to see if the U.S. Congress would pass GATT before acting on ratification).

[24] *See* H.R. 5110, 103d Cong. (1994) (enacted) (setting forth the text of the resolution); Helene Cooper & John Harwood, *Major Shifts in Trade are Ensured as GATT Wins Key Senate Vote*, WALL ST. J., Dec. 2, 1994, at A12 (reporting on the Senate's approval of GATT).

[25] *See* John Harwood & Helene Cooper, *House Clears GATT Accord In 288-147 Vote*, WALL ST. J., Nov. 30, 1994, at A1.

Clinton Administration and House Republicans had reached a compromise regarding the President's authority to link environmental and labor standards to trade agreements, thereby greatly enhancing prospects for the ratification of GATT;[26] (2) September 21, 1994, when the *Wall Street Journal* reported that House and Senate negotiators had reached an important accord on the world trade pact;[27] (3) September 30, 1994, when U.S. Senate Commerce Committee Chairman Ernest Hollings of South Carolina, a key opponent of the agreement, agreed to allow a Senate vote on the measure in early December of 1994;[28] and (4) November 22, 1994, when a major compromise deal between President Clinton and Senate Majority Leader Robert Dole regarding the role of the WTO became public, thus removing a major stumbling block to GATT ratification.[29] The importance of these dates to the ultimate success of GATT 1994 marks them as "events" for purposes of testing world stock market reactions.

3. EVENT STUDY HYPOTHESES

3.1. *Changes in the GATT System by the Uruguay Round*

3.1.1. *Overview*

The Uruguay Round of GATT represents a massive liberalization of international trade, cutting tariffs on thousands of articles by approximately forty percent and mandating the removal of significant import restrictions throughout the world.[30] International trade theory generally predicts that such a multilateral

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[26] *See* Helene Cooper, *White House Compromises on GATT With House Republicans to Ease Passage*, WALL ST. J., Aug. 15, 1994, at A2.

[27] *See* Bob Davis, *GATT Pact Moves Forward In Congress as House, Senate Negotiators End Work*, WALL ST. J., Sept. 21, 1994, at A4.

[28] *See* David Rogers & Bob Davis, *Senators Pledge December Vote on GATT Pact*, WALL ST. J., Sept. 30, 1994, at A2.

[29] *See* Bob Davis & David Rogers, *Clinton, Dole Are Close to Deal Seeking to Assure Critics of World-Trade Pact*, WALL ST. J., Nov. 22, 1994, at A26.

[30] *See* Harwood & Cooper, *supra* note 25, at A1 (reporting that the agreement will reduce tariffs by 40%); Alan Riding, *One Hundred Nine Nations Sign Trade Agreement*, N.Y. TIMES, Apr. 16, 1994, at 35, 48 (detailing the required reductions in import restrictions); *see generally* Bob Davis, *A Primer on GATT: Sure, it's Tedious, But the Important Things Often Are*, WALL ST. J., Nov. 28, 1994, at A3 (outlining key questions and answers regarding the changes made by the Uruguay Round).

liberalization of trade policies will increase economic efficiency and enhance economic growth for all signatory countries.[31] Indeed, the Uruguay Round is expected to increase world income by over $500 billion per year.[32]   Consequently, one would probably expect markets in all areas of the world to react positively to events signaling a likely agreement of this kind.

Nevertheless, it is reasonable to expect the Uruguay Round to have some disparate impacts on different nations, regions, and economic sectors throughout the world. These impacts will be precipitated, in part, by the interplay between substantive changes embodied in certain specific provisions of the Uruguay Round agreement.

3.1.2.   *Specific Provisions*

3.1.2.1.   *Tariff Reductions*

As noted above, the Uruguay Round will cut tariffs on a wide array of products by about forty percent.[33]   For example, in Europe the tariff on computers dropped from 4.9% to 2.5% as a result of the Uruguay Round, while the average fourteen percent tariff on imported computer chips dropped to approximately eight percent.[34]   Tariff reductions on computers helps companies exporting computers to Europe by lowering the tariffs charged on their products. Companies manufacturing computers in Europe also benefit because lower tariffs on imported computer chips means lower costs of raw materials.[35]   Over time, the Uruguay Round slashes tariffs on thousands of items, and even eliminates them altogether with respect to certain goods.[36]   The agreement

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[31] *See* U.S. International Trade Commission, *Potential Impact on the U.S. Economy and Selected Industries of the GATT Uruguay Round Agreements,* June, 1994, I-9 (unpublished study, available from the U.S. International Trade Commission). [hereinafter *ITC Study*].

[32] *See* Shell, *supra* note 5, at 831 & n.3.

[33] *See supra* note 30 and accompanying text.

[34] *See Many Business Leaders See Long-Term Gain, Especially at Computer, Drug, Farming Firms,* WALL ST. J., Dec. 2, 1994, at A6 [hereinafter *Many Business Leaders*].

[35] *See id.*

[36] *See Trade Pact's Key Provisions,* WALL ST. J., Dec. 2, 1994, at A6.

thus gives an especially big boost to companies and countries that are major exporters.[37]

3.1.2.2.   Elimination of Import Restrictions

The agreement takes major steps toward the reduction and/or elimination of import restrictions with respect to both industrial and agricultural goods.[38] Perhaps most significant in this regard is the ten-year phasing out of the Multifiber Arrangement ("MFA"), a system of quotas that limits imports of textiles and apparel into the United States and other industrialized countries.[39] According to some estimates, world trade in textiles and apparel may increase by as much as sixty percent once the MFA phase out is completed.[40]

3.1.2.3.   Subsidies

The Uruguay Round agreement places limits on government subsidies of certain economic activities,[41] particularly in the agricultural sector.[42] For example, the Uruguay Round reduces export subsidies and government budgetary support for agriculture by thirty-six percent in "developed" countries and twenty-four percent in "developing" countries.[43] The agreement restricts subsidies to tropical agricultural products even further.[44]

3.1.2.4.   Intellectual Property Rights

The Uruguay Round agreement stipulates that all signatories will adopt intellectual property protection in copyrights, trademarks, patents, industrial designs, layout designs of integrated circuits, geographical indications, and undisclosed information.[45]

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[37] *See Many Business Leaders, supra* note 34, at A6 (speculating that some of the biggest winners could be companies like K-Mart, Compaq, Mattel, Georgia-Pacific, Caterpillar, and Microsoft).

[38] *See* ANNE O. KRUEGER, TRADE POLICIES AND DEVELOPING NATIONS 50 (1995).

[39] *See Trade Pact's Key Provisions, supra* note 36, at A6.

[40] *See* KRUEGER, *supra* note 38, at 51.

[41] *See Trade Pact's Key Provisions, supra* note 36, at A6.

[42] *See* KRUEGER, *supra* note 38, at 51.

[43] *See id.* at 51-52.

[44] *See id.* at 51.

[45] *See id.* at 52 & n.28.

This provision represented a "big win" for worldwide pharmaceutical, software, film, and book publishing industries which have consistently registered complaints about international piracy.[46] Under the agreement, however, developing countries will have considerably more time to implement intellectual property rights than developed countries.[47]

3.1.2.5.   *Trade in Services*

With technological advances reducing transportation and communication costs and time, trade in services has increased in importance relative to trade in goods.[48] The Uruguay Round brings trade in services under the multilateral negotiating umbrella of the GATT/WTO, and further negotiations in various areas can be expected.[49] The Uruguay Round does not, however, include any immediate substantive changes in this area. For example, U.S. negotiators failed in their attempt to gain access for U.S. banks and securities firms to markets in Japan and other key countries.[50]

3.2.   *"Competitiveness" Issues*

3.2.1.   *Overview*

It thus appears that various specific provisions of the Uruguay Round clearly will impact certain industries, nations, and regions differently. In a general sense, however, the agreement's provisions liberalizing world trade will be most beneficial to those countries in a competitive position to take advantage of new trading opportunities. Moreover, because many of the trade-liberalizing aspects of GATT will be phased in several years after the Agreement's January 1, 1995, effective date,[51] the countries most likely to benefit will probably be those in the best competi-

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[46] *Trade Pact's Key Provisions, supra* note 36, at A6.

[47] *See* KRUEGER, *supra* note 38, at 52.

[48] *See id.* at 55.

[49] *See Trade Pact's Key Provisions, supra* note 36, at A6.

[50] *See id.*

[51] *See* GATT 1994, *supra* note 2, pt. I, para. 3, 33 I.L.M. at 12 (recognizing the negotiators' desire to make GATT effective as of January 1, 1995).

tive position a decade or more from now.[52] Consequently, although today's top competitors will receive some benefit from the Agreement, one would predict that tomorrow's most competitive countries will benefit most from the Uruguay Round.

3.2.2. *Measuring Current Competitiveness*

One of the best measures of *current* national competitiveness is national output or Gross Domestic Product ("GDP") per capita.[53] This measure encapsulates the quality and availability of production inputs, as well as the impact of government and other policies.[54] A 1995 national output ranking of the major nations of the world using an index[55] provided the following results:

CHART ONE		
Current Competitiveness		
Top 25% of Countries Ranked	United States	100
	Switzerland	92
	Singapore	88
	Canada	83
	Japan	82
	France	78
	Australia	75
	Austria	75
	Belgium	74
	Italy	73

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[52] For example, the phase out of the MFA under the Uruguay Round occurs over a ten-year period and is heavily "backloaded," as most of the quota restrictions will not be lifted until the years 2000 through 2005. *See* KRUEGER, *supra* note 38, at 51.

[53] *See International Competitiveness Revisited*, UBS INT'L FIN., Winter 1996, at 1, 2 [hereinafter *International Competitiveness*].

[54] *See id.* at 2.

[55] Since the United States received the highest score, the survey arbitrarily gave it a benchmark score of 100.

CHART ONE Current Competitiveness		
Top 50% of Countries Ranked	United Kingdom	73
	Netherlands	72
	Germany	72
	Sweden	70
	New Zealand	63
	Israel	61
	Spain	53
	Ireland	50
	Korea	43
	Portugal	40
Top 75% of Countries Ranked	Argentina	38
	Malaysia	37
	Chile	34
	Greece	33
	Thailand	28
	Mexico	27
	Hungary	26
	Brazil	23
	Columbia	23
	Poland	21
All Countries Ranked	Turkey	20
	Russia	16
	Egypt	14
	Indonesia	13
	South Africa	11
	China	10
	Iran	9
	Pakistan	9
	Nigeria	6
	India	5

From the perspective of current competitiveness, one would expect many of the world's industrialized powers to benefit from the Uruguay Round. In particular, the United States, Canada, the European Community, and Japan seem well-poised to capitalize on new economic opportunities afforded by the Uruguay Round.

3.2.3. Future Competitiveness

Although immediate opportunities under the Uruguay Round are significant, because many of its provisions do not become effective for many years, and it will be in effect for a long time, the question of *future* national competitiveness is also critically important. Because economic growth is ultimately driven by

investment, and generally most investment is funded domestically, examination of gross domestic savings as a percentage of GDP is one good predictor of future competitiveness.[56] In this regard, the United States, although currently the world's most competitive country, only has a domestic savings rate of about fifteen percent.[57] Singapore, China, Korea, Indonesia, Thailand, and Japan on the other hand, all have savings rates of thirty percent or more.[58] Chart Two below illustrates the domestic savings rates for nineteen key countries.[59]

CHART TWO
Gross Domestic Savings as a Percent of GDP
(World Bank figures, 1989-94 averages)

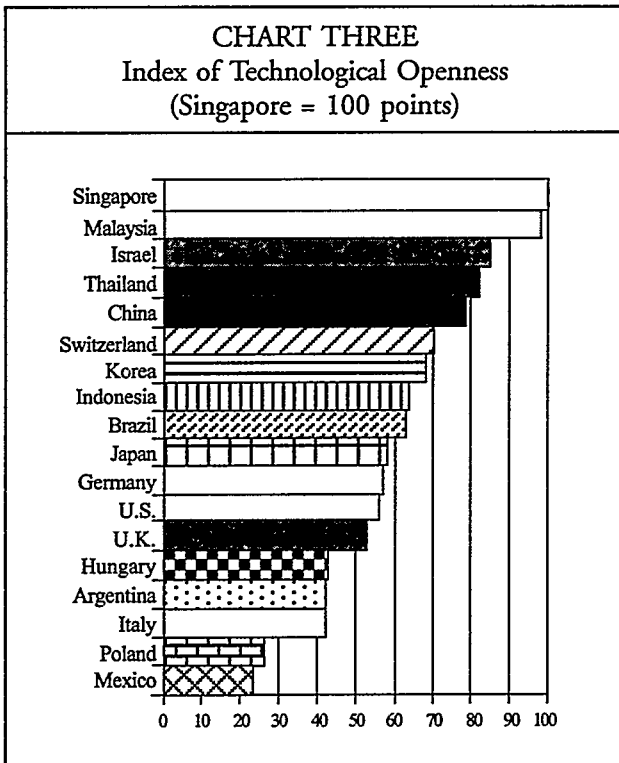| Country	Savings rate
Singapore	~47
China	~42
Korea	~37
Indonesia	~37
Thailand	~35
Japan	~34
Switzerland	~30
Germany	~26
Chile	~26
Brazil	~23
India	~22
France	~21
Italy	~20
Mexico	~19
Hungary	~18
U.S.	~15
U.K.	~15
Greece	~12
Egypt	~9

Scale: 0 5 10 15 20 25 30 35 40 45 50

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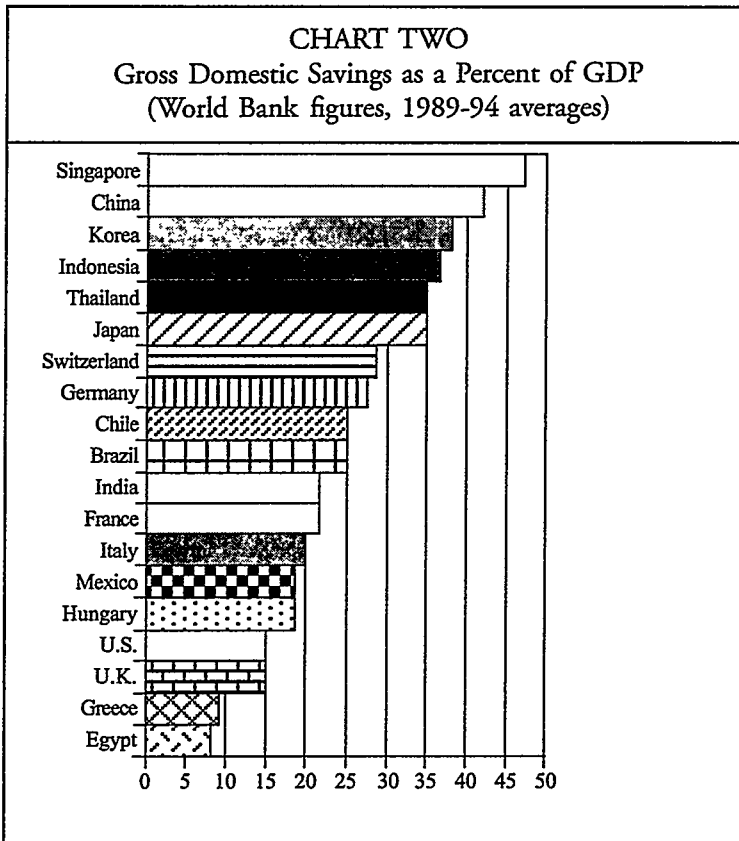
[56] *See International Competitiveness, supra* note 53, at 3 (concluding that domestic investment in excess of 30% combined with domestic savings in excess of 30% will render a country exceptionally competitive in the future).

[57] *See id.*

[58] *See id.*

[59] *See id.*

Another major component of future competitiveness is the ability to create and adopt new technology.[60] A variety of factors, such as percentage of GDP devoted to research and development and the export of manufactured goods, serve as proxies for a nation's potential technological openness.[61] A recent survey of eighteen countries ranked Singapore, Malaysia, Israel, Thailand, and China highest in terms of technological openness.[62] It is interesting to note that four out of these five countries are in East Asia.[63] Chart Three below illustrates the breakdown.[64]

CHART THREE
Index of Technological Openness
(Singapore = 100 points)

Country	
Singapore	
Malaysia	
Israel	
Thailand	
China	
Switzerland	
Korea	
Indonesia	
Brazil	
Japan	
Germany	
U.S.	
U.K.	
Hungary	
Argentina	
Italy	
Poland	
Mexico	

0 10 20 30 40 50 60 70 80 90 100

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[60] *See id.* at 4.

[61] *See id.*

[62] *See id.* at 5.

[63] *See id.* (demonstrating that technology is acquired mostly through import of capital goods and that East Asian "openness to technology" puts them in a leading position).

[64] *See id.* Because Singapore ranked highest, the survey arbitrarily gave it an index of 100 points. *See id.*

Other factors, particularly those of a macro economic nature including percentage of government consumption of GNP and real rates of exchange, also figure into calculating potential future national competitiveness.[65] Chart Four below sets forth a recent comprehensive calculation of the potential future national competitiveness of forty different countries:[66]

CHART FOUR Future Competitiveness (Maximum points = 100)		
Top 15% of Countries Ranked	Singapore	96
	Malaysia	91
	Thailand	83
	China	83
	Japan	81
	Korea	78
Top 25% of Countries Ranked	Ireland	76
	Switzerland	75
	Indonesia	75
	Netherlands	72
Top 50% of Countries Ranked	Germany	71
	Belgium	68
	Austria	67
	France	67
	Sweden	66
	Canada	63
	United States	62
	Italy	62
	United Kingdom	60
	New Zealand	60

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[65] *See id.* at 7.
[66] *See id.*

	CHART FOUR Future Competitiveness (Maximum points = 100)	
Top 75% of Countries Ranked	Chile Australia Israel Spain Russia India Argentina South Africa Mexico Colombia	59 59 57 57 55 52 52 52 50 49
All Countries Ranked	Hungary Pakistan Portugal Egypt Brazil Poland Nigeria Iran Greece Turkey	49 47 47 46 44 41 39 39 36 33

It is interesting to note that *all* of the countries in the top 15% of the future competitiveness ranking are in Asia, while various countries like the United States and Canada, which are currently extremely competitive, drop close to the middle of the pack.[67] Thus, if the Uruguay Round agreement is predicted to have its greatest impact in years to come, the top future competitors, all Asian countries, are likely to be its greatest beneficiaries.

3.3. *Industry Impacts*

As noted above, the Agreement impacts specific industries around the world.[68] New intellectual property rights regulations should significantly benefit pharmaceutical, software, and related companies. Indeed, a comprehensive U.S. International Trade

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[67] *See id.*

[68] *See supra* notes 31-47 and accompanying text.

Commission study ("ITC study") regarding the potential impact of the agreement on U.S. industries predicted that the U.S. pharmaceutical industry will be the only U.S. industry likely to experience a sizable[69] positive net trade effect as a result of the accord.[70] The agreement's gradual elimination of the MFA is also likely to greatly impact the textiles and apparel industries.[71] Elimination of the MFA will enable lower-cost producers of textiles and apparel to gain access to new markets, allowing consumers in these markets to purchase products at lower prices. This may hurt higher-cost producers of these goods in the same markets.[72] The ITC study predicts that the relatively high-cost U.S. textile and apparel industry will suffer the most of any U.S. industry from the results of the Uruguay Round.[73] According to the study, the U.S. textile and apparel industry will experience a sizable negative net trade effect due to the accord.[74]

Worldwide reductions in national government export subsidies mandated by the Uruguay Round should greatly benefit agricultural exporters.[75] The ITC study predicted modest net trade effects[76] for U.S. exporters of fruits and vegetables as well as grain and animal feed.[77]

4. EVENT STUDY RESULTS AND ANALYSIS

4.1. Overview/Aggregate Results

Table One sets forth the prediction errors for the overall stock markets of the United States, Canada, and Mexico.[78] It also

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[69] The ITC study considered an impact of more than 15% to be "sizable." *See ITC Study, supra* note 31, at I-7.

[70] *See id.* at xx.

[71] *See supra* notes 36-40 and accompanying text.

[72] *See generally ITC Study, supra* note 31, at xix (outlining the impact of multilateral trade liberalization under Uruguay Round Agreements on exports and imports).

[73] *See id.*

[74] *See id.* at xx.

[75] *See supra* notes 38-44 and accompanying text.

[76] The ITC study characterizes an effect between 5% and 15% as "modest." *See ITC Study, supra* note 31, at I-7.

[77] *See id.* at xx.

[78] *See infra* Table One.

For our purposes, prediction error is calculated as follows:

provides aggregated stock market statistics for North America as a whole, the Asian/Pacific region, and Europe.[79] Market statistics are based on "Dow Jones Equity" indices reported daily in the *Wall Street Journal*.[80] The recent nature of the "events" analyzed

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$$PEIt = RIt - (\propto I + \beta IRWt)$$

when all rates of return are in *ex post* terms. Prediction errors are tested for statistically significant differences from zero with the following t-test technique:

$$tIt = \left| \frac{PEIt}{SEIt} \right|$$

when

$$SEIt \left| = \sqrt{S^2 1 + \frac{1}{n} + \frac{\left(Rwt - \overline{Rw}\right)^2}{\displaystyle\mathop{\mathrm{a}}_{t+1}^{\mathrm{o}} \left(Rwt - \overline{Rw}\right)^2}} \right.$$

with:

s2 = the variance of the market model residuals in the estimation period; and
n = the number of days in the estimation period.

In other words, SE_{It} is the square root of the estimated forecast variance for day τ in the analysis period. This test statistic has n-2 degrees of freedom and is Student's t-distributed. The null and alternative statistical hypotheses to be tested using the equation to determine SE_{It} are:

$H_o : E(PE_{It}) = 0$
$H_1 : E(PE_{It}) \neq 0$

"Event clustering" problems are avoided here by using portfolio results rather than individual security returns. *See* Larry Y. Dann & Christopher M. James, *An Analysis of the Impact of Deposit Rate Ceilings on the Market Values of Thrift Institutions*, 37 J. FIN. 1259, 1272 (1982) (theorizing that portfolios are generally diverse enough to avoid the impact of specific industry event clustering).

[79] *See infra* Table One.

[80] *See, e.g., Listed Options Quotations*, WALL ST. J. Mar. 26, 1996, at C12 [hereinafter *Listed Options*]. The Dow Jones index for North America contains aggregate stock market statistics for Canada, Mexico, and the United States.

in this Article precludes use of computerized tape records. Thus, all market data was gleaned from manual examinations of the *Wall Street Journal*.

Tables Two, Three, Four, and Five build on the overall market analysis presented in Table One by examining the impact of the studied "events" on nine different sectors of the world economy.[81] Table Two examines prediction errors for economic sectors in North America, while Table Three conducts the same analysis for Asia.[82] Table Four analyzes how industry sectors in Europe reacted to events leading to the U.S. ratification of the Uruguay Round, while Table Five focuses on the impact of these events on economic sectors in domestic United States markets.[83]

The aggregate world market results are very interesting. There are absolutely *no* significant or abnormal prediction errors, either positive or negative, for Europe.[84] The same is true for Mexico.[85] There are three abnormal returns for Canada, two positive, and one strongly negative.[86] There are also three abnormal returns for the United States, two strongly negative and one strongly positive.[87] For the North American region as a whole, including the United States, Canada, and Mexico, there are two abnormal returns, one positive and one negative.[88] These returns demonstrate that securities markets in the world did not react

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The Asia/Pacific index contains statistics from Australia, Hong Kong, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Singapore, South Korea, and Thailand. The European index contains market data from: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. *See id.*

[81] *See id.* The Dow Jones World Stock Index sets forth the following sectors: basic industries (e.g., chemicals, metals, paper products); consumer/cyclical (e.g., apparel, retailers, media); industrial (e.g., railroad, trucking); energy (e.g., oil companies, pipelines, coal); financial (e.g., banks, insurance companies); independent (e.g., conglomerates, overseas trading, plantations); consumer/non-cyclical (e.g., pharmaceuticals, medical supplies, food); technology (e.g., semiconductors, software, aerospace/defense); and utilities (e.g., telephone, water, electric). *See id.*

[82] *See infra* Table Two.

[83] *See infra* Tables Four and Five.

[84] *See infra* Table One.

[85] *See id.*

[86] *See id.*

[87] *See id.*

[88] *See id.*

conclusively, if at all, to positive events regarding the ratification of the Uruguay Round.[89]

The only region in the world with an apparently clear reaction to these events was the *Asian/Pacific region*. While this region experienced only one significant prediction error, it was extremely positive in nature.[90]

Given the anticipated widespread positive economic effects of the Uruguay Round,[91] these results are somewhat surprising. They seem, however, to strongly confirm the earlier hypothesis that the Uruguay Round will be the most beneficial for those nations/regions that are going to be the strongest competitors in the *future*.[92] As noted, the Asian/Pacific region experienced the most positive net wealth effect of the regions studied. Furthermore, the region's index is comprised of market data from countries like Singapore, Malaysia, Thailand, Korea, and Japan,[93] countries that rank at the very top of the index of future competitiveness.[94]

In contrast, markets in the United States showed no evidence of positive wealth effects associated with the ratification of the Uruguay Round of GATT.[95] While ranking number one in the world in terms of current competitiveness/GDP per capita,[96] the United States is only a middle-ranking future competitor.[97] European countries, also ranked in the middle of the future competitiveness charts,[98] likewise showed no market reaction to Uruguay Round ratification.[99] In sum, the aggregate data seems to confirm the theory that the impact of the Uruguay Round is

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[89] *See id.* Prediction areas for all regions, whether normal or abnormal, were balanced between positive and negative. Canada had more positive prediction errors (eighteen out of thirty dates having positive signs) than any other country in North America or the European region. *See infra* Table One.

[90] *See infra* Table One (showing a single prediction error of extreme positive nature).

[91] *See supra* notes 3-5 and accompanying text.

[92] *See supra* note 52 and accompanying text.

[93] *See supra* note 80.

[94] *See supra* Chart Four.

[95] *See infra* Table One.

[96] *See supra* Chart One.

[97] *See supra* Chart Four.

[98] *See supra* Chart Four.

[99] *See infra* Table One.

going to be long-term in nature[100] and that future, rather than present, competitors will be its greatest beneficiaries.

4.2. Sector Analysis

4.2.1. Overview

Although events surrounding Congressional ratification of the Uruguay Round did not have a net wealth effect on the overall market in the United States or other countries/regions, these events did significantly impact certain economic sectors/industries in these countries and regions.[101] This section presents a sectoral analysis of the data.

4.2.2. United States

While the studied events had no significant impact on U.S. markets as a whole, the events did negatively impact certain specific sectors of the U.S. economy.[102] Not surprisingly, goods of a consumer cyclical nature, including apparel, had a strong negative prediction error.[103] This is consistent with the negative impact the gradual elimination of the MFA will have on the apparel and related industries in the United States.[104] It is also consistent with the ITC Study's prediction of a sizable negative trade effect for this and related U.S. industries as a result of the Uruguay Round.[105]

The U.S. consumer non-cyclical sector, including the pharmaceutical industry, showed an unsurprising slightly positive net reaction to the studied events.[106] The Uruguay Round's intellectual property protections should be a boon to U.S. pharmaceutical manufacturers.[107] The ITC Study predicted a major positive net

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[100] *See supra* note 52 and accompanying text. To some extent, of course, this is obvious since many of the Uruguay Round's key provisions, like the elimination of the Multifiber Arrangement, don't completely phase in for five or more years. *See supra* note 52.

[101] *See infra* Tables One to Five.

[102] *See infra* Table Five.

[103] *See infra* Table Five.

[104] *See ITC Study supra* note 31, at xix.

[105] *See ITC Study, supra* note 31, at xx.

[106] *See infra* Table Five.

[107] *See Trade Pact's Key Provisions, supra* note 36, at A6 (stating that the pharmaceutical industry should be the "clearest winner" in the trade agree-

trade effect on this industry.[108]   The more modest positive market reaction, though, may reflect fears that while the agreement's intellectual property provisions represent a positive first step, they need to be a lot stronger to really help U.S. holders of valuable pharmaceutical patents and other intellectual property.[109]

The overall flat reaction of the U.S. financial sector to the agreement is also not surprising.[110] While the Uruguay Round failed to directly reach an agreement on the financial services issue,[111] it did include an explicit framework for future negotiation on this and related trade-in-services subjects.[112] Thus, while U.S. negotiators failed to secure immediate access for U.S. banks and securities firms to Japan and other Asian countries where markets are currently closed to them, the door has been somewhat opened.[113]

A variety of other U.S. economic sectors, however, had surprisingly negative market reactions to Uruguay Round ratification events. Such reactions run counter to the ITC's generally sanguine predictions for all U.S. industry under the Uruguay Round.[114] For example, the basic industries sector (including chemicals, metals, and paper products) had a sharply negative reaction, as did both the industrial (railroads, trucking, and building materials) and technology sectors.[115] These results tend to signal that U.S. industry may face more competition from

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ment).

[108] *See ITC Study, supra* note 31, at xx.

[109] *See* Boskin, *supra* note 15, at 138 (noting that the agreement reached in the Uruguay Round provides better protection than the current practically non-existent system); *Many Business Leaders, supra* note 34, at A6 (statement of Peter Teeley, Vice President, Amgen, Inc., claiming that protections should be much stronger).

[110] *See infra* Table Five.

[111] *See* Boskin, *supra* note 15, at 138 (admitting that the Uruguay Round agreement has some shortcomings, including a failure on this account); *Trade Pact's Key Provisions, supra* note 36, at A6 (listing the major provisions of the Uruguay Round agreement).

[112] *See ITC Study, supra* note 31, at IX-5-6 (noting that future developments in this area could greatly benefit certain U.S. service industries); *Trade Pact's Key Provisions, supra* note 36, at A6 (stating that "negotiations would continue" about financial services issues).

[113] *See Trade Pact's Key Provisions, supra* note 36, at A6.

[114] *See ITC Study, supra* note 31, at I-9.

[115] *See infra* Table Five.

Asian and other countries under the Uruguay Round than expected. In particular, the negative reaction in the technology sector may illustrate the weakness of GATT's present intellectual property protections, ostensibly intended to protect and help U.S. software, semiconductor, and biotechnology companies.[116]

4.2.3. North America

The sectoral results for North America in large measure mimic those for the United States.[117] The reactions of the basic industries (chemicals, metals) and technology sectors in North America continue to be clearly negative, while the financial services sector is flat.[118] Surprisingly, the consumer cyclical sector, including apparel, is flat for North America as a whole while negative for the United States.[119] This may, in part, indicate that the elimination of the MFA will negatively impact Mexico and Canada less the United States.[120] In contrast, the consumer/non-cyclical sector, including the pharmaceutical industry, while showing slightly positive abnormal returns for the United States, is flat for North America as a whole.[121] This may reflect some of the benefits that the United States' strong pharmaceutical industry will reap from the Uruguay Round's new intellectual property protections.[122] Overall, though, the results for North America as a whole are very similar to those for the United States.

4.2.4. Europe

While overall market reaction in Europe to the studied events was completely flat,[123] sectoral analysis indicated flat to somewhat negative reactions.[124] There were *no* significant or abnormal returns for the European basic industries, industrial, energy, financial, consumer/non-cyclical, and utilities sectors.[125] The

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[116] *See supra* note 107 and accompanying text.
[117] *See infra* Table Two.
[118] *See infra* Table Two.
[119] *Compare infra* Table Two *with infra* Table Five.
[120] *See supra* notes 71-74 and accompanying text.
[121] *Compare infra* Table Two *with infra* Table Five.
[122] *See supra* note 107 and accompanying text.
[123] *See infra* Table One.
[124] *See infra* Table Four.
[125] *See infra* Table Four.

European consumer/cyclical sector, including apparel, showed a slightly negative reaction, which may once again be related to the phasing out of the Multifiber Arrangement.[126]   The sharpest negative reaction in European markets, however, was in the "independent" sector of the economy, which includes overseas trading companies and conglomerates.[127]   These results appear counterintuitive because companies of this kind should benefit most from the generally liberalized world trade regime implemented as part of the Uruguay Round.[128] The empirical results appear to indicate, however, that European-based companies of this kind may be comparatively weaker future competitors under the post-Uruguay Round economic construct.[129]   The same assertion may hold true for the European technology sector, which also experienced a clear negative reaction to the studied events.[130]

4.2.5.   Asia

Sectoral reaction in the Asian/Pacific region to the studied events was extremely positive, confirming the overall positive reaction in Asian/Pacific markets.[131]   Clear positive abnormal returns were found for the consumer/cyclical, industrial, energy, financial, consumer/non-cyclical, and technology sectors.[132] The remaining sectors (basic industries, independent, and utilities) were basically flat.[133] There were *no* abnormal or significant *negative* returns for any Asian/Pacific economic sector.[134] The strongest positive significant returns were for the Asian financial and consumer/non-cyclical sectors.[135]   The strong positive returns for the financial services sector in Asia makes considerable sense

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[126] *See supra* notes 39-40 and accompanying text.

[127] *See infra* Table Four.

[128] *See supra* notes 3-5 and accompanying text.

[129] *See supra* Chart Four.

[130] *See supra* Chart Four. *See generally* Terence Roth and Bhushan Bahree, *Europe, Despite Rising Joblessness, Isn't Likely to Turn to Protectionism*, WALL ST. J., Apr. 1, 1996, at A9 (discussing problems the European economy has had in competing in the new, post-WTO, globalized world economy).

[131] *See infra* Table Three.

[132] *See infra* Table Three.

[133] *See infra* Table Three.

[134] *See infra* Table Three.

[135] *See infra* Table Three.

given the success, as noted above, of Japanese and other Asian negotiators in keeping this sector of the Asian economy mostly closed to foreign competition.[136]   While the Uruguay Round agreement does put the issue of more open trade in financial services "on the table," that is the limit of its accomplishments in this area.[137]   In the meantime, Japanese and other Asian banks, securities firms, and other financial institutions remain largely free from competition from American and other foreign institutions.[138]

The very strong positive reaction in the Asian consumer/non-cyclical economic sector, which includes the pharmaceutical and other industries,[139] is somewhat more puzzling. The data seem to suggest that Asian/Pacific countries are in a unique position to profit in this sector.[140]   For example, the agreement's new intellectual property provisions may hurt various developing countries by forcing them to pay much higher prices for drugs and other goods.   The developed and newly industrialized countries of the Asian/Pacific region, however, are probably in a position to benefit from stronger intellectual property rules.[141] This situation should help spur even greater Asian/Pacific research and development activity.[142]   Moreover, some Asian/Pacific countries, like Malaysia,[143] already have strict rules regarding the protection of intellectual property. The Uruguay Round removes any comparative advantage other countries currently enjoy over them in this regard. Consequently, Malaysia will become an even stronger Asian competitor in the future.[144]

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[136]   *See supra* note 50 and accompanying text.

[137]   *See supra* note 50 and accompanying text.

[138]   *See supra* note 50 and accompanying text; *see also Trade Pact's Key Provisions, supra* note 36, at A6 (noting that U.S. negotiators failed to gain access for U.S. banks and securities firms in Japan and several Southeastern Asian nations).

[139]   *See infra* Table Three.

[140]   *See* KRUEGER, *supra* note 38, at 53.   This is because of the Uruguay Round's new phase-in intellectual property protections and its overall easing of export barriers. *See id.*

[141]   *See id.* at 53 & n.30.

[142]   *See id.* at 53

[143]   *See id.* at 53 n.30.

[144]   *See generally id.* at 53 n.30 (noting that "besides the direct cost of higher prices, developing countries will be financing the foreign exchange cost of the larger royalty payments"). Malaysia ranked second only to Singapore as the

5. CONCLUSION

The Uruguay Round agreement of the GATT/WTO is perhaps the most important event in recent world economic history. Our event study analysis, however, shows that securities markets throughout the world did not react equally to the agreement. While the overall Asian/Pacific market as well as numerous industrial sectors in that market reacted extremely positively to the accord, reactions in markets in Europe and North America were basically flat to slightly negative. The long-term nature of the impact of the Uruguay Round on the world economy likely contributed in large measure to our empirical findings. Many of the agreement's provisions, such as its elimination of the world MFA, will not be fully phased in for up to a decade. Moreover, even after all the agreement's provisions become fully implemented it will take numerous years for their economic impact to be fully felt. Consequently, the agreement will probably most benefit those countries and regions which are in the best "competitive" position a decade or two into the future. A recent comprehensive analysis of "future competitiveness" gave the highest scores in this regard to Singapore, Malaysia, Thailand, China, Japan, and Korea, with scores for North America and European countries generally lagging far behind. Consequently, the empirical results of our study appear to provide hard evidence corroborating the perceived positive economic benefit the Uruguay Round of the GATT/WTO will bring to the Asian/Pacific region of the world.

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top future competitor in the world. *See supra* Chart Four.

TABLE 1

Abnormal Returns Around Announcement Dates for GATT:
Aggregate Average Results for Selected Countries and Regions[a]

		Aug 15	Sep 21	Sep 30	Nov 22	Nov 29	Dec 2
North America							
	−2	0.0040	−0.0050	0.0023	−0.0030	0.0043	0.0017
	−1	−0.0047	0.0015	0.0043	−0.0021	0.0053	−0.0048
	Day 0	0.0067	−0.0138**	−0.0036	−0.0042	0.0023	−0.0057
	+1	−0.0007	−0.0031	0.0027	−0.0098	0.0017	0.0104*
	+2	0.0067	0.0019	−0.0001	0.0043	−0.0048	−0.0026
U.S.							
	−2	0.0046	−0.0058	0.0026	−0.0026	0.0043	0.0013
	−1	−0.0049	0.0013	0.0051	−0.0017	0.0052	−0.0050
	Day 0	0.0074	−0.0146***	−0.0032	−0.0040	0.0022	−0.0061
	+1	−0.0008	−0.0031	0.0026	−0.0108**	0.0013	0.0113**
	+2	0.0064	0.0018	0.0007	0.0043	−0.0050	−0.0024
Canada							
	−2	0.0034	0.0075	0.0035	−0.0038	0.0134*	0.0031
	−1	−0.0100	0.0108	0.0028	−0.0014	0.0023	−0.0042
	Day 0	0.0024	−0.0150**	−0.0008	−0.0058	−0.0052	0.0038
	+1	0.0001	−0.0017	−0.0011	0.0037	0.0031	0.0070
	+2	0.0071	0.0038	0.0010	0.0134*	−0.0043	−0.0011
Mexico							
	−2	−0.0074	0.0016	−0.0068	−0.0159	−0.0011	0.0128
	−1	0.0065	0.0048	−0.0206	−0.0117	0.0176	−0.0023
	Day 0	0.0114	−0.0041	−0.0147	−0.0026	0.0254	−0.0201
	+1	0.0055	0.0135	0.0114	0.0169	0.0128	−0.0089
	+2	0.0153	0.0085	−0.0177	−0.0011	−0.0023	−0.0020
Asia							
	−2	−0.0003	0.0045	−0.0073	0.0042	−0.0038	0.0005
	−1	0.0049	−0.0003	−0.0050	0.0008	−0.0046	0.0025
	Day 0	−0.0047	0.0192***	0.0077	0.0001	−0.0008	0.0047
	+1	0.0004	0.0030	−0.0036	0.0086	0.0005	−0.0103
	+2	−0.0048	0.0004	0.0037	−0.0038	0.0025	0.0020
Europe							
	−2	−0.0052	0.0010	0.0130	−0.0017	−0.0019	−0.0026
	−1	0.0007	−0.0024	0.0015	0.0017	−0.0011	0.0049
	Day 0	−0.0030	−0.0069	−0.0063	0.0060	−0.0015	0.0011
	+1	0.0005	0.0004	0.0013	0.0011	−0.0026	−0.0017
	+2	−0.0024	0.0030	−0.0058	−0.0019	0.0049	0.0028

[a] Asterisks indicate level of significance for t tests of abnormal returns' difference from zero: *−.10, **−.05, ***−.01.

TABLE 2

Abnormal Returns Around Announcement Dates for GATT: North America[a]

Sectors of the Economy		Aug 15	Sep 21	Sep 30	Nov 22	Nov 29	Dec 2
Basic Industries							
	−2	0.0004	0.0054	0.0059	−0.0063	−0.0016	0.0039
	−1	−0.0103	0.0109	0.0072	−0.0064	0.0075	0.0063
	Day 0	−0.0019	−0.0132*	−0.0024	−0.0066	0.0010	−0.0045
	+1	−0.0034	−0.0049	−0.0024	−0.0170**	0.0039	0.0111
	+2	0.0014	0.0020	−0.0023	−0.0016	0.0063	−0.0019
Consumer Cyclical							
	−2	0.0018	−0.0054	0.0027	−0.0081	0.0084	0.0016
	−1	−0.0016	−0.0002	0.0045	0.0001	0.0013	−0.0062
	Day 0	0.0047	−0.0153	−0.0063	−0.0044	0.0037	−0.0095
	+1	−0.0011	−0.0072	0.0042	−0.0065	0.0016	0.0105
	+2	0.0118	0.0013	0.0026	0.0084	−0.0062	−0.0049
Industrial							
	−2	−0.0013	−0.0055	0.0052	−0.0054	−0.0016	0.0030
	−1	−0.0058	0.0003	0.0003	−0.0580	0.0061	0.0022
	Day 0	0.0079	−0.0127**	−0.0028	−0.0062	0.0037	−0.0034
	+1	−0.0014	−0.0073	0.0018	−0.0126**	0.0030	0.0085
	+2	0.0063	0.0006	−0.0041	−0.0016	0.0022	−0.0027
Energy							
	−2	0.0029	−0.0116	−0.0014	0.0002	−0.0040	0.0017
	−1	−0.0105	0.0007	0.0056	−0.0064	0.0027	−0.0067
	Day 0	0.0112	−0.0139*	−0.0017	0.0058	0.0027	−0.0066
	+1	−0.0058	−0.0038	0.0037	−0.0015	0.0017	0.0053
	+2	−0.0047	0.0041	0.0040	−0.0040	−0.0067	−0.0111
Financial							
	−2	0.0018	−0.0063	−0.0036	−0.0106	0.0250	0.0033
	−1	−0.0049	−0.0049	0.0038	−0.0070	0.0058	−0.0077
	Day 0	0.0093	−0.0195***	−0.0043	−0.0127*	−0.0015	−0.0014
	+1	−0.0002	−0.0022	−0.0003	−0.0092	0.0033	0.0112*
	+2	0.0060	−0.0010	−0.0034	0.0250***	−0.0077	0.0010
Independent							
	−2	−0.0132	−0.0005	−0.0080	−0.0066	−0.0076	−0.0129
	−1	−0.0109	−0.0114	0.0023	−0.0006	0.0037	−0.0127
	Day 0	0.0066	−0.0177*	−0.0005	−0.0165*	0.0188**	−0.0064
	+1	0.0103	0.0029	−0.0083	−0.0195**	−0.0129	0.0302***
	+2	0.0028	−0.0059	−0.0073	−0.0076	−0.0127	−0.0053
Consumer/Non-cyclical							
	−2	0.0131	−0.0075	0.0059	0.0001	−0.0014	0.0002
	−1	−0.0026	0.0071	0.0048	0.0030	0.0031	−0.0038
	Day 0	0.0128**	−0.0111**	−0.0059	−0.0048	0.0066	−0.0049
	+1	0.0023	−0.0003	0.0064	−0.0135**	0.0002	0.0098*
	+2	0.0123	0.0051	0.0069	−0.0014	−0.0038	−0.0038
Technology							
	−2	0.0085	−0.0004	0.0021	0.0034	−0.0033	0.0072
	−1	−0.0008	0.0003	−0.0011	0.0010	0.0067	−0.0100
	Day 0	−0.0011	−0.0124	0.0011	−0.0062	0.0010	−0.0095
	+1	−0.0011	−0.0041	0.0020	−0.0225***	0.0072	0.0117
	+2	0.0113	−0.0017	−0.0043	−0.0033	−0.0100	0.0012
Utilities							
	−2	0.0015	−0.0073	0.0070	0.0002	0.0169**	−0.0028
	−1	−0.0054	0.0023	0.0071	−0.0047	0.0054	−0.0027
	Day 0	0.0070	−0.0115	−0.0040	0.0065	−0.0040	−0.0048
	+1	−0.0017	0.0004	0.0035	0.0068	−0.0028	0.0076
	+2	0.0006	0.0056	−0.0036	0.0169***	−0.0027	0.0016

[a] Asterisks indicate level of significance for t tests of abnormal returns' difference from zero: *−.10, **−.05, ***−.01.

TABLE 3

Abnormal Returns Around Announcement Dates for GATT: Asia[a]

Sectors of the Economy		Aug 15	Sep 21	Sep 30	Nov 22	Nov 29	Dec 2
Basic Industries							
	−2	0.0018	0.0031	−0.0061	0.0062	−0.0005	−0.0077
	−1	0.0038	0.0026	−0.0070	0.0014	−0.0058	0.0042
	Day 0	−0.0025	0.0222**	0.0103	0.0013	−0.0008	−0.0024
	+1	0.0032	0.0050	−0.0024	0.0088	−0.0077	−0.0175**
	+2	−0.0013	0.0066	0.0003	−0.0005	0.0042	−0.0003
Consumer Cyclical							
	−2	0.0007	0.0037	−0.0089	0.0053	−0.0075	−0.0012
	−1	0.0045	−0.0034	−0.0060	0.0002	−0.0046	0.0029
	Day 0	−0.0062	0.0205**	0.0086	−0.0021	−0.0031	0.0016
	+1	−0.0016	0.0018	−0.0043	0.0065	−0.0012	−0.0106
	+2	−0.0053	0.0031	0.0020	−0.0075	0.0029	0.0039
Industrial							
	−2	−0.0024	0.0026	−0.0081	0.0055	−0.0036	−0.0032
	−1	0.0062	−0.0003	−0.0058	0.0025	−0.0085	0.0038
	Day 0	−0.0042	0.0205**	0.0077	0.0005	−0.0008	−0.0017
	+1	0.0002	0.0021	−0.0027	0.0087	−0.0032	−0.0107
	+2	−0.0052	−0.0002	0.0036	−0.0036	0.0038	0.0011
Energy							
	−2	0.0036	0.0081	−0.0153	0.0021	0.0073	−0.0058
	−1	0.0057	0.0001	−0.0091	0.0041	−0.0056	−0.0001
	Day 0	−0.0016	0.0169*	0.0167*	−0.0063	0.0036	0.0052
	+1	−0.0041	−0.0020	−0.0071	0.0166*	−0.0058	−0.0143
	+2	−0.0051	0.0027	0.0094	0.0073	−0.0001	0.0035
Financial							
	−2	−0.0018	0.0048	−0.0090	0.0011	0.0016	0.0068
	−1	0.0038	−0.0007	−0.0005	−0.0012	−0.0016	0.0030
	Day 0	−0.0047	0.0189***	0.0063	0.0007	0.0006	0.0146**
	+1	0.0023	0.0046	−0.0034	0.0057	0.0068	−0.0087
	+2	−0.0052	−0.0009	0.0057	0.0016	0.0030	0.0022
Independent							
	−2	0.0064	0.0082	−0.0058	−0.0005	−0.0095	−0.0022
	−1	−0.0005	−0.0024	−0.0050	0.0029	0.0004	−0.0014
	Day 0	−0.0056	0.0128	0.0099	−0.0004	−0.0016	0.0025
	+1	−0.0004	−0.0004	−0.0059	−0.0037	−0.0220	−0.0152
	+2	−0.0040	−0.0043	0.0039	−0.0095	−0.0014	−0.0021
Consumer/Non-cyclical							
	−2	0.0006	0.0021	−0.0054	0.0069	−0.0015	−0.0018
	−1	0.0059	0.0029	−0.0083	0.0023	−0.0063	0.0129*
	Day 0	−0.0043	0.0159**	0.0041	0.0006	−0.0012	0.0025
	+1	−0.0006	0.0003	−0.0001	0.0087	−0.0018	−0.0098
	+2	−0.0049	−0.0032	0.0049	−0.0015	0.0129*	0.0053
Technology							
	−2	−0.0061	0.0021	0.0017	0.0078	−0.0043	0.0011
	−1	0.0032	0.0020	−0.0104	−0.0011	−0.0099	−0.0050
	Day 0	−0.0056	0.0234*	0.0111	−0.0037	0.0002	0.0050
	+1	−0.0011	0.0038	−0.0090	0.0108	0.0011	−0.0081
	+2	−0.0086	−0.0030	0.0013	−0.0043	−0.0050	0.0009
Utilities							
	−2	0.0055	0.0129	−0.0009	0.0032	−0.0055	0.0009
	−1	0.0125	−0.0001	−0.0078	0.0035	−0.0021	−0.0050
	Day 0	−0.0060	0.0099	−0.0005	0.0053	−0.0034	−0.0036
	+1	−0.0014	0.0028	0.0002	0.0101	0.0009	−0.0080
	+2	−0.0030	0.0025	0.0030	−0.0055	−0.0050	−0.0004

[a] Asterisks indicate level of significance for τ tests of abnormal returns' difference from zero: *−.10, **−.05, ***−.01.

TABLE 4

Abnormal Returns Around Announcement Dates for GATT: Europe[a]

Sectors of the Economy		Aug 15	Sep 21	Sep 30	Nov 22	Nov 29	Dec 2
Basic Industries							
	−2	−0.0044	0.0047	0.0047	−0.0062	−0.0037	−0.0083
	−1	0.0003	−0.0060	−0.0016	−0.0003	−0.0030	0.0013
	Day 0	−0.0067	−0.0046	−0.0040	0.0024	−0.0031	−0.0015
	+1	0.0027	−0.0005	−0.0061	−0.0019	−0.0083	−0.0048
	+2	−0.0067	−0.0012	−0.0056	−0.0037	0.0013	0.0050
Consumer Cyclical							
	−2	−0.0051	0.0001	0.0054	−0.0022	−0.0090	−0.0059
	−1	0.0005	−0.0060	0.0004	−0.0005	−0.0046	0.0048
	Day 0	−0.0053	−0.0079	−0.0109*	0.0050	−0.0040	−0.0043
	+1	−0.0017	−0.0023	0.0014	−0.0010	−0.0059	−0.0067
	+2	−0.0041	0.0010	−0.0043	−0.0090	0.0048	−0.0003
Industrial							
	−2	−0.0078	0.0013	0.0070	−0.0031	−0.0047	−0.0057
	−1	−0.0026	−0.0049	−0.0026	0.0021	−0.0019	0.0023
	Day 0	−0.0049	−0.0074	−0.0093	0.0062	−0.0028	−0.0008
	+1	−0.0017	−0.0015	−0.0004	−0.0004	−0.0057	−0.0073
	+2	−0.0025	0.0033	−0.0060	−0.0047	0.0023	−0.0009
Energy							
	−2	−0.0061	−0.0046	0.0029	−0.0021	−0.0008	0.0026
	−1	0.0016	−0.0050	−0.0035	−0.0021	−0.0016	0.0070
	Day 0	−0.0044	−0.0093	−0.0032	0.0069	−0.0048	−0.0042
	+1	0.0011	−0.0022	0.0039	−0.0040	0.0026	−0.0001
	+2	−0.0088	−0.0060	0.0001	−0.0008	0.0070	−0.0028
Financial							
	−2	−0.0078	0.0022	0.0080	−0.0022	0.0016	−0.0026
	−1	−0.0017	−0.0029	0.0010	0.0016	−0.0015	0.0050
	Day 0	−0.0086	−0.0077	−0.0059	0.0038	−0.0011	0.0024
	+1	−0.0025	0.0023	0.0005	0.0003	−0.0026	0.0001
	+2	−0.0020	0.0008	−0.0093	0.0015	0.0050	0.0057
Independent							
	−2	−0.0023	0.0051	0.0101	−0.0047	−0.0188**	0.0019
	−1	−0.0018	−0.0104	0.0033	0.0019	−0.0018	−0.0014
	Day 0	−0.0007	−0.0137*	−0.0157**	0.0042	0.0009	0.0031
	+1	0.0003	−0.0056	0.0008	−0.0002	0.0019	−0.0058
	+2	−0.0049	0.0040	−0.0074	−0.0188**	−0.0014	0.0044
Consumer/Non-cyclical							
	−2	−0.0005	−0.0049	0.0079	−0.0029	−0.0020	−0.0014
	−1	0.0043	0.0010	0.0003	0.0001	−0.0013	0.0037
	Day 0	0.0075	−0.0082	−0.0040	0.0046	−0.0008	−0.0035
	+1	0.0013	−0.0018	0.0001	0.0013	−0.0014	−0.0024
	+2	−0.0015	0.0042	−0.0097	−0.0020	0.0037	0.0041
Technology							
	−2	−0.0129	−0.0015	0.0091	−0.0060	0.0040	−0.0134
	−1	0.0021	−0.0058	0.0009	−0.0043	−0.0015	0.0039
	Day 0	−0.0134	−0.0078	−0.0321***	0.0040	−0.0031	0.0059
	+1	0.0005	0.0029	−0.0012	−0.0056	−0.0134	−0.0023
	+2	−0.0008	0.0040	−0.0042	0.0040	0.0039	0.0039
Utilities							
	−2	−0.0108	0.0003	0.0074	−0.0010	−0.0111	−0.0015
	−1	−0.0030	−0.0039	0.0106	0.0015	0.0006	0.0083
	Day 0	−0.0099	−0.0085	−0.0063	0.0044	−0.0014	0.0025
	+1	−0.0015	−0.0012	0.0007	−0.0062	−0.0015	−0.0027
	+2	0.0001	0.0039	−0.0121	−0.0111	0.0083	−0.0009

[a] Asterisks indicate level of significance for t tests of abnormal returns' difference from zero: *−.10, **−.05, ***−.01.

TABLE 5
Abnormal Returns Around Announcement Dates for GATT: U.S.[a]

Sectors of the Economy		Aug 15	Sep 21	Sep 30	Nov 22	Nov 29	Dec 2
Basic Industries							
	−2	0.0006	0.0039	0.0047	−0.0053	−0.0025	0.0019
	−1	−0.0101	0.0086	0.0094	−0.0053	0.0071	0.0080
	Day 0	−0.0015	−0.0154**	−0.0023	−0.0059	0.0022	−0.0074
	+1	−0.0041	−0.0064	−0.0026	−0.0212***	0.0019	0.0112
	+2	0.0007	0.0015	−0.0014	−0.0025	0.0080	−0.0011
Consumer Cyclical							
	−2	0.0023	−0.0057	0.0020	−0.0083	0.0030	0.0011
	−1	−0.0016	−0.0005	0.0056	0.0002	0.0066	−0.0064
	Day 0	0.0045	−0.0165***	−0.0064	−0.0041	0.0032	−0.0101
	+1	−0.0014	−0.0074	0.0051	−0.0080	0.0011	0.0112
	+2	0.0114	0.0011	−0.0101	0.0030	−0.0064	−0.0048
Industrial							
	−2	−0.0004	−0.0066	0.0004	−0.0052	−0.0012	0.0012
	−1	−0.0083	0.0003	0.0091	−0.0055	0.0061	0.0027
	Day 0	0.0079	−0.0153**	−0.0008	−0.0091	−0.0001	−0.0038
	+1	−0.0019	−0.0081	0.0011	−0.0153**	0.0012	0.0097
	+2	0.0050	−0.0007	−0.0012	−0.0012	0.0027	−0.0019
Energy							
	−2	0.0031	−0.0121	−0.0014	0.0010	−0.0038	0.0019
	−1	−0.0108	0.0008	0.0056	−0.0058	0.0027	−0.0073
	Day 0	0.0117	−0.0144*	−0.0016	0.0070	0.0029	−0.0061
	+1	−0.0058	−0.0039	0.0038	−0.0008	0.0019	0.0058
	+2	−0.0051	0.0044	0.0045	−0.0038	−0.0073	−0.0115
Financial							
	−2	0.0014	−0.0064	−0.0040	−0.0112	0.0241***	0.0036
	−1	−0.0043	−0.0056	0.0035	−0.0075	0.0055	−0.0080
	Day 0	0.0094	−0.0204***	−0.0043	−0.0135**	−0.0013	−0.0017
	+1	−0.0006	−0.0017	−0.0005	−0.0102	0.0036	0.0117
	+2	0.0056	−0.0014	−0.0032	0.0241***	−0.0080	0.0006
Independent							
	−2	−0.0132	−0.0005	−0.0080	−0.0067	−0.0076	−0.0129
	−1	−0.0109	−0.0114	0.0024	−0.0005	0.0037	−0.0128
	Day 0	0.0066	−0.0177*	−0.0004	−0.0165*	0.0188**	−0.0058
	+1	0.0104	0.0029	−0.0083	−0.0194**	−0.0129	0.0391***
	+2	0.0028	−0.0059	−0.0073	−0.0076	−0.0128	−0.0051
Consumer/Non-cyclical							
	−2	0.0140**	−0.0079	0.0063	0.0002	−0.0016	0.0000
	−1	−0.0022	0.0070	0.0051	0.0033	0.0032	−0.0039
	Day 0	0.0128**	−0.0114**	−0.0058	−0.0048	0.0068	−0.0053
	+1	0.0021	0.0000	0.0063	−0.0142**	0.0000	0.0103*
	+2	0.0124**	0.0052	0.0072	−0.0016	−0.0039	−0.0039
Technology							
	−2	0.0084	−0.0013	0.0023	0.0037	−0.0036	0.0071
	−1	−0.0004	0.0005	−0.0016	0.0014	0.0069	−0.0101
	Day 0	−0.0014	−0.0124	0.0012	−0.0061	0.0012	−0.0098
	+1	−0.0013	−0.0043	0.0020	−0.0230***	0.0071	0.0115
	+2	0.0110	−0.0019	−0.0047	−0.0036	−0.0101	0.0015
Utilities							
	−2	0.0021	−0.0095	0.0084	0.0016	0.0180**	−0.0037
	−1	−0.0057	0.0025	0.0091	−0.0049	0.0049	−0.0026
	Day 0	0.0061	−0.0124	−0.0040	0.0081	−0.0054	−0.0057
	+1	−0.0009	0.0006	0.0033	0.0060	−0.0037	0.0096
	+2	−0.0006	0.0054	−0.0033	0.0180**	−0.0026	0.0016

[a] Asterisks indicate level of significance for t tests of abnormal returns' difference from zero: *–.10, **–.05, ***–.01.