

# The uncertain course of finance

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*The financial world is experiencing great changes that will doubtless affect Mexican financial markets.*

**S**ecurities markets, of which the best-known form is the stock exchange, are one of the areas of economic science where academic developments have had the most practical results.<sup>1</sup>

Samuelson, Friedman, Markowitz, Miller, Sharpe and Tobin, Nobel Prize winners whose names are all well known in Mexico, are also famous as pioneers whose academic work has transformed the business world. Used in tandem with Wall Street's sophisticated instruments and technology, their models have made the financial world an exclusive, lucrative club for "the initiated."<sup>2</sup>

These developments have given rise to a paradigm based on the rational expectations theory, known in financial circles as the "strong version of the efficient market theory." According to this theory, the market

will be able to absorb all relevant information immediately, making it impossible to predict stock exchange behavior. In other words, the route taken by the market is simply, as they say in New York, a random walk down Wall Street.

However, this conception has recently produced a number of criticisms. By way of example, one can cite studies by L. Lowenstein,<sup>3</sup> M. Porter and E. Fama, among others, that have been published in the *Harvard Business Review*, the *Journal of Finance*, *The Economist* and the *Journal of Corporate Finance*.

These studies question the objectivity of modern financial theory, casting doubt on the bestsellers that proclaim absolute equality among investors,<sup>4</sup> thereby starting what could well be—following the expression of the American philosopher Thomas S. Kuhn—a scientific revolution that will modify the face of finances even further once it reaches Mexico.

## The basis of efficient markets

The Capital-Assets Pricing Model (CAPM), central to this debate since it quantifies the relationship of the basic binomial of risk return finance in Betas (volatility indices), allows one to predict the behavior of the typical rational, risk-averse investor, who aims to maximize profits. Determining the cost of capital, it provides guidance for corporate investment strategies.

The development of CAPM was followed by the theory of portfolio diversification, based on the idea that an investor who diversifies will be able to reduce his risks to the standard level of market or systemic risk.

The intuition behind this conception has served as the basis for the successful market in mutual funds, which are "baskets" of different companies' shares. During the first eight months of 1993, this market accounted for 165 million dollars, making it one of the most powerful and influential institutional investors in the world.

## A revolution begins

Disagreements and criticisms come from various sources. The advantages of investing in "small caps"—while contrary to prevailing theory—are well-known among stock-market operators. Surveys conducted by *The Economist* (October 9, 1993) and the *Harvard Business Review*<sup>5</sup> provide an excellent summary of these criticisms.

One could say that it all started in the '80s, when some experts found a partial explanation for American

<sup>1</sup> Peter L. Bernstein, *Capital Ideas: The Improbable Origins of Modern Wall Street*. New York, The Free Press, 1992.

<sup>2</sup> Abelardo Arroyo, "Simplificando el mercado," *El Financiero*, May 10, 1993.

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<sup>3</sup> See Louis Lowenstein, *Sense and Nonsense in Corporate Finance*. New York, Addison-Wesley Publishing Co. Inc., 1991.

<sup>4</sup> See, for example, Peter S. Lynch, *Beating the Street*. New York, Simon and Schuster, 1993.

<sup>5</sup> Nancy A. Nichols, "Efficient? Chaotic? What's the New Finance?" *Harvard Business Review*, March-April 1993.



# HIGHLIGHTS OF EIGHT YEARS

## March 1985

U.S. President Ronald Reagan and Canadian Prime Minister Brian Mulroney meet. They request their respective trade ministers to explore the possibilities for reducing and eliminating trade barriers.

## September 1985

President Reagan and Prime Minister Mulroney exchange letters of resolution to negotiate a Free Trade Agreement (FTA).

## October 1987

U.S. and Canadian negotiators sign a draft of the Agreement.

## December 1987

The heads of both delegations ratify the text of the Agreement. The final version is sent to the U.S. Congress and the Canadian Parliament.

## January 1989

The FTA between the U.S. and Canada goes into effect.

## March 1990

The *Wall Street Journal* publishes an article asserting that Mexico and the United States have agreed to initiate negotiations to develop a Free Trade Agreement.

## April 1990

The Mexican Senate establishes a forum for consultations on the FTA.

## June 1990

The U.S. Senate opens hearings on a "fast track" bill

that would allow President George Bush to negotiate directly with President Carlos Salinas. Both presidents issue a joint communiqué announcing their intention to negotiate an FTA, and instructing their respective trade representatives to explore the possibilities.

## August 1990

The Mexican Secretary of Commerce and the U.S. trade representative meet and issue a joint recommendation to President Bush, urging that the U.S. and the Mexican presidents initiate FTA negotiations.

## September 1990

President Salinas appoints an Advisory Committee for FTA negotiations and informs President Bush that Mexico intends to sign a Free Trade Agreement. President Bush sends a bill to Congress to open negotiations. Canada expresses its desire to join the largest trade bloc in the world.

## February 1991

President Salinas, President Bush and Prime Minister Mulroney agree to start trilateral negotiations for a North American FTA.

## May 1991

The U.S. House of Representatives votes in favor (231 to 192) of approving the "fast track" for negotiating the FTA with Mexico. The U.S.

Senate also approves the motion (59 to 36) to give President Bush the authority to negotiate.

## June 1991

Trilateral negotiations between Canada, Mexico and the U.S. open in Toronto, Canada. The issues discussed include access to markets, trade regulations, investment, technology transfer, services and settlement of disputes.

## August 1991

The ministers of commerce of the three countries meet in Seattle, Washington. They agree on a gradual reduction of tariffs, to be carried out in three stages, on all products to be imported and exported between the three countries. They resolve to make an in-depth analysis of the restrictions on government purchases in the three nations. The governors of the fifty U.S. states express their support for the negotiations.

## October 1991

The ministers of commerce of the three countries meet in Zacatecas, Mexico. They review the progress of the working groups assigned to each of the nineteen major sections of the agreement and call for a draft by January of 1992. They agree to approach labor and the environment as parallel issues, but not to include them in the text of the agreement.



# OF FREE TRADE NEGOTIATIONS

## February 1992

Presidents Bush and Salinas meet in San Antonio, Texas. Progress was reported by 8 of the 18 working groups. Differences persist in such key areas as energy, agriculture and the automotive industry.

## March 1992

Agreement on 14 subjects in the general text is sought at meetings hold in Mexico, Canada and the U.S. Joint declaration, by the three chiefs of state, after a telephone conference call, to the effect that negotiations are proceeding as planned.

## April 1992

Trade representatives meet in Montreal to discuss and eliminate differences in the key areas of energy, agriculture and livestock, automotive products and conflict resolution, as a step toward the final phase of negotiations.

## May 1992

Most working groups finish, leaving only energy, rules of origin, and agriculture and livestock pending. The automotive sector is reported to be almost concluded.

## August 1992

The end of negotiations is formally announced, after 200 meetings between negotiating teams and 7 ministerial sessions. Complete agreement is reached on the agenda's 22 points, and

final revision of most chapters already closed is completed. In a three-way telephone conversation, the U.S. and Mexican presidents and the Canadian prime minister express their approval. They issue a message to their respective nations announcing the result of the negotiations.

## October 1992

The trade representatives of the three countries "initial" the final legal text of the treaty in San Antonio, Texas. Presidents Bush and Salinas and Prime Minister Mulroney are present as witnesses. It is agreed that NAFTA will enter into force on January 1, 1994, but the date remains subject to two further requirements: its signature by the chiefs of state of the three countries and ratification by their respective congresses.

## December 1992

In their respective countries, presidents Bush and Salinas and Prime Minister Mulroney sign the final NAFTA agreement.

## January 1993

President Salinas and President-elect Clinton meet in Austin, Texas, where they agree that the NAFTA will not be renegotiated.

## March 1993

The formal negotiation of agreements running parallel to

the NAFTA begins in Washington.

## May 1993

Canada's House of Commons approves the text of NAFTA by a vote of 140 to 124. The treaty is turned over to the Senate for consideration.

## August 1993

Negotiators for Mexico, Canada and the United States announce the conclusion of NAFTA's parallel agreements on labor and environmental issues, begun in March of this year. Negotiations produce a two-in-one accord. Mexico and the United States decide to apply commercial sanctions in extreme cases of repeated non-compliance with environmental and ecological standards; Canada rejects this mechanism, while agreeing to open its courts to hearing Mexican or U.S. complaints.

## November 1993

The governments of Mexico and the United States agree on three adjustments to the text of the treaty, relating to tariff reduction, citrus products and sugar. U.S. Vice President Al Gore debates NAFTA on television with Texas billionaire Ross Perot. On the 17th, the U.S. House of Representatives ratifies NAFTA by a vote of 234 to 200, after more than 12 hours of debate in which 245 congressmen participate. The U.S. Senate also ratifies the treaty (61 to 38), on the 20th.



firms' loss of competitiveness vis à vis German and Japanese companies.

The gap was based on a distortion of U.S. firms' priorities and investment levels, due to the demands of the U.S. securities markets—in other words, a managerial approach aimed at maximizing shareholders' profits.

In this context, a company which had lower standards for investment returns and access to cheaper capital than its American competitor could undertake a broader range of investments (research and development, organizational development, etc.), thereby creating a broader competitive advantage in a corporate culture of higher indebtedness (Germany or Japan) and long-term relations with banking.

Thus American companies are faced with the choice of competing against companies that demand lower investment returns or responding to shareholders' demands.

The efficiency of the world's most highly-developed and important financial system has been questioned by several academic trends, of which three are particularly important.

The first comes, paradoxically, from one of the Founding Fathers, Eugene Fama, an unorthodox financial guru from the University of Chicago. After carrying out a number of analyses, Fama and K. French concluded that markets are probably not efficient in the ways the theory sets forth, which calls into question the risk-return linkage as predicted in the CAPM theory.

The second comes from a hard-line practitioner, Louis Lowenstein, president of a supermarket chain and professor at Columbia University. Lowenstein, who has a more pragmatic style, despite being branded a revisionist by some critics, argues in favor of firms with high investment and modernization requirements which, having a high Beta level, are faced with high capital costs and severe restrictions on their investment schemes—precisely because of the high demands of the market that give wrong signals and distort the distribution of investment resources, seriously damaging the firms' competitiveness.

The last trend, perhaps the first to provide an alternative paradigm, has its roots in physics and mathematics faculties: the chaos theory, which, transferred to the field of finances, has become the hypothesis of fractional markets.

Proponents of this idea<sup>6</sup> argue that although market behavior is unpredictable, it can at least be deciphered. Their analysis is based on the fact that, contrary to CAPM predictions, investors' behavior obeys a logic, because of its heterogeneity, that cannot be reduced to linear equations. For example, an individual's aversion to risk is

not the same in situations where he may win as in those where he may lose.

Some of the studies in this area are based on the idea of reproducing this non-linear behavior in computers.

### Empirical evidence


This debate—which, far from being over, is currently in progress at several American universities (USCD, Chicago, Harvard, Wisconsin, Colombia, etc.)—bears a relation to the daily changes and events on Wall Street. One example of this, for which there is no hard empirical evidence, is the well-known impact of technological changes and new financial instruments on the market.<sup>7</sup>

There is discussion of the effect that new arbitration techniques, automatic programs for buying and selling shares, globalization and portfolio insurance strategies have on market volatility. Indeed, the impact of institutional investors' automatic programs on the 1987 crash is well-accepted: these programs control vast amounts of shares, and their combined action can destabilize the market.

Another anomaly causing great controversy was the merger boom of the eighties. Although it arose from a combination of factors, such as pressures to compete for markets, a loose application of anti-monopoly laws and changes in industrial regulation, it is also true that it found fertile ground in the new company assessment techniques, according to which the replacement value of company assets is greater than a firm's stock market value. This undervaluation is a result of the market's own inability to appreciate the intrinsic value of assets, giving rise to a wave of raiders and junk bonds, which reached its peak with the Federal Court trial of Michael Milken, the junk-bond czar.

### Conclusions

It can be argued that all alternate theories, albeit with different bases and methodology, coincide in the fact that markets do have a certain predictability and memory, although the results of the discussion and its effects on markets' daily tasks have yet to be seen.

At the same time, this revolution comes to Mexico at a crucial point, since it stands in the way of the Mexican government's goal of allowing market laws to control the financial system's behavior, as well as the Mexican financial sector's explicit attempt to expand by finding new niches in the market. Achieving this requires the stability provided by a consensus among participants as to how the market operates 

<sup>6</sup> See N.A. Nichols, *ibid.*

<sup>7</sup> D. Davis and P. White, "Stock Market Volatility." Board of Governors of the Federal Reserve Document, August 1987.