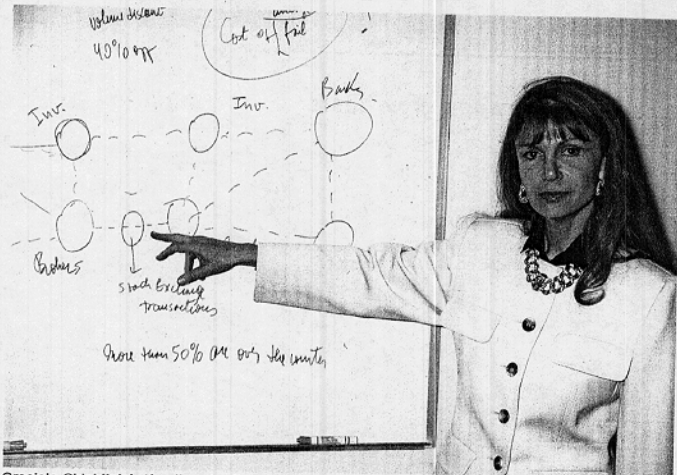


FINANCE

Settling Accounts

A computer system for making a truly global stock market exists. How will it be used?



Graciela Chichilnisky leading the field in financial services

Though she has doctoral degrees in both economics and mathematics from the University of California at Berkeley, Graciela Chichilnisky does not quite fit the stereotype of a "rocket scientist," as the phrase was popularized on Wall Street. Admittedly the Argentine entrepreneur is a theoretical mathematician, computer programmer and head of a fast-growing financial services company with offices in New York, London and Tokyo. But instead of just harnessing her intellectual abilities to the problem of squeezing an additional margin of profit from the stock market, Chichilnisky wants to change the way money is made on Wall Street — as well as in London or Tokyo — and then get on with the rest of her life.

Chichilnisky is chairman and chief executive officer of Fitel Ltd., a closely-held financial services company she established with several colleagues in 1985, backed by financial support from a wealthy European investor. On the strength of *Equinet*, a global securities trading support system which the company developed and now markets to financial institutions around the world, Fitel has grown exponentially. Earlier this year, Fitel announced that it had sold 12% of its common stock to Recruit Co., Ltd., a private \$1.4 billion Japanese company with interests in publishing, real estate and data communications. The move was designed to strengthen Fitel's presence in Tokyo and integrate its services with Recruit's communications network.

The alliance with Recruit appears to have many advantages for Fitel. Recruit has the financial and marketing clout to promote *Equinet* aggressively in Tokyo, and perhaps more important, according to Chichilnisky, has what she calls the "mindpower" to help Fitel leverage its expansion into global networking services. For Recruit, which has invested heavily to create the world's largest private supercomputing center outside the U.S. (See *Business Tokyo* January 1988), the tie-up with Fitel is its first major joint venture.

Japan's Dominance

Japan has always been central to Fitel's strategy, Chichilnisky notes, not only, because of the prominence of the Tokyo market and the clout of its financial institutions, but also because of what she foresees as Japan's eventual dominance of global capital markets. Historically, Japan's economic strength can be attributed to its highly-efficient use of information. The general trading companies, for example, in one sense are simply huge proprietary networks designed to scour the world for information on markets, and in another sense to channel the flow of products and funds to those markets.

In principle, therefore, a system like *Equinet* is well suited to the needs of Japan's large financial institutions. The network is designed to replace time-consuming and costly paperwork, the deluge of telexes, phone calls and facsimile messages which are typically required to complete posttrade settlement of cross-border securities transactions. This could be useful in Japan, where, because of the written language, paper overflows onto floors.

While brokers can execute a trade almost

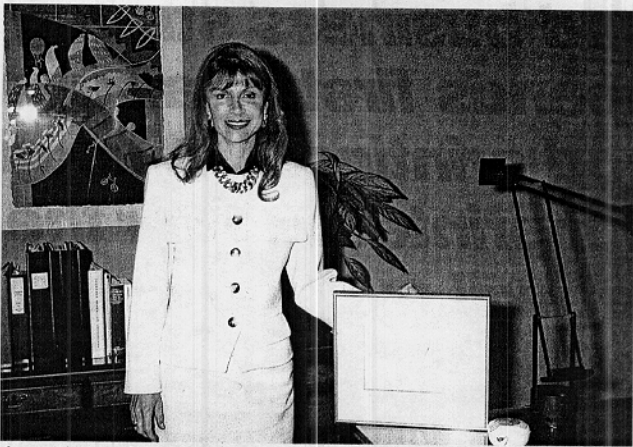
instantaneously, it can take days, if not weeks, for the people in the backroom to consummate the deal. The largely manual settlement procedures used in most brokerages and clearing banks are often slow and error-prone, and are the major reason why a high proportion of transactions end up classified as "failed trades."

There are many reasons for the high proportion of failures: among them a lack of a universal trade matching system, non-standard settlement periods in different markets ranging from one day in Hong Kong to two weeks in the U.K., and unwieldy delivery and payment systems. Fitel's Geoffrey Heal estimates that as many as 40% of all cross-border transactions end up as fails; a problem that generates enormous costs to market participants in penalty fees, interest and the cost of capital – in addition to the sheer overhead cost of processing the vast amounts of paper that are generated.

Earlier this year, David Kelly, president of the U.S.-based National Securities Clearing Co., spoke to the Group of Thirty symposium in London on the inherent risk posed by these settlement problems to participants in the global securities trading system. In a worst case scenario, Kelly suggests, "the risk to individual market participants ... are that due to error conditions endemic to the system ... the resources required to fund net receivables from failed security transactions could impair an institution's financial viability."

Billion-Dollar Losses

These risks are anathema to large institutional investors such as Japanese life insurance companies, who on any given day may trade billions of dollars to maintain their portfolios of Japanese and foreign securities. Without a highly reliable, real-time system to keep track of their huge inventories, and at the same time monitor the status of all transactions, from execution to delivery, such institutions are forced to tie-up millions of dollars in capital to protect against failed trades and, ultimately, against systemwide failure.



A proud memory, Chichilnisky with framed printouts of Equinet's first transaction

Last October, for example, institutional investors lost millions of dollars in Hong Kong on trades that could not be settled on time. Not because the market was closed, Chichilnisky points out; but rather because on the day before the market went into recess, the phone and telex lines were so clogged that messages could not get through.

More Efficient

This is precisely the problem which *Equinet*, and two other products which Fitel has developed for institutional investors, *Xnet*, an automated system for settling foreign exchange transactions, and *Equiloan*, a similar system for the borrowing and lending of securities, were designed to solve. Hoping to create a more efficient mechanism for channeling international capital flows, Fitel's original business plan aimed at setting up an international stock exchange; an idea the founders soon abandoned, given their experience in international organizations such as the United Nations and the World Bank. An international exchange, they reasoned, would not only be too expensive but would inevitably turn into a U.N. in miniature: a nightmare of regulations, protocol and politics.

The transformation of this idea into an online settlements system hinged on the recognition that they could use computers to create a "virtual" stock exchange – an edifice without bricks or mortar – that would, nonetheless, be able to solve one of the most critical problems in international finance: the market's chronic inability to prevent failures in every two of five cross-national transactions.

This focus is what distinguishes *Equinet* from other computer-assisted investment programs devised by academic theorists who have found jobs on Wall Street. Unlike program trading systems, for example, which are designed to exploit discrepancies between stock and index futures prices, and thus attempt to profit from inefficiencies in the market, *Equinet* is designed to reduce and eventually eliminate the gaps between the theory and reality of efficient markets.

Global Market

Ultimately, Chichilnisky believes, a truly global stock market is the most efficient mechanism to channel the flow of funds from capital surplus countries to capital poor economies. Global trading in securities effectively eliminates the issue of sovereignty in the sense that politically, the nationalities of the investors, and the companies they invest in, no longer matter. But to be credible to both investors and institutions,



Eileen Chang can install Equinet in hours

an international trading system has to provide adequate assurance that a transaction will eventually be settled as efficiently as it is executed. This level of certainty has not yet been achieved on any of the world's markets. That, of course, is where *Equinet* comes in.