

ECONOMIC COMMENTARY

Federal Reserve Bank of Cleveland

Standardizing World Securities Clearance Systems

by Ramon P. DeGennaro and
Christopher J. Pike

The international trading of corporate securities has flourished in the past decade. In just several years, the volume of this international trade has increased tenfold (see figure 1), accompanied by heavy investment in automated systems to handle the expanded sales and purchases of the securities. This automation, however, has had only a limited impact on the timeliness and accuracy of international settlement.

Trading volumes continue to swell, and each country has continued to operate under its own settlement procedures. No two securities markets settle trades in precisely the same way; each adheres to unique standards and time frames. Without common standards or compatible clearance systems, the result has been an increasing difficulty in operating securities clearance systems, which match trades and transfer securities and funds—the nuts and bolts of securities exchange.

Lack of coordination among securities exchange markets not only slows trade, but also is costly. Securities houses bear the risk of deals not being concluded on time—and the additional cost if they are not concluded at all. London exchanges, for example, spent \$25 million to \$33 million each in 1987 on the interest payments for borrowings against unsettled deals.¹

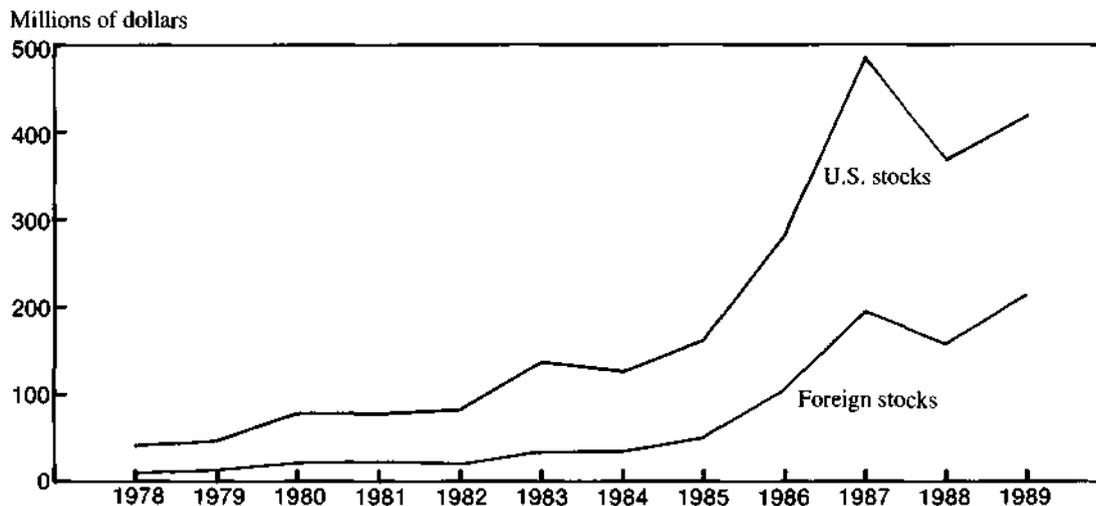
The stock market crash of October 1987 highlighted the inefficiency, economic costs, and risk inherent in the current international system. Fully 40 percent of all transactions failed to settle by contract date at the time of the crash, increasing the pressure to reform and standardize trading procedures.² All countries recognize the problem, but there has as yet been no coordination in the efforts to reform and standardize international securities trade.

Within the past year, one international organization, the Group of Thirty (G-30), has made specific recommendations for the clearance and settlement of international securities trades.³ A private-sector group, the G-30 comprises bankers, investors, traders, regulators, and bank officials concerned with the basic mechanisms underlying the international financial system.

The group's recently evolved Steering Committee, composed of members from eight countries, has been mandated to propose suggestions for improving world securities markets by 1992, coinciding with the plan for establishing a single internal market in Europe by that date. Unlike the European Economic Community's goal of free access to all types of markets within its 12 member states, the G-30's recommendations focus specifically on reducing the risk and cost of trading in

The dramatic increase in the volume of international securities trading has strained the present system of settling trades. The costs and risks of such trading can no longer be ignored. An international organization, the Group of Thirty, has recommended changes in the structure of financial markets to minimize these problems.

FIGURE 1 INTERNATIONAL STOCK TRANSACTIONS
Sales and purchases by U.S. investors



SOURCE: *Treasury Bulletin*, December 1989; and *NYSE Fact Book*, New York Stock Exchange, 1989.

financial markets worldwide. The group offers a challenging framework for improving the current situation in world securities markets.

■ The G-30 Report

In its March 1989 report, "Clearance and Settlement Systems in the World's Securities Markets," the G-30 set forth a nine-step strategy for reducing the risk and increasing the efficiency of international securities clearance and settlement (see box 1). A secondary, but necessary, intermediate goal is to foster standardization among the groups involved in securities transactions. Of the nine specific recommendations in the G-30 report, the United States is already in compliance with seven.

A U.S. Steering Committee has recently reviewed the areas in which the United States is not in compliance: moving to a t+3 (trade date plus three business days) settlement period for corporate securities, and adopting a same-day funds payment schedule for settlement of those trades.⁴ Same-day funds earn interest from the day received. Currently, some investors pay for corporate securities with next-day funds, which do not earn interest and cannot be used for settlement until the following day.

The Steering Committee's proposal, issued in March 1990, urges that the United States shift to the same-day funds transfer process, instead of its current next-day funds payment standard.⁵

■ The Current Settlement Process

Presently, stock trades in the United States do not result in immediate delivery of the security in exchange for payment. Current procedures call for delivery on t+5, five business days later. During those five business days, both the buyer and seller (or their intermediaries) are at risk: either party could conceivably fail to honor its commitment. The longer the time before securities are exchanged for cash, the greater the likelihood that the value of the securities will change, increasing the incentives for one party to default. Many market participants have concluded that the increasing volume and volatility of financial markets makes the risk too great to ignore.

The most direct way to address this problem is to reduce the time between the trade date and the exchange of securities for cash. However, several important steps must occur during that time. First, the brokers must confirm the transaction by notifying their cus-

tomers of the terms of the trade. The customers, in turn, must affirm, or agree to those terms as communicated by the broker. Next, the trade is cleared, which creates statements of obligation. One party must deliver securities, while the other must deliver funds. Finally, the trade is settled, at which time both parties discharge the obligations created at clearance.

These steps must occur in proper sequence, and none of them is automatic or immune to error. Shortening the time between the trade date and settlement of that trade leaves less room for inefficiency and mistakes. This emphasizes the need for dealers and brokers to submit all trades for confirmation by day t+1, and for customers to have access to an interactive affirmation system.

The problems of international securities transactions are still more complex, because markets do not yet have standardized procedures. For example, although the United States does not yet settle by t+3, it does at least use rolling settlement. Trades are settled five business days from the trade date, regardless of the time of the trade. In contrast, France uses a monthlong account period. All trades during the account period settle on the same day. The

BOX 1

The nine recommendations of the Group of Thirty, designed to reduce the risk and lower the cost of trading securities internationally.

1. Comparisons should be established between direct market participants (brokers, exchange members) by day t+1.
2. Indirect market participants should be members of a positive-affirmation comparison system by 1992.
3. Each country should have a central securities depository (CSD, used to immobilize securities) by 1992.
4. Each country should implement a netting system by 1992, unless volume is low enough to permit otherwise.
5. A delivery versus payment system should be in place by 1992.
6. Payment in same-day funds should be adopted.
7. Rolling settlement should be adopted. No later than 1990, final settlement by t+5 should be the rule. The ultimate goal is t+3 by 1992.
8. Securities lending as a means of expediting settlement should be encouraged.
9. The numbering of securities and message codes should be standardized.

differing systems mean that trades between French and U.S. investors encounter yet another layer of cost, risk, and potential error. This lack of standardization adds to the problems financial markets face in limiting risk and lowering costs.

The United States must also institute changes to conform to a second recommendation by the G-30, the proposal to settle all trades in same-day funds. From the perspective of the financial markets, same-day funds are safer. The additional risk of paying with next-day funds can be large enough to disrupt trading: many banks refused to deliver securities to Drexel Burnham Lambert's broker-dealer subsidiary after the parent corporation entered Chapter 11 unless they were paid with same-day funds.⁶

■ The Transition Phase and Potential Pitfalls

Markets throughout the world are not likely to incorporate the G-30's recommendations smoothly, including the implementation of settlement by day t+3 or the use of same-day funds. Some markets must incur substantial up-front costs and may not view the benefits as sufficiently large. An important advantage of the G-30's recommendations is that none of the nine is new; all are in place in various markets throughout the world. For example, in the U.S. Treasury bill market, trades are settled either on the trade date or on the next business day, well before t+3, and settle in same-day funds. The problems facing other financial markets concern implementation and coordination, not invention.

Although the required procedures are already in place in some markets, the problems of implementation and coordination can be real and large. For example, the apparent 40 percent reduction in the settlement period from five days to three is in fact even more extreme. With five business days between the trade date and the settlement date, brokers and other market participants could rely on an intervening weekend to catch up with paperwork. This will not always be possible with settlement

due at t+3, making affirmation and confirmation by t+1 even more important.

The G-30 also recognizes that consistently making delivery of physical securities by t+3 is impossible. Book-entry systems, in which computer entries entirely replace paper certificates of ownership, are the best method for recording and transferring ownership. A good alternative is a central securities depository (CSD), such as the Depository Trust Company. CSDs are financial intermediaries that hold all paper certificates immobile in a central location, recording and transferring ownership by means of computer entries. Book-entry systems or CSDs offer cost savings as well as faster transfers. One problem with such systems is that some local laws, both in the U.S. and abroad, require the use of physical securities. Unless the appropriate authorities change these laws, they will impede the movement toward book-entry systems and could block their constituents' access to financial markets.

In addition, the G-30 has refrained from addressing political problems—at the corporate, national, and international levels—that are likely to arise. For example, using next-day funds permits clearing banks to earn float; they retain use of the funds for one more business day. In 1985, the American Bankers Association estimated that same-day settlement could cost the banking industry \$3 billion in lost float. The industry cannot forgo that much income annually, and its members will be forced to change their clearing fees to compensate. Brokerage firms may need fewer employees and have lower profit margins under the automated systems needed to meet the G-30's recommendations. Even if total employment in the brokerage industry remains constant, the nature of jobs will change. The implementation process will eliminate certain jobs, while increasing the need for others. Employees whose jobs are in jeopardy may resist and successfully delay the necessary changes.

Some countries have many of the recommended procedures already in

place, while others must invest large sums both in capital improvements and in training personnel. France has essentially completed the process of dematerializing physical securities in favor of a book-entry system, while England has not yet even immobilized securities in a CSD.

Will some countries resist implementing portions of the recommendations? If so, what will this mean for standardizing trading terms and for transactions across national boundaries? Markets that fail to conform to common standards will suffer cost and risk disadvantages relative to other markets, and investors will choose to use the markets that do adopt the G-30 recommendations.

Finally, the G-30 has identified many of the risks inherent in the proposed system, and notes that they can be surmounted using methods already in place in other markets. For example, markets can develop central clearinghouses to guarantee that transactions settle according to the terms of the trade. To protect itself from the possibility of its members failing to perform, the clearinghouse can incorporate a risk-sharing arrangement similar to those that futures exchanges already use.

**Federal Reserve Bank of Cleveland
Research Department
P.O. Box 6387
Cleveland, OH 44101**

Address Correction Requested:
Please send corrected mailing label to the above address.

Material may be reprinted provided that the source is credited. Please send copies of reprinted materials to the editor.

What the G-30 cannot do is uncover all possible risks other entities may bear because of the proposed system. For example, under present trading systems, the buyer and seller offer a faceless commitment to perform, since they do not know each other at the time of the trade. Shortening the period between the trade date and the execution of the trade tends to limit the risk of this arrangement, but ensuring delivery by the target date of t+3 will require more borrowing (and lending) of securities, which is not riskless. In this case, the G-30's recommendations may not reduce total risk, but they do make the credit commitment more explicit. They reduce the risk of the faceless commitment between the buyer and seller, while increasing the risk between the borrower and lender.

■ Conclusion

Large increases in trading volume have strained the current system of settling international securities trades and have driven up the costs and risks of such transactions. In addition, advances in computers and communications technology have made international trading a common occurrence, introducing new sources of cost and risk to financial markets. The Group of Thirty's recommendations are an attempt both to coordinate and to accelerate the evolution of worldwide financial markets in response to the changing nature of international trading.

■ Footnotes

1. See "Back Office to the Fore," *The Economist*, March 25, 1989, pp. 84, 90.
2. See "Faster, Better and More Profitable," *The Banker*, August 1989, pp. 22, 24.
3. See "Clearance and Settlement Systems in the World's Securities Markets," Group of Thirty, London, March 1989.
4. See "Compressing the Settlement Period," Group of Thirty, U.S. Working Group Draft Report, November 8, 1989.
5. See Karen Gullo, "Faster Securities Settlement Urged," *American Banker*, March 5, 1990, p. 3.
6. Ibid.

Ramon P. DeGennaro is a visiting scholar and Christopher J. Pike is a research assistant at the Federal Reserve Bank of Cleveland.

The views stated herein are those of the authors and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.

**BULK RATE
U.S. Postage Paid
Cleveland, OH
Permit No. 385**