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DEVELOPMENTS IN INTERNATIONAL BANKING AND FINANCE

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Finance 499H
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Introduction

The intent of the following research work is to take a deeper look into developments in international banking and finance. First, a detailed summary of the International Banking Act of 1978 is discussed. This gives a foundation from which the topics to follow it will build upon. The research of the International Banking Act briefly details the regulations, as well as the surrounding influences on the financial world that are the result of the Act.

Next is a discussion on the great wave of foreign companies that have sought to expand in the United States and economic and financial reasoning behind this expansion. Included in this area of research is the expansion of U.S. companies abroad. For U.S. companies, foreign markets are dynamic, complicated, and offer great opportunities, even for purely domestic corporations; therefore, grasping these opportunities is a major challenge.

Finally, the growth of the International Monetary Market of the Chicago Mercantile Exchange is observed. An introduction to the Market including its historical beginnings and functionings is researched. Other topics of relevance related to the IMM, including understanding futures in foreign exchange and Eurodollar futures are discussed.

As a whole, a very wide, general perspective on international banking and finance is researched and discussed. New developments, as well as old policies have been uncovered. The following chapters view these developments as they affect the international financial environment and how this environment affects businessmen and consumers alike.

I. Summary of the International Banking Act of 1978

The International Banking Act of 1978 (IBA) regulates foreign banking activities in the U.S. By April 1978 there were 122 foreign banks operating banking offices in the U.S. with combined assets of approximately 90 billion.¹ They held more than \$26 billion in commercial and industrial loans. This equals 20% of business loans of three hundred large weekly reporting banks.²

Under four major forms of organization may foreign banks operate: agencies, branches, investment companies, and commercial bank subsidiaries.

Agencies are primarily involved in financing trade and investment between their home country and the U.S.. Balances placed with them by parent or sister institutions and borrowings in the interbank and Federal Funds markets are the major source funds for agencies. They can maintain credit balances, which represent, undisbursed amounts of loans made to their customers and receipts from international trade transactions, but cannot accept conventional deposits.³

The branch allows foreign banks a broad scope of banking activities, including services approaching full service commercial banking. Branches are allowed to solicit time and demand deposits. Traditionally, branches have focused lending operations on U.S. subsidiaries of home based corporate customers, however they have become more involved in the U.S. corporate banking market.⁴

Investment companies engage in loan and investment activities and have many of the same banking powers as agencies. They are not allowed to accept deposits, but maintain credit balances. They are the only organizational form allowed to deal in securities.

Foreign banks may also establish commercial bank subsidiaries in the U.S. These subsidiaries are the same as banks owned by U.S. residents and

are subject to like regulation.⁵ Foreign banking corporations can provide a full range of banking services in the U.S., through this form. Before 1978 legislation, subsidiaries were the only organizational form of foreign bank that fell under Federal regulatory authority.

It should also be noted that foreign banks are allowed to operate a variety of organizational forms, simultaneously.

There were sixty-three foreign banks operating facilities in more than one state with thirty-one of these operating in three or more states, as of April 1978.⁶ Federal law did not prohibit multistate branching by foreign banks. Enforcement of McFadden Act restrictions on multistate branching was not possible, since foreign banks were not eligible for Federal reserve membership. Because branches and agencies of foreign banks were not defined as bank subsidiaries, under the Bank Holding Company Act, they were not subject to multistate banking prohibitions of that legislation. Finally, certain states enacted specific legislation permitting foreign bank entry regardless of whether the bank had facilities in other states. Therefore, foreign banks have expanded their multistate operations in international banking and finance, domestic commercial and industrial loans, money market operations, and retail banking.⁷

The effect of competition between foreign and domestic banks due to the ability of the former to conduct multistate operations was the most controversial topic covered in the International Banking Act.

The International Banking Act of 1978 attempts to settle the interstate banking issue by establishing regulations that promote competitive equality between domestic and foreign banks while preserving states ability to attract foreign capital and develop international banking centers.⁸ The IBA allows foreign banks to establish branches or agencies in any state where permitted by state law as previously. However, the

foreign institution is required to designate a particular state as its home state and its deposits from outside that state are limited to those foreign-source and international banking and finance related deposits permitted for Edge Act Corporations. Foreign banks are also prohibited from acquiring subsidiary banks outside the home state they have designated. The IBA exempts from these limitations all foreign bank operations existing on or before July 27, 1978, as per the grandfather clause.⁹

Until the enactment of the IBA all foreign bank branches and agencies operating in the U.S. did so under state regulation. Passage of the act has given these institutions the option of obtaining either a state or Federal license. As a part of this provision, foreign banks electing Federal branch or agency licenses gain access to Federal Reserve System services, such as check clearing and collection and wire transfers.¹⁰ To promote Federal chartering of subsidiaries, the IBA permits a small number of the directors of a National bank to be non U.S. citizens, subject to the Comptroller of the Currency's approval.

To ensure that Federal branches and agencies of foreign banks do not have a competitive advantage over their state counterparts, several provisions were added in the IBA including: 1) Federally licensed agencies of foreign banks, like state licensed agencies, cannot accept deposits, but are allowed to maintain credit balances arising from lending activities; 2) a foreign bank cannot maintain both Federally licensed branches and agencies in the same state, because states permit only one form of organization; and 3) Federal branches and

agencies within states are made subject to the branching restrictions of the McFadden Act.¹¹

Passage of the International Banking Act shifted regulatory responsibility from the state to the Federal level. The Federal Reserve Board, in consultation with the states, has the power to set reserve requirements for all Federally and state licensed foreign bank branches and agencies whose parent organizations have more than one billion in total international assets, and almost all meet this criterion.¹²

The IBA provides authority for the Comptroller of the Currency, the FDIC, the Federal Reserve Board, and the states, in examining the foreign banking organizations within their respective regulatory limits. In addition, the Federal Reserve Board is provided with residual examining authority over all the banking operations of foreign banks. This authority permits the Federal Reserve to make independent examinations of any or all foreign banking operations in the U.S.

The 1978 legislation applies the nonbanking and anti-tying provisions of the Bank Holding Company Act to all foreign financial institutions. Existing nonbanking activities are grandfathered from July 26, 1978. However, the IBA gives the Federal Reserve the authority to terminate the grandfathered status of any company after December 31, 1985.¹³

The IBA make FDIC insurance optional for all foreign banks that do not accept retail deposits. FDIC insurance is mandatory for branching operations that do accept retail deposits.

The IBA revises several provisions of the Edge Act. First, it removes the restriction limiting outstanding liabilities to ten times the capital and excess of these institutions. The second major revision abolishes the mandatory 10% reserve requirement that is imposed on the liabilities of Edge corporations and replaces it with the same reserve requirements that apply to member banks. Still another revision allows majority control of Edge corporations by foreign-owned banking institutions. Finally, another provision requires that the Federal Reserve Board revise any other regulatory restrictions that discriminate against foreign-owned banking institutions.¹⁴

The IBA of 1978 is the first legislation that brings foreign-owned banking operations in the U.S. under federal regulations comparable to those faced by domestic financial institutions. Its major objectives are to promote competition between foreign and domestic banks, to improve Federal regulatory control over monetary policy, and to provide a Federal presence in the regulation and supervision of foreign bank activities in the U.S.. In addition, the legislation directs the Federal Reserve to revise regulations that encumber Edge Act corporations in competing with foreign-owned banking institutions.

Finally, the United States nonbanking activities of foreign banks operating in the U.S. are placed under the same restrictions as their domestic counterparts, and FDIC insurance is made available to those foreign branches desiring coverage.

The International Banking Act has been praised as landmark legislation because it established the principle that each country should treat foreign banks as they would their own. The IBA took away some advantages enjoyed in the U.S. by foreign banks. No longer will foreign banks be able to open branches in more than one state, when U.S. banks are limited to the one state rule.

Most importantly, the IBA has opened the way for a full examination of the American banking system, that no longer appears in tune with the high technology of multinational commerce. Some U.S. banks have fallen by the wayside in competition with foreign rivals because they have been severely limited in domestic expansion. Sears, Roebuck can preside over a national financial dynasty and the largest stock brokers are in a similar happy position, but the largest banks are forced to concentrate their retail efforts on just one state, plus foreign markets.¹⁵

A strong national banking system helps to strengthen the U.S. export effort and provide better services to American communities and individuals that have been served by monopolistic institutions in the past. Recently the Federal Reserve Board has given interstate bank branching in the U.S. by domestic banks the go ahead for dealings that primarily concern international affairs.

Edge Act companies can now provide full service banking for their customers and open branches. An Edge corporation (named for a New Jersey Congressman whose legislative amendment created it about sixty years ago) is a subsidiary company of a bank holding company that specializes in international wholesale dealings. The Edge

branching will enable regional banks to expand across the nation at a relatively low cost and in time it may lead to full-scale national banking in the U.S.

Of concern to many central bankers is the question of keeping watch on the growth rate of the Eurodollar markets. These markets could easily spark full global inflation through excessive liquidity and undermine the domestic money supply control efforts of the central banks in the major industrial countries.¹⁶ Imposing reserve requirements on the Euro-markets is difficult and there is danger that too much regulation may overly constrain these markets, intimidating international financial flows and doing more harm than good.

If governments and central banks now intervene more actively to control international credit markets, another source of political conflict among governments will thereby arise along with the negative effects of such intervention on the economic efficiency of these markets.¹⁷

FOOTNOTES

- 1 Segala, John P., "A Summary of the International Banking Act of 1978," The Economic Review, Federal Reserve Bank of Richmond, (January/February 1979), pp 16.
 - 2 Ibid, pp 16.
 - 3 Ibid, pp 17.
 - 4 Ibid, pp 18.
 - 5 Ibid, pp 19.
 - 6 Ibid, pp 19.
 - 7 Ibid, pp 19.
 - 8 Ibid, pp 18.
 - 9 Ibid, pp 18.
 - 10 Ibid, pp 19.
 - 11 Ibid, pp 19.
 - 12 Ibid, pp 20.
 - 13 Ibid, pp 20.
 - 14 Ibid, pp 21.
 - 15 Vogl, Frank, "A Special Report: International Banking," 1979; pp 10.
 - 16 Ibid, pp 10.
 - 17 Ibid, pp 10.
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II. Foreigners Invade the U.S.

In 1979, when recent take-overs are counted then the total U.S. assets of foreign banks here amounts to more than \$140 billion, which is about 10% of all assets booked at U.S. banking institutions.¹ In commercial lending, the foreign portion of the market is more than 13% nationwide, approximately doubling in the past seven years.²

Why have foreign banks been expanding so much in the U.S.?

There are many solutions including:

- America is the largest single national market and foreign banks are keen to get part of the action here.
- U.S. laws, gave foreign banks here some distinct advantages, enabling them to avoid reserve requirements and open branches in numerous states.
- Expansion in the U.S. has been a logical step in the rapid growth of many banks in their home countries and overseas markets in recent years.
- Foreign banks felt it essential to compete here as U.S. banks have become more active abroad.
- Foreign corporations have seen tremendous investment opportunities in the U.S. and foreign banks have in many cases followed their biggest domestic corporate clients to American shores.³

The foreign expansion in the U.S. is no more than a part of the foreign investment boom taking place here. The combined sales of the one hundred largest foreign investments in the U.S., according to Forbes tables, amounted to \$113 billion in 1978.⁴

In the 1960s the biggest U.S. banks seemed to dominate the international banking stage, but much has changed since then and the great growth of some foreign banks made it inevitable that they would seek to enjoy this great domestic market. In 1968 six of the ten biggest money center banks in the Free World were based in the U.S..⁵ By 1977 the number of U.S. banks in the top ten was down to

three.⁶ At the end of 1977, Japan had more banks in the top fifty than did the U.S..⁷

Serving international corporations is necessary for international banks and according to foreign bankers, about 50% of the globe's one thousand largest firms have their head offices here so the foreign banks are scrambling to get into the U.S.⁸

Recently, banks such as Barclays, National Westminster, Standard Chartered, and Lloyds, have bought large existing chains of branches in the U.S. These acquisitions have reflected a basic long-term optimism in America and its economic potential. The Federal Reserve Board and the Comptroller of the Currency have welcomed the foreign expansion in the U.S. The foreign banks building in the U.S. are top class institutions, some of which are directly owned by foreign governments.

The foreign banks have tended to concentrate in Illinois, California, and New York. Some states have actively prevented foreign banks from opening offices. The barriers to foreign expansion are disintegrating now and the banks from abroad are moving throughout the country. The foreign banks are generating competitive benefits, strengthening foreign investment and trade growth while offering U.S. corporations opportunities in international markets.

During 1980, two years after passage of the International Banking Act which was designed to set U.S. and foreign banks competitively equal, the Federal Reserve removed some major competitive advantages foreign banks enjoyed. It started phasing in reserve requirements on deposits in U.S. branches of foreign banks and enforced

legislation on foreign bank lending with the introduction of its March credit controls.⁹

The Federal Reserve's new initiatives may end the days when major corporations could rely on foreign banks to put constant downward pressure on lending rates and credit prices. The reserve requirements have increased the costs of dollar borrowings to foreign banks and will squeeze profit margins in their U.S. operations, while the Fed may restrain the major foreign banks during periods of credit restraint.¹⁰

This pressure, as well as, tough competition from major U.S. money center banks, are forcing many foreign banks to reassess their business strategy for the 1980s.

For almost a decade, foreign banks have scrambled into the U.S. winning business with cheap loans, much as U.S. banks established themselves in overseas markets during the turbulent 1960s. A survey of major corporations by Greenwich Research Associates, a survey firm, showed that as of mid-1979 the three most important reasons for doing business with foreign banks related to price: lower rates, more flexible pricing, and indifference to compensating balances.¹¹

That corporate business, combined with U.S. loans to foreign companies, trade financing and money market operations has attracted more than three hundred foreign banks to open offices in the U.S.. Assets are well over \$140 billion with commercial and industrial loans exceeding \$35 billion.¹²

Most foreign banks have a desire to do business with the U.S.' largest companies and have been willing to suffer losses to build business. Banks such as National Westminster, a large British insti-

tution, and Credit Lyonnais, France's third largest bank, offered U.S. firms "free" credit lines, borrowing facilities without the already low .25 to .5 percent commitment fee normally charged by foreign banks.¹³

The cost of these lines makes them attractive as an alternative to commercial paper and as insurance policies against tight money markets in the U.S.. Many corporations opened credit lines with foreign banks, but have never used them. They entered into these credit agreements because they needed additional dollar borrowings and Eurodollar markets were substantially cheaper.¹⁴ The lines provided an inexpensive insurance policy in an amount larger than ever expected to be used and at a substantially lower price than that from U.S. banks.

U.S. banks have learned to fight back. Other bankers confirm that during much of 1980 low-priced credits were as likely to go to American banks as foreign banks, whether in the U.S. or Eurodollar market.¹⁵ The new U.S. competitive environment is forcing foreign banks to compete for business.

Canadian banking institutions are leading into the middle market (companies beneath Fortune 1000). Smaller corporations report battles of rate-cutting, but except for a few Canadian banks, no foreign institution has yet confirmed a national bid for that business.¹⁶

Other foreign banks are watching the Canadian attack on the middle market with interest. "For years," says one British banker, "people in the U.S. have been telling us we are going after the wrong end of the market. They say spreads at the large companies are too thin."¹⁷

One answer to that problem is to buy an American bank and compete for middle market business while simultaneously obtaining a new source of dollars and increased exposure in the U.S..¹⁸ Since 1978, when the dollar collapsed in foreign exchange markets, great investments have been made by foreign banks in the U.S.. Most of the acquiring banks continue to operate parallel lending operations of the parents bank, leaving the U.S. bank essentially autonomous.

Foreign banks that are not ready to buy into the U.S. and wish to continue with the Fortune 1000 corporations are undecided between those with blanket calling programs and an emphasis on loan volume and those with more selective strategies. Credit Lyonnais (French), Bank fuer Gemeinwirtschaft (German), and Swiss Bank Corporation, all involved with seeking fortune 1000 corporations have not missed the middle market either.¹⁹

Whatever their strategy, foreign banks may find that the Federal Reserve will be more of an ally than an enemy.

Detroit Edison Company had begun to arrange an \$800 million project financing for its Belle River Power Plant, the largest bank project financing it had ever tried, a few weeks before the Federal Reserve announcement.²⁰ The utility planned to raise 80% of the money from U.S. banks and 20% from foreign banks. Citibank was to be the agent and Barclays Bank International would take a \$75 million share of the credit.²¹ But the company's treasurer reports that negotiations came to a halt shortly after the Fed announcement. Several U.S. banks had to pull out of the credit because their commercial loans were increasing faster than the six to nine percent rate that the Fed had

established as a guideline for the year.

The treasurer discovered the foreign banks were eager participants and took double the amount that he expected. The treasurer established new ties with eight foreign banks and may wish to expand these ties in the future.

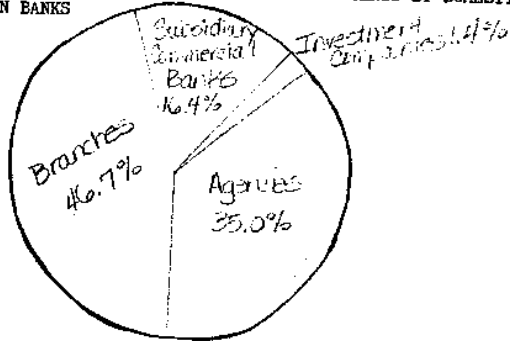
Foreign banks can be expected to increase their lending to internationals and to other U.S. corporations with large appetites for bank credit. Multinationals operating in the U.S., whether American or foreign, are a great source of business for the foreign banks.

Less hungry U.S. companies may find foreign banks easier to deal with because they are more Americanized. Treasurers note that often American calling officers represent foreign banks, and foreign bankers confirm that well over half of their officers are U.S. citizens or U.S. educated.²² Therefore, these officers have a better knowledge of American business, history, and the economy.

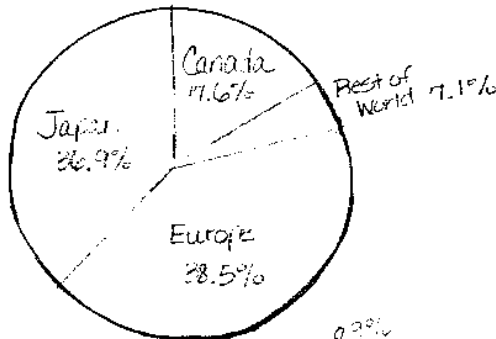
Foreign banks realize that to succeed in the U.S. they must be loyal to U.S. companies in bad times. If the Federal Reserve's new controls and competition from American banks make life more difficult, the foreign banks will have to run ahead of the U.S. banking institutions.

COMMERCIAL AND INDUSTRIAL LOANS TO U.S. RESIDENTS BY DOMESTIC
OPERATIONS OF FOREIGN BANKS
(MAY 1980)

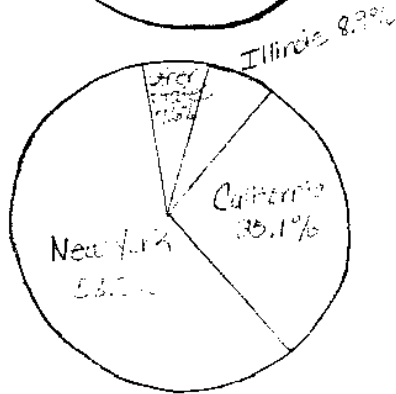
TYPE OF LENDING SOURCE



FOREIGN COUNTRY OF ORIGIN



LOCATION OF LENDING SOURCES



Source

Banks with international activities have found those activities to be highly profitable.

For the largest five internationally oriented banks in the U.S., overseas profits in the first six months of 1979 totaled \$492.6 million, which indicates a full year rate of gain of 19%.²³

The main factor accounting for this superior rate of earnings was an estimated 30% annual increase in international net interest revenue. This reflected a 15.6% average gain in overseas loans along with a widening in margins.²⁴

There has been improvement in international net interest margins which has essentially reflected the general increase in interest rates in both the Eurodollar market as well as most major domestic money markets; the shift in the composition of overseas loan portfolios in favor of higher-yielding local currency credits; and reasonably good growth in demand-deposit balances.²⁵

In general, the U.S. international banks have been increasing emphasis on local currency credits. Eurocurrency lending continues to expand.

Geographically, the most rapid rate of loan growth has occurred in South America and in the southern portion of Brazil and Argentina. Loans in this part of the globe have expanded 30%.²⁶ In Western European markets, the demand for credit has been growing by 10-12%. The Middle East is still one of the most rapidly growing areas of the world. Due to sovereign risk considerations in this area, the rate of loan growth has moderated.²⁷

World trade and investment are now multi-trillion dollar annual activities. In the first five months of 1979, U.S. exports alone were

at an annual average rate of \$165.2 billion while imports were at a rate of \$188.8 billion.²⁸

Partially their growth has been due to the imposition at times of exchange controls by individual nations, by great payments imbalances, by severe economic strains undermining the fixed currency rate system, and many other factors.

Today debt is daily issued in a wide variety of currencies, in a broad variety of maturity dates, and in a wide variety of yield arrangements. During 1978, new activity in the medium term Euro-currency bank credit and multinational bond markets reached a record of \$104 billion, which is a gain on 1977 of nearly 40%.²⁹

The center of the international debt market formerly was London, but new rival centers have matured, such as Hong Kong, Singapore, the Bahamas, and the Middle East. Europe presently accounts for approximately 70%, with London's share of the whole down to about 35% say informed bankers.³⁰

The Euromarkets have matured at a great pace. Morgan Guaranty figures suggest that the net size of the Eurocurrency market grew from \$14 billion to \$50 billion between 1964 and 1969 and a decade later, it is ten times as great.³¹

Typical deals between brokers and bankers run from one million dollars upwards and the daily turnover for a European broker can be between one-half and one billion dollars. However there never has been such a thing as a typical or average day.

The size of the markets keeps increasing and there are dangers that the increases maybe too swift, loosing new inflationary pressures.

An illustration of growth is the great expansion seen in 1978 in

fund outflows from the U.S., a product of a weak dollar, elimination of foreign reserve requirements, slow domestic U.S. credit demand, a large U.S. payments deficit, and aggressive U.S. banking action.

The foreign markets are dynamic and complicated. They offer great opportunities even for domestic corporations and grasping these opportunities is a major challenge. For the individual, or even the corporate treasurer, the growing International Monetary Market on the Chicago Mercantile Exchange represents a clearly visible means of seeing the currency markets both for spot prices and forward rates, in action.

Finding the best financing terms may be crucial in determining whether a firm gets a contract and sometimes the best terms are available through foreign markets.

Competition between banks, whether within the U.S. or the international market is so intense that the corporate executive can almost play one bank against another to secure the best service at the cheapest rates.

Often special factors play a key role in selecting a bank. One institution may have detailed experience in the right technical area, another will not deal with a country that a manufacturer wants to trade with, and other banks will not handle military projects. Many times a corporation's traditional and trusted bank cannot compete.

Some companies are afraid of foreign trade because of the complexities of currency deals. This is no longer a problem. Most banks should be able to handle the technical financing in an export deal.

Payment on some deals can be delayed and currency risks can generate concern for an exporter. There is no difficulty using forward markets to hedge for a short time the currency risks that may arise in today's markets. Recently banks have sought to find ways to deal with longer term currency risks and some solutions are now being discovered.

An exporter must determine in advance the cost of the project in domestic terms, and then enter into a series of contracts to buy foreign currency against domestic currency at future dates at specified forward exchange rates.

Just as currency risks can be minimized in trade and investment deals, so they may be held to a minimum in direct financing operations. With rates constantly changing and with world financial markets now so intertwined, it makes sense for large and medium-size companies to investigate the possibilities of using the Euro-markets. Often financing in the U.S. can be cheaper because the unregulated markets are not controlled by central bank minimum reserve requirements.

FOOTNOTES

- 1 Hector, Gary, "Foreign Banks Are Here to Stay", Cashflow, November/December 1980, pp 2.
 - 2 Ibid, pp 2.
 - 3 Ibid, pp 2.
 - 4 Ibid, pp 2.
 - 5 Ibid, pp 3.
 - 6 Ibid, pp 3.
 - 7 Ibid, pp 3.
 - 8 Ibid, pp 3.
 - 9 Ibid, pp 3.
 - 10 Ibid, pp 3.
 - 11 Ibid, pp 3.
 - 12 Ibid, pp 3.
 - 13 Ibid, pp 3.
 - 14 Ibid, pp 4.
 - 15 Ibid, pp 4.
 - 16 Ibid, pp 4.
 - 17 Ibid, pp 4.
 - 18 Ibid, pp 4.
 - 19 Ibid, pp 5.
 - 20 Ibid, pp 5.
 - 21 Ibid, pp 5.
 - 22 Ibid, pp 5.
 - 23 "International Banking: That's Where the Money Is", The Practical Banker, December 1979, pp 16.
 - 24 Ibid, pp 16.
 - 25 Ibid, pp 16.
-

26 Ibid, pp 17.

27 Ibid, pp 17.

28 Vogl, Frank, "A Special Report: International Banking", 1979,
pp 11.

29 Ibid, pp 11.

30 Ibid, pp 11.

31 Ibid, pp 11.

III. The Growth of the International Monetary Market of the Chicago Mercantile Exchange

The International Monetary Market in Chicago introduced the concept of financial futures trading. With the introduction of foreign currency futures, the IMM, founded in 1972, offers a wide range of financial futures contracts in three main areas:

Interest Rates

90-Day Treasury Bills
 3-Month Domestic Certificates of Deposit
 3-Month Eurodollar Time Deposits

Foreign Exchange

British Pounds	French Francs
Canadian Dollars	Japanese Yen
Deutsche Marks	Mexican Pesos
Dutch Guilders	Swiss Francs

Gold

The concept of financial futures was developed in anticipation of the end of the Bretton Woods Agreement which precipitated the elimination of fixed parities between major currencies. The Chicago Mercantile Exchange supported by economists such as Dr. Milton Friedman saw that the proven techniques of futures trading could be applied to the financial industry, as had been to the agricultural industry. With the new floating exchange rates, the opening of the International Monetary Market on May 16, 1972, created the first centralized market for transferring financial risk.

The success of foreign currency futures on the IMM encouraged further developments in the use of financial futures. A gold contract was introduced in 1974, followed in 1976 by 90-Day U.S. Treasury Bills, and in 1981 by 3-Month Domestic Certificates of Deposit and

Eurodollar Time Deposits, to develop prominence in short-term interest rate futures. April 1982, saw the listing of futures in the Standard and Poor's 500 Stock Index on the Exchange's new Index and Option Market(IOM). CME and IOM members are authorized to trade all IOM contracts.

The growth of financial futures has been spurred by uncertainty of the economy and a need for more precise financial management. Futures markets are designed to meet this need. The financial contracts on the IMM provide the mechanism for price "discovery" and hedging.

Hedging allows a company to transfer risk it otherwise must bear, including an interest rate risk incurred because funds are to be raised or invested in the money market, or foreign exchange risk that exists when funds are needed for overseas investment. Hedging is a mechanism used by a lender or borrower of funds as a temporary substitute for a transaction planned at a later date.

In all of its financial futures contracts, the IMM provides three essential elements: 1) An efficient central market, which brings together differing viewpoints on future values. 2) An open market, available to all participants; corporations, banks, finance companies, pension funds, money market funds, discount houses, investment companies, dealers, and individual investors. 3) A market that eliminates certain credit risks; the IMM, with its special clearing system, guarantees fulfillment of the contract between a buyer and a seller in a futures transaction.¹

While the IMM currently trades the most diversified variety of financial contracts, further expansion is planned in additional

instruments.

The International Monetary Market is a classic example of the auction market process at work. On the IMM trading floor in Chicago, the largest and most modern trading facility in the world, all bids and offers on financial futures contracts are made by open outcry.

Unlike some security exchanges that utilize the specialist system, the Exchange confers no special responsibility on individual trading members and makes certain that all participants have equal access to the market. This broad philosophy has allowed competition among traders to flourish and has fostered an efficient market that consistently seeks the best price for a given futures contract.

The basis of this trading system is the Chicago Mercantile Exchange's membership including 1400 representatives of major brokerage firms and independent traders.² An additional 200 IOM memberships were made available to qualified public purchasers by January 26, 1983.³ All of these members are permitted to trade in financial futures and they perform two important market functions: Floor Broker and Floor Trader.

A Floor Broker serves as a broker's broker, responsible for executing orders for the accounts of one or more of the Exchange's member firms. These orders may be for member firms or for individual and institutional customers of these firms.

Floor Traders are the same as market makers in the securities markets, as individuals trading for their own accounts or for those of organizations that they represent. Floor Traders are necessary in creating markets interest and in insuring that bids and offers are made. As institutions become an even more important part of the

market, Floor Traders play an active role in serving large institutions.

Together, Floor Traders and Floor Brokers form the marketplace for trading futures. The trading policies and strategies, combined with their expert knowledge, contribute importantly to the development of successful, liquid markets.

Orders to buy and sell financial futures contracts come to trading arena of the IMM via teletype or telephone, where they are received by an individual firm at its communications desk. These orders are time stamped and brought to the appropriate trading floor or "pit" by a runner. Financial futures contracts are traded in separate areas, which are divided into a number of sections designed for trading in particular contract months.

The broker responsible for handling the firm's orders in a specific future or delivery month then becomes responsible for handling the order.

Investors may utilize a spectrum of instructions to Floor Brokers, including: limits, market-if-touched orders, stops, stop limits, time orders, open orders, fill or kill orders, scale orders, combinations, opening-only orders, closing-only orders, spreads, and cancellations.⁴ Individual companies may differ in their use of these orders and the IMM may prohibit their use at times to maintain fair and orderly markets.

When a trade is completed, the participants must make a written record of its time, delivery month, price and size. At the same time, a specially trained employee of the Exchange, known as a pit observer, records the details of the transaction on a quote card which is then entered into the IMM's computerized price reporting

system.

The price information is stored for later use in reconciling trades and immediately is displayed on an electronic price quotation boards located on the floor, as well as on wire services, and quotation vendors.

Once an order is executed, it is endorsed by the broker and returned to the company's communications desk. The order handling process may take as little as two or three minutes. The IMM places great emphasis on the efficiency of processing orders.

All transactions are settled daily, which is an essential feature of the clearing, or accounting system at the International Monetary Market. Every account is "marked to market" or adjusted every day to reflect profits and losses. Before the start of trading the next day, each account either disburses or collects funds in order to complete the daily settlement process.

The settlement price is the beginning for the "no-debt" clearing system, which is calculated for every IMM futures contract by deriving the average price traded in the last thirty to sixty seconds of trading.⁵ Once established, the settlement price is used to compute the value of all available positions, enabling changes in accounts to be measured by market fluctuations that take place from one day's close to the next, rather than on a number of days or weeks until a final settlement date is reached.

A second important feature of the accounting system at the IMM is the Clearing House, which is the opposite party in all transactions. For participants in financial futures, many time consuming credit evaluations are unnecessary because of the upstanding credit standing of the Clearing House, itself a part of the exchange.

Another important factor of the IMM's clearing system is that all transactions are cleared through the Clearing Member companies of the Exchange. The processing of all transactions through these firms makes a substantial contribution to the efficiency of the daily settlement system.

In order to make a transaction in the financial futures market, a security deposit, called a margin requirement, must be paid. Unlike the margin that secures an equity position on a stock exchange, the deposit represents security to cover any initial loss that may result from adverse price movements.

The margin system is designed to help each account in withstanding a great adverse price move on a single day and it is one of the keystones of the Exchange Clearing House's financial security system. The Exchange takes great steps to insure that free and open markets exist for the trading of futures contracts.

In addition to its standard trading regulations, the Exchange has the power to take immediate action in dealing with an abrupt change in factors influencing futures markets to insure orderly trading. Such emergency action might result from the devaluation of a currency or a sudden change in the supply position of an underlying instrument. As an example, the rules for the IMM foreign currency contracts are subject to changes in regulations made by foreign governments.⁶

While the chief economic benefit of futures markets is thought to be price protection, the integrity of the market is primarily based on an exchange's capability to deliver the actual product or financial asset that is traded. Although more than 95% of all

futures contracts are liquidated before the expiration of a contract, the remainder must be delivered according to detailed specifications.⁷ The Clearing House at the IMM acts as the delivery agent for all contracts. This insures timely delivery of the exact quality and quantity of the financial asset specified in a contract is made by the seller and that full and timely payment is made by the buyer.

The procedure for opening an account is simple and straightforward. After contacting a member firm, a potential customer will be asked to sign a customer security deposit statement. This agreement binds a customer or the chief of an organization to make good any losses incurred in the course of trading.⁸

Funds deposited for margin requirements must be accounted for by the member firm. According to Federal law, these separate funds are not subject to liens. Once the funds have been deposited, a customer may begin trading. U.S. national banks intending to participate in financial futures are subject to requirements set by the Comptroller of the Currency.

The International Monetary Market is regulated by the Exchange's Board of Governors and its Special Counsel.⁹ The 24-member Board of the Chicago Mercantile Exchange consists of 18 persons elected from the membership of the Exchange.¹⁰ The Board also consists of three futures industry representatives and three public representatives appointed by its chairman.¹¹

The Board is responsible for establishing Exchange regulations, enacting the policy and enforcing the rules through surveillance and, when necessary, taking disciplinary action.

Members of the Board also serve as chairmen of more than 50 committees made up of Exchange members, staff and outside consultants.¹²

These groups conduct meetings and make recommendations to the Board. The daily Exchange administration is carried out by a full-time staff of about three hundred.¹³

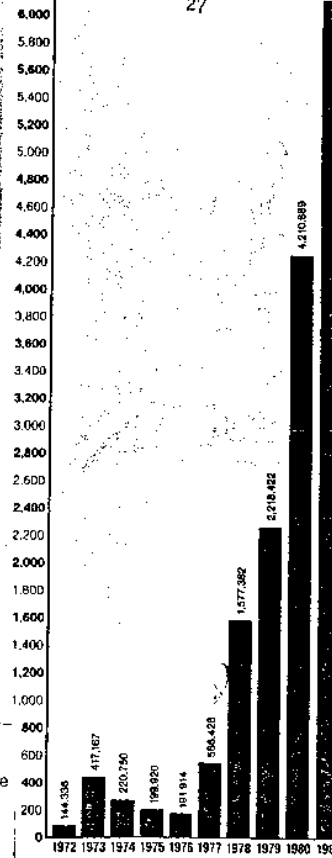
The Compliance and Audits department conducts the self-regulatory responsibilities of the Exchange in two essential areas. It monitors the financial status of clearing member firms and their customers, and acts as the chief investigative agency of the Exchange, examining possible rule breakers. It also serves as the prosecuting agency at hearings before the President, appropriate committees and the Board of Governors.¹⁴

All clearing member companies are also required to submit a minimum of two financial statements, one of which must be certified, determining how each firm is meeting its requirements.

In 1816, Great Britain became the first country to fix the value of an ounce of gold in terms of the pound sterling, and gold became the primary means of settling international debts. Other countries soon followed Great Britain's lead. The U.S. dollar was fixed in terms of gold at \$20.67 a troy ounce in 1900.¹⁵ During the Great Depression, with President Franklin D. Roosevelt's election, the price of gold in terms of the dollar was fixed on a daily basis until it was set at \$35.00 to the troy ounce of gold in 1934.¹⁶ Concurrent with this fixing of rates, U.S. citizens were restricted from owning the precious metal. December 31, 1974 marked the first time that gold bullion was legally equitable by private citizens.¹⁷

For illustrative purposes, assume that the U.S. government minted a gold piece with the American eagle stamped on it, and called it "one dollar." This one dollar gold piece held precisely 1/20 of an ounce of gold. At the same time, the King of England created a

Contract Volume By Year



M Foreign Exchange Futures Volume By Contract

presents trading in British Pounds (introduced in 1972), Canadian Dollars (1972), Deutsche Marks (1972), Dutch Guilders (1973), French Francs (1974), Italian Lira (1972 & 1973 only), Japanese Yen (1972), Mexican Pesos (1972) and Swiss Francs (1972).

Contract	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
British Pounds	14,787	31,412	14,033	15,015	33,465	78,701	240,099	513,682	1,263,750	1,491,102
Canadian Dollars	38,804	29,161	3,699	2,677	17,068	161,139	207,654	399,865	601,925	475,585
Deutsche Marks	19,318	77,264	49,447	54,793	44,887	134,368	400,569	450,856	922,608	1,654,891
Dutch Guilders		11,327	1,527	927	392	2,812	3,585	22	4	4
French Francs			11,359	6,238	5,968	3,150	4,449	406	144	2,080
Italian Lira	3,989	125,653	7,239	1,790	1,449	82,261	361,731	329,645	675,073	960,598
Mexican Pesos	9,717	120,337	90,941	48,547	51,439	17,029	17,844	29,982	19,301	18,905
Japanese Yen	17,721	22,013	42,505	69,933	37,246	106,968	321,451	493,944	827,884	1,518,767
Total	144,336	417,167	220,750	199,920	191,914	586,428	1,557,382	2,218,422	4,210,589	6,121,932

- source?

gold piece containing $1/4$ of an ounce of gold, stamped his likeness on the face, and named it a "pound."

The pound contained five times as much ($1/20 \times 5 = 1/4$) gold. If an American wanted to trade his dollars for sterling, he would have to trade five dollars to receive one pound. This price would therefore be the exchange rate. In time though, gold became cumbersome and governments began to create paper certificates or coins of cheaper metals that were exchangeable for gold. A U.S. dollar paper certificate could be taken to the U.S. Treasury and traded in for $1/20$ of an ounce of gold.

As world trade grew, governments printed more and more paper certificates. Soon there were more paper certificates than there was gold in each country's treasury. If everyone came to the treasury at once and wanted gold for his paper certificates, the vaults would be empty before each one had received his gold. Although no major government has had such a run on its gold supply, the knowledge of the possibility of such demands caused the value of the paper certificate to decrease. If there were 1,000,000 one-dollar paper certificates in the world, and only \$900,000 worth of gold in our vaults in the U.S., people would soon believe each dollar they held would only be worth \$.90.

In reality, it did not happen this way. One dollar was still worth one dollar to all citizens in the U.S. transacting business within the U.S.. But when they would do business with a British citizen, they would have to pay more than five dollars to receive one pound if they were to receive the equivalent gold (assuming that the King of England had not issued more pounds than he had in gold in his vaults). The price or exchange would therefore increase.

In time, paper certificates became acceptable as money, regardless of their gold backing, because people knew that stable governments would back their currency. The fact that the certificates were backed by something of value made them acceptable as money.

On August 15, 1971, the U.S. government officially halted redeeming paper certificates for gold. The practice had ceased some time earlier, but at this time there was an official announcement.¹⁸

The old laws of supply and demand, which had been gaining influence with the increase of paper money, began to play a key role. Gold had served its function by establishing the rate of exchange between countries. Supply and demand are now important factors in the variability above and below that rate.¹⁹

If foreigners are anxious to buy U.S. goods, they will be eager to purchase U.S. dollars to pay for those goods. The increased demand for U.S. dollars will drive the price up for foreigners. If a German can buy U.S. dollars at the rate of 2.50 Deutschemarks per dollar, the increased demand may drive the price up to, say 2.60 Deutschemarks per dollar. The price for dollars in terms of Deutschemarks could rise to a point at which Germans' tastes for American goods were discouraged by this high price.

Such an increased demand could affect the price of any currency. The supply side could also cause the exchange rate variability. If the supply of dollars held by foreigners is great, its price will decrease. This law of supply and demand is thus a basic force affecting fluctuating exchange rates.

The system of international payments was formalized in 1944 with the evolution of the International Monetary Fund at Bretton

Woods, New Hampshire.²⁰ This meeting of the major industrialized countries of the West established a par value for the major currencies vis-a-vis the U.S. dollar, then fixed at \$35 to the troy ounce of gold. The fluctuation limits were set at one percent above or below the par value for cash or spot transactions.²¹ This system worked fairly well for several years. As long as the U.S. was willing to run its balance of payments at a deficit, the system continued. The volume of dollars overseas increased as the United States purchased foreign automobiles, fine wines, and other items from our trading partners. With the great supply of U.S. dollars abroad, they became overvalued. Shortly after the first U.S. devaluation in 1971, the IMF meeting in Washington, D.C., allowed limits to expand to 2 1/4 percent either side of par.²² This Smithsonian Agreement, in allowing more fluctuation around the parity level, necessitated more hedging activity by commercial interests.²³

The Smithsonian Agreement fell apart in February, 1973.²⁴ Today there is a combination of floating rates, restricted by independent central bank activity to restrict extreme variations, and the European Monetary System.²⁵ The European Monetary System operates similarly to the former Smithsonian Agreement, with fewer participants.

If it were assumed that supply and demand were the only factors considered by central banks, and if the price of a country's currency increased to its upper limit, then central banks would take steps to increase the supply of that currency; therefore, driving its price downward. This would occur by selling their own currency and taking foreign currency in return. If the exchange rate were at the

lower limit, a central bank would buy its own currency in an attempt to decrease the supply and drive the price upward.

Par values were changed from time to time in an effort to maintain the fixed rate in line with reality.

Millions of currency transactions take place each day between citizens of different countries. Since it would be very difficult for someone who needed pounds sterling to search out an individual who has them for sale, the foreign exchange market has developed as a medium through which buyers and sellers can easily reach one another. In the past, banks handled this service. Through their correspondent relationships with banks in other countries, they have ready access to foreign currency. There is not a physical transfer of Swiss Francs for U.S. Dollars. It is a bookkeeping entry whereby each bank credits the other's account for the currency. The U.S. bank keeps an account with the Swiss bank and vice versa. The banks then exchange a dollar balance in the U.S. bank for a Swiss franc balance in the Swiss bank.

Any bank dealing in foreign exchange can provide any customer with an exchange rate for any currency. For example, if a customer called a bank in Chicago and asked for 250,000 Swiss francs, the bank would call two or three or more foreign currency dealers, by direct line, and get the least expensive price available for the 250,000 Swiss francs.²⁶ The customer will have the Swiss francs he requested. He may also have the bank, for a fee, deliver the francs to any bank of his choosing via cable transfer or mail.

This market is similar to the over-the-counter market in securities. There is no centralized meeting place, and no fixed opening and closing time. In fact, some foreign exchange dealers in London

banks maintain a 24-hour-a-day operation.²⁷

The banks do the majority of the foreign exchange business, but there are other participants. Some large international firms maintain extensive foreign exchange trading departments. There are wholesale brokers in New York and other large financial centers who buy and sell large blocks of foreign exchange among the banks at very small margins. There are also a few brokers who deal in foreign exchange at the retail level, with speculators or with hedgers other than banks.

In addition to changing money, the foreign exchange dealers regularly sell various currencies for forward deliveries. Most banks that deal in foreign exchange can enter into a contract to buy or sell any amount of currency at any date in the future, for its customers. There are some limitations to such transactions including: the ability of the bank to find a customer for the opposite side of the transaction; willingness of the bank to take the opposite side itself, if necessary; and the credit-worthiness of the customer.²⁸ Banks usually like to balance out their obligations in the forward and cash markets. Since they are risk-averse institutions, banks attempt to hedge all their transactions. The following table contrasts the forward market among the banks with the futures market of the IMM.

The International Money Market quotes all currency prices in dollars or cents per unit of foreign currency. For example, an IMM Deutschemark (DM) contract for March delivery of 125,000 DMs, if priced at .3850, reflects a dollar value of \$48,125.00 (125,000 DM x \$.3850). The minimum trading variation for the DM contracts is .001,

which, for 125,000 Deutschemarks is worth \$12.50.

Spot market quotations in the interbank market are in the inverse form, that is, units of foreign currency to the dollar, with the exception of some British Commonwealth currencies.²⁹ Deutschemarks quoted at 2.5974 to the dollar in the spot market are DMs that are selling for approximately \$.3850. To convert a spot quote to a "flat" rate, the reciprocal is taken ($1/2.5974 = .3850$). British pounds, Australian, and New Zealand dollars are quoted as flat rates, as so many dollars to the pound.³⁰

Forward quotations are in the form of points greater than or less than the spot quotes. Two numbers are given including, the first which is the bid price and the second which is the asked price. American and continental traders always give the bid price first. London traders give the offer price first.³¹

Wire reports will usually state whether the points are premium or discount to the spot rate. If the first number is larger, the forward rate is at a discount. Forward traders never quote their buy prices higher than their selling prices. If the first number is smaller, add it to the spot bid price, and add the second number to the spot offer price to arrive at a flat rate for a forward transaction.

Forward quotes are usually given for standard days such as 30, 60, and 90 days, and 6 and 12 months or more forward. In the futures market, the days until delivery decrease to zero, and therefore there would be 30 days to delivery once in a contract lifetime. Delivery day is the third Wednesday of the month for all currency futures delivery months.

Comparison of the Forward and Futures Markets

	Forward	Futures
Size of Contract	Tailored to individual needs.	Standardized.
Delivery Date	Tailored to individual needs.	Standardized.
Participants	Banks, brokers, and multinational companies. Public speculation not encouraged.	Banks, brokers and multinational companies. Disallowed public speculation encouraged.
Security Deposit	None as such, but compensating bank balances or lines of credit required.	Small security deposit required.
Clearing Operation	Handled contingent on individual banks and brokers. No separate clearinghouse function.	Handled by exchange clearinghouse. Daily settlements to the market price.
Markets/price	Over the telephone worldwide.	Central exchange floor with worldwide communications.
Regulation	Self-regulating.	Commodity Futures Trading Commission; National Futures Association
Liquidation	Most settled by actual delivery. Some by offset, at a cost.	Most by offset; very few by delivery.
Transaction Costs	Set by "spread" between bank's buy and sell price.	Negotiated brokerage fees, quoted for entry and exit.

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As with any commodity futures market, a distribution of hedgers and speculators is needed for efficient market functioning. A speculator buys a futures contract with the intention of selling it at a higher price, or he sells a futures contract with the intention of buying it back at a lower price. By assuming the risk of exchange rate change, the speculator's presence in the market gives it depth and continuity.

Different trading strategies may be used in the market. Generally, the two headings under which approaches to market analysis can be categorized are fundamental analysis and technical analysis.

In fundamental analysis, one analyzes basic economic indicators including interest rates, balance of trade and the like to determine the direction of price fluctuations. These basic indicators reflect the relative strength or weakness of an economy. Fundamentalists determine long-range prices rather than short-term fluctuations.

Technical analysis is concerned with how traders react to the supply and demand factors that were previously mentioned. The technical analyst believes that the price, volume, and open interest are reflective of all market participant's opinions. Technical analysts study the market activity instead of the causes of the activity.

Hedging may be defined as the purchase or sale of a futures contract as a temporary substitute for a future cash transaction. It may also be the purchase or sale of a futures contract to offset an equal and opposite transaction or position in the cash market. It is anticipated that by such a transaction any loss in one market will be offset by a gain in the other and thus loss through price

change will be reduced.

While the hedger's purpose is not to profit from price movement, it is important to be aware of recent trends in the currencies involved. The cash, futures and forward prices are influenced by the same fundamental factors. The hedger can rely on the fact that professional currency traders are keeping track of the prices in all markets for profit potential.

Effective hedging relies on the basis and its movement.³² The basis in this context is the difference between cash, or spot, exchange rate and the futures exchange rate. The basis will be nearly the same as the difference between cash and forward exchange rates for the same period. In reality, the basis moves toward zero as the delivery date for the futures contract approaches. In the end, the futures delivery becomes a spot delivery.

In foreign exchange, the basis reflects the interest rate differential between countries. If there are no restrictions for trade and capital flow, forward rates will vary inversely with the interest-rate differential between two countries.³³

To understand foreign exchange rate fluctuations, one must begin with the assumption that currency is basically a commodity and subject to the laws of supply and demand. The fundamental factors affecting currency supply and demand may be categorized as balance of payments, political treaties and governmental influences, seasonal fluctuations, and expectations. These four areas interact to determine the exchange rate at any point in time for any currency.³⁴

A country's balance of payments is the net inflow or outflow of a country's currency when it has summed up all its transactions with

other countries.³⁵ These transactions include exports of goods and services, foreign investments in that country, imports of goods and services, foreign aid, investments by that country's citizens abroad, and governmentally directed central bank transactions.³⁶

Normally, if a country's balance of payments surplus is growing and its price in the international foreign exchange market may be increasing. If a deficit balance of payments exists and the demand for that country's currency is decreasing, the price may fall in world markets.

Income in this context refers to private sector income. Individuals with money to spend, spend money on foreign investments and trips abroad. These transactions create a flow of money out of the country. Those same high incomes create taxes for government vaults, keeping the federal budget out of a deficit position.

Countries with lower levels of income have trouble purchasing imports and investing abroad. The inability to take part in international commerce hinders those countries richly endowed with natural resources.³⁷

The general level of prices affects the number of exports of a country. The U.S. had nearly priced itself out of the international market in some goods.³⁸ Japan was making many similar goods and was able to sell them at lower prices. Naturally, given equal quality, the less expensive item would sell first. Prices are interrelated with incomes. High incomes stem from high wages which may lead to higher prices for goods produced.

Interest rates are also important in determining the balance of payments. If interest rates are high in a country, foreigners will

invest their money there. Other things equal, short to intermediate term investment funds will flow toward that country with the highest interest rate. This, in turn, will tend to lower interest rates. As the supply of lendable funds increases, the interest rate for the use of these funds will decrease.

Inflation is an increase in price without a corresponding increase in quality or service. Inflation may be caused by increased costs of production, forcing the price up; or increased demand pulling the price up.³⁹ Inflation causes an erosion of purchasing power of the currency.

Inflation's influence runs through incomes, prices, and interest rates. Inflation has become a prominent part of life in most industrialized nations of the world; therefore, it is a factor to be considered when studying balance of payments among nations.

Currently there is a mixture of floating rates for several major currencies, stabilized by national central banks at their own initiative, and of pegged rates among the members of the European Monetary System (EMS).⁴⁰

Eight Common Market members participate in EMS: Belgium, Denmark, France, West Germany, Ireland, Italy, Luxembourg and the Netherlands.⁴¹ EMS members have formally agreed to intervene in spot currency markets to maintain the relationship among currencies. As a result, the three currencies traded on the IMM have moved synonomously, but have not stabilized in relation to outside currencies.⁴² The rates are kept within 2 1/4% above and below the agreed-upon par values (except for Italian lira, which can vary by 6%), but this maintenance applies only to spot rates, not futures

or forward rates.⁴³

The internal monetary policy pursued by a nation's government does not consistently coincide with its external policy. Although the goals of each are not mutually exclusive, they often conflict. Governments, in fulfilling their domestic monetary policies, can control to an extent the money supply in a country. They do this primarily through control of bank reserves and open-market transactions. The central banks, which are connected with the federal governments, can decrease or increase the money supply by selling or buying government securities.

The international implications of a government's domestic policy become apparent. For example, the government may attempt to generate domestic growth by keeping interest rates low so that people can afford to borrow money to expand existing businesses and create new businesses. If the level of interest rates is presently lower than in foreign countries, lendable dollars will continue to flow toward the higher interest rate; therefore, worsening the imbalance between countries and increasing the exchange-rate problem.

Often external policy is formulated to coincide with internal policy, often to the detriment of both. Governments may use tariffs on imports and subsidies on exports.⁴⁴ Tariffs are taxes that must be paid by the importer. This increase in cost to the importer is usually passed on to the consumer in the form of a higher price. Subsidies may be paid to producers of goods that are in excess supply to encourage them to export their goods. This lets foreigners buy the goods at a lower price, while the home government pays the exporter an additional amount per unit, which allows him to profit.

Exchange controls, when imposed, may take a spectrum of forms, from a limitation on investment in foreign countries, to blocked currency for foreign investment in the home country. These measures are taken to protect some shortcoming within the domestic economy such as distortion in incomes, prices, and interest rates, or an inflationary economy.

All nations want more of everything, including many products they cannot afford. Governments often spend more than they collect in the form of taxes. The government must then make up this deficit by borrowing money. The end result of government deficit spending is an increase in the money supply and inflation.⁴⁵ The solution to inflation is painful including tight money, increased taxes, and decreased government spending. Few nations are willing to suffer the effects of these actions.

Unstable governments often create weak currencies, but even in the better-established industrial nations of the world, the influence of political elections is felt in the foreign exchange market.⁴⁶ Major economic policy changes, as well as revaluations and devaluations, are made with an eye toward the next election. In summary, political and governmental factors are important influences on foreign exchange, both through direct effect and indirectly through balance of payments.

Exchange rates often show a cyclical variation due to the seasonality of demand for the currency. For example, demand is high during the peak export season when foreigners seek the home country's currency to purchase the goods.⁴⁷ Peak importing seasons tend to increase the supply of the currency on the international

market, especially if payment is made in the currency of the home country, a negotiable item between buyers and sellers.⁴⁸ This factor is reasonably predictable by research on historical rates.

As in stocks and commodity prices, expectations influence the price of a nation's currency. In fact, expectations may at times be the predominant factor affecting foreign exchange spot rates. Expectations may lead to massive flows of short-term capital sloshing about the world in search of the best currency to be in at a given time. During the spring of 1971, billions of dollars flowed into West Germany in anticipation of a revaluation (an increase in the par value or price of that currency in terms of other currencies).⁴⁹ In fact, there were so many dollars that the German central bank was unable to support the price of the dollar in terms of Deutschmarks in accordance with the IMF agreements that were in effect at the time, and was forced to allow the Deutschmark float.⁵⁰ Supply and demand factors were allowed to establish new rates of exchange when the central bank simply refused to purchase the dollars. The exchange did indeed float upward, and the revaluation then became a fact. Since those Deutschmarks were now worth more, the conversion back into dollars created a profit for those who anticipated the revaluation.⁵¹

The previous discussion has centered on the effects of fundamentals on the spot rate of exchange. These same fundamentals also affect the forward rates of exchange. The relationship between spot and forward rates of exchange is close and complex, especially among currencies that are actively traded. Bankers hedge transactions between forward and spot markets, causing the spot rate to move in the same direction as the forward rate.

In a previous discussion, the movement of short-term funds among countries as they seek the highest available interest rate was introduced. This is an important factor that limits the spread between forward and spot exchange rates, provided few capital controls.

The trader who seeks out the highest interest rates will always hedge himself, distinguishing him from the pure speculator. Most capital flows are in covered positions, rather than purely speculative.

The forward rate of exchange must be at a level that will allow the trader to bring his profits home in the form of interest on the certificates of deposit without losing them in the conversion back to dollars. If the forward rate for dollars in terms of British pounds is at a large enough premium to the spot rate, the arbitrageur will lose his profits in the transaction.⁵²

The basic rule can be stated as follows: At equilibrium, the currency of the higher-interest-rate country should be selling at a forward-rate discount in terms of the lower-interest-rate country's currency.⁵³ The reverse of this also applies. The lower-interest-rate country's currency will be selling at a forward rate premium in terms of the higher-interest-rate country's currency. At equilibrium, the difference in interest rates between two countries should equal the spread between the forward and spot rates.⁵⁴

Gold historically has had a close relationship with exchange rates. All currency par values were based on gold through the U.S. dollar. However, in 1968 when a two-tier gold market was created, official prices for gold and free market prices for gold showed a wide variance.⁵⁵ In August of 1971, the United States officially broke the tie between gold and currency by announcing the end of conversion.⁵⁶

FOOTNOTES

- 1 "The Chicago Mercantile Exchange," Chicago, 1984, pp 4.
 - 2 Ibid, pp 5.
 - 3 Ibid, pp 5.
 - 4 Ibid, pp 6.
 - 5 Ibid, pp 6.
 - 6 Ibid, pp 10.
 - 7 Ibid, pp 13.
 - 8 Ibid, pp 14.
 - 9 Ibid, pp 20.
 - 10 Ibid, pp 20.
 - 11 Ibid, pp 20.
 - 12 Ibid, pp 21.
 - 13 Ibid, pp 21.
 - 14 Ibid, pp 22.
 - 15 Aliber, Robert Z., "The International Money Game," 3rd ed. New York, Basic Books, 1979, pp 4.
 - 16 Ibid, pp 4.
 - 17 Ibid, pp 5.
 - 18 Solomon, Robert, "The International Monetary System 1945-1976: An Insider's View," New York, Harper and Row, 1977, pp 17.
 - 19 Ibid, pp 17.
 - 20 Kubarych, Roger F., "Foreign Exchange Markets in the United States," New York, Federal Reserve Bank of New York, 1978, pp 9.
 - 21 Ibid, pp 9.
 - 22 Ibid, pp 9.
 - 23 Ibid, pp 9.
 - 24 Ibid, pp 9.
-

- 25 Dufey, Gunter and Ian H. Giddy, "The International Money Market," Englewood Cliffs, NJ, Prentice-Hall, 1978, pp 43.
 - 26 Ibid, pp 43.
 - 27 Coninx, Raymond G.F., "Currency Risk," London, Euromoney Publications, 1983, pp 24.
 - 28 Coninx, Raymond G.F., "Foreign Exchange Dealer's Handbook," New York, Pick Publishing, 1982, pp 56.
 - 29 Ibid, pp 61.
 - 30 Ibid, pp 62.
 - 31 Ibid, pp 62.
 - 32 Walker, Townsend, "A Guide for Using the Foreign Exchange Market," New York, Wiley, 1981, pp 34.
 - 33 Ibid, pp 34.
 - 34 Riehl, Heinz and Rita M. Rodriguez, "Foreign Exchange and Money Markets: Managing Foreign and Domestic Currency Operations, New York, McGraw-Hill, 1983, pp 58.
 - 35 Ibid, pp 57.
 - 36 Ibid, pp 57.
 - 37 Aliber, pp 32.
 - 38 Kubarych, pp 14.
 - 39 Walker, pp 38.
 - 40 Dufey, Gunter and Ian H. Giddy, pp 47.
 - 41 Ibid, pp 47.
 - 42 Ibid, pp 49.
 - 43 Ibid, pp 49.
 - 44 Aliber, pp 37.
 - 45 Ibid, pp 37.
 - 46 Kubarych, pp 16.
 - 47 Ibid, pp 15.
 - 48 Ibid, pp 16.
-

49 Riehl, Heinz and Rita M. Rodriguez, pp 63.

50 Ibid, pp 63.

51 Ibid, pp 64.

52 Walker, pp 45.

53 Ibid, pp 46.

54 Ibid, pp 46.

55 Soloman, pp 28.

56 Ibid, pp 28.

IV. Inside Eurodollar Futures and Chicago as a World Financial Center

A Eurodollar is defined as any dollar on deposit outside of the United States. Mostly, this means dollar balances on the books of the London branches of the U.S. and other major world class banks. Occasionally, Eurodollars are also deposited in other locations such as Nassau or the Grand Cayman Islands.¹ Since these deposits are outside of the U.S., they do not fall under U.S. jurisdiction, and the regulations that govern domestic deposits do not apply to Eurodollars.

In the late 1950s, Regulation Q prohibited U.S. banks from paying interest on deposits of less than 30 days and permitted a maximum of 1% up to 90 days.²

Merchant banks in France and the United Kingdom realized that by taking a dollar deposit for three months and converting it to their own currency on a forward basis they could generate domestic funds at a profitable interest spread.³ Using these strategies, they could afford to pay more than Regulation Q allowed. Offshore depositors of dollars in U.S. banks were the first to react as funds were withdrawn from banks in the U.S. and redeposited at higher rates with banks in London and Paris. To their defense against loss of deposits, the U.S. banks allowed their London branches to enter the market and to take dollar deposits.⁴

The Eurodollar deposits did not fall under the regulations governing domestic U.S. banks and being a foreign currency in the countries of deposit, often did not fall within the jurisdictions of the authorities in those countries.

In the mid 1960s, the market had expanded and funds were available for dollar-denominated loans to be made by European banks to

commercial borrowers.⁵ To give these borrowers the benefit of short-term interest rates, but the guarantee of funds for a fixed period, the Eurodollar rollover loan was invented. Under the arrangements, the borrower was given a five-year loan with the interest rate fixed at three or six month intervals and linked to the London Interbank Offered Rate (LIBOR, the rate at which dollar deposits are offered between top-tier banks) plus a negotiated mark-up over LIBOR.⁶

In 1966, Eurodollar CDs were issued by banks in the United Kingdom to increase the appeal of the Euro market to depositors and to meet the increased demand for funds from the U.S..⁷ These were negotiable instruments and traded at fluctuating rates below the Eurodeposit rate, depending upon market conditions plus supply and demand among the issuers.

The allocation and size of deposit lines between banks reflects the size, financial strength and overall competence of the bank. Banks in the marketplace analyze each other's credit standing and allocate an internal line of credit for each bank with which they deal. The line covers all placements in the interbank market for all currencies, as well as placements of domestic currency.⁸ Banks may have sub-limits relating to maturity such as smaller limits for six-month deposits than for three-month deposits.

Sovereign risk is independent of the bank with which funds are placed, and relates to the country under whose regulations that bank functions. A typical bank has sovereign lines restricting the total amount deposited with institutions in any one country. One bank with branches in two countries may attract funds from another bank in the international market to one of its branches, but not the other.⁹

Almost all banks will quote rates from the current date to a future date for deposits or placements. A normal transaction for a bank when short-term rates exceed long-term rates is:

- 1) Borrowing dollars from another bank for six months;
- 2) Lending those dollars to another bank or a customer for three months;
- 3) After the three month loan matures, reinvesting the principle and the interest received for the remaining three months.¹⁰

When the interest calculations for the three month transactions are netted against the interest to be paid for the six-month borrowing, a break-even rate is achieved. The end result is an interest rate for the period three months forward to six months forward.¹¹ This rate is referred to as forward/forward by the interbank bank.

When this rate is achieved, the bank can do any of the following that it deems most profitable: lend to a corporate customer for the last three months; close out the position by making a forward deposit; or leave the position open to be closed later in the expectation of favorable interest rate movement.¹²

Other currencies are also placed on deposit outside of their own countries. The Eurocurrency market is comprised of all of these currencies. Eurodollars are the foundation of international finance and are utilized to provide a vehicle for the borrowing and lending of funds. With the addition of foreign exchange contracts, both spot and forward, they can effectively create hedged loans and deposits in other currencies.¹³

The link between two Eurocurrencies is the cost of converting dollars to the second currency for the first day of the deposit, and reconverting back to dollars on the last day of the deposit. These conversions are reached by means of a currency trade.

Depositors must be paid a premium to place their funds in the Euro-market, and banks are willing to make this concession to obtain funds in this market. There are a spectrum of reasons for depositors to prefer domestic CDs to Eurodollars for placing short-term money, and for the willingness of banks to pay a premium on Euro-deposits. On the side of the depositors the reasons include: 1) Sovereign risk because depositors are concerned that the property rights of holders of U.S. dollar-denominated deposits abroad will not be respected and that acceptance of this risk by the depositor requires additional compensation. 2) Liquidity because depositors are willing to receive less interest to gain the ability to raise needed cash in the secondary market, if necessary, before the deposit's maturity. 3) Depositor identity because corporations are the main source of funds in the domestic CD market. Banks are not the principal buyers of the CDs of other banks, except in their dealer operations. In the Eurodollar market, most deposits are held by banks, who must be paid a premium to hold the non-negotiable deposit of another bank.¹⁴

On the part of borrowers the reasons for preferring domestic CDs to Eurodollars include: 1) Zero Reserve Requirements because Eurodollars are a foreign currency outside the U.S. these deposits are not subject to regulation. In particular, these deposits carry no reserve requirements. This reduces the "all-in" expense of issuing a Eurodollar deposit relative to a domestic CD; therefore, the bank is willing to pay a higher yield in the Eurodollar market. 2) In the Eurodollar market, corporations are net purchasers of funds, not net providers of funds as in the domestic CD market, thus borrowers are concerned about their identity. The spread between Euro-rates and domestic CD rates reflect, partially, the value added by banks acting as intermediaries

between the corporate lenders in the domestic CD market, and corporate borrowers in the Eurodollar market.¹⁵

Unlike the behavior of spreads between Eurodollar rates and domestic CD rates, spreads between Treasury rates and Eurodollar rates have a predictable tendency to increase as rates increase. Eurodollar rates at the three-month maturity are more volatile than either Treasury bill rates or CD rates.¹⁶

As with most debt instruments, a increase in rates tends to reduce the cost of longer-term rates relative to shorter-term rates, due mainly to the expectation that rates will fall to previous levels. This was the interaction between short-term (three-month) Euro-rates and longer-term (six-month) Eurodollar deposit rates in the fourth quarter of 1980.¹⁷ However, in the first quarter of 1980, despite the unprecedented increase in rates during the period, the yield curve did not invert, and six-month rates remained high relative to shorter-term rates.¹⁸ This was believed to be the result of depositor concern with bank credit risk at that time.

Long noted as the transportation, manufacturing and agricultural center of the United States, Chicago is now emerging as one of the great financial centers of the world.

The increase in financial prowess is largely due to the city's unique and innovative futures exchanges. The International Monetary Market, for example, lists futures contracts covering foreign currencies, gold, Eurodollars and U.S. government debt instruments. Traders buying or selling these items in London, Zurich, Tokyo and Hong Kong must be aware of the most recent futures price in Chicago.

This growing international influence is bringing the world banking community to Chicago. In addition to leading U.S. banks with represen-

ative offices in Chicago, nearly 50 foreign bank agencies or branches are located in the metropolitan area.¹⁹

The flow of futures activity between the city's banks and other institutions in the U.S. and abroad is a good indication of the increasing recognition that futures contracts are an excellent risk-transfer and asset-management tool. The amount of money on deposit in Chicago's banks every day for open futures positions has been estimated at greater than \$1 billion.²⁰

In addition, futures trading has made Chicago a leading center for the U.S. and international brokerage industry and has fueled the growth of sophisticated data processing and research services.

The city's innovative futures exchanges, led by the International Monetary Market, will continue to develop the new contracts required by the dynamic nature of international finance and business. Eurodollar Time Deposit futures will be followed by futures on stock indexes and options on futures contracts as the IMM continues to better Chicago's reputation, and its own, as a world center for creative financial strategy and for the transfer of financial risk.

FOOTNOTES

- 1 "Inside Eurodollar Futures," Chicago, 1984, pp 3.
 - 2 Ibid, pp 3.
 - 3 Ibid, pp 3.
 - 4 Ibid, pp 4.
 - 5 Ibid, pp 4.
 - 6 Ibid, pp 5.
 - 7 Ibid, pp 6.
 - 8 Ibid, pp 6.
 - 9 Ibid, pp 6.
 - 10 Ibid, pp 6.
 - 11 Ibid, pp 5.
 - 12 Ibid, pp 5.
 - 13 Ibid, pp 5.
 - 14 Ibid, pp 5.
 - 15 Ibid, pp 6.
 - 16 Ibid, pp 8.
 - 17 Ibid, pp 8.
 - 18 Kubarych, Roger F., "Foreign Exchange Market in the United States,"
New York, Federal Reserve Bank of New York, 1978, pp 3.
 - 19 Ibid, pp 3.
 - 20 Ibid, pp 3.
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V. Summary

In retrospect, this research work has explored many areas of international banking and finance. Much has been exposed and learned from these topics.

The International Banking Act of 1978 is the first legislation that brings foreign-owned banking facilities in the U.S. under federal regulations comparable to those faced by domestic financial institutions. This legislation promotes competition between foreign and domestic banks, improves federal regulatory control over monetary policy, and provides a federal presence in the regulation and supervision of foreign bank activities in the U.S.

Foreign banking expansion felt in the U.S. has been caused by several factors including: America is the largest single national market; Until the IBA of 1978, U.S. laws gave foreign banks here some distinct advantages; Foreign banks felt it necessary to compete here as U.S. banks have become more active abroad; and Foreign corporations have seen great investment opportunities in the U.S. and foreign banks have followed their largest domestic corporate clients to the United States.

U.S. banking institutions have also expanded abroad significantly. Foreign markets are dynamic and complicated and this attracts U.S. companies abroad. U.S. banks seek to grasp these foreign opportunities, for domestic business. Finding the best financing terms may be crucial in determining whether a firm gets a contract and often the best terms are available through foreign competitive markets.

The International Monetary Market in Chicago introduced the concept of financial futures trading. The growth of financial futures has been sparked by an uncertain economy and a need for more exact financial management. Futures markets are designed to meet this need. The financial contracts on the IMM provide the mechanism for price hedging.

The system of international payments was formalized in 1944 with the introduction of the International Monetary Fund at Bretton Woods. This meeting of the major industrialized countries of the west established a par value for the major currencies based upon the U.S. dollar. Par values were changed from time to time in an effort to maintain the fixed rate in line with reality. Today, we have regulated floating exchange rates.

Millions of currency transactions take place daily between citizens of different countries. Since it would be very difficult for someone who needed a foreign currency to search out an individual who has it for sale, the foreign exchange market has developed as a medium through which buyers and sellers can easily reach one another. The research of this topic centers on the fundamentals of the spot rate of exchange. These same fundamentals also affect the forward rates of exchange. This relationship between spot and forward rates of exchange is close and complex, especially among currencies that are actively traded.

A Eurodollar is any dollar on deposit outside of the United States. Since these deposits are outside of the U.S., they do not fall under U.S. jurisdiction, and the regulations governing domestic deposits do not apply to Eurodollars. Other currencies are also placed on deposit outside of their own countries. The Eurocurrency market is composed of all of these currencies. Eurodollars have been found to be the foundation of international finance and are utilized to provide a vehicle for the borrowing and lending of funds. With the addition of foreign exchange contracts, both spot and forward, they can effectively create hedged loans and deposits in other currencies.

Overall, the research of each of these areas of finance has overturned much information. The growth of the international financial market makes it necessary for the businessman and consumer alike to utilize its resources.

In order to use international financial institutions, one must research and study the action of this unique market.

Much more could be written and discussed, as there are volumes of information on international banking and finance. In the concise manner of this study, international markets have been viewed and studied in brief. This market offers a challenging opportunity for those who wish to pursue any one of its areas. This work offers essential information on the international financial operation.

BIBLIOGRAPHY

- Aliber, Robert Z., The International Money Game, 3rd ed., New York, Basic Books, 1979.
- Brown, Brendon, Money Hard and Soft on the International Currency Markets, New York, Wiley, 1978.
- "The Chicago Mercantile Exchange," Chicago, 1984.
- Coninx, Raymond G.F., Currency Risk, London, Euromoney Publications, 1983.
- Coninx, Raymond G.F., Foreign Exchange Dealer's Handbook, New York, Pick Publishing, 1982.
- Dufey, Gunter and Ian H. Giddy, The International Money Market, Englewood Cliffs, NJ, Prentice-Hall, 1978.
- Einsig, Paul, A Textbook on Foreign Exchange, 2nd ed., London, Macmillan, 1969.
- George, Abraham H. and Ian H. Giddy, International Finance Handbook, 2 vols., New York, Wiley, 1983.
- Hector, Gary, "Foreign Banks are Here to Stay," Cashflow, November/ December 1980.
- "Inside Eurodollar Futures," Chicago, 1984.
- "International Banking: That's Where the Money Is," The Practical Banker, December, 1979.
- Kubarych, Roger F., Foreign Exchange Markets in the United States, New York, 1978.
- Riehl, Heinz, and Rita M. Rodriguez, Foreign Exchange and Money Markets: Managing Foreign and Domestic Currency Operations, New York, McGraw-Hill, 1983.
- Segala, John P., "A Summary of the International Banking Act of 1978," The Economic Review, Federal Reserve Bank of Richmond, (January/February 1979).
- Solomon, Robert, The International Monetary System 1945-1976: An Insider's View, New York, Harper&Row, 1977.
- Vogl, Frank, "A Special Report: International Banking," 1979.
- Walker, Townsend, A Guide for Using the Foreign Exchange Market, New York, Wiley, 1981.
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