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Report to the Chairmen, Committee on
Banking, Housing and Urban Affairs,
U.S. Senate, and Committee on Banking,
Finance and Urban Affairs, House of
Representatives

January 1991

INTERNATIONAL BANKING

Implementation of Risk-Based Capital Adequacy Standards

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The Honorable Donald W. Riegle, Jr.
Chairman, Committee on Banking, Housing
and Urban Affairs
United States Senate

The Honorable Henry B. Gonzalez
Chairman, Committee on Banking, Finance
and Urban Affairs
House of Representatives

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We have addressed implementation of the Basle framework to measure capital adequacy standards and to establish minimum capital standards for international banks. This framework was adopted in 1988 by members of the Basle Committee on Banking Supervision, under the auspices of the Bank for International Settlements in Basle, Switzerland. We conducted our review in response to congressional interest in banks' capital adequacy as addressed in the International Lending Supervision Act of 1983.

We are sending copies of this report to other interested congressional committees, the Chairman of the Board of Governors of the Federal Reserve System, the Chairman of the Federal Deposit Insurance Corporation, the Secretary of the Treasury, and other interested parties. Copies will also be made available to others on request.

Please contact me on (202) 275-4812 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix III.

Allan I. Mendelowitz, Director
International Trade, Energy,
and Finance Issues

Executive Summary

Purpose

The U.S. Congress has been concerned that banks may not be holding adequate capital to ensure their safety and soundness. To underscore its concern, Congress passed the 1983 International Lending Supervision Act, which directed the Federal Reserve and the Treasury Department to encourage other countries to work toward maintaining or improving banks' capital bases. In 1988, bank regulators on the Basle Committee on Banking Supervision with representatives from 12 countries, under the auspices of the Bank for International Settlements, adopted a framework to measure capital adequacy and to establish minimum capital standards for internationally active banks. The framework is designed to help improve the soundness and stability of the international banking system and to reduce some competitive inequalities among countries. Included in the framework are minimum capital adequacy standards that are to be fully achieved by the end of 1992.

GAO reviewed the implementation of the Basle framework to determine (1) what steps regulators and financial institutions are taking to implement the framework, (2) what progress has been made toward meeting the framework's objectives, and (3) what issues remain to be resolved in implementing the framework. GAO reviewed implementation in the United States, France, Germany, Switzerland, the United Kingdom, and Japan.

Background

Before the Basle framework was established, each individual national regulatory supervisor monitored risks that its banks faced according to domestic regulations, rather than international regulations or standards. However, because the world's financial markets have become increasingly international and competitive over the past decade, banks are increasingly interconnected by common borrowers and funding sources. Financial difficulties in a large, internationally active bank could have worldwide repercussions. Thus, the growing risks in the international banking system have underscored the need for international regulatory coordination.

Results in Brief

All 12 countries with representatives on the Basle Committee are implementing the Basle framework by making regulatory changes or establishing informal agreements with banks. Most banks covered by the capital adequacy standards in the six Basle Committee member countries GAO examined already meet, or are close to meeting, the minimum basle standards. These standards require banks to hold a 7.25 percent

ratio of capital to risk-weighted assets by year end 1990, and 8 percent by year end 1992. (See app. I.)

In making progress toward meeting the objectives of the Basle framework, international banks already have raised their capital levels; put more emphasis on profitability, risks, and the capital needed to support their activities; and disclosed more financial information. Adoption of the Basle framework demonstrates that countries with a wide variety of financial and regulatory structures can reach and implement an international agreement on regulatory standards for international banks.

U.S. and European regulators we spoke to emphasized that the Basle standard is only a minimum. They expect each of their banks to operate above this minimum, at a level commensurate with the riskiness of the activities of the individual institution.

While the Basle framework allows national discretion in implementing the standards, this flexibility has not lessened the value of the agreement. The Basle Committee continuously interprets the standards as issues arise. Although the Basle framework is important and will continue to be expanded, there are limits to what it can ultimately achieve. Some competitive inequality is likely to remain between banks from different countries because of differing domestic economic conditions as well as tax, accounting, and market structure differences. The Basle framework was not intended to address these factors, nor can it be used as a substitute for good bank management and regulatory supervision.

GAO's Analysis

Status of Implementation of the Basle Framework

Although the framework is not legally enforceable as a treaty, Basle Committee members see the framework as binding, and regulators in all six countries GAO studied have taken steps to implement it. The framework's flexibility allows for some national discretion to account for differences among countries. This implementation has not significantly changed any country's regulatory structure. Changes to banks' capital adequacy standards have been primarily technical and involve definitions of capital and assumptions about the risks involved in bank activities by risk-weighting assets and including off-balance-sheet items.

In the United States, bank regulators are implementing the Basle framework through legally enforceable capital guidelines in regulations that apply to all banks. U.S. banks that do not yet meet the final standard have undertaken activities, such as raising new capital and selling assets, to do so. Currently, if U.S. banks wish to expand, regulators take into consideration their ability to meet the 8-percent final standard. In addition, U.S. bank regulators are imposing a further capital standard, called a leverage ratio, on U.S. banks, which requires a minimum level of capital relative to total, rather than risk-weighted, assets.

Although the European Community countries GAO reviewed (France, Germany, and the United Kingdom) are generally implementing the Basle framework, the Basle standards themselves are not formally being used as a regulatory measurement tool because of the legally binding European Community banking requirements that are being incorporated in national regulations. There are only minor differences between the European Community requirements and the Basle framework, and they do not diminish the value of the framework.

In Japan, the Basle framework has been implemented through ministerial notification from the Ministry of Finance and affects only banks that have activities overseas. These banks have been active in raising capital in the Japanese stock market and have extensive holdings; however, since the stock market decline starting early in 1990, Japanese banks have been less able to raise capital. They also have experienced lower capital levels because the contribution to bank capital from unrealized gains on their stock holdings has been reduced by the market decline. These losses have forced the banks to reduce their assets and focus more than in the past on profitability, that is, return on assets, to meet the capital adequacy guidelines.

Progress Toward Meeting the Framework's Objectives

In each of the countries GAO reviewed, internationally active banks have made some progress toward meeting the Basle framework's objectives. For example, the Basle standards have made banks more sensitive to risks in their activities. Banks are focusing more on profitability and the capital needed to support their activities. Some countries have applied the standards to all of their banks, not just to internationally active ones. In addition, market forces have demanded that banks disclose more information about their capital levels and activities since a common standard has enabled more extensive comparisons of bank capital strength.

The Basle framework builds on the work of earlier Basle Committee initiatives. As the first multilateral bank regulatory standard, the Basle framework illustrates that consensus can be reached among countries with different financial and regulatory systems. The fact that other countries, in addition to Basle Committee members, have chosen to implement the standards demonstrates the framework's wide applicability, acceptance, and credibility.

Unresolved Issues Related to the Basle Framework

The Basle framework primarily addresses credit risk, the possibility that a borrower may default. Banks, however, face additional types of risk, and regulators on the Basle Committee are discussing proposals to incorporate measurement of these risks into capital adequacy guidelines.

The Basle Committee and the European Community are examining competitive issues that arise between banks and other financial institutions that conduct similar business activities as banks but are subject to different regulations. Other issues emerging from implementation of the framework, such as consolidation (of the parent company and its subsidiaries) and disclosure, are being studied by the Committee. Nevertheless, some competitive inequality will continue to exist among banks in different countries due to tax, accounting, and regulatory differences among countries as well as to different domestic economic conditions. The Basle framework cannot address these differences.

Fundamentally, capital is only one component in ensuring a bank's safety and soundness. Asset quality and managerial competence are also important. Strong bank management and regulatory supervision will continue to be important elements in ensuring the safety and soundness of the banking industry.

Recommendations

This report analyzes the progress of and limitations in implementing the Basle framework for measuring capital adequacy of internationally active banks; it contains no recommendations.

Agency Comments

GAO received oral comments on a draft of this report from the Federal Reserve Board and the Office of the Comptroller of the Currency. They generally agreed with GAO's findings, and their comments have been incorporated where appropriate. The Federal Deposit Insurance Corporation had no comments on this report.

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Abbreviations

EC	European Community
GAO	General Accounting Office
U.K.	United Kingdom

Introduction

Development of the Basle Framework

The changes and increasing risks within the international financial system over the past decade have underscored the need for better international coordination of bank supervisory practices. One area involves assessing a bank's capital in relation to the riskiness of its activities. Maintaining an adequate capital base is an important contribution to ensuring a bank's soundness and stability. Recognizing the need for an internationally accepted and uniform way of measuring banks' capital, in 1988 the Basle Committee on Banking Supervision¹ developed a framework for measuring capital adequacy which included a capital adequacy standard of 8-percent capital to risk-weighted assets² for internationally active banks. The 8-percent target is to be met by year end 1992. Bank supervisory authorities from the 12 nations that are members of the Basle Committee³ have undertaken efforts to implement the framework.

Need for International Coordination on Bank Capital Standards

Concern about capital adequacy (i.e., whether a bank's capital is sufficient to support its activities) centers on capital's role as a buffer to absorb unexpected losses that an institution's current earnings cannot cover. In so doing, maintaining adequate capital helps reduce the likelihood of bank failures, protect depositors and creditors, and maintain public confidence in the banking system.

The world's financial markets have become increasingly international and competitive over the past decade. Technological advances, new financial products, domestic deregulation, and decreasing distinctions between types of financial institutions have changed the face of these markets. These developments have led to corresponding increases in the associated risks assumed by banks. Banks face many types of risks, including

- credit risk (i.e., the risk of loss from default);
- interest rate risk (i.e., the risk of loss from movements in interest rates);

¹The name of the Committee was changed in 1989 from Basle Committee on Banking Regulations and Supervisory Practices to Basle Committee on Banking Supervision. The Committee meets under the auspices of the Bank for International Settlements.

²Risk weight refers to a percentage figure assigned to an asset category, such as loans, based on broad categories of credit risk. Assets with a high risk profile are assigned high weights while lower risk assets are assigned lower or zero weight. The capital adequacy standard is a ratio of total capital to risk-weighted assets.

³The members of the Basle Committee are representatives of the central banks and supervisory authorities of Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.

- foreign exchange rate risk (i.e., the risk of loss from movements in exchange rates);
- position risk from securities holdings (i.e., the risk of loss from movements in the market price of stock holdings, or holdings of debt instruments in the trading account); and
- operational/business risk (i.e., the risk of loss from computer system failure, human errors, fraud, and so forth).

Capital adequacy of banks has generally been monitored and regulated by individual national supervisors in accordance with domestic policies and practices. However, as international business conducted by banks grew, differences between countries' regulation heightened uncertainty and created real, and perceived, competitive inequalities among banks. At the same time, banks in some countries were showing generally declining capital ratios.⁴ Deteriorating asset quality, particularly with respect to less developed country loans, also posed additional risks in some financial markets. Banks are more interconnected now than in the past, and difficulties with, or the failure of, a large, internationally active bank could have significant worldwide repercussions. Thus, increasing systemic risks in the international banking system underscored the need for international regulatory coordination.

In response to both prudential and competitive concerns, bank regulators recognized the need for greater comparability in regulatory standards in the major industrial countries. Regulators agreed that one important way to help ameliorate international systemic risks is to strengthen banks' capital; however, capital requirements have competitive implications because it is more costly for banks to raise capital than to borrow funds. Nevertheless, some competitive inequality would be minimized if these strengthened capital levels were made under a common framework used by all bank supervisors. Thus, regulators sought to improve international consistency in the definition of capital and in the procedures for assessing capital adequacy in relation to banking risks.

International Agreement on the Basle Framework

Regulators from the major industrial nations had been discussing capital adequacy issues for some time in the Basle Committee. The first attempt toward reaching international agreement on minimum capital requirements was initiated in 1987 when the United States and the United Kingdom (U.K.) issued a bilateral accord for comment on a framework to

⁴The capital ratio is a ratio of a bank's capital to its assets.

evaluate the adequacy of a bank's capital in relation to its risk.⁵ This proposal laid the foundation for the Basle Committee's framework for measuring capital adequacy of internationally active banks.⁶ The framework, which was adopted in 1988, primarily addresses credit risk, which the Committee viewed as the major risk banks face. The Basle framework was designed to help achieve the following primary objectives:

- to strengthen the soundness and stability of the international banking system by increasing individual banks' capital levels and
- to level the international playing field because countries' different regulatory requirements were seen as causing some competitive inequality between banks.

An additional objective of the framework was to ensure that banks set aside enough capital to support their off-balance-sheet activities,⁷ a growing proportion of banks' risks that often were not included in domestic capital requirements.

The Basle framework for measuring capital adequacy defines a minimum standard which internationally active banks should maintain. This framework includes the following three basic elements:

- a common definition of capital, whereby capital is divided into two tiers: tier 1, or core, capital, and tier 2, or supplementary, capital (see app. I). The Committee emphasized tier 1 capital, reflecting the importance the Committee attached to increasing the quality, as well as the level, of the capital maintained by banks. Tier 1 represents only those capital elements that all member countries considered and agreed to be included as core capital. Tier 2 represents capital instruments used in some, but not all, member countries. Individual regulators can, therefore, determine which of these tier 2 elements will be permissible in their countries.
- a risk-weighting framework for relating capital to the riskiness of assets and off-balance-sheet activities. The framework divides assets and off-

⁵"Convergence of Capital Adequacy in the United Kingdom and the United States," January 1987.

⁶This framework is outlined in the International Convergence of Capital Measurement and Capital Standards, Committee on Banking Regulations and Supervisory Practices (Basle, Switzerland, July 1988).

⁷Off-balance-sheet activity refers to banks' business, often fee-based, that does not generally involve booking assets and taking deposits. An example of such an activity is issuing letters of credit.

balance-sheet activities into five broad categories based on their perceived riskiness. Each category is then assigned a risk weight, or percentage. Assets with lower risk weights would, therefore, require that the bank hold less capital for them than for assets with higher risk weights. The Committee recognized that these categories broadly capture credit risk and do not differentiate between the quality, or creditworthiness, of individual parties.

- a minimum risk-based capital standard. The capital standard is a ratio of total capital to risk-weighted assets and, thus, relates the amount of capital a bank must hold to the riskiness of its business activities. An interim standard requires banks to achieve a 7.25-percent ratio by year end 1990. The final standard requires banks to maintain capital at least equal to 8 percent of their risk-adjusted assets by year end 1992. This standard requires 4 percent to consist of tier 1 capital. Tier 2 capital cannot exceed tier 1 capital, but is required to fill the remainder of the 8-percent requirement.

For a more detailed discussion of the framework, see appendix I.

Objectives, Scope, and Methodology

The U.S. Congress has been concerned about whether the capital international banks hold is adequate to ensure their safety and soundness. To underscore its concern, Congress passed the International Lending Supervision Act in 1983, which directed the Federal Reserve and the Treasury Department to encourage other countries to work toward maintaining or improving banks' capital bases. In 1988, bank regulators in the Basle Committee on Banking Supervision addressed this concern by adopting the Basle framework for measuring banks' capital adequacy.

We reviewed the implementation of the Basle framework in the United States, France, Germany, Switzerland, the United Kingdom, and Japan. These countries include the major international financial centers of New York, London, and Tokyo. Our purpose was to determine (1) what steps regulators and financial institutions in these countries are taking to implement the framework, (2) what progress has been made toward meeting the framework's objectives, and (3) what issues remain to be resolved in implementing the framework.

We reviewed a number of banks, particularly large, internationally active banks covered by the standards in each country studied, so that a broad spectrum of viewpoints could be included. In selecting banks for

our review, we did not randomly choose sample participants and therefore did not attempt to make statistically valid projections or generalizations about how close banks are to meeting the standards. We also did not select banks to assess how their operations have been affected by the standards because banks have until the end of 1992 to meet the standards, and little or no data have been published yet that would permit such an analysis. For these same reasons, we did not assess how well the framework's objectives are being met; however, we did make preliminary observations on countries' progress toward meeting these objectives.

We interviewed and obtained documentary information from government regulators and bankers in the United States, France, Germany, Switzerland, the United Kingdom, and Japan. We met with officials from the Bank for International Settlements, the Basle Committee on Banking Supervision, the European Community (EC),⁸ and the Organization for Economic Cooperation and Development. We also interviewed bank rating analysts, academics, bank analysts, financial market experts, and officials of associations representing banks to obtain their views on implementation of the Basle framework. We reviewed regulations and instructions issued by regulators to banks on implementing the Basle framework.

We conducted our work between March and September 1990 in accordance with generally accepted government auditing standards. We received oral comments from the Federal Reserve Board and the Office of the Comptroller of the Currency on a draft of this report. Agency officials generally agreed with our findings, and their comments have been incorporated where appropriate. The Federal Deposit Insurance Corporation indicated that it had no comments.

⁸The European Community is composed of Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.

Status of Implementation of the Basle Framework

Although the framework is not legally enforceable as a treaty, Basle Committee members consider the framework to be binding, and regulators in all six countries we studied have undertaken efforts to implement it. The Basle framework was designed to be flexible and allow some national discretion in deciding how it would be implemented in each country. We determined that implementation of the Basle framework has not significantly changed any country's regulatory structure. The changes that have been made in banks' capital adequacy requirements have primarily involved definitions of capital, risk weights on assets, and inclusion of off-balance-sheet activities.

Most banks covered by the standards in those countries we visited already meet, or are close to meeting, the final 8-percent capital adequacy standard. Those banks which fall short today are expected to meet the final standard by the year end 1992 deadline. To meet the standards, banks in some countries have had to do very little, while others have had to raise capital, restructure assets, and alter their business strategies by increasing prices for services or changing the types of loans they make, among other things.

Regulators' Actions to Implement the Basle Framework

U.S. bank regulators are implementing the Basle framework through issuing regulatory guidelines in early 1989 as appendixes to banking regulations. Enforcement of these guidelines does not require changes to U.S. banking law.¹ U.S. regulators can use enforcement tools, such as memoranda of understanding, written agreements,² and cease-and-desist orders, to gain bank compliance with capital guidelines. U.S. banking officials and bankers told us banks regard the guidelines as binding.

All U.S. banks are required to meet the interim standard by December 31, 1990, and the final standard by December 31, 1992. U.S. bank regulators have been monitoring the banks' capital levels and encouraging banks to meet the Basle standards as soon as possible. For example, when reviewing bank applications for starting new activities, such as undertaking mergers and acquisitions or opening new branches, U.S. bank regulators take into consideration the ability of the banks to meet the 1992 standard.

¹The International Lending Supervision Act mandates that U.S. regulators require banks to achieve and maintain adequate capital by establishing minimum levels of capital.

²According to U.S. bank regulators, the difference between memoranda of understanding and written agreements is that written agreements are made public and, therefore, are more forceful than memoranda of understanding.

Switzerland and the United Kingdom have formally changed their banking regulations to incorporate the Basle framework. In December 1989, the Swiss Federal Council amended domestic capital adequacy requirements for banks based on the Basle framework without incorporating the framework completely. The Federal Council required all Swiss banks to meet the new capital adequacy requirements by December 31, 1989. In the United Kingdom, the Bank of England issued a notice in October 1988 which provided detailed guidance for assessing capital adequacy in line with the Basle framework. The U.K. system is now consistent with the Basle standards, and the capital ratios used for regulatory purposes are stated in Basle terms. All U.K. banks have been required to meet the Basle standards since December 31, 1989.

In 1988, French and German regulators implemented the Basle framework through agreements with the largest internationally active banks in each country rather than through legislative or regulatory changes. Domestic standards, rather than Basle standards, are used for regulatory purposes. The largest internationally active banks in both countries have been calculating and reporting their Basle ratios to bank regulators.

The Basle framework was implemented in Japan through ministerial notification issued by the Ministry of Finance in December 1988 and pertains only to banks that have establishments overseas; all city banks, trust banks, and long-term credit banks are subject to the framework. Banks with only domestic business can choose to comply with the Basle standard, otherwise they continue to follow the national Japanese capital standard, which does not provide for risk-weighting of assets. According to Japanese officials, those banks that choose to comply with the Basle standard voluntarily are those that plan to expand internationally in the future. Once a bank decides to follow the Basle standard, its decision is irreversible. Japanese government officials told us that as of August 1990, 91 Japanese banks were following the Basle standard, and 64 other banks remained under domestic regulation.

Japanese regulators have implemented changes to Japanese regulations that will help Japanese banks meet the Basle standards. In January 1990, restrictions on the issuance of convertible bonds were abandoned. The subordinated loan market³ was established in Japan in June 1990. A

³The subordinated loan market is a market for debt whose holders have a claim on the firm's assets only after the claims of the holders of "senior" debt have been satisfied. The subordinated debt holder is in a much riskier position with regard to being repaid than the senior debt holders.

market for securitized loans⁴ is gradually developing. Municipal and general loan sales are now permitted. Restrictions on issuing preferred stock will be relaxed. The Commercial Code was amended in June 1990, but implementing regulations have not been finalized yet.

Basle Standards and EC Directives Differ Slightly

In the European Community, banking regulations are being adopted as part of the EC's single market program. National regulators in the EC countries we visited believe it is more important to implement current EC banking directives, which also establish risk-based capital adequacy requirements, in their domestic banking regulations.⁵ Therefore, they have not legislatively changed their banking regulations to incorporate the Basle framework. EC directives are legally binding⁶ and apply to all banks, not just to internationally active banks. Although the EC directives and Basle framework represent a similar approach, capital elements are defined somewhat differently. This minor difference may prevent some EC regulators from fully incorporating the Basle framework⁷ because EC banks must comply with their domestic banking requirements as amended to incorporate the EC directives.

The types of capital permitted to count toward requirements affect banks' competitiveness and ability to meet both Basle and EC standards. According to some bankers, although they can meet the 8-percent Basle ratio, their ability to meet the 8-percent EC ratio depends on how capital is defined in domestic banking regulation. Regulators may not permit all

⁴Securitized loans refers to a group of mortgages or other loans (in Japan, only mortgages are securitized) that are pooled and used as the basis for debt securities sold to the public and institutional investors. The holders of the securities receive their principal and interest payments from the repayments made on the original pools of loans.

⁵The EC has three directives dealing with banks' capital adequacy: the Own Funds Directive, which defines qualifying capital; the Solvency Ratio Directive, which determines the quantity of the qualifying capital that is required; and the Capital Adequacy of Investment Firms and Credit Institutions Directive, which would define the capital standards for security activities of banks and security firms. The EC adopted the first two directives in 1989. The latter has been proposed, but has not yet been adopted.

⁶An EC directive requires member states to ensure that their national regulation conforms to the directive's objectives but leaves them free to decide how it should be implemented.

⁷The Basle Committee and the EC worked together in establishing their risk-based capital requirements to ensure consistency. Because 7—Belgium, France, Germany, Italy, Luxembourg, the Netherlands, and the United Kingdom—of the 12 Basle Committee members are also EC members, internationally active banks in these EC member countries will be implementing both sets of standards.

capital elements within the EC directives to count for regulatory purposes. For example, loan loss reserves⁸ are not included in the EC directives' definition of capital. However, the EC directives include a fund for general banking risks. Agreement has not been reached among EC member countries about which reserves should be included in the general fund.

According to EC regulators, financial analysts, and bankers we interviewed, the EC directives' requirements will meet or exceed the Basle capital requirements. Since the EC directives, not the Basle standards, will define regulatory capital for EC member countries, banks in some countries may be able to include more types of capital when calculating Basle ratios than when calculating EC ratios. Therefore, in some cases, an individual bank's Basle capital ratio may be higher than its EC capital ratio. Some banks may then have to raise capital to meet EC requirements, even though they have not needed to raise capital to meet Basle requirements.

Internationally Active Banks Meet or Are Close to Meeting the Basle Standard

According to estimates by the U.S. Federal Reserve Board, 96.4 percent of insured commercial U.S. banks meet the 1992 Basle standard, based on June 30, 1990, data. In addition, 45 of the top 50 U.S. bank holding companies,⁹ and 19 of the top 50 U.S. commercial banks¹⁰ meet the 1992 standard.

Most of the internationally active banks in Germany, Switzerland, and the United Kingdom already meet the final 8-percent standard. Internationally active French banks meet the interim standard and are close to reaching the final standard. Although further efforts are needed to meet the target and to cover the future development of assets and risks, French banking authorities are confident that banks will improve their capital position in order to meet Basle's final standard by the year end 1992 deadline.

⁸A loan loss reserve is a noncash account created against the possibility of future loss. These reserves recognize that a portion of an institution's loans may not be repaid and may be charged off against earnings.

⁹A bank holding company is a state-chartered company that controls one or more banks. The Federal Reserve Board determines which activities closely related to banking may be engaged in by bank holding companies either by the holding company, a bank, or through nonbank subsidiaries.

¹⁰Based on the Office of the Comptroller of the Currency's estimates for the top 50 U.S. commercial banks as of June 30, 1990.

As of March 31, 1990, the end of the Japanese fiscal year, only 3 of the 12 city banks had not reached the 1992 standard; of these, only 1 had not reached the interim 1990 standard. Since then, however, the decline in the Japanese stock market has reduced the amount of Japanese banks' hidden reserves,¹¹ making it more difficult for them to continue to meet the standards. During the early part of 1990, the weaker yen inflated Japanese banks' foreign currency-denominated assets, causing them to need more capital to back their assets.¹² The recent strength of the yen has reversed this trend, but fluctuations in the exchange rate will continue to affect Japanese banks' ability to meet the standard. While no official data have been published, industry analysts estimate that many banks have fallen below the 8-percent standard. At the same time, however, they expect all internationally active banks to meet the 8-percent standard by the end of the Japanese 1992 fiscal year (March 31, 1993).

Banks' Efforts to Improve Their Capital Ratios

Banks in the six countries we reviewed have raised capital through a variety of means, including issuing new stock, creating new capital instruments, disclosing hidden reserves, and improving profitability to generate capital through retained earnings. Banks in the United States, the United Kingdom, and Japan have been selling assets, such as loans, to decrease their capital requirements and, in many cases, to refocus their business activities. Financial analysts generally see improving profitability as the best means for raising capital since such action does not depend on the banks' efforts to raise capital in open markets.

It is noteworthy that under the Basle framework's definition of capital, subordinated debt is considered supplementary or tier 2 capital, not core or tier 1 capital. In developing its framework, the Basle Committee acknowledged that subordinated debt may not fulfill the requirements of core capital because of the fixed maturity¹³ and the inability to absorb losses except in liquidation (i.e., such debt must be repaid by an ongoing concern). Further, the framework restricts the amount of debt capital

¹¹Hidden reserves, also known as hidden assets, amount to the difference between the book value recorded on the balance sheet and the market value of these assets (book value means the purchase price). The reserves are technically called "latent hidden reserves."

¹²As the yen has declined in value against the U.S. dollar in 1990, the yen value of dollar-denominated loans has increased by a corresponding amount. From a capital standpoint, this means that more capital has had to be available to reflect the increased yen exposure of Japanese banks.

¹³Subordinated term debt covers debt instruments with a maturity of over 5 years that are subordinated. These instruments are subject to amortization of 20 percent per year (deducted from the capital base) when the maturity becomes less than 5 years.

that can be included in the bank's capital base to a maximum of 50 percent of the core capital element. The use of subordinated debt is likely to increase in some countries with implementation of the Basle framework. Regulators in Switzerland have increased the amount of subordinated debt that can count as capital, while Japanese regulators have allowed Japanese banks to issue subordinated debt for the first time.

U.S. banks have undertaken various activities to improve their capital positions. Some banks have issued stock and subordinated debt to raise capital from sources outside the bank. To raise capital internally, some banks have lowered operating costs, slowed asset growth, sold assets, and increased prices for services and for various products. One reason banks have needed to increase capital is to account for off-balance-sheet activities now included under the risk-based standards. By decreasing assets through asset sales and securitization, banks can lower their need for capital.

Banks in European countries have focused more on increasing capital from other sources than on selling off assets. However, according to European bankers, this strategy has generally been undertaken more for business reasons, such as expansion, than for the need to comply with the Basle standards. European banks' efforts to change asset composition, or to restructure portfolios by selling particular types of assets, or to limit growth of specific types of assets to meet the Basle standards have been limited. Markets for these types of activities are underdeveloped. However, within the past 2 years, some large U.K. banks have disposed of assets to improve their capital ratios. Methods for transferring the risks associated with banks' loans by selling or securitizing them have become more prevalent in the United Kingdom.

French banks have focused on raising capital. Some of the largest internationally active French banks are state owned, however, and thus have limited capital-raising powers. For example, they cannot raise capital by offering shares to the public, nor has the government provided sufficient capital for the banks to meet the Basle standards. As a result, they have sought other sources of capital, including receiving capital from nonbanking financial companies.

Japanese banks have undertaken various activities to meet the Basle standards. The largest Japanese banks were very active in raising equity capital in the stock market after the Basle framework was adopted. The Japanese stock market decline in 1990 has reduced opportunities for Japanese banks to raise more capital, in addition to reducing

the amount of capital Japanese banks have in unrealized gains on their holdings of corporate stock, commonly known as hidden assets. This decline has forced the banks to shift their activities into less risky asset categories, to restrain asset growth, and to focus more on profitability than in the past.

To increase profitability, large Japanese banks have recently shifted their emphasis to making more loans to small and medium-sized companies relative to large corporate clients. The banks can charge more for these loans because these companies have fewer options for financing. Japanese banks have also been trying to increase fee income and are raising their prices for different transactions. Banks have begun issuing subordinated debt to life and non-life insurance companies. In addition, Japanese banks have been concentrating more on asset and liability management than in the past.

Progress Toward Meeting the Objectives of the Basle Framework

In each of the six countries we reviewed, we found that internationally active banks have made progress toward meeting the objectives of the Basle framework. Implementation of the Basle standards is helping to increase the safety and soundness of the banking system by making banks more sensitive to any risks in their activities. It is also making banks focus more intently on profitability and the capital needed to support their activities, especially their off-balance-sheet activities. By instituting common international capital adequacy standards, the Basle framework has begun to level the international playing field and has reduced some of the competitive inequality between internationally active banks in different countries.

Progress Toward Increasing Safety and Soundness of the Banking System

Regulators and private sector officials view the Basle standards as a start toward forcing banks to focus more on the risks underlying their activities and setting aside capital to support their activities. In this way, if risks are better covered, stability of the banking system is improved. Bankers and regulators in different countries told us that one of the biggest strengths of the Basle framework is that it imposes more discipline on the international banking system. They believe the Basle framework is helping to strengthen the banking system because banks—particularly those that were seen as undercapitalized—have improved their capital positions. Japanese bank regulatory and private sector officials believe that forcing banks to keep a healthy balance sheet by replenishing capital will contribute to world financial stability.

Foreign and U.S. officials we interviewed believe that inclusion of off-balance-sheet activities helps better capture the riskiness of banks' activities and contributes to the safety and soundness of the system. In addition, the pricing of financial products may become more realistic because banks have to set aside capital to support their activities. These actions both strengthen the system and begin to level the playing field.

Regulators see the Basle standards as an impetus for making banks focus more on the risks underlying their activities. For example, U.S. banks have been concentrating more on their business strategies. Banks generally are focusing more on profitability (return on capital or assets)—to justify the use of capital—than on asset growth, or growth for the sake of growth. For example, Japanese banks have been more concerned with return on assets and the riskiness of their assets than ever before. Japanese banks have begun instituting asset and liability management systems.

Although the Basle framework specifically targets internationally active banks, some countries have broadly applied the Basle framework to all of their banks, thus helping to strengthen the international banking system. For example, all U.S. banks and bank holding companies are required to meet the Basle standards.¹ Additionally, all EC banks will essentially be implementing the Basle standards by complying with the EC standards, which are very similar. Similarly, all Swiss banks have implemented the Basle framework through stringent domestic capital requirements.

U.S. and European regulators we spoke to emphasized that the Basle standard is only a minimum. They expect each of their banks to operate above this minimum, at a level commensurate with the riskiness of the activities of the individual institution.

Some countries have standards which set higher capital requirements and/or incorporate risks or assets not covered by the Basle framework. For example, effective September 1990, the U.S. Federal Reserve Board has established a minimum leverage ratio requirement for all banks,² in addition to the Basle capital adequacy standard. The minimum leverage ratio is the ratio of a bank's core or tier 1 capital, which primarily consists of equity,³ to total assets. The Office of the Comptroller of the Currency also issued a bank minimum leverage requirement similar to the Federal Reserve's. The Federal Deposit Insurance Corporation has issued proposed bank minimum leverage requirements for public comment. The minimum leverage ratio is based on the principle that any bank, no matter how minimal its credit risk, needs to maintain some level of capital to protect against losses from other types of risk and from unforeseen and extraordinary events.

Some of the U.S. regulators we interviewed expressed the concern that since the Basle capital adequacy ratio does not capture all risks faced by banks, banks may be able to shift their portfolios to hold less capital under the Basle standard than they were required to hold under the

¹For regulatory purposes, small U.S. banks with under \$1 billion in assets are permitted to perform a "de minimis" or simple test to determine their compliance with the standards. If they pass this test, they are not required to complete additional paperwork required of larger banks or of those that do not pass the simple test.

²The minimum leverage ratio is 3 percent for those strong banking institutions which are top rated under the regulatory rating system. Banks must maintain higher capital reserves based on their risk profiles. Any institution experiencing or anticipating significant growth would be expected to maintain higher capital levels.

³Equity is the ownership interest of common and preferred stockholders in a company.

former U.S. capital adequacy requirement. The risk-based Basle standard requires banks to maintain the full 8-percent capital only on those assets that are risk weighted at 100 percent. Theoretically, a bank could shift all its assets into the zero-percent risk category and not be required to hold any capital against these assets even though these assets may entail other types of risk.

Regulators in the United Kingdom and the United States are looking beyond the 7.25-percent interim standard and are implementing the final 8-percent standard, although, according to the Basle agreement, the final standard is not effective until year end 1992. U.S. regulators emphasize that the final standard is only a minimum, and banks must meet or exceed the minimum if they are considering expansion or are engaged in risky activities. Although U.K. regulators require that banks meet the final 8-percent ratio, the more liberal interim arrangements regarding the limits on general provisions for loan loss reserves will be allowed.⁴ Japanese regulators require Japanese banks to meet only the interim standard; however, once a bank meets the final standard it is not allowed to fall below it again. Banks in Switzerland already surpass Basle's 8-percent standard because of stricter domestic capital requirements.

In addition, a common capital adequacy standard has enabled better comparison of bank capital strength, so investors and other financial market participants are seeking more information on bank capital. This interest, in turn, has forced banks to disclose more about their activities. For example, Japanese banks now publish in their annual reports information on their tier 1, tier 2, and hidden assets. Although there is no requirement for individual banks to disclose their Basle capital adequacy ratio, bank officials and bank analysts we spoke with felt that banks will be forced to disclose this information for competitive reasons.

In some countries, adoption of the Basle standards has also led to increased regulatory monitoring of banks. A bank's Basle ratio is a regulator's tool in the supervision process. For example, to verify U.S. banks' compliance with the Basle standards, U.S. regulators are requiring banks to provide them with much more data on their activities than in the past. In Japan, the Ministry of Finance has instituted new reporting requirements as a result of the Basle framework.

⁴Until another agreement is reached, loan loss reserves will be limited to 1.5 percent of risk-weighted assets under the interim 1990 standards and 1.25 percent under the final 1992 standards.

Progress Toward Reducing Competitive Inequality

Regulators in all countries we reviewed generally agree that the Basle framework is a step toward reducing competitive inequality, or leveling the playing field, among banks from different countries; however, it is just a start. Although differences will remain between countries because of tax, accounting, and regulatory variations, all internationally active banks in the countries that have adopted the Basle framework now use the same definition of core, or tier 1, capital and many of the same elements included in tier 2, or supplementary capital. Regulators and bankers alike see the adoption of a common definition of core capital as one of the most positive developments brought about through the Basle framework. In addition, the risk weights on different items are similar in all countries implementing the framework.

As the first internationally accepted regulatory banking standard, the Basle framework illustrates that consensus can be reached among countries with different financial and regulatory environments. It also heightens the awareness of bank capital adequacy issues among regulators in different countries and increases international cooperation. The fact that additional countries such as Australia, New Zealand, Austria, Bahrain, and Singapore have chosen to implement the Basle framework demonstrates its wide applicability, acceptance, and credibility.

Unresolved Issues Related to the Basle Framework

Given the numerous risks international banks face, as well as the impossibility of capturing all the risks in one ratio, the Basle Committee noted in the original framework that it would address credit risk first. Additional risks would be included later. The Committee also recognized that there were still other factors that it could not address. Some of these would be left up to individual country regulators' discretion to resolve. Others reflect differences between countries' economic conditions and tax, regulatory, and accounting systems. The Basle Committee is monitoring and discussing issues that arise during implementation of the framework.

Furthermore, while the Committee viewed capital adequacy as an important factor for assessing a bank's strength, it recognizes that other criteria also exist for assessing a bank's safety and soundness. The quality, purpose, and use of capital are important when assessing the strength of a bank; however, other factors must be considered when evaluating a bank's financial condition.

Expansion of the Basle Framework

The Basle Committee views the capital adequacy framework as an evolving process. The Committee decided that credit risk was the primary risk faced by most banks and, thus, should be addressed first. In addition, the Committee determined that credit risk could be quantified through broad, although somewhat arbitrary, risk categories (see app. I). While the Basle Committee recognized that banks face many other risks, such as changes in the value of their holdings due to movements in interest rates (interest rate risk), in foreign exchange rates (foreign exchange rate risk), and in the prices of securities and traded debt instruments (position risk), credit risk would be addressed first since it is the primary risk faced by banks.

The Committee is looking at ways to refine the framework to better include measurement of these other risks; however, these issues are extremely complex and will probably remain open for some time. Basle Committee subcommittees are developing proposals to measure these additional types of risk, but they do not expect to finalize any agreements until late 1991 at the earliest.

Issues Left to National Discretion by the Basle Framework

We found risk-weight categories for assets and supplementary capital, particularly reserves, to be issues of concern to national regulators in the countries we studied.

Issues Regarding Risk-Weight Categories for Assets

Bankers, regulators, and financial market analysts in the six countries we reviewed expressed concern over the arbitrary nature of risk weights assigned to bank assets. However, when drafting the framework, the Basle Committee recognized that it could only assign risk weights based on broad categories of types of borrowers due to the inherent difficulty of creating capital standards for such a diverse group of countries and banks (see app. II). In some cases, the capital requirements for both high-risk loans and low-risk loans will be the same. For example, all private sector nonfinancial institution loans (except for residential mortgages) are equally weighted at 100 percent regardless of the credit history of the borrower. Given the broadness of the risk weights, bank managers and regulators are therefore responsible for assessing the riskiness of individual assets and requiring any additional capital needed to support those assets.

As with most regulation, unintended effects may occur from implementation of the Basle framework. For example, banks may incur increased risk from selling off bank assets because the bank may sell its most profitable business (i.e., its most "salable" assets), leaving the bank with less profitable and possibly riskier assets. Selling assets to raise capital in the short run may have an adverse impact on the bank's ability to generate income in the long run. It may also incur greater risks if it shifts assets into different risk categories to take advantage of the lowest risk weight possible to decrease capital requirements, or if it shifts into higher risk assets within categories to increase profitability. The framework leaves it up to the individual country regulators to stay abreast of changes in the market and incorporate additional risks into the framework to adjust for these changes.

The Basle framework was designed to allow individual countries' regulators limited flexibility to interpret some of the risk weights as they best fit into their financial systems. The Basle Committee did not intend that bank managers would use these broad risk-weight categories to make pricing and lending decisions. It is conceivable that some banks, in an attempt to increase short-term profitability, may choose to fund higher-risk loans that command higher interest rates to boost profit margins,

rather than funding lower-risk loans with lower profit margins, but which have identical capital charges.

In addition, as new financial products are brought to the market, the regulators must decide how these financial instruments fit into the framework and assign them to an asset risk category, adding to the complexity of the initial framework. For example, U.S. regulators cited the numerous phone calls they have received from financial institutions inquiring about risk weights on products as a factor making it difficult to implement the Basle framework.

Issues Concerning Supplementary Capital, Particularly Reserves

The Basle framework represents negotiated compromise, resulting in a final definition of capital that is broader than those definitions used by many of the participating countries. As such, flexibility designed into the framework allows national discretion in defining supplementary capital elements (tier 2), which may permit banks to have advantages in some areas, most notably regarding which reserves may count as capital. Although the Basle Committee does not regard itself as a tribunal, it has made decisions about whether certain instruments count as tier 1 or tier 2 capital, according to the framework's criteria.

We found the issue of defining which reserves, including loan loss reserves, revaluation reserves,¹ and undisclosed reserves,² should count as tier 2 capital to be one main area of contention which causes diversity in implementation. The framework allows various forms of reserves to be included as capital. Due to differences in countries' accounting systems and regulators' concerns that not all tier 2 elements represent a strong form of freely available capital, banks in some countries are not permitted to hold all five forms of tier 2 capital, such as various types of reserves (see app. I).

Regulators in the countries we reviewed disagree on whether loan loss reserves should be counted as capital. Not all regulators believe loan loss reserves are a strong form of capital because some reserves may be earmarked for already identified losses and are not freely available to support future or unanticipated losses. As a result, some banks believe

¹Revaluation reserves are an accounting restatement or revaluation of assets to reflect current market values, reflected on the balance sheet.

²Undisclosed reserves as defined in the Basle framework are unpublished or hidden reserves that must be shown on the bank's income statement (profit and loss account) and accepted by its national regulator.

they are competitively disadvantaged because their foreign competitors can hold different tier 2 capital elements and thus have access to relatively cheaper forms of capital. However, since banks have access to different forms of tier 2 capital, the overall effect on banks' competitiveness cannot be determined.

Issues Arising From Implementation of the Basel Framework

Other issues arising from implementation of Basel standards are being addressed at both the individual country and international levels. The Committee is studying many of these issues, such as consolidation,³ disclosure, competition between banks and other financial institutions, and hedging.⁴ The Basel Committee has not taken a definitive position on these issues.

The Issue of Consolidation

The Basel standards were intended to be applied at a consolidated level, but the definition of consolidation varies among countries. Some countries apply consolidated ratios for a bank's entire portfolio; others apply them only at the bank level or deduct out securities or certain investments from the ratios. Each route has competitive and regulatory consequences. For example, the United States defines its consolidated ratio so as to require both the bank and its bank holding company to comply with the Basel standards; however, securities subsidiaries are deducted from the consolidated ratio. Holding company-type structures are not as common in Europe as they are in the United States, although in some cases banks are part of larger financial entities within Europe. Most European banks can conduct more activities, either directly or indirectly, than can U.S. banks. The issue of consolidated supervision is being discussed within the EC and the Basel Committee.

The Issue of Disclosure

The Basel framework does not require banks to publicly disclose their capital ratios. Disclosure of Basel capital ratios is not uniform internationally. Some bank officials and regulators suggest exercising caution when using the ratios because (1) some countries are implementing the final requirements while others are implementing the interim arrangements and (2) personnel in the banks, regulatory offices, and auditing

³Consolidation is an accounting term used for a bank's combined financial statement of the parent company and its subsidiaries.

⁴To hedge is to reduce risk by taking a position that offsets existing or anticipated exposure to a change in market rates.

firms are still learning how to implement the Basle framework. However, a number of banks are already disclosing their Basle capital ratios in response to requests from market participants. Market and regulatory pressure for greater bank disclosure of financial information is likely to continue.

The Bank for International Settlements' reporting requirements call for each country to report a single Basle capital ratio that represents the average of the largest internationally active banks. To improve comparability, regulators require that the average Basle ratio of only large internationally active banks be calculated and reported to the Bank for International Settlements; however, comparability of international bank ratios is limited. While the framework may eventually improve the openness of information ("transparency"), not all countries have mandated that banks publicly disclose either the Basle ratios or the methodology for computing the ratios. Knowing how a bank computes its capital ratio and the elements within that ratio (i.e., the type of tier 2 capital elements used) is important when using the ratios to compare banks in different countries. However, officials in the six countries we reviewed believe that the ratio can be somewhat useful in a general sense, to compare banks of similar size in the same country.

The Issue of Competition Between Banks and Other Financial Institutions

The Basle Committee, along with other international entities, is addressing concerns about the particular competitive inequalities that may exist between banks and other financial institutions. The Basle framework applies only to banks and not to other financial institutions, such as securities firms, credit corporations, and insurance companies. The capital adequacy requirement may disadvantage banks when competing against these firms, unless some harmonization of capital standards is reached within the financial industry.

The competitive equality, or level playing field, between banks and securities firms is of increasing concern, given the blurring distinctions between financial products and institutions. The Basle Committee is discussing this issue with securities regulators as it seeks to expand the existing framework to incorporate risks from securities holdings. Additionally, the EC is currently addressing this issue under its 1992 single market program. Under this program, banks and securities firms will be granted licenses which allow them to conduct a broad range of financial services. Because banks and securities firms will have similar powers, the EC is working to harmonize some regulations, including capital requirements.

Issues Related to Hedging

By focusing on credit risk, the Basle framework considers the total risk of the bank to be the sum of the risks associated with each asset or loan. In looking at other forms of risk, such as interest rate risk, foreign exchange risk, and position risk, this approach would be inadequate. The total risk of the bank is not the sum of these risks. Similarly, the interest rate risk (or foreign exchange risk) that a bank faces is not the sum of the interest rate risk of each loan or other asset.

The interaction between different assets is important. Banks use assets in their portfolios to "hedge" their position, or to use assets with different and offsetting risks to minimize the overall risk of their portfolios. For example, a bank may hold government bonds in its portfolio. While the risk of default is low, and the risk weight assigned by the Basle framework is low, there is interest rate risk—the value of the bond could change if interest rates change. To offset the risk of the bond diminishing in value if interest rates increase, the bank could purchase an option, a financial instrument that would give the bank the right to sell the bond at a fixed price at some future date, i.e., a "put" option. Essentially, the option functions as insurance against serious loss. In practice, the range of financial instruments used by banks and other financial institutions to hedge against risks is extensive and complex.

Assessing the total risk of a bank's portfolio must reflect the full range of risks that a bank faces and recognize that some risks are offsetting. Diversification of assets, while maintaining the quality of the assets, is a key component of prudent banking. Banks that have their assets concentrated in one sector or region, for instance, are more subject to losses if that sector or region is in decline than banks that have diversified their portfolios.

Devising a capital adequacy standard that captures this total risk is a complex process. Basle subcommittees addressing these issues have reported both progress and problems in taking complex hedging strategies into consideration in developing proposals for incorporating these additional risks into the framework. They are trying to ensure that banks, which assume different forms of risk, will be required to provide adequate capital against the possibility of (1) loss in the total portfolio or (2) loss when a hedging strategy fails without requiring undue levels of capital when the bank has effectively hedged or insured against loss. Taking into consideration hedging strategies that rely on offsetting risks of similar assets is particularly difficult for the interest rate risk subcommittee. Hedging strategies that seek to address both interest rate

and foreign exchange risk simultaneously are even more complex and difficult to address in an international forum.

Issues the Basle Framework Cannot Address

Despite the efforts of the Basle Committee, some competitive inequality will still exist due to tax, accounting, economic, and regulatory differences between countries, which the framework cannot address. These differences also affect comparability of Basle ratios between banks in different countries. For example, the way a bank accounts for the value of its assets and investments may cause differences to occur in risk-based ratio calculations, depending on the accounting standards the bank is required to use. The Basle framework cannot address these differences.

The Basle framework only establishes a minimum for a bank capital adequacy requirement, and other factors must be considered. For example, it is possible that a bank may meet the minimum Basle capital adequacy standards and still be inadequately capitalized if it engages in highly risky activities. When assessing a bank's financial condition, additional capital may be needed to account for additional risks from the quality of loans and investments, liquidity, the quality and level of earnings, investment and loan-portfolio diversification, and the management's ability to monitor and control the bank's financial and operating risks. Strong bank management and regulatory supervision will continue to be important elements in ensuring the safety and soundness of the banking industry.

Basle Framework for Capital Adequacy

The Basle Committee outlined a framework¹ for risk-based capital that includes both a definition of capital and a method for calculating risk-weighted assets by assigning assets and off-balance-sheet items to broad risk categories. A bank's risk-based capital ratio is calculated by dividing its qualifying capital (the numerator of the ratio) by its risk-weighted assets (the denominator of the ratio). The following discussion illustrates the elements that constitute the ratio.

Three Parts to Framework

Qualifying Bank Capital

The Basle framework defines the elements of qualifying bank capital. Qualifying capital consists of two types of capital components: "core capital" (tier 1 capital) and "supplementary capital" (tier 2 capital). The capital elements are as follows:

Tier 1

- paid-up share capital/common stock
- disclosed reserves/retained earnings

Tier 2

- undisclosed reserves²
- asset revaluation reserves²
- general provisions/general loan loss reserves
- hybrid (debt/equity) capital instruments
- subordinated term debt³

¹The framework is more completely described in the Basle Committee's paper *International Convergence of Capital Measurement and Capital Standards*, July 1988. The U.S. final capital regulations are detailed in the Federal Register 54:11500-11517 (Federal Deposit Insurance Corporation); 54:4168-4184 (Office of the Comptroller of the Currency); 54:4186-4221 (Federal Reserve System); and Regulations H (12 C.F.R. 208), Appendix A, and Regulation Y (12 C.F.R. 225), Appendixes A and B (Federal Reserve System).

²Undisclosed reserves and asset revaluation reserves are not allowed under U.S. generally accepted accounting principles.

³Subordinated term debt is limited to 50 percent of tier 1 elements.

Deductions from capital base:

from tier 1: goodwill

from total capital (tier 1 and tier 2):

- Investments in unconsolidated banking and financial subsidiary companies⁴
- Investments in the capital of other banks and financial institutions (at the discretion of national authorities)

Risk-Weight Categories

The second part of the framework includes different categories of asset and off-balance-sheet exposure, weighted according to broad categories of relative riskiness. The framework delineates five risk categories, ranging from the least risky at zero percent to the most risky at 100 percent, as defined in table I.1.

⁴The presumption is that the framework would be applied on a consolidated basis to banking groups.

Appendix I
Basle Framework for Capital Adequacy

Table I.1: Risk Weights by Category of On-Balance-Sheet Assets

Percent	Asset categories ^a
Zero	Cash
	Claims on central governments ^b and central banks denominated in national currency and funded in that currency
	Other claims on OECD central governments and central banks
	Claims collateralized by cash or OECD central-government securities or guaranteed by OECD central governments
20	Claims on multilateral development banks and claims guaranteed by or collateralized by securities issued by such banks
	Claims on banks incorporated in the OECD and loans guaranteed by OECD-incorporated banks
	Claims on banks incorporated in countries outside the OECD with a residual maturity of up to 1 year and loans with a maturity of up to 1 year guaranteed by banks incorporated in countries outside the OECD
	Claims on nondomestic OECD public sector entities, excluding central government, and loans guaranteed by such entities
	Cash items in process of collection
50	Loans fully secured by a mortgage on residential property that is or will be occupied by the borrower or that is rented
100	Claims on the private sector
	Claims on banks incorporated outside the OECD with a residual maturity of over 1 year
	Claims on central governments outside the OECD (unless denominated in national currency and funded in that currency. See above)
	Claims on commercial companies owned by the public sector
	Premises, plant and equipment, and other fixed assets
	Real estate and other investments (including nonconsolidated investment participations in other companies)
	Capital instruments issued by other banks (unless deducted from capital)
0, 10, 20, or 50 ^c	All other assets
	Claims on domestic public sector entities, excluding central government, and loans guaranteed by such entities ^d

Legend

OECD = Organization for Economic Cooperation and Development. The OECD is made up of 24 developed country members. Its goals are to achieve high economic growth, contribute to sound economic expansion, and contribute to the expansion of world trade.

^aU.S. regulators only allow four risk categories—0, 20, 50, and 100 percent.

^bUnder the U.S. capital standards, U.S. Treasury securities and Government National Mortgage Association (GNMA) securities are included in this category.

^cThese are left up to national discretion. U.S. regulators only allow 20- and 50-percent categories.

^dUnder the U.S. capital standards, U.S. government sponsored agencies that include obligations of the Federal Home Loan Mortgage Corporation (FHLMC), the Federal National Mortgage Association (FNMA), the Farm Credit System, the Federal Home Loan Bank System, and the Student Loan Marketing Association (SLMA) fall under this category.

Source: International Convergence of Capital Measures and Capital Standards, Committee on Banking Regulations and Supervisory Practices (Basle, Switzerland, July 1988), pp. 24-25.

In addition to on-balance-sheet items, the framework also takes into account off-balance-sheet items and includes a credit conversion factor for such items, derived from the estimated size and likely occurrence of the credit exposure. Member countries have some limited discretion to allocate particular instruments into the categories based on the nation's instrument characteristics. The credit conversion factors for off-balance-sheet items are listed in table I.2.

Table I.2: Credit Conversion Factors for Off-Balance-Sheet Items

Credit conversion factors	Instruments
100 percent	Direct credit substitutes. For example, general guarantees of indebtedness, such as standby letters of credit serving as financial guarantees for loans and securities, and/or acceptances, including endorsements with the character of acceptances Sale and repurchase agreements with recourse. Some credit risk remains with the bank because of the possibility of recourse Asset sales with recourse. Again, some credit risk remains with the bank Forward asset purchases, forward deposits, and partly paid shares and securities that represent commitments with certain drawdowns
50 percent	Transaction-related contingent items. For example, standby letters of credit related to particular transactions, performance bonds, bid bonds, and warranties Note issuance facilities and revolving underwriting facilities Other commitments with an original maturity of over 1 year. For example, formal standby facilities and credit lines
20 percent	Short-term trade-related contingencies that are self-liquidating. For example, documentary credits collateralized by the underlying shipments
Zero percent	Commitments with an original maturity of up to 1 year or which can be unconditionally cancelled at any time

Source: Raj Bhala, *Perspectives on Risk-Based Capital*, Bank Administration Institute (Rolling Meadows, Illinois: 1989), p. 100.

Capital Adequacy Ratio

The third part of the framework is the capital ratio, defined as the ratio of the bank's qualifying capital divided by its total risk-weighted assets. The target standard ratio is set at 8 percent, of which core capital (tier 1) is to be at least 4 percent. Tier 1 plus tier 2 must be equal to or greater than 8 percent of the total risk-adjusted assets. Tier 2 capital cannot be more than tier 1 capital (i.e., tier 2 cannot be included as additional capital if it exceeds tier 1 capital).

Under the Basle framework, the Committee agreed to a transitional standard of 7.25 percent (to be achieved by the end of 1990) and a final

Appendix I
Basle Framework for Capital Adequacy

standard of 8 percent (to be achieved by the end of 1992). Table I.3 outlines the transitional arrangements as noted in the Basle agreement.

Table I.3: Transitional Arrangements for Bank Capital Adequacy Standards

Basle framework elements	Initial standard	Standard at end of 1990	Standard at end of 1992
Minimum standard	Level prevailing at end of 1987	7.25 percent	8.00 percent
Measurement formula	Core (tier 1) elements	Core elements (3.625 percent plus 3.625 [tier 2] percent)	Core elements (4 percent plus 4 percent)
Supplementary elements that can be included in tier 1	Maximum 25 percent of total core elements	Maximum 10 percent of total core elements (i.e., 0.36 percent)	None
Limit on general loan loss reserves in supplementary elements ^a	No limit	1.5 percentage points or, exceptionally, up to 2.00 percentage points	1.25 percentage points or, exceptionally and temporarily, up to 2.00 percentage points
Limit on term subordinated debt in supplementary elements	No limit (at national discretion)	No limit (at national discretion)	Maximum of 50 percent of tier 1
Deduction for goodwill	Deducted from tier 1 (at national discretion)	Deducted from tier 1 (at national discretion)	Deducted from tier 1

^aThis limit would only apply if no agreement is reached on provisions for reserves in capital.

Source: International Convergence of Capital Measurement and Capital Standards, Committee on Banking Regulations and Supervisory Practices (Basle, Switzerland, July 1988), p. 32.

Financial and Regulatory Systems for the Six Countries Studied

The financial and regulatory systems in the six countries we reviewed are all different. The U.S. system is decentralized, with banks' activities limited to banking functions. Germany and Switzerland have traditionally had universal banking systems, while the trend toward universal banking is more recent in the United Kingdom and France. Banks in Japan have traditionally been specialized; however, distinctions between types of banks are becoming less pronounced.

This appendix is a synthesis of information obtained from foreign and domestic bank regulators we spoke with and various published sources. We did not independently corroborate this information.

The United States

The creation of a dual banking system, consisting of federal and state-chartered banks, has resulted in a decentralized system in the United States. In 1933, the Glass-Steagall Act separated banks' deposit-taking and lending activities from securities-underwriting activities. However, with recent deregulation and expanded bank powers, the distinctions between banks and other financial institutions are blurring. Banks operate in a highly regulated environment where they must obtain permission from banking regulators to obtain a bank charter, to branch, to merge, to consolidate, to acquire other corporations, or even to close operations.

Three federal bank regulators, as well as each state's banking regulators, are responsible for promoting and ensuring the soundness of the nation's system of insured banks. The Office of the Comptroller of the Currency charters, examines, and supervises national banks. Individual state banking regulators oversee all other banks. In addition, the Board of Governors of the Federal Reserve System has examination and supervision responsibilities for state-chartered banks, which are members of the Federal Reserve System, bank holding companies, and nonbank subsidiaries. The Federal Deposit Insurance Corporation has similar responsibilities for those state-chartered banks that are not members of the Federal Reserve. In their examination of banks, regulators assess five critical aspects of bank operations and condition — capital adequacy, asset quality, management, earnings, and liquidity.

Germany

Germany has a universal banking system. Germany's three largest banks are Deutsche Bank, Dresdner Bank, and Commerzbank. Additionally, many German banks historically have had close ties with industrial and commercial companies. These ties may be reinforced by equity

investments in such companies. Due to their widespread activities, banks play a dominant role in German financial markets.

In the view of a financial analyst, Germany has a formal and stringent bank regulatory framework. As such, German bank requirements and supervision are usually defined in, and implemented through, laws and legislative regulations. German banking requirements are contained in the Banking Act of 1961 and its subsequent amendments. According to the German Federal Banking Supervisory Office, this act reflects the universal banking concept through its broad definition of "banking institution," whereby any institution, with some exceptions, engaging in a banking activity is defined as a bank if the scale of the enterprise calls for a commercially organized business undertaking. Bank supervision is carried out by the Federal Banking Supervisory Office, working in close cooperation with the Deutsche Bundesbank, Germany's central bank.

Switzerland

Switzerland, like Germany, has a universal banking system. Therefore, banks can engage in every type of banking and financial activity either directly or through subsidiaries. According to financial analysts, the activities which qualify an institution as a bank are widely defined and include deposit-taking, lending, and underwriting and dealing in securities. The Swiss banking market is dominated by the three largest banks—Union Bank of Switzerland, Swiss Bank Corporation, and Credit Suisse. For the most part, these banks do not have direct holdings with nonfinancial businesses. While smaller banks and finance companies are generally more specialized, their specialties fall within a broad range of financial services. As in Germany, the banks are the leading financial market players.

According to financial analysts, banking in Switzerland has been governed by comprehensive banking legislation for many years. The major provisions governing banking regulation and supervision are contained in the Federal Law on Banks and Savings Bank of 1934 and the Implementing Ordinance of 1972. The Federal Banking Commission supervises the Swiss banking system. The Commission issues written instructions to banks and auditing firms regarding specific banking law regulations and reporting requirements. Private, officially authorized, independent auditors -- rather than the Commission-- conduct direct examinations of the banks.

The Swiss National Bank, Switzerland's central bank, collects information from and imposes certain prudential requirements on banks. In the

view of financial analysts, the Swiss Bankers Association is a very influential body within the financial sector. The association has established rules and a code of ethics which its members are expected to follow. It cooperates closely with the government and the Swiss National Bank in developing new banking legislation.

The United Kingdom

As opposed to the universal banking system found in other European countries, in the United Kingdom banks form only one part of the wider banking and finance sector. Many of the sector's nonbank participants compete with banks in specific activities. The United Kingdom has no formal barriers preventing financial firms from engaging in diverse services such as banking, securities-underwriting and dealing, and commercial investment. However, historically the U.K.'s financial system has been characterized by specialized institutions engaged in discrete services. In the view of financial analysts, this system has been changing since the mid-1980s, as many U.K. banks are now significantly involved in financial activities other than traditional banking business, including securities and insurance activities.

The Bank of England traditionally used an informal system of bank supervision, which required that banks provide it with detailed statistical reports followed by interviews with the Bank's management. According to financial analysts, the Banking Act of 1979 formalized this system and for the first time required that deposit-taking institutions be licensed by the Bank. Analysts believe that, despite the more substantial statutory powers granted to it by the Banking Act of 1987, the Bank of England prefers to retain its consultative, flexible role and exercise its statutory powers only when necessary.

France

The French financial system underwent many changes in the 1980s. According to a paper by the Federal Reserve Bank of New York, these changes included the denationalization of large, state-owned financial corporations, the elimination of barriers to competition between different financial institutions, and the establishment of a new bank regulatory structure. The financial system previously had many specialized institutions and state-owned banks operating under different administrative controls. More recently, the general trend has been to establish universal banks, meaning that banks can engage directly or indirectly through subsidiaries in a wide range of financial services, including deposit-taking, commercial and consumer lending, insurance, and securities activities. These universal banks are less specialized and are more

market-oriented institutions. Permissible bank activities include deposit-taking, lending, and underwriting and dealing in securities. French banks generally do not have extensive nonfinancial holdings.

According to financial analysts, the Banking Law of 1984 restructured the entire French banking system, bringing it under a single regulatory framework that includes several specialized regulatory entities. The Finance Ministry is the supervisory body for the entire banking and financial system.

Japan

All banking institutions in Japan fall within the regulatory purview of two supervisors—the Ministry of Finance and the Bank of Japan. The Ministry regulates all aspects of Japanese financial activities, whereas the Bank administers monetary policy and supervises individual institutions. The Ministry's statutes give it power to create formal banking regulations; however, it often relies on an unofficial approach known as "administrative guidance" to supervise individual institutions. The Bank uses three official instruments to implement monetary policy—setting reserve requirements, conducting open market operations,¹ and changing the official discount rate. The Bank also uses an informal mechanism known as "window guidance" as a form of moral suasion that enables the Bank to regulate the amount of additional credit available within the economy.

According to a paper by the Federal Reserve Bank of New York, traditionally the commercial banking sector in Japan has been characterized by a high degree of specialization. In June 1990, it was generally defined to include 11 city banks, 64 first-tier regional banks, 83 foreign banks, 3 long-term credit banks, 1 specialized foreign exchange bank, 68 second-tier regional banks, and 7 trust banks. These institutions are distinguished from each other by their relative size, the maturity of their assets and liabilities, the extent of their operations, and the activities in which they engage. In recent years, however, these distinctions have blurred, and competition between these institutions has intensified.

¹Open market operations are conducted by the central bank when it participates in the financial markets directly, buying and selling securities, and bills at market prices on its own account.

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