

**In Search of a
Level Playing Field
The Implementation
of the Basle Capital
Accord in Japan and
The United States**

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Group of Thirty, Washington, DC

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I. Introduction

The Basle Capital Accord of 1988 established capital adequacy standards for international banks. As the Accord notes, its first objective was to improve the safety and soundness of banks. Its second objective was to control the competitive advantages international banks in different countries might enjoy over one another because they were subject to different capital requirements.

To achieve the second objective, the framers of the Accord sought to establish a framework that was fair and consistent and that would diminish (the Accord's word) competitive inequality. This study focuses on the second objective by examining the implementation of the 1988 Accord in Japan and the United States.¹ We recognize that the effect of the Accord must ultimately be judged in terms of competition among the banks in all of the countries that are party to the Accord. However, competition between U.S. and Japanese banks has a crucial multilateral impact. Further, we believe that the analytical approach we take can be applied multilaterally, as well as to other bilateral relationships. We do not generally deal with the 1993 consultative proposals to revise the Accord with respect to netting, market risks, and interest rate risk, since these proposals have not yet been agreed or implemented.

At the outset, we are extremely skeptical that any accord on capital can have a major impact on competition among banks in different countries. Competitive advantages between banks in two countries are caused primarily not by differences in capital ratios but by differences in comparative advantage, the fundamentals of each economy, and government support in the form of safety net policies.² As the "Capital Scorecard" we have devised shows, the stronger safety net in Japan enables that country's banks to obtain cheaper funding than their U.S. competitors can.

Capital Scorecard

Factor	Advantage	
	Japan	U.S.
Safety net and other non-Basle policies	■	
Ratios in addition to Basle	■	
Scope of application of Basle requirements		■
Qualifying capital		■
Risk-weighting of assets		■
Enforcement		■

Japanese banks also have an advantage because U.S. banks are subject to capital ratios over and above those imposed by Basle, through leverage ratios, capital required for interest rate risk, and capital required to avoid onerous forms of supervision. On the other hand, U.S. bank holding companies are not strictly subject to the Basle requirements. This enables them to raise capital and downstream it to a bank in the form of equity. Because the Japanese have no bank holding companies, they cannot take advantage of this device.

The heart of the Basle Accord is the definition of capital and the assessment of the risks associated with different kinds of assets (risk-weighting). We believe that the United States has an advantage in these areas, but not because of any fancy footwork in implementing the Accord. Because they can exploit a more sophisticated capital market, U.S. banks can raise capital through cheaper instruments. Moreover, the U.S. tax and accounting rules, and related regulations, give U.S. banks advantages in using gains on appreciated securities as a source of capital.

U.S. banks also have an advantage in risk-weighting because activities that are much more important in the United States than in Japan—residential real estate lending, for example—have low risk-weights. Finally, Japan benefits by significantly less strict enforcement.

We conclude that its limited scope prevents the Basle Accord from making a significant contribution to leveling the playing field between Japanese and U.S. banks. Indeed, by setting a capital floor of 8 percent for risk-weighted assets, the Accord makes the playing field less level, to the disadvantage of U.S. banks, in one important sense. The reason is that Japanese banks do not need to hold 8 percent capital because of the strength of their safety net. Since the Basle Accord mandates that they do, U.S. banks are under some pressure to hold proportionately more, to maintain their competitive standing, and doing so may well drive up U.S. bank costs unnecessarily. In the real world

a minimum capital standard may distort rather than improve competitive equality.³

We further conclude that only by accident could the Accord diminish competitive inequality between U.S. and Japanese banks. A central point of our study is that even though the capital requirement was implemented in the same way in both countries, it had dramatically different impacts as a result of differences in accounting and tax rules and banking regulations.

The Accord acknowledges that accounting and tax rules could distort the comparability of the capital positions of international banks. Our study shows that such distortion is so massive as to render comparability impossible. The effects cannot be trivialized by a mere disclaimer. We believe the burden is now on the defenders of the Accord to produce credible evidence, beyond rhetoric, that the Accord has made *any* meaningful contribution to leveling the playing field. We guess that the Accord has been of more benefit to U.S. than to Japanese banks because they operate in a more favorable accounting, tax, and regulatory context.

Some claim that, by imposing a minimum 8 percent capital ratio, the Basle Accord helped level the playing field by establishing a common framework that will lead to convergence; in this view our study points only to the need for further harmonization of accounting, regulatory, and tax rules. We agree that the Accord would be more beneficial *if* there were meaningful progress toward harmonization with respect to safety net subsidies and other rules. That we may have a more even playing field in the future does not mean we have one now; and the future, by definition, remains to be seen.⁴

Given the historical propensity of nations to compete for advantage, one might conclude that harmonization is unlikely, and that nations will continue to use safety nets and other rules to their advantage. Our analysis is static in the sense that, by necessity, it is based largely on data and practices in 1992, the first year that the Accord was fully in effect. Still, absent meaningful harmonization outside the Basle framework, we have no reason to believe our conclusions will change.

Finally, how meaningful is it, in the modern world of finance, to even the playing field between banks in different countries? More and more, the traditional business of banking is conducted by nonbanks, such as finance companies and insurance and securities firms, that are entirely outside the Basle framework. Because the Accord does not address this central issue, it can, at best, equalize competition on only part of the playing field. Indeed, the major beneficiaries of the increases in the "equal" costs imposed by the Accord may be firms that compete with banks but are not subject to such costs. The recent proposals to impose market risk regulation on banks exacerbate this

problem because many countries exempt securities firms from risk regulations, or at least impose lighter burdens on them.⁵

In short, we believe that the Basle Accord cannot be justified on the grounds that it enhances competition. It must be judged solely on its contribution to strengthening the safety and soundness of international banks—and even that in the light of its possible contribution to credit crunches in periods of economic downturn.

Notes

¹ In April 1993, the Basle Committee on Banking Supervision issued new proposals on capital to deal with netting and market risks, together with an interim proposal for the measurement of interest rate risk. The Committee stated that the proposals dealt with the "dual objectives of meaningful prudential standards and further movement towards regulatory convergence and competitive equality." Consultative Proposal by the Basle Committee on Banking Supervision, "The Prudential Supervision of Netting, Market Risks and Interest Rate Risk" (April 1993), Preface, para. 3.

² Safety net policies here refer to deposit insurance and government mechanisms to supply banks with capital, in the form of debt or equity, on more favorable terms than would be available in the private market. These mechanisms include loans from the central bank as lender of last resort. Obviously, other government policies affect competitiveness, such as regulation or taxation, but the costs of these policies generally make the firms less competitive. Our focus is primarily on government subsidies.

³ One important provision of the Basle Accord, in terms of improving the safety and soundness of international banks, is the requirement that capital be measured on a consolidated basis. We do not know whether consolidation in Japan increased or decreased overall bank capital.

⁴ F. Choi and R. Levitch, *The Capital Market Effects of International Accounting Diversity* 14 (1990), states that uniform accounting standards seem to be a "natural outgrowth" of the adoption of international supervisory standards for banks, including capital adequacy guidelines, without adducing any evidence to support the proposition. We have seen no progress toward more uniform accounting standards for banks in the four years since the adoption of the Basle Accord.

⁵ The Basle Committee, in formulating its proposals, acknowledged its failure to develop common minimum standards for banks and securities firms in coordination with the Technical Committee of the International Organization of Securities Commissions (IOSCO). Consultative Proposal, "The Prudential Supervision of Netting..." (April 1993), Preface, para. 9.

II. The Competitive Impact of Capital Ratios

Capital requirements have a significant impact on the competitiveness of banks. A bank that is more highly leveraged than another bank may enjoy a competitive advantage. Take two banks, Bank A and Bank B. They face a 7 percent market rate of interest for marginal increases in the cost of funding; they operate in the same markets and are equally creditworthy. Bank A has a 4 percent capital requirement, that is capital must equal 4 percent of total assets, and Bank B has a 6 percent requirement. Here, capital refers to equity.

The total cost for Bank A in making new loans is

$$.07 \times .96 + .04 \times .04 = .0672 + .004C,$$

where C is the cost of capital; and the total cost for Bank B in making new loans is

$$.07 \times .94 + .06 \times .06 = .0658 + .006C.$$

Where the cost of capital exceeds the marginal interest rate (7 percent in the example), Bank A, the more leveraged bank, has a cheaper cost of funds. If, for example, the cost of capital for both banks were 10 percent, the cost of funds for Bank A would be 7.12 percent ($6.72 + 0.40$), as compared with Bank B's 7.18 percent ($6.58 + 0.60$). Since equity is almost always costlier than debt because equity is more risky and receives less favorable tax treatment, Bank A will enjoy a competitive advantage over Bank B. Bank A can charge borrowers a lower rate of interest and make the same spread (profit) as Bank B. For example, Bank A can make a 2 percent spread by charging a borrower 9.12 percent, whereas Bank B must charge 9.18 percent to make the same spread. In addition, capital requirements affect the total lending capacity of banks. Bank A, with a 4 percent capital requirement, can lend

twenty-five times its capital; Bank B, with a 6 percent requirement, can lend only 16.66 times its capital.

Competitive Bailout Differential

In a perfect market, creditors of Bank A might insist on higher rates of interest than would creditors of Bank B because Bank A's higher leverage ratio and smaller capital cushion increase their risk. Government safety nets prevent this from happening in banking. Because deposit insurance, bailout policies, and lender-of-last-resort facilities combine to protect bank creditors against bank failure, creditors may be relatively indifferent to the leverage ratios of their debtors. Although they may not be absolutely certain that they will be repaid, they know that the government will absorb a very significant part of the repayment risk for large international banks. This public absorption of risk means that these banks need not fully compensate their creditors for the risk of increased leverage. From this perspective, the difference between capital/asset ratios for banks in two countries may merely reflect different levels of government subsidy.¹

Table 1 sets out the Bank for International Settlements (BIS) capital ratios for the ten largest banks (as of 1992) in Japan and the United States. We compare these banks throughout the study since they are likely to be in direct and significant competition with each other in a variety of asset, liability, and off-balance-sheet products.

All of the banks exceed the total minimum capital ratio of 8 percent that BIS requires, but U.S. banks have the higher ratios. The average total ratio of the ten largest U.S. banks is 13.60, compared with 9.67 in Japan. In addition, U.S. banks hold a significantly higher percentage of their total capital in Tier 1 capital, 67 percent compared with 51 percent for the Japanese. The lower Japanese ratios may merely reflect the recent economic downturn in Japan, particularly the real estate loan losses and the fall of the prices of shares on the Tokyo Stock Exchange. It might also reflect the need for U.S. banks to have more capital than Japanese banks in order to compete with them effectively.

If the de facto guarantee the Japanese government provides against failure is perceived to be stronger than the U.S. government guarantee, U.S. banks would have to be better capitalized than Japanese banks to enjoy the same cost of funds.² Of course, U.S. banks would then incur additional costs for capital that Japanese banks did not. U.S. banks could compensate for these additional costs only by being more efficient. The increase in efficiency would then generate the resources necessary for additional capital.

Table 1. Capital Ratios of Japanese and U.S. Banks

Bank	Total	Tier I ¹	Tier II ²
Japanese banks (September 1993)			
Daiichi	9.80	5.00	4.80
Sakura	9.05	4.52	4.52
Fuji	9.82	5.11	4.71
Mitsubishi	9.81	4.90	4.90
Sanwa	10.20	5.18	5.02
Sumitomo	9.91	5.45	4.45
Tokai	9.27	4.63	4.63
Tokyo	10.41	5.44	4.97
IBJ	9.25	4.62	4.62
LTCB	9.25	4.62	4.62
U.S. banks (December 1993)³			
BankAmerica	12.03	7.61	4.42
Citibank	11.61	6.69	4.92
Nations	11.87	7.58	4.29
Chemical	12.40	8.30	4.10
Chase	13.68	8.81	4.87
Bankers	16.49	9.97	6.52
Morgan	14.86	10.61	4.25
Wells Fargo	15.59	10.62	4.97
1st Interstate	13.16	9.96	3.20
Banc One	14.37	10.63	3.74

1. Basically, equity and earnings.

2. Debt instruments representing residual claims, like preferred stock and subordinated term debt, as well as revaluation and loan loss reserves.

3. The data on U.S. banks are actually for bank holding companies. This is the proper comparison because the nonbanking operations of Japanese banks are conducted in subsidiaries of banks rather than in nonbanking subsidiaries of the parent holding company. Our comparison thus takes into account the consolidated data for nonbanking operations in both countries.

Source: Federal Reserve, Japanese Securities Report.

The ratios in Table 1 reflect book rather than real capital. Given more accurate measures of capital, capital ratios for U.S. banks might not be higher. For example, Japanese banks can use only 45 percent of unrealized gains on securities in their investment account as capital, and revaluation reserves alone represent approximately 40 percent of the Tier II capital of the ten largest Japanese banks (see Table 3 below). Before the 1991-92 fall of the Nikkei index, this percentage would have been considerably higher. But given Japanese tax rates in excess of 55 percent, revaluation reserves correctly state the maximum after-tax income available from the sale of these securities. And, if securities prices fell from their September 1993 values, the reported capital in Table 1 would be overstated. Even

after the fall of Tokyo real estate prices, Japanese banks may have a substantial amount of undisclosed and unrealized gains from real estate holdings, which are not counted at all in Japan as Basle capital (see Chapter IV, note 48). On the other hand, their failure to write off loans or to take adequate loan loss reserves may greatly inflate their book capital.

Net Subsidies

One might also consider whether Japanese banks actually enjoy a net subsidy, compared with U.S. banks. Roughly speaking, the net subsidy would be the value of the safety net minus the cost of regulation. Under this formulation, regulation would be viewed as a cost banks pay for subsidies, although some regulation would probably exist even without subsidies. The Japanese safety net seems significantly stronger than that of the United States. Japanese bank regulators, the Ministry of Finance (MOF), and the Bank of Japan (BOJ), have been more likely to bail out failing banks than have their American counterparts. Until quite recently, no bank in Japan has failed: regulators have strongly protected banks and have arranged mergers for small troubled banks with big banks. In the few recent cases of bank failure, the MOF arranged the sale of the failed bank's assets to other banks, utilizing the financial aid of the Deposit Insurance Corporation and the BOJ. All deposits in the failed banks, including deposits exceeding the maximum coverage limit of deposit insurance, were transferred to other banks, so no depositor suffered loss. Thus, since World War II, no depositor in a Japanese bank has lost money as a result of bank failure. This record stands in sharp contrast to the current situation in the United States. During 1992, the Federal Deposit Insurance Corporation (FDIC) resolved one-hundred twenty failed banks. In sixty-six of those cases, including the four largest subsidiaries of the \$8.8 billion First City Bancorporation, one of the largest failed bank transactions in FDIC history, uninsured depositors lost money.³

On the cost side, both U.S. and Japanese banks are subject to considerable regulation. We do not attempt to quantify and compare the costs of regulation, but we would guess that American costs are higher. Many studies have concluded that the cost of U.S. regulation is quite high, but so are the costs of Japanese regulation.⁴ Under Japanese banking, corporation, and antitrust laws, and capital market regulations, many restrictions are imposed on Japanese banks. Japanese banks also are subject to nonstatutory public burdens, for instance, the maintenance of the specialized banking sys-

tem or governmental pressure to bail out failing companies for which they serve as a main bank.

Much of Japanese regulation, however, seems aimed at managing competition, and thus may actually increase Japanese bank profitability (albeit at consumer expense), while the United States emphasizes safety and soundness regulation, a deadweight cost. Indeed, much U.S. regulation, as in the payment system, is intended to decrease the actual public subsidy. Thus, we believe that Japanese banks do have a higher net as well as a higher gross subsidy.

In theory, one might expect the market to arbitrage away competitive advantages for banks. Thus, if Japan had more favorable capital rules, U.S. banks could move there, just as U.S. corporations choose to be organized in the state of Delaware because they prefer Delaware law; or just as banks in the European Union base their operations in the country whose banking regulations they favor.⁵ In practice, such moves will not happen. The United States and Japan would not let their major banks shift home countries.⁶ Banks might be free to shift particular operations between the two countries, for example, basing certain lending operations in the United States rather than in Japan; but doing so would not materially affect capital regulation, which is imposed on a *consolidated* basis by the home country.

The Effect of Higher Minimum Ratios

Some readers of an earlier version of this paper have suggested that, despite the distorting effect of different levels of government guarantees, the Basle Accord has made the playing field more even because it imposes a minimum 8 percent capital ratio on all banks. Assume that before the Accord state-owned banks in France had a 2 percent capital/asset ratio while U.S. banks had a 7 percent ratio. The French-U.S. differential was 5 percentage points. Some argue that while a minimum 8 percent ratio might require U.S. banks to hold 11 percent to compensate for the stronger French guarantee, its imposition has narrowed the differential to 3 points, thus making the playing field more even. This line of argument is flawed.

To begin with, capital requirements have little meaning for state-owned banks. The state can create whatever equity is required by injecting taxpayer funds, whereas the ability of a privately owned bank to raise equity is subject to market discipline. A state-owned bank can acquire whatever capital it needs even if its earnings prospects are dismal.

But suppose we substituted privately owned Japanese banks for state-owned French banks. Would the argument then have force?

Capital requirements deal with nominal not real capital. Real capital is the market value of assets minus the market value of liabilities. If the market (debt suppliers, in particular) believes it is sufficient for Japanese banks to hold 2 percent real capital, it may be inefficient for Japanese banks to hold higher levels, given their put on government capital (the guarantee).⁷ They will have a substantial incentive to keep real capital at 2 percent while complying with the nominal 8 percent Basle requirement. This can be done simply by not fully writing off bad loans.

The market and the availability of government guarantees will tend to determine the real capital ratios of banks, as well as the differential in required capital ratios among banks in different countries. Governments may alter this tendency by trying to ensure that real capital ratios are identical to Basle nominal ratios, but different governments may do more or less. Indeed, if the United States were to try to make its banks hold 8 percent real capital, and the Japanese were content to have their banks hold 2 percent real capital, the impact of the 8 percent minimum would be to widen the difference from 5 to 6 points.

Some evidence suggests that the Accord has not by itself narrowed the nominal capital differential between major U.S. and Japanese banks. Table 2 sets out the recent average ratios of tangible equity to total assets for the top ten U.S. and Japanese banks from 1986 to 1992. Equity consists of common and preferred stock plus surplus plus retained earnings. This ratio allows us to compare capital ratios in Japan and the United States before and after the Basle Accord. Risk-based ratios were unavailable for Japanese banks in the pre-Accord period.

While the differential narrowed somewhat in the Basle transition years, 1989-91, it is marginally wider in 1992 than it was in 1986. U.S. and Japanese banks have both increased their capital over the period, but the rates of growth have been about the same. It may be that U.S. regulation requiring ratios higher than Basle's have prevented the differential from narrowing; otherwise, Japanese capital ratios would have increased by more than those of U.S. banks. But the fact remains that Basle has not produced more competitive equality as measured by nominal differentials.

Even a narrowing of the pre-Accord differential would not necessarily improve competitive equality. It is possible that the marginal cost of capital increases as more capital is raised. This outcome would obtain if returns to capital decreased as more capital was raised. The cost to U.S. banks of maintaining a three point differential that requires an 11 percent capital ratio may be higher

**Table 2. Ratio of Tangible Equity to Total Assets,
Japanese and U.S. Banks, 1986-92**

Year	Japanese banks (percent)	U.S. banks (percent)	Difference (percentage points)
1986	1.91	5.30	3.39
1987	2.20	4.98	2.78
1988	2.56	5.68	3.12
1989	2.73	5.17	2.44
1990	2.94	5.34	2.40
1991	3.12	5.87	2.75
1992	3.42	6.83	3.41

Source: Federal Reserve, Japanese Securities Report.

than the cost of maintaining a five point differential that requires a 7 percent ratio.

In summary, we believe competitive advantages between banks in two countries are caused not by differences in required capital ratios but by differences in comparative advantage, economic fundamentals, or government support levels.

This paper does not explore another important issue concerning the effect of the Accord: whether it contributed to the credit crunch in the 1991-92 recessionary period by restraining bank lending. There is increasing evidence that it played some role, but obviously, other factors, principally slackening loan demand, were at work.⁸

Notes

¹ If Japanese banks derive a competitive advantage over U.S. banks because of a long-term difference between the general cost of capital for all firms in the two countries, regulation of capital ratios will not eliminate Japanese advantages. Studies disagree as to whether such long-term differences exist. See C. Kester and T. Luehrman, "The Myth of Japan's Low-Cost Capital," *Harvard Business Review* (May-June 1992), p. 130, disagreeing with earlier studies indicating a lower cost for Japanese than U.S. firms; and J.P. Morgan (R. Mattione), "Valuation and the Cost of Capital in Japan: Is Japan at a Disadvantage Now?" (April 6, 1992), finding Japan had an advantage in the 1980s but may have a disadvantage in the 1990s.

² It would be difficult to test our hypothesis by looking at the actual cost of funds (liabilities) for Japanese banks. It would be consistent with our hypothesis if Japanese banks had a lower cost or the same cost of funds as U.S. banks. A lower cost could indicate that U.S. banks could not generate sufficient funds from operational efficiency to offset higher capital costs. The same cost of funds could

indicate that they did. In either case the Japanese banks could enjoy a comparative safety-net subsidy. They might even have a higher cost of funds and enjoy a comparative subsidy if the operational efficiencies of U.S. banks more than offset the subsidy.

It would also be difficult to test our hypothesis by looking at credit ratings. While rating agencies do take account of safety nets, they become an important factor only when a bank might be downgraded to under-investment-grade, which is not the case for any of the top ten U.S. or Japanese banks. As of the end of fiscal year 1992, the lowest credit rating by Moody's for the long-term senior debt of any of the top ten banks by assets, in Japan or the United States, was Baa2 for Citibank.

³ Federal Deposit Insurance Corporation, *1992 Annual Report*, pp. 32-34. As of the end of 1992, First City Bancorporation would have ranked as the sixty-second largest bank holding company by assets. American Banker, *Ranking the Banks 1993, Annual Statistical Review* (August 27, 1993), p. 8A.

⁴ See the studies on U. S. regulation cited in J. Danforth, "Who Pays for the High Cost of Excessive Bank Regulation," *12 Banking Policy Report* (1993), p. 24.

⁵ O.J. 1989 L386 (December 30, 1989) (89/646/EEC). They are taking advantage of the ability to branch throughout the Union subject principally to the regulation of the home country afforded by the Second Banking Directive.

⁶ A U.S. bank holding company could not reincorporate in Japan because Japan does not permit bank holding companies. Assuming the foreign country had its own requirements for bank holding companies (by hypothesis less stringent than those of the United States), the Federal Reserve Board would still have the authority to apply U.S. bank holding capital requirements to the foreign bank holding company. It could do so under the provisions of the Bank Holding Company Act, which requires adequate financial and management resources and prohibits evasion of the Act. 12 U.S.C. §1842(c) and 12 U.S.C. §1844(b). The Board also has broad authority to set capital requirements under the International Lending Supervision Act of 1983, 12 U.S.C. §3907. In our view, the Board, as a matter of policy, would consider applying foreign bank holding company capital requirements in lieu of U.S. requirements only to "real" foreign bank holding companies, those with more than one-half their banking business outside the United States. See 12 U.S.C. §1843(c)(9); Regulation K, 12 C.F.R. §211.23(b).

When the Hong Kong and Shanghai Banking Corporation, a Hong Kong bank and bank holding company, was acquired in 1991 by a newly formed United Kingdom holding company, HSBC Holdings, Board approval under the Bank Holding Company Act was required since HSBC Holdings indirectly acquired a U.S. bank. The United Kingdom had no capital requirements for bank holding companies. The Board found that HSBC Holdings had the same capital as HSBC,

and that HSBC's capital was more than adequate under Basle standards, 77 *Federal Reserve Bulletin* 273 (1991). This is unreliable precedent for considering a case in which a U.S. bank holding company moved abroad. The latter case could be viewed as one involving the evasion of U.S. requirements, and the holding company, unlike the case of HSBC Holdings, would likely have sizable holdings other than a bank, thus giving some meaning to separate capital requirements for holding companies.

7 H. Jackson, "The Expanding Obligations of Financial Holding Companies," 107 *Harvard Law Review* 507 (January 1994), argues that there may be significant efficiency costs to imposing excessive capital requirements on banks, and that it would be preferable to substitute bank claims on holding company capital for higher levels of bank capital. Bank puts on the government function in a similar matter.

8 For evidence that capital requirements may have been a constraint on bank lending. See R. Cantor and J. Wenninger, "Perspective on the Credit Slowdown," 18 *Federal Reserve Bank of New York Quarterly Review* (Spring 1993), pp. 3, 12-13; J. Peek and E. Rosengren, "The Capital Crunch in New England," *New England Economic Review* (May/June 1992), p. 21; J. Peek and E. Rosengren, "Bank Regulation and the Credit Crunch," Federal Reserve Bank of Boston, Working Paper No. 93-2 (February 1993); L. Browne and E. Rosengren, "Real Estate and the Credit Crunch: An Overview," *New England Economic Review* (Nov./Dec. 1992), p. 25; B. Bernanke and C. Lown, "The Credit Crunch," Presentation at Brookings Panel (October 21, 1991); R. Litan, "Nightmare in Basle," *The International Economy* (November/December 1992), p. 7. Richard Spillenkothien, Director of the Federal Reserve Board's Division of Banking Supervision and Regulation, while generally stressing slackening loan demand, has also stated that the need to comply with capital requirements had restrained bank lending; Statement to the Subcommittee on General Oversight and Investigations of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, August 4, 1992, reprinted in 78 *Federal Reserve Bulletin* 746 (October 1992).

III. The Basle Accord

The Basle Accord was entered into by the central banks of the Group of Ten countries in July 1988, having been preceded in 1986 by a similar Federal Reserve Board proposal and by an Accord between the Board and the Bank of England in 1987.¹ The Basle Accord has four major parts: (1) the required ratio of capital to risk-weighted assets; (2) the definition of capital; (3) the determination of risk-weighted assets; and (4) the conversion of off-balance-sheet items into risk-weighted assets.

Beginning in 1993, the minimum ratio of capital to risk-weighted assets must be 8 percent. Capital is divided into two tiers, Tier I and Tier II. Tier I capital is basically equity and retained earnings; Tier II capital includes revaluation and loan loss reserves and debt capital instruments that, like equity, represent residual claims—for example, cumulative perpetual preferred stock and subordinated term debt.

The Accord classifies assets into four risk-weight categories: zero percent, 20 percent, 50 percent, and 100 percent. Assets with a zero percent risk-weight (which are not counted in the denominator of the capital/risk-weighted assets ratio) are items like cash and claims on central governments. All commercial loans to private obligors, as well as assets not described in the Basle risk-weight schedule (Annex 2 of the Accord), are risk-weighted at 100 percent.

Off-balance-sheet items are divided into five "credit conversion" categories, based on the estimated size and likelihood of the credit exposure, as well as on their relative degree of risk. Foreign exchange and interest rate contracts are given special treatment, described later. The other items are converted into asset equivalents

based on credit conversion factors of 100 percent, 50 percent, 20 percent, and zero percent. For example, standby letters of credit are converted into assets at 100 percent; commercial letters of credit are converted at 20 percent. Once converted into assets, these items are subject to the asset risk-weights described above. Thus, a \$100 commercial letter of credit issued on behalf of a private company would be counted as a \$20 asset—\$100 times the 20 percent conversion factor times the 100 percent risk-weight.

Notes

¹ Twelve countries were involved: Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom, and United States. See E. Kapstein, "Supervising International Banks: Origins and Implications of the Basle Accord," *Princeton Essays in International Finance* 185 (December 1991), for an excellent treatment of the history and background of the Accord.

IV. Japanese and U. S. Implementation of the Basle Accord

The implementation of the Basle Accord in the United States was accomplished through regulations issued by the federal agencies responsible for supervising banks. Regulations were issued in early 1989 by the Office of the Comptroller of the Currency for national banks,¹ by the Federal Reserve Board for state banks that are members of the Federal Reserve System,² and by the Federal Deposit Insurance Corporation for state banks that are not members of the Federal Reserve System.³ With insignificant exceptions, the agencies have adopted the same requirements.⁴ In addition, the Federal Reserve Board promulgated a slightly modified version of the Accord for bank holding companies.⁵ The regulations were issued pursuant to the existing statutory authority of these agencies; no new congressional grant of authority was necessary.

The Basle Accord, it should be noted, is not the exclusive source of capital requirements for U.S. banks. U.S. banks are also subject to a 3 percent minimum leverage ratio (capital/total assets).⁶ The United States has also proposed additional capital requirements for U.S. banks based on their interest rate risk.⁷ In addition, the level of supervision of a bank depends on its capital levels. To be subject to minimum supervision, under the "Prompt Corrective Action" rules, a bank must have a total risk-based capital ratio of 10 percent or greater, a Tier I ratio of at least 6 percent, and a leverage ratio of at least 5 percent.⁸ The fact that U.S. banks are subject to Basle plus other capital requirements, whereas Japanese banks are subject only to Basle, makes one skeptical at the outset of the degree

to which Basle itself can level the playing field between banks in the two countries.

The Basle Accord was implemented in Japan in 1988 by the Banking Bureau of the Ministry of Finance in the form of administrative guidance. However, since no specific statutory provision authorized MOF to issue such guidance, the Diet enacted the 1992 amendments to the Banking Law and other laws relating to banks to provide that authority, for example, Article 14-2 of the Banking Law.

We examine five areas in which significant differences in the implementation or effect of the Basle Accord in Japan and the United States may affect competition between banks from these countries: (1) the scope of application; (2) qualifying capital for banks; (3) risk-weighting of assets; (4) the treatment of interest rate and foreign exchange contracts; and (5) enforcement.

Scope of Application

There are two important differences in the scope of application of the Basle Accord. First, Japan has only compulsorily applied the Accord to banks with offices abroad, whereas the United States has applied it to all banks. Second, the United States has applied the Accord to bank holding companies; Japan does not permit bank holding companies.

International Banks

The Basle Accord applies to the consolidated operations of "international banks" but fails to define what they are. As in many other areas, the Accord leaves this matter to national discretion.

Japan has applied the Accord to banks with branches or subsidiaries in other countries.⁹ This practice has meant that all eleven city banks, all three long-term credit banks, all but one of the six trust banks, twenty-nine of the sixty-four regional banks, and five of the sixty-five second-tier regional banks are mandatorily subject to the Accord. Other banks may choose to be subject to the Accord on the condition that they will remain so for the foreseeable future; a trust bank, twenty-seven regional banks, and eight second-tier regional banks have done so. Banks that are not subject to the Accord must target their leverage ratio to be 4 percent or greater. Voluntary subscriptions appear to have resulted largely from peer pressure, or from the idea that Basle subscribers improve their reputation.¹⁰ Possibly some banks might have to hold less capital under the Basle formula of 8 percent of risk-weighted assets than under the alternative Japanese leverage ratio of 4 percent of all assets.

The United States, on the other hand, has applied the Accord to all insured depository institutions. Although Basle does not require this extended application, countries are free to adopt stricter standards than the Accord requires, and the United States has done so. This choice might have reflected the judgment that Basle was a better measure of capital adequacy than were the leverage ratios previously in effect. It may also have reflected a desire to avoid distortions in competition in domestic markets and to establish a level playing field domestically.¹¹ Applying Basle only to banks with international operations might have saddled them with more onerous capital requirements than their domestic competitors faced. The Japanese have largely avoided the problem of domestic competition because market segmentation in Japan means that banks subscribing to Basle are not strong competitors in the geographic markets of the banks that have not subscribed to Basle.

This difference in application should not significantly affect competition between Japanese and U.S. banks. Worldwide competition between Japanese banks and U.S. banks (in Japan, the United States, and third-country markets) will be subject to Basle constraints. Although cross-border activities like deposit-taking or lending by Japanese banks without foreign banking offices are not subject to Basle constraints, while they are for U. S. banks, this difference should be insignificant. The Japanese banks that have not subscribed to Basle do not compete significantly outside Japan, and U.S. banks do not compete significantly in Japan with these Japanese banks.

There might also be concern that Japanese banks subject to Basle can fund in the Japanese interbank market from Japanese regional banks that are not constrained by Basle—regional banks in Japan are usually net providers of funds to other banks—whereas all banks in the U. S. interbank market are constrained by Basle. Since unconstrained banks can lend at lower rates, funding costs for Japanese banks might be lower. Again, we expect this difference to have minimal impact.

Bank Holding Companies

Article 9 of the Japanese Antitrust Law prohibits all holding companies, including bank holding companies. This policy is traceable to the attempt during the postwar occupation to limit the power of the Zaibatsu, large Japanese conglomerates. The Antitrust Law prohibits the establishment of a company whose only purpose is to hold stocks in other companies. It also prohibits banks from holding more than 5 percent of the stock of another company, with very limited exceptions. In addition, the Banking Law prohibits any

company from engaging in the banking business without a license from MOF. Some commentators interpret this prohibition to mean that no company can hold controlling stock in a bank, and this has almost never occurred. In the United States, by contrast, most large banks operate through the bank holding company form. Thus, whereas Japanese banks issue debt and equity directly to the market, capital is raised in the United States through bank holding companies and then downstreamed to subsidiary banks.

Double-Gearing from Above: U.S. Banks. As already indicated, the Basle Accord does not apply to bank holding companies. If Country X had bank holding companies but chose not to apply the Accord to them, it might have a significant competitive advantage over Japanese banks. Holding companies could raise capital through instruments that did not qualify for Tier I capital treatment, such as cumulative perpetual preferred stock or subordinated debt, and downstream the proceeds to subsidiary banks in a form that did qualify for Tier I capital treatment, for example, common equity.

The advantage to Country X's banks would be the availability of cheaper sources of capital. Bankers clearly believe that raising capital on the market through equity is more expensive than raising it through other instruments, particularly when common share prices are depressed compared with benchmarks such as book value or past common stock prices. This belief currently deters Japanese banks from issuing new equity, in light of the recent plunge in the market value of their common stock. It may have some basis in the real-world application of finance theory despite the classic Miller and Modigliani formulation that different capital structures do not affect the total cost of capital. That the interest on debt is tax deductible and the dividend payments on equity are not makes corporate debt cheaper to issue than equity. Further, preferred stock with promised dividends may reduce agency costs. And, this is even more true of cumulative than of noncumulative preferred. Managers who must pay out returns to investors may manage more efficiently than managers without such obligations.

The United States, unlike Country X, has consolidated capital requirements for bank holding companies. The rationale for these requirements, which are promulgated by the Federal Reserve Board, is rooted primarily in the "source of strength doctrine," the idea that the holding company should stand ready to infuse capital into its banking subsidiaries should the need arise.¹² Although these capital requirements are based upon the Basle "framework," they are not identical in one important respect. Cumulative perpetual preferred stock may be used for up to 25 percent of Tier I capital, whereas

Basle permits only noncumulative perpetual preferred to count as Tier I capital. Perpetual preferred stock is a significant source of capital for U.S. banks, accounting for over 12 percent of Tier I capital (see Table 3). Virtually all of this perpetual preferred stock is cumulative. Therefore, U.S. banks are deriving a substantial advantage from having their holding companies issue cumulative perpetual preferred stock and counting it as Tier I capital. If the banks had issued it, it would have counted only as Tier II capital.

Gearing from Below: Japanese Banks. Although Japanese banks cannot double-gear from above—that is, they cannot use the holding company to raise funds and downstream the proceeds into the bank—they can use subsidiaries to raise funds for the bank. A subsidiary can borrow funds from a third party and upstream the funds to the parent bank. Under Japanese commercial practice, banks are generally held liable for the debts of subsidiaries, so the third party has, in effect, lent money to the bank itself. In Japan, such loans to bank subsidiaries are usually made in the form of subordinated term debt securities, which count as Tier II capital under the Basle Accord. Of course, this would be no different from the bank itself issuing the debt securities. The main reason why Japanese banks use their subsidiaries to raise funds is to avoid Japanese government restrictions on bank fund raising in Japan. For example, banks can use foreign subsidiaries to avoid restrictions on the issuance of preferred shares.

This type of subordinated debt security may not always be an entirely reliable source of capital, however. Some have observed that part of it may have been purchased by affiliates financed by the borrowing bank.¹³ Hypothetically, a bank could, in cooperation with outside investors, establish an unconsolidated entity (Company X), an entity in which the bank's equity stake was less than 5 percent. The bank lends money to Company X which, in turn, lends money in the form of subordinated debt securities to the bank's subsidiary—which qualifies as Tier II capital—and the bank subsidiary upstreams the funds to the bank. The capital provided by Company X is unreliable in the sense that if the bank cannot pay off the subordinated debt security, Company X will default on its loan to the bank, inasmuch as Company X has no source of revenue other than payments on its subordinated debt. Thus, any default by the bank on the subordinated debt security will, in effect, deprive the bank of this source of capital.

The source of the difficulty is that the bank has financed the preferred debt investment by a shell company. If Company X were a real company with substantial business the effect would be

gether different. In that event, the bank might default on subordinated debt payments, but Company X would continue to have the capital to repay its loan from the bank.

Kinzai Weekly has reported a rumor that those who buy the subordinated debt securities of Japanese banks are all Japanese investors and that Japanese banks provide these investors with financing to buy their securities.¹⁴ They do so despite the MOF prohibition against the practice.¹⁵ Under the scheme, a bank underwrites a private placement of five-year euroyen bonds (usually at LIBOR plus 30 basis points) for clients who use the proceeds to buy the bank's dollar perpetual subordinated debt securities. At the same time, the clients swap with the bank the dollar coupon on the subordinated debt for yen LIBOR plus 100 to 120 basis points for five years, thus assuring the investors of a spread of 70 to 90 basis points. The bank promises to buy back its securities after five years.

How does this case compare with our hypothetical case? Here, investors receive the funds to purchase bank subordinated debt securities from third parties (the purchasers of the euroyen bonds) rather than from the bank. This means that these third parties, rather than the bank as in the hypothetical case, are at risk if the bank defaults on its subordinated debt. The third parties may be part of the bank's group, but they, rather than the bank, are at risk. The situation would be more like the hypothetical one if the bank were to guarantee repayment of the euroyen bonds.¹⁶

It has also been reported that a high proportion of bank subordinated debt securities have been issued to lease and finance companies.¹⁷ More than 80 percent of the funding of these companies comes from the same banks. Many banks, it is said, use these companies to make risky real estate loans that the banks could not make directly. This case is closer to our hypothetical case since there is a substantial risk that the finance and lease companies (with troubled loan portfolios) would default on their bank loans if the banks were unable to service their subordinated debt securities.¹⁸

Gearing Conclusions. U.S. banking companies derive a major advantage from using holding companies to issue noncumulative perpetual preferred stock and downstream it to the bank as equity, Tier I capital. Gearing from below can be used in Japan to supplement only Tier II capital and not Tier I capital. In 1992, the United States, probably in response to credit crunch concerns, relaxed the capital requirements on bank holding companies by lifting the limit on the amount of noncumulative perpetual preferred stock that they could include in Tier I capital.¹⁹

It is conceivable that Japanese banks have used subsidiaries to engage in sham schemes to transform loans into Tier II capital in the form of subordinated debt, but this practice would be a clear abuse of Basle and MOF policies. If tolerated, it would call into question the seriousness of the Japanese government in implementing the Accord. Use of such devices by U.S. bank holding companies would be illegal.²⁰ We have no official evidence that such shams have been used in Japan on any scale.

Qualifying Capital for Banks

Table 3 gives an overview of the capital sources (Tier I and Tier II) for U.S. and Japanese banks. We have selected the ten largest banks in both countries for comparison since these will be the most vigorous international competitors.

Type of capital	Japanese banks		U.S. BHCs	
	Billions of yen	Percent	Millions of dollars	Percent
Tier I	16,263	100.0	76,860	100.0
Common equity	15,320	94.2	57,522	74.8
Perpetual preferred stock	..	..	9,661	12.6
Cumulative	..	..	9,397	12.2
Other	942	5.8	280	0.4
Less: Nongrandfathered goodwill	..	..	-3,854	-5.0
Tier II	13,209	100.0	35,006	100.0
Other perpetual preferred stock	..	..	498	1.4
Subordinated debt	6,117	46.3	18,232	52.1
Mandatory convertibles	..	..	3,659	10.5
Perpetual debt	..	..	500	1.4
Long-term preferred with 20 years or more maturity	..	..	87	0.2
Loan loss reserves	1,458	11.0	12,030	34.4
Foreign	862	6.5	..	..
Revaluation reserves	5,345	40.5	..	..
Other	289	2.2	..	..
Less: Investment in unconsolidated subsidiary	..	..	712	..
Memoranda				
Total allowance for loan loss	1,458	..	28,860	..
Total unrealized gains	11,878	..	..	..
Tier I/Tier II	2.20	..	1.23	..

Note: Here and in the following tables the symbol ".." indicates a cell that is not applicable.
Sources: Federal Reserve Board, Japanese Securities Report.

Japan and the United States have implemented Basle differently with respect to three important sources of capital:

- preferred stock, hybrid instruments, and subordinated debt;
- loan loss reserves; and
- revaluation reserves.

Preferred Stock, Hybrid Instruments, and Subordinated Debt

The Basle Accord permits banks to count noncumulative perpetual preferred stock as Tier I capital and cumulative perpetual preferred stock in Tier II capital, to an unlimited extent. Other hybrid instruments—mandatory convertible securities, perpetual debt, and long-term preferred stock—may also be included in Tier II capital to an unlimited extent. The Accord also permits banks to include subordinated term debt in Tier II to the extent of 50 percent of Tier I capital. Japan and the United States have adopted the Basle provisions without change, although the latter has cautioned banks against “undue reliance” on preferred stock as part of Tier I capital.

In practice, with the exception of some international issues noted below, Japanese banks cannot currently take as much advantage of the Basle rules permitting the use of preferred stock and subordinated debt securities as can U.S. banks. Insofar as this inability forces them to use more expensive forms of capital, they are at a competitive disadvantage vis-à-vis U.S. banks that make significant use of such instruments.

As Table 3 shows, perpetual preferred stock is an important source of Tier I capital for U.S. banks, accounting for 12.6 percent. The various hybrid instruments, together with cumulative perpetual preferred stock, account for a significant 13.5 percent of Tier II capital. Convertible securities are the most important; alone, they constitute 10.5 percent of Tier II. Subordinated debt accounts for just over half of U.S. banks’ Tier II capital. On the other hand, Japanese banks have no domestic perpetual preferred stock. They now hold substantial subordinated debt, 46.3 percent of their Tier II capital. The heavy use of this instrument is quite recent.

Whereas both countries have implemented the Basle provisions on preferred stock in the same way, legal difficulties about the issuance of preferred stock in Japan have prevented Japanese banks from taking advantage of the preferred stock alternative. In principle, a Japanese company issuing preferred stock must specify in its articles of incorporation the legal rights of preferred shareholders, including the maximum amount of dividends payable on the preferred, the preemptive rights of preferred shareholders, rights in case of stock splits, and so on.²¹ There has been no consensus among

lawyers, including those at the Ministry of Justice who must certify the articles of incorporation, as to how these rights should be specified. However, an officer of the Ministry of Justice recently presented a basic framework for dealing with the problems of preferred stock.²²

In order to pay a preferred dividend that amounts to 2.5 percent after tax, the rate estimated to be necessary to attract taxable investors, banks would have to pay a 5 percent dividend. At present this would amount to roughly ¥37.5 per share for the top six city banks, whereas common stockholders get only ¥8.5 per share.²³ It may be difficult to get common stockholders to consent to such limits. City banks claim that MOF should allow preferred stock dividends to be tax deductible as a way of solving this problem.

The cost of redemption is also a serious issue. A bank may wish to redeem preferred stock when the stock market is favorable to the cheap issue of common stock. But, in Japan, redemption of preferred stock is treated as depreciation of equity and must be done only out of retained surplus, not from the proceeds of the common stock issuance.²⁴ Also, redemption of preferred is conclusively deemed as a payment of a dividend to common stockholders whose preferred shares are redeemed, and it is taxed as a dividend. This problem can be avoided if the preferred stock is convertible into common, but it is then more difficult to attract investors.

Because of these problems, Japanese banks have yet to issue preferred shares in the domestic market. A city bank study group formed in August 1992 is considering the problems, and it has been reported that Sakura Bank will issue preferred shares in the domestic market at the end of March 1994.²⁵ MOF has expressed its intention to support efforts of the city banks to issue preferred stock.²⁶

As is often the case with new Japanese financial instruments, preferred stock has been issued abroad before it can be issued domestically. On March 30, 1992, Sakura Holding S.C.A., a Luxembourg special-purpose subsidiary of Sakura Bank, issued ¥100 billion in noncumulative "exchangeable" preferred stock, 0.225 percent of Sakura's BIS ratio. The special-purpose subsidiary then upstreamed the funds raised in the form of a loan to the parent bank. The preferred stock is exchangeable for Sakura's common stock until June 23, 1995, and must be compulsorily exchanged by June 30, 1995.

In addition to the special problems involving the use of preferred stock, Japanese city banks face some important MOF restrictions on the issuance of certain subordinated debt: they have not been allowed to issue long-term debentures, which include subordi-

nated debt securities. The purpose is to protect the special privilege of long-term credit banks, given on the assumption that they were long-term lenders whereas the city banks were supplying shorter-term credit, such as working capital.²⁷ Even though the distinction between the business of the two types of banks has blurred in recent years, the long-term credit banks still retain the privilege.

However, MOF has permitted the city banks to issue subordinated debt securities through subsidiaries (or special-purpose companies) to finance their operations outside Japan. These subsidiaries can issue senior or subordinated debt securities backed by the parent bank's subordinated guarantee under the following conditions: (1) the debt is denominated in a foreign currency; (2) the debt is issued in overseas markets; and (3) the proceeds are used to support operations outside Japan.

MOF also generally conditions the issuance of all kinds of capital instruments by Japanese banks on bank profitability.²⁸ These restrictions are aimed at avoiding heavy debt burdens, in the form of dividends or interest, particularly when the return on capital is lower than the cost of the capital. Unlike the case in the United States, dividend payments on equity are not entirely discretionary with the issuer. In Japan, when corporations, including banks, issue stock to the market, they must maintain promised dividend payout ratios for the following three financial years in order to foster the "soundness" of the stock market.²⁹ These restrictions make it more difficult for the less profitable Japanese banks to raise capital.³⁰

The 1993 consultative proposal to revise the Accord with respect to market risk envisioned a new Tier III capital instrument, a type of short-term subordinated debt, for satisfying part of the capital required for the market risk on debt securities and equities held in banks' trading books. Under the proposal, the instrument must be unsecured, have an original maturity of at least two years, not be repayable before the agreed repayment date unless the supervisor agrees, and be subject to a lock-in clause that would stipulate that no interest or principal was due on the instrument if capital allotted to the trading book fell to too low a level.³¹ As with other debt instruments that require deep markets and facilitating regulation, Japanese banks may be unable to make as full use of this source of capital as can their U.S. competitors.

Loan Loss Reserves

The Basle Accord permits banks to count loan loss reserves of up to 1.25 percent of risk-weighted assets as Tier II capital.³² The percentage limitation reflected a concern that loan loss reserves that are intended to cover specific, known losses are not really capital

because they are not available to cover future unanticipated losses. Since it is difficult to know whether reserves are intended to cover unknown rather than known losses, a limit was placed on the use of such reserves for the purpose of meeting capital requirements. Although the Accord was amended in 1991 to make clear that only reserves for unidentified losses could be counted as capital as of 1994, the 1.25 percent limitation was retained.

In their implementation of the Accord, Japan and the United States have both allowed loan loss reserves to the maximum permitted. But, U.S. banks are much more reliant on loan loss reserves as a source of capital. As Table 3 shows, these reserves constitute 34.4 percent of Tier II capital for U.S. banks, compared with 17.5 percent (including foreign loan loss reserves) for Japanese banks. As discussed below, Japan is much more restrictive in allowing banks to carry loan loss reserves than the United States is.

Japan. In Japan, the bank accounting rules established by the MOF Banking Bureau and the tax law recognize three categories of loan loss reserves: a general loan loss reserve (general reserve), a special account for loan depreciation (special depreciation account) and a special loan loss reserve for certain types of foreign loans (special foreign reserve).³³ The following tabulation summarizes Japanese rules with respect to reserves.

Reserve account	Restriction	Capital status
General	Limited to the greater of 0.3 percent of total loans or the ratio of average loan losses to total loans in past three years.	Counted
Depreciation	See note 36.	Not counted
Foreign	In practice, limited to 35 percent of foreign loans.	Counted until 3/94

MOF permits banks to count only the general and special foreign reserves as capital. Since the special depreciation account is used to cover the charge-off only of actual known losses or of specific loans on which losses have been highly expected, MOF does not permit these reserves to count as capital. In addition, the November 1991 amendment to the Accord means that special foreign reserves will no longer be counted as capital as of March 31, 1994. Banks will, as a result, lose 6.5 percent of their Tier II capital.

The MOF Banking Bureau has imposed very restrictive ceilings on the general and special foreign reserves. In practice, the general reserve cannot exceed 0.3 percent of total loans.³⁴ And, until re-

cently, the special foreign reserve could not exceed 15 percent of the special foreign loans. Although MOF has now abolished any formal ceiling on the latter, as a matter of mutual agreement most of the ten largest banks have 35 percent special foreign reserves. The total amount of general and special foreign reserves held by the ten largest banks amounts to only 0.41 percent of their total risk-weighted assets, compared with the 1.25 percent allowed by the Basle Accord.

The 0.3 percent limit on general reserves comes from the tax law. Japanese tax law understandably seeks to restrict the deductibility of reserves from taxable income. The use of such reserves to decrease taxes has been a subject of controversy in the past. Until 1971, the maximum amount of the general reserve under the tax law was 1.5 percent, and the MOF Banking Bureau required banks to hold at least 1.8 percent. There was strong criticism from consumer groups and some politicians that the general reserve rate was higher than the real loan loss rate, and that the general reserve was being used to hide excessive profitability. This matter was especially sensitive in 1970, given the combination of low regulated deposit interest rates and the high inflation rate resulting from the oil crisis. As a result, from 1971 to 1982, the MOF Tax Department reduced the general reserve limit from 1.5 percent to 0.3 percent. Surprisingly, the MOF Banking Bureau adopted the same limit, even though it is charged with regulating bank capital to protect the safety and soundness of banks, and not with collecting taxes.³⁵ In Japan, tax considerations have driven regulatory policy in the case of general reserves.³⁶

United States. Under generally accepted accounting principles (GAAP) and regulatory accounting principles (RAP) loan loss reserves in the United States are composed of allocations relating to specifically identified troubled loans and to the inherent credit risk for all other loans. Accounting Standard No.5 governs accounting for contingent losses. The GAAP principle it established requires that contingent losses be reflected on the face of financial statements when they are both probable and reasonably estimable.³⁷

Under RAP a loan loss reserve has components for (1) loans individually reviewed; (2) loans grouped into homogeneous pools; and (3) inherent loan portfolio losses. The reserves for the first two components are generally determined by a loan classification scheme set forth in an agreement of bank regulators, the Uniform Agreement on the Classification of Assets and Appraisal of Securities Held by Banks. Under this scheme, loans are assigned a classification (other assets especially mentioned, substandard, doubtful, or loss) according to their credit risk.³⁸ A certain percentage of each loan classification will then be set aside in the loan reserve. For

example, it appears that 50 percent of loans classified as "Doubtful" and all of the loans classified as "Loss" should be included in the loan reserve. Unlike the case with Japan, there are no ceilings on the amount of loan loss reserves.

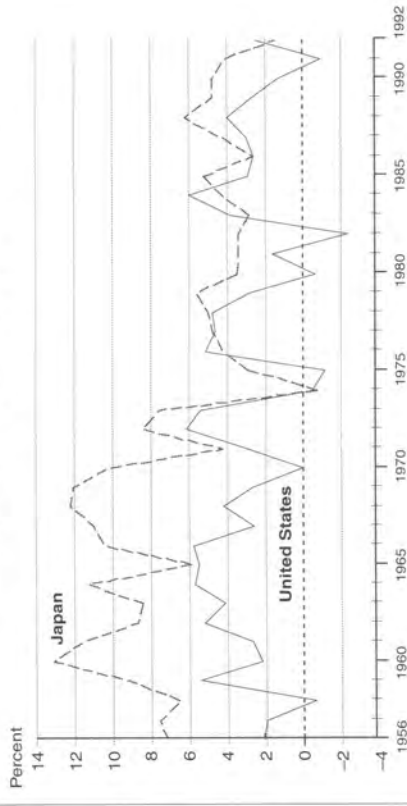
RAP clearly allow holding reserves against loans that have been identified as losses and troubled, as well as against unanticipated loan portfolio losses. Indeed, a recent study concludes that provisions for loan losses are based largely on known rather than future losses.³⁹ As previously indicated, however, the Basle Accord allows loan reserves to be included in capital only to the extent that the reserves are held against future and unknown losses, and this restriction was strengthened by the November 1991 amendment to the Accord. Although the Accord could well be interpreted to exclude losses against troubled as well as loss assets, the United States only prevents reserves against loss assets as counting as capital.⁴⁰ Thus, in contrast to Japan, the United States allows reserves against troubled loans to count as capital.

Unlike the case with Japan, U.S. tax treatment of loan loss reserves is independent of regulatory treatment. Since 1986 large banking institutions (those with \$500 million or more in assets) can deduct bad-debt expenses only when loans are declared uncollectible.⁴¹ Loans of banks are presumed conclusively to be uncollectible when ordered charged off by bank regulators or when charged off in accordance with established regulatory policy and confirmed as such, in writing, on the next subsequent audit by the regulators.⁴² In addition, loans classified as loss assets by bank regulators may also be charged off under the "Conformity Election," if the loan meets the loss classification criterion of "basically worthless."⁴³

One of the points underlying current U.S. tax treatment of loan loss reserves is to minimize the possibility that tax treatment of reserves could distort incentives to provide adequate reserves. Until 1965, all provisions for loan losses were tax deductible by banks, regardless of charge-offs taken in the past or expected loan losses. This provided incentives for banks to raise loan loss provisions when income was high and take lower provisions when income was low, a perverse incentive.

Comparing Japan and the United States. Initially, it may appear that U.S. banks have a capital advantage with respect to loan loss reserves. U.S. regulators allow banks to count reserves for troubled loans as qualifying capital, whereas Japanese regulators do not. In addition, U.S. regulators impose no ceiling on the amount of reserves, whereas the Japanese impose a 0.3 percent ceiling on general reserves, the only reserves that will count as capital after 1994.

Chart 1. Real GNP Growth Rates, Japan and the United States, 1956-92



Source: Bank of Japan.

The 0.3 percent ceiling would not put Japanese banks at a capital disadvantage if it were not binding—that is, if experience indicated that the actual level of the general reserve should not exceed that level. It is clear that the loan loss rate has been lower in Japan than in the United States for the last thirty years, in part because of the higher economic growth rate in Japan. Chart 1 shows real GNP growth in the United States and Japan between 1956 and 1992.

The ratio of net charge-offs to total bank loans of Japanese banks (city banks, regional banks, long-term credit banks, trust banks, and second-tier regional banks) was 0.006 percent during this period. As the tabulation below indicates, net charge-offs of Japanese banks have recently increased with the downturn of their economy, but they are still below those of U.S. banks.

Banks	1989	1990	1991
Japanese banks	0.07	0.04	0.16
U.S. banks	1.16	1.44	1.60

While the Japanese charge-off rates are still below 0.3, these rates may substantially understate actual losses.⁴⁴ The MOF has recently estimated that nonperforming loans were 2.1 percent of bank loans,⁴⁵ and others have estimated that 6.4 percent of bank loans might default. It thus seems that general loan loss reserves should exceed the 0.3 percent ceiling. Thus, Japanese restrictions on these reserves may well limit the Tier II capital of Japanese banks.

But, such a limit may actually result in a competitive advantage for Japanese banks.

Japanese banks do not lose capital if they do not increase their general loan loss reserves. Earnings that would otherwise go to reserves can be held as earned surplus and counted to an unlimited extent as Tier I capital. From this point of view, regulatory policies that limit reserves may increase the ability of earnings to generate capital. On the other hand, if loans that are not producing income are not written off or reserved, taxes may be imposed on income accrued but not actually paid. These taxes may be recovered in the future, but the time value of taxes paid may be lost. This disadvantage would have to be weighed against the advantage of having more capital in the short term.

This advantage may be one of the reasons that many Japanese banks, especially those with a sizable amount of nonperforming loans, do not want to increase reserves. These banks also do not want to sacrifice dividends or sell assets, measures that would be required to bring reserves up to adequate levels considering the depressed state of current earnings. Finally, these banks do not want to disclose the poor quality of their portfolios by adding to reserves. Thus, capital advantages as well as other considerations point to holding down general reserves.

By keeping general reserves within a 0.3 percent ceiling, Japanese banks do sacrifice the tax savings that could be realized by removing the ceiling: additions to earned surplus are not deductible, whereas additions to the general loan loss reserve would be. Thus, those banks with strong capital positions would like to raise the ceiling on reserves, but it will be difficult to obtain the Tax Department's agreement.

Compared with U.S. banks, Japanese banks do enjoy an advantage from a tax point of view. Japanese banks get to deduct 0.3 percent of general reserves for tax purposes, while U.S. banks get no tax deductions from additions to general reserves. U.S. banks can deduct only loss assets; they appear to have an easier test for whether an asset is a loss asset, but this is a marginal advantage.

In summary, Japanese policy restricting reserves probably gives Japanese banks an advantage over U.S. banks.⁴⁶

Note on the Valuation of Loans

Although the Basle Accord provides for risk-weighting of loans according to the borrower—for example, 100 percent for loans to private borrowers—it does not set standards for the valuation of loans, or establish conditions for writing loans down or off. The lack of uniformity in this area further undercuts the potential of the Accord to even the competitive playing field. If Japanese banks have

not written off or down their sizable bad loans—which many observers believe they have not—their capital is highly overstated. Writing off loans would reduce capital by the amount of the write-off.⁴⁷ Thus, the policies of regulators toward write-offs has a major impact on bank capital, and they are beyond the purview of the Basle Accord.

Revaluation Reserves

The Basle Accord permits banks to include as Tier II capital 100 percent of the difference between the carrying cost and market value of fixed assets (normally land and buildings) and 45 percent of the difference between the carrying cost and market value of securities. These forms of capital are referred to as revaluation reserves. Japan has implemented the Accord by permitting revaluation reserves on securities held in investment accounts (those not expected to be sold within a year of acquisition), but not securities in trading accounts; and it has prohibited revaluation reserves on fixed assets.⁴⁸ As Table 3 shows, revaluation reserves on securities constituted 40.5 percent of Japanese banks' Tier II capital.⁴⁹ The United States has prohibited using revaluation reserves for either type of asset. The significance of this difference in implementation must be evaluated in light of the difference in the legal ability of banks from the two countries to hold various types of securities and the accounting and tax treatment of those securities. We generally conclude that because of accounting and tax factors, the widely perceived Japanese advantage from being allowed revaluation reserves does not exist.

U.S. banks are generally prohibited by the Glass-Steagall Act (12 U.S.C. §24 (Seventh)) from holding equity securities, but they can hold debt securities of investment grade. U.S. bank holding companies are permitted by the Bank Holding Company Act (12 U.S.C. §1843(c)(6)) to invest in up to 5 percent of the shares of a single company, but in practice they hold only a negligible amount of stock. U. S. banks can carry only debt securities in the trading accounts, and they must generally carry these securities at market value.⁵⁰ In investment accounts, equity securities are carried at the lower of aggregate historical cost or aggregate market value, while debt securities are carried at historical cost.⁵¹

Japanese banks can hold both debt and equity securities. However, Article 9 of Japan's Antitrust Law limits Japanese banks' holdings of equity securities to 5 percent of the shares of a single company. Japanese banks do hold a large amount of stock of other companies, particularly those that are substantial borrowers and members of the corporate "group."⁵² As of March 1992, the total

book value of stock held by Japan's ten largest banks was ¥21,254 billion, or 4.76 percent of their total consolidated assets.

In Japan, only debt securities may be carried in the trading account, and they must be carried at the lower of historical cost or market. As for debt securities in the investment account, banks may elect to carry them at either historical cost or at the lower of historical cost or market.⁵³ As a result of the adoption of the Basle Accord, most Japanese banks have chosen historical cost. Equities in the investment account, until recently, had to be carried at the lower of historical cost or market. This rule applies to each equity security and contrasts with the U.S. rule, which applies to the aggregate value of equity securities.

In August 1992, MOF announced a package of measures to support the stock market and mitigate the financial difficulties of banks.⁵⁴ One of these measures permitted banks to carry equities on their midyear September 1992 accounts at either historical cost or at the lower of historical cost or market, the same rule as for debt securities.⁵⁵ However, as of March 1993, banks were required to return to the normal rule of the lower of historical cost or market.

This table summarizes the U.S. and Japanese accounting rules for bank holdings of securities.

Country and security	Trading account	Investment account
Japan		
Debt	Lower of historical cost or market	Election between historical cost, and lower of historical cost or market
Equity	None allowed	Lower of historical cost or market
United States		
Debt	Market	Historical cost
Equity	None allowed	Lower of aggregate historical cost or aggregate market

How do these different rules in the two countries affect bank capital? Distinguishing between securities held in trading and investment accounts is important in answering this question.

Trading Account. With respect to trading accounts, which in both countries can include only debt securities, U.S. banks appear to fare better in terms of capital than Japanese banks do when interest rates are declining and the same as Japanese banks when interest rates are rising. This outcome is due to the differences in accounting treatment given to trading accounts by Japanese and U.S. banks.

Assume a Japanese and a U.S. bank both have the following initial balance sheet:

Assets		Liabilities + Capital	
100	Trading account	460	Liabilities
400	Other assets	40	Capital

Further assume that the securities in the trading account increase in market value by 200 because interest rates fall. The balance sheet of the United States bank now appears as follows:

Assets		Liabilities + Capital	
300	Trading account	460	Liabilities
400	Other assets	240	Capital

The U.S. bank marks up the value of the trading account by the gain of 200, to its new market value of 300, and increases capital by the same amount. The increase comes into capital through an addition to retained earnings even though the gain has not been realized by the sale of the appreciated securities. The capital/asset ratio of the U.S. bank improves from an initial 8 percent to 34.3 percent.

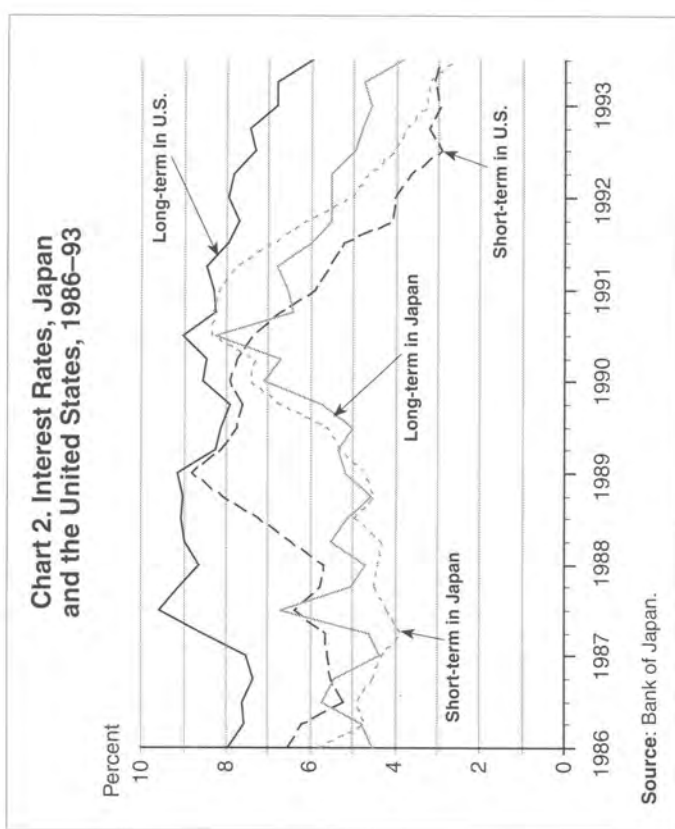
Under Japanese accounting principles, the balance sheet of the Japanese bank does not change because securities are not marked up to market. Nor does regulatory capital increase, since the MOF does not allow revaluation reserves to be held for securities in the trading account. Thus, the Japanese bank's capital/asset ratio is unchanged by the gain in the value of its securities portfolio.

Only by selling the securities and making an after-tax addition to retained earnings can the Japanese bank increase BIS capital as a result of the gain. If we assume that the bank wishes to continue to hold the securities sold, and is selling them only to generate BIS capital, it will buy them back at 300. The new balance sheet will then look like this:

Assets		Liabilities + Capital	
300	Trading account	572	Liabilities
400	Other assets	128	Capital

Japan taxes capital gains on all securities held by corporations, whether debt or equity, at 55.99 percent (call it 56 percent for our purposes), the same rate at which it taxes corporate ordinary income.⁵⁶ Thus, the Japanese bank can add only 88 of the 200 gain to capital— $88 = 200 \times .56$. The capital/asset ratio of the Japanese bank improves from the initial 8 percent to 18.3 percent, compared with the 34.3 percent for the U.S. bank, and only at the cost of loss of income on the amount of taxes paid earlier than would otherwise be the case.⁵⁷

U.S. accounting rules clearly give U.S. banks a BIS capital advantage when there are gains in the securities trading account. However,



there may also be losses when interest rates increase. U.S. banks lose capital when prices of securities in the trading account decline; they must mark their securities down to market with a corresponding decrease in capital. But, so must Japanese banks. Thus, if interest rates are rising, banks from the two countries fare the same. Overall, U.S. banks have an advantage, which they have been able to exploit in the declining-rate environment of the past several years. Chart 2 shows the movement of long-term and short-term interest rates in Japan and the United States between 1986 and 1992.

Data on the trading accounts of the ten largest banks in the two countries, shown in Table 4, reveal that trading account assets represent a much bigger percentage of total assets in the United States, 1.69 percent, than they do in Japan, 0.43 percent. Thus, the U.S. advantage is likely to be important in the overall capital picture.

The data also show that Japanese banks have very small unrealized gains in their trading accounts. Such gains represent only 0.02 percent of Tier 1 capital. The reason may be that such gains were small in 1991; more likely, it is the fact that the banks engaged in gains trading in order to count the after-tax gain as capital.

Table 4. Japanese and U.S. Bank Trading Accounts, 1992¹

Item	Japanese banks (billions of yen)	U.S. banks (millions of dollars)
Carrying value	1,913	18,413
Government bonds	1,877	10,047
Local bonds	32	296
Other	4	8,366 ²
Unrealized gains	4	..
Total on-balance-sheet assets	419,273	1,091,254
Total risk assets	359,603	955,275
Equity capital (Tier I)	17,958	63,609
Ratios (percent)		
Trading account/total on-balance-sheet assets	0.43	1.69
Trading account/total risk assets	0.53	19.30
Unrealized gains/equity	0.02	..

1. The data for Japan are as of March; those for the United States are as of June.

2. These securities break down as follows: other bonds, notes, and debentures, 421; certificates of deposit, 513; bankers acceptances, 1,979; and other, 5,156.

Source: Federal Reserve, Japanese Securities Report.

Investment Account. Japan allows banks to count 45 percent of the unrealized gain on securities in the investment account as capital, whereas the United States allows none at all. One might expect this difference to result in a competitive advantage for Japan. In fact, given the differences between the U.S. and Japanese accounting and tax treatments of these securities, that advantage is not so clear.

To recap, under current U.S. accounting rules, equity securities in a bank's investment account are carried at the lower of aggregate cost or aggregate market, while debt securities are carried at cost.⁵⁸ Japanese banks, on the other hand, account for debt securities in the investment account at either the lower of historical cost or market, or at historical cost. The Japanese account for equities at the lower of historical cost or market with respect to each equity security. Japan taxes gains from the sale of appreciated securities at a statutory rate of 56 percent, as compared with the U.S. statutory rate of 35 percent. Table 5 sets forth comparable data for the investment accounts of the ten largest Japanese and U.S. banks.

Table 5. Japanese and U.S. Bank Investment Accounts, 1992¹

Item	Japanese banks (billions of yen)	U.S. banks (millions of dollars)
Total carrying value ²	54,637	83,077
Debt securities	21,978	63,352
Equity securities	21,254	2,419
Total unrealized gains	11,878	1,729
Total on-balance-sheet assets	449,273	1,091,254
Total risk assets	359,603	955,275
Equity capital (Tier I)	16,262	63,609
Revaluation reserve	5,345	..
Potential revaluation reserve	..	788
Ratios (percent)		
Total carrying value/total balance sheet assets	12.16	7.61
Revaluation reserves or potential revaluation reserves/equity	32.87	1.22
Revaluation reserves or potential revaluation reserves/total risk assets	1.49	0.08

1. The data for Japan are as of March; those for the United States are as of June.

2. This total includes investments not itemized here.

Source: Federal Reserve, Japanese Securities Report.

The Importance of Investment Accounts. The data permit some general observations about the importance of revaluation reserves for U.S. and Japanese banks. First, potential revaluation reserves for U.S. banks appear to be insignificant, 0.08 percent of total risk assets, when compared with the actual importance of revaluation reserves to Japanese banks, 1.49 percent of total risk assets.

Securities in the investment accounts represent a smaller portion of total assets of U.S. banks than of Japanese banks, about 8 percent compared with 12 percent, and potential revaluation reserves would have made a very small addition to the capital of U.S. banks, 1.22 percent in 1992. In sharp contrast, as of March 1992, revaluation reserves constituted 32.9 percent of the equity of the Japanese banks.⁵⁹ If these reserves were not counted as Tier II capital, it would be very difficult for Japanese banks to meet the Basle capital requirements.

Second, given legal restrictions, the investment accounts of U.S. banks consist almost entirely of debt securities, 96.3 percent of their domestic securities in 1992. Japanese banks, on the other hand, held 49.2 percent of the investment account in equity securities.

Therefore, potential revaluation reserves for U.S. banks would be generated when interest rates were falling relative to the coupon rates on securities in the portfolio, as compared with Japanese banks, which generate the reserves both when interest rates are falling and when stock prices are rising. The importance of the contribution of equity holdings to revaluation reserves means that the amount of the reserves depends heavily on stock market prices.

Gains Traded by U.S. Banks. One of the puzzles raised by these data is why unrealized gains, and therefore potential revaluation reserves, are so small for U.S. banks. In contrast, a recent General Accounting Office study on the implications of market value accounting for banks' debt investment securities concluded that a 1 percent decrease in interest rates in 1990 would have resulted in a 3 percent increase in the aggregate value of debt investment securities held by all banks.⁶⁰ GAO assumed in this calculation that investment securities with a maturity of one to five years had an average maturity of three years, and that securities with a maturity of over five years had an average maturity of eight years. In fact, short-term interest rates decreased nearly 1 percentage point in 1990.⁶¹ Table 6 gives data on unrealized gains for the top ten U.S. banks from 1989 to 1992.

Table 6. Unrealized Gains on Debt Securities in Investment Accounts of U.S. Banks, June 1989-92

Type of security and value	1989	1990	1991	1992
Domestic debt securities				
Total carrying value	48,651	48,627	49,184	63,352
Market value	48,956	48,550	49,714	64,849
Unrealized gains (losses)	305	-77	530	1,497
Foreign debt securities				
Carrying value	19,731	23,132	17,983	17,306
Market value	19,545	22,439	17,804	17,323
Unrealized gains (losses)	-186	-693	-180	17
Total debt securities				
Carrying value	68,382	71,759	67,167	80,658
Market value	68,501	70,989	67,158	82,172
Unrealized gains (losses)	119	-770	350	1,514
Ratio of unrealized gains (losses) to market value	0.002	..	0.005	0.02

Source: Federal Reserve.

The table shows that there were no unrealized gains in 1990 on debt securities.⁶² Indeed, unrealized gains on debt securities are quite small throughout this period, ranging from a low of 0.02 percent in 1989 to a high of 2 percent in 1992.

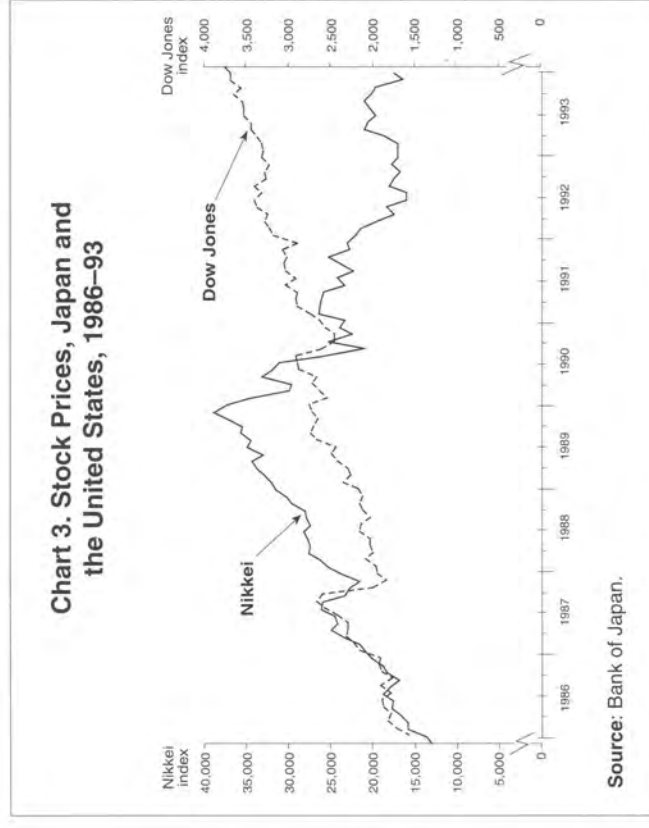
The disparity between the General Accounting Office prediction of a 3 percent increase and the actual decrease may result from the significant differences between the actual maturity structures and the GAO assumptions. More likely it is because GAO, as it clearly stated, did not take into account the banks' portfolio management strategies. Banks may try to minimize unrealized gains in their investment portfolios through selling securities with gains and holding securities with losses—gains trading, the same strategy Japanese banks apparently pursue on the trading account.

As previously discussed, a gains-trading strategy has a significant tax cost. U.S. banks engaged in gains trading can realize only 65 percent of the gain as capital given the 35 percent tax.⁶³ But, this contributes more to capital than the 45 percent Japanese revaluation reserve. And gains trading contributes to the usually more expensive Tier I capital rather than Tier II capital. Furthermore, U.S. gains trading can contribute more to capital than Japanese gains trading, given the higher 56 percent Japanese tax rate.

Gains Trading Versus Revaluation Reserves. Use of gains trading carries two costs not incurred with revaluation reserves. First, there is a loss of income on the taxes paid. The significance of the loss depends on how much earlier the sale occurred as a result of the need to generate capital than would otherwise have been the case.

Second, buying back the sold securities in the marketplace at a higher price (the bank may need the securities to meet liquidity requirements) may generate an additional need for capital. If these securities are government bonds with a zero risk-weight, the usual case for U.S. banks, the increase in total assets will not generate any additional capital cost.

In principle, Japanese banks could also engage in gains trading, but it could never be as advantageous for them as it is for U.S. banks. Further, for Japanese banks engaged in gains trading of equities, a buyback would incur a significant additional capital cost since equities carry a 100 percent risk-weight. Although Japanese banks may not need equities for liquidity, they will often have to buy back stock sold to maintain their ties with major borrowers and "group" members. Moreover, in a rising stock market, investment in stock often looked attractive compared with returns from lending. Chart 3 compares the performance of the Nikkei and Dow Jones indexes from 1987 to 1993.



Appendix A analyzes the comparative advantages for Japanese banks of gains trading versus revaluation reserves. It concludes that under some conditions Japanese banks benefit by gains trading rather than using revaluation reserves.

Dealing with Losses. In years of loss for debt securities (in which interest rates are rising relative to portfolio rates), U.S. banks and Japanese banks are equal in terms of capital treatment: banks from both countries can continue to carry these securities at cost and not lose capital. In years of loss for equity securities (in which equity markets are falling), U.S. banks, and Japanese banks (with an exception in September 1992), are both required to mark down their securities to market—in the United States on an aggregate basis, in Japan on an individual-security basis. This requirement gives an advantage to U.S. banks, but it is of limited significance, given their small holdings of equity.⁶⁴

Since Japanese banks hold roughly one-half of their investment portfolio in equity, while U.S. banks hold only an insignificant amount, Japanese banks will normally be worse off than U.S. banks from the perspective of meeting BIS capital requirements when stock markets fall. Of course, until quite recently, Japanese markets

have been rising, and most of the Japanese portfolio is in Japanese stock.

When the Japanese market fell significantly, the MOF temporarily changed the accounting rule so that equity losses did not have to be realized for midyear 1992. The aim of the change was to remove the incentive of banks to engage in gains trading to offset these losses. This, in turn, it was hoped, would relieve some of the downward pressure on stock prices.⁶⁵ The effect of the MOF action on Japanese bank capital is simulated in Case 2 in Table A-1 in Appendix A. It assumes that the MOF policy was applied to the 1991 year-end financial period (March 1992). Japanese banks actually marked down stocks in their investment accounts by ¥852 billion. We assume that, absent the new MOF policy, Japanese banks would have engaged in gains trading, selling securities with a ¥1,936 billion gain to offset the ¥852 billion loss ($1,936 \times .44 = 852$), given the 0.56 tax rate. This transaction would also reduce total risk assets by the amount of the sale.

Had banks been able to postpone recognition of the losses, as MOF allowed in 1992, and thus avoid selling securities with gains of ¥1,936 billion, total unrealized gains would have increased from ¥11,878 billion to ¥13,814 billion and revaluation reserves would have increased from ¥5,345 billion to ¥6,216 billion. In turn, the risk-based capital ratio would have improved by 27 basis points, from 6.01 percent to 6.28 percent.⁶⁶

This entire discussion demonstrates a general point of this paper: the impact of Basle capital requirements on banks in different countries depends on the accounting principles and tax rates in those countries.⁶⁷ It also demonstrates the possibility of changing accounting principles to generate capital. Harmonization of capital requirements without harmonization of bank capital accounting is unlikely to make a meaningful contribution to leveling the playing field. Indeed, the Japanese case illustrates the incentives the Basle agreement creates to manipulate accounting rules at the possible expense of meaningful disclosure.

Marking to Market. The U.S. Securities and Exchange Commission has been forcefully advocating a policy of market value accounting, which would force banks to mark to market their investment securities, as well as their trading account securities, thus giving investors a more accurate picture of their current financial condition. This would be a large change since debt securities have been carried at historical cost and equity securities have been marked only down, not up, to market. On the other hand, publicly reporting banks must

already disclose the difference between the carrying value and the market value of their securities portfolios.

Recently, the SEC has forced banks that regularly engage in trading debt securities in their investment account to stop accounting for the securities at historical cost; the SEC has required the securities to be marked down to market.⁶⁸ The U.S. banks could have marked these securities up to market as well as down to market, accounting for them in the same way as securities in their trading accounts. Doing so would have allowed banks' capital positions to rise as interest rates fell, while under a convention that applies the lower of cost or market, capital can only fall as rates rise. Some authorities have speculated that U.S. banks did not want to accept the idea of market value accounting any more than was necessary, and that they resisted marking fully to market even when that was in their short-term interest.

In a related development, FASB has now adopted new accounting rules for investment account securities, effective December 15, 1993, requiring more market value accounting than at present, albeit less than the SEC has advocated. FASB Statement 115, adopted on April 13, 1993, after much debate and controversy in the banking industry, classifies investment securities into three categories. Securities held for investment, debt securities held until maturity, will be carried at historical cost. Securities available for sale, and debt or equity securities that could be held for indefinite periods, will be marked both up and down to market on the balance sheet (and will thus affect capital); however, the adjustments will not flow through the income statement (to avoid variations in earnings). Securities held for trading, as before, will be marked both up and down to market, and the adjustments will flow through the income statement.⁶⁹

These rules allow U.S. banks to generate 100 percent of the gain as capital from appreciated securities without a tax cost (subject to the new U.S. tax rules discussed below); but capital will also be eroded at 100 percent of losses. The rules would affect bank capital whether or not adjustments flowed through the income statement.

Banks and their regulators have opposed market value accounting out of concern with the increase in the volatility of earnings and the effect such accounting might have on banks' demand for long-term government securities. But, pertinent information should be available to the market. Also, dire predictions on volatility, such as those made by the GAO, do not take account of portfolio management techniques. As we have seen, substantial changes in interest rates have had only a minimal impact on bank capital in the 1986-90 period. U.S. banks may actually be better off from a capital point of view with a market value accounting system. Finally, as the recent FASB changes show, one need not reflect balance sheet

adjustments on the income statement. The U.S. banking regulators have recently proposed the adoption of FASB 115 for regulatory accounting purposes.⁷⁰

Japanese accounting rules for banks may also be moving in the direction of marking to market. Japanese banks began disclosing unrealized capital gains on securities in 1990 in accordance with accounting rules established by the Federation of the Bankers Associations of Japan.⁷¹ And, the MOF Securities Bureau has required banks that are subject to the disclosure requirements of the Securities and Exchange Law to disclose such gains since December 1990.⁷² All of this information is supplemental; it does not yet affect the balance sheet or income statement. Obviously, the Japanese will keep a watchful eye on U.S. developments.

New U.S. Tax Rules. Under the tax provisions of the Omnibus Budget Reconciliation Act of 1993 (OBRA), a "dealer in securities" will recognize gain or loss on its securities—if not held for investment or not used as a hedge—based on the market value of the securities on the last business day of the taxable year.⁷³ Most banks will be dealers in securities, and thus subject to these provisions.⁷⁴ This provision will lessen the U.S. capital advantage with respect to trading account gains. U.S. banks will now get a maximum of the after-tax gain, 65 percent, rather than the pre-tax gain of 100 percent, unless they can establish that trading account securities are held for hedging. On the other hand, 65 percent is still better than the 45 percent revaluation reserve enjoyed by Japanese banks.⁷⁵ U.S. banks will have a new advantage with respect to losses in the trading account since, unlike Japanese banks, they can deduct these losses from taxable income without selling the securities.

Conclusions. In summary, U.S. banks have a clear capital advantage with respect to the trading account. The situation with respect to the investment account is difficult to assess.

On the trading account, the U.S. practice of marking to market generates more capital from gains (even on an after-tax basis under the 1993 tax law) than does the Japanese use of gains trading. Banks in both countries must mark down securities in cases of loss. Thus, U.S. banks enjoy a capital advantage when interest rates fall and prices of debt securities increase.

On the investment account, with respect to gains, U.S. banks generate more capital from gains trading than Japanese banks do from use of revaluation reserves or gains trading (Japanese banks may prefer gains trading, depending on the level of unrealized gains and effective tax rates). Under the new FASB mark-to-market

rules, U.S. banks will have an even greater advantage on the gains side since securities "available for sale" will be marked to market. This advantage may be further enhanced in the future if the Basle Committee prohibits gains trading.

Under the Basle Banking Committee's Consultative Proposal on the Supervisory Treatment of Market Risks (April 1993), new capital requirements are imposed for market risk on banks' trading accounts, but not on their investment accounts. These requirements create the possibility that banks will trade out of their investment account to avoid the new capital requirements related to market risk. The Committee stated that it would be vigilant to prevent gains trading of securities that are not marked to market.⁷⁶ Since FASB rules and SEC requirements will make U.S. banks hold a significant percentage of securities in the investment account at market—unlike the Japanese banks—prohibitions on gains trading may be more likely to affect the Japanese.

On the investment account, with respect to losses on debt securities, banks in both countries have in the past been able to carry those securities at cost. However, SEC policy and the new FASB rules now require U.S. banks to mark down some of their securities, and doing so could impose a significant disadvantage on U.S. banks. In cases of loss on equity securities, both countries normally require marking down to market, although this requirement was temporarily suspended in Japan in 1992. But U.S. banks need mark down only when the aggregate market value is less than the aggregate cost, whereas Japanese banks make the determination on an equity-by-equity basis. This difference gives an advantage to U.S. banks, but it is of limited significance, given U.S. banks' small holdings of equity.

Other Sources of Capital

We have concentrated on how Japan and the United States have dealt with sources of capital specifically addressed under the Basle Accord. But the Accord did not deal with all issues relating to capital. For example, while the Accord prohibited counting goodwill as capital, requiring its deduction from Tier I capital elements, it did not address other intangibles. The United States has decided that purchased mortgage servicing rights (PMSRs) and purchased credit card relationships (PCCRs), which represent contractual rights to receive income for rendering certain services, can count as Tier II capital up to 50 percent of Tier I capital. All other identifiable intangible assets, including core deposit intangibles, must be deducted from Tier I capital.⁷⁷ Also, U.S. bank regulators are currently considering the proper capital treatment of "deferred tax assets" (DTAs), income that will be generated in the future as a result of

favorable tax treatment. The Federal Reserve Board has proposed allowing these assets to count as capital to a limited extent. DTAs dependent on future taxable income, such as tax carryforwards, are limited to the lesser of amounts that can be realized within one year of a quarter-end report date or 10 percent of Tier I capital. No limit has been placed on DTAs that can be realized from taxes paid in earlier carryback years.⁷⁸

Unilateral action by the United States on these items of capital demonstrates the inability of the Accord fully to harmonize capital treatment for banks from different countries. PMSRs and PCCRs are important sources of capital only for United States banks, pointing up the fact that capital market instruments differ among countries. The failure to agree on the proper capital treatment for country-specific instruments leaves open the possibility that countries can derive competitive advantage from favorable treatment of such items. DTAs arise as a result of U.S. tax laws and accounting principles.

The generation of capital through special items may also occur in Japan. The Japanese Committee for Economic Development is currently considering whether to recommend that Japanese banks be able to revalue at current appraised values their premises and other real estate owned largely as a result of foreclosures (OREOs).⁷⁹ These assets are carried at appraised values, but the last appraisal was before 1950. One city bank could increase the value of its OREOs from ¥347 billion to ¥1,390 billion, and its BIS capital ratio from 8.2 percent to 10.8 percent, if this were to be allowed. MOF is concerned about the tax implications. When revaluations were done before 1950, banks were taxed at 6 percent of the gain. MOF has stated that banks should pay the normal tax if a revaluation occurs, a requirement that would obviously make the revaluation less attractive to the banks.⁸⁰

Conclusion

Any changes in accounting that affect the statement of earnings also affect capital since earnings generate capital. In this sense the accounting issues we have reviewed with respect to the securities portfolio must be seen in a larger context. For example, in 1992, FASB was considering whether or not to require revaluations in mortgage-backed securities based on changes in prepayment expectations. In fact, FASB did not adopt such a requirement. If the United States had required revaluation and Japan did not, the capital of the banks from the two countries would be determined in different ways and competition would be affected.⁸¹ The same point could be made for accounting rules affecting any assets.⁸²

Overall, Japanese banks seem to be at a distinct disadvantage with respect to Tier II capital instruments, given their difficulty in

altogether hybrids and limits on their loan loss reserves. On the other hand, the same limits on loan loss reserves, together with their failure to write off bad loans, gives them a Tier I capital advantage. Whereas Japanese banks use revaluation reserves to generate Tier II capital, U.S. banks generate Tier I capital as a result of mark-to-market accounting for trading accounts, and increasingly for investment accounts. It is difficult to say which banks have the balance of advantage with respect to capital. But only by pure accident will the various advantages and disadvantages result in a more even playing field.

Risk-Weighting of Assets

Japan has adopted the minimum risk-weights of the Basle Accord without variation while the United States, in certain instances, requires assets to carry a higher risk-weight than Basle requires. As of December 1, 1992, the United States had higher risk-weights (expressed as percentages) in the seven areas set forth in Table 7.

In three cases (items 1, 5, 6) the United States has assigned a risk-weight to assets that are not covered by assets described in the Basle Accord. These types of assets do not exist in Japan and thus are not covered by its risk-weight system. As a general principle, however, assets not described in the Japanese system are assumed to be risk-weighted at 100 percent.

These cases demonstrate a difficulty of applying a harmonized risk-weight system in a world in which national markets or governments may create distinct instruments. If significant amounts of assets held by banks in Japan and the United States were not described in the Accord, a great potential for competitive advantages would arise as each country adopted its own risk-weights.⁸³ As for the three items, the overall effect of their lower risk-weighting is not dramatic but is still significant; items 1 and 5 are 7.87 percent of all 20 percent risk-weighted assets, and item 6 is 1.2 percent of all 50 percent risk-weighted assets.

The potential for such divergence was in principle limited by the Accord's residual approach—that assets not described in the agreement be risk-weighted at 100 percent. Obviously, the United States has not followed this approach in these three cases. Its authorities probably believed that these types of assets were more like assets with risk-weights lower than 100 percent—for example, that shares in a fund of mortgage-backed U.S. government agency securities were like other government assets or instruments given 20 percent risk-weights under the Basle Accord. Yet, judgments of individual countries about correct analogies leave room for discretion that may be used for competitive advantage.

Table 7. Selected Risk-Weights of the Basle Accord as Adopted by Japan and the United States¹

Item	Basle risk-weights (percent)	
	Japan	U.S.
1. Portions of claims that are conditionally guaranteed by the central governments of OECD countries and U.S. government agencies, and the portions of local currency claims that are conditionally guaranteed by the central governments of non-OECD countries, to the extent that the bank has liabilities booked in that currency.	None	20
2. Claims on, and the portions of claims that are guaranteed by, home country government-sponsored agencies.	10	20
3. General obligation claims on, and the portions of claims that are guaranteed by the full faith and credit of, local governments and political subdivisions of the home and other OECD local governments.	10	20
4. The portion of claims that are collateralized by securities issued or guaranteed by the central government of OECD countries.	0	20
5. Certain privately issued securities representing indirect ownership of mortgage-backed U.S. government agency or U.S. government-sponsored agency securities.	None	20
6. Revenue bonds or similar claims that are obligations of U.S. state or local governments, or other OECD local governments, but for which the government entity is committed to repay the debt only out of revenues from the facilities financed.	None	50
7. Investment in shares of a fund whose portfolio is permitted to hold only securities that would qualify for the zero or 20 percent risk categories.	Average	20
1. Home country refers to the United States or Japan.		

In four cases (items 2, 3, 4, 7) the United States has adopted higher risk-weights than the Basle Accord requires, apparently out of concern that the Basle weights are too low. For example, the United States might have special concerns about the possible bankruptcies of local governments (affecting item 3). Again, the competitive significance of this action would depend on the percentage these assets represented of total assets; in fact, claims on local and state governments (no breakdown is available for claims on local governments alone) represent only 2.38 percent of all assets in the 20 percent risk-weight category.

The divergence from Basle minimums by the United States shows that regulators may not sacrifice safety and soundness out of

Table 8. Distribution of Japanese and U.S. Bank Assets by Risk-Weight, 1992

Risk-weight (percent)	Japanese banks		U.S. banks	
	Billions of yen	Percent	Millions of dollars	Percent
0	41,825	9.3	150,213	13.5
10	11,170	2.6	..	..
20	90,353	20.1	226,546	20.4
50	27,659	6.2	106,785	9.6
100	277,600	61.8	627,160	56.5
Total, all assets	449,273	100.0	1,110,704	100.0

Source: U.S. banks, Federal Reserve; Japanese banks, Securities Report analysis as discussed in Appendix B.

concern for competitive impact. On the other hand, on December 31, 1992, the United States reduced the risk-weight on item 4 to the Basle level of 0 percent largely out of concern for the competitive impact of requiring higher risk-weights than other countries required.⁸⁴

The competitive impact of the risk-weight system cannot be measured solely by assessing country divergences from the Basle minimum standards. The Basle choice of risk-weights for particular assets can itself have competitive impact. If Japanese banks tended on average to have assets in higher risk-weight categories than U.S. banks, they might be at a competitive disadvantage. For example, Basle allows a 50 percent risk-weight for loans fully secured by a mortgage on residential property that is or will be occupied by the borrower or that is rented. In implementing Basle, the United States interpreted "residential property" to include one- to four-family residential properties. It also permitted securities backed by qualified loans to carry a 50 percent risk-weight.⁸⁵ In principle, Japanese banks could, like their U.S. competitors, take advantage of the 50 percent risk-weight. But there is much less financing of residential real estate in Japan because of different housing conditions.

Table 8 indicates asset distribution by risk-weight category for the top ten Japanese and U.S. banks in 1992.

The table shows that U.S. banks had a higher percentage of assets in residential mortgages—3.4 points more—and a lower percentage of assets in commercial loans—5.3 points less—than did their Japanese competitors. This meant lower capital requirements for U.S. banks. Put another way, if the United States had been unable to get a 50 percent risk-weighting for residential mortgages,

U.S. banks would have had higher capital requirements—the alternative would have been 100 percent—and would have been less competitive at the margin with the Japanese.

The table also shows that U.S. banks had a higher percentage of assets with a zero weight. This also means lower capital requirements for U.S. banks. The competitive impact may be more difficult to judge, given that assets with a zero risk-weight have lower returns and usually narrower margins than assets with higher risk-weights.⁸⁶ In 1992, facing declining loan demand and the constraining effect of the capital requirements themselves, U.S. banks may have had little choice other than to substitute government securities (the principal asset with a zero risk-weight) for commercial loans.

Under the Basle Banking Committee's consultative proposal on market risk, applicable to banks' trading accounts but not their investment accounts, capital requirements related to market risk will replace the 1988 credit risk requirements. Under the 1988 Accord the risk-weight of a debt security is determined by the type of obligor—for example, most important, whether the obligor is a government or a private issuer, and the risk-weight of equity is always 100 percent. The Basle Committee has stated that whether the market risk proposals "would lead to higher capital charges on balance would depend on the pattern of each bank's book and the category of issuer. A bank with well-hedged positions or with significant holdings of high-grade corporate debt securities could well have a lower capital requirement than at present."⁸⁷ U.S. banks could derive a greater advantage if these proposals do generally lead to lower requirements for big banks; as Table 4 indicates, they hold 1.69 percent of total assets in their trading account as compared with 0.43 percent for Japanese banks.

Interest Rate and Foreign Exchange Contracts

The Basle Accord applies capital requirements to off-balance-sheet transactions. Both countries have implemented the Accord's treatment of these transactions in the same way except in one important area, interest rate and foreign exchange contracts.

The Basle Accord permits countries to use one of two methods in calculating the asset equivalents of these contracts, the original exposure or current exposure method. At the Basle conference Japan strongly pushed to permit countries to use either method. The United States has required banks to use the current exposure method.

Japan, on the other hand, has allowed banks to choose the method if their transaction volume of foreign exchange and interest

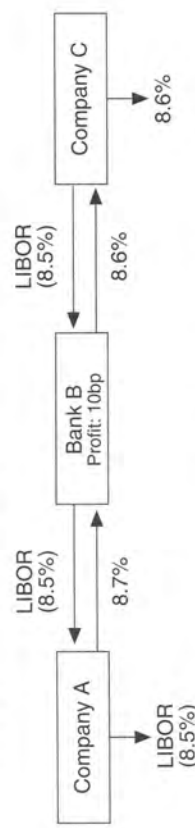
rate contracts is not large or if they do not have the administrative ability to use the current exposure method. Once a bank has chosen the current exposure method, it cannot switch back to the original exposure method.⁸⁸ Only one Japanese bank has chosen the current exposure method in full, and three have chosen it with respect to some kinds of contracts and will choose it in full in the near future. Other Japanese banks, however, have chosen the original exposure method.

We will examine how each of these methods works by using a simple fixed-floating interest rate swap as an example.

Suppose Company A and Company C seek to enter into a fixed-floating rate swap through Intermediary Bank B on the following terms:

Notional principal	\$10 million
Maturity	3 years
Floating index	6 months LIBOR (currently 8.5%)
Floating reset period	Every 6 months
Fixed rate	T bill rate + 70 basis points (current T bill rate = 8%)
B's profit (spread)	10 basis points

This transaction can be diagrammed as follows:



Note that Intermediary Bank B has entered into two independent contracts. Under its contract with Company A, it pays A a floating rate of 8.5 percent and receives a fixed rate of 8.7 percent. Under its contract with Company C, it pays C a fixed rate of 8.6 percent (8.7 – profit of 0.1) and receives a floating rate of 8.5 percent.

Under the Basle original exposure method, a bank must apply the following conversion factors to the notional principal amounts of interest rate contracts (including swaps) to determine their asset equivalents:

Maturity	Factor (percent)
Less than one year	0.5
One year and less than two years	1.0
Each additional year	1.0

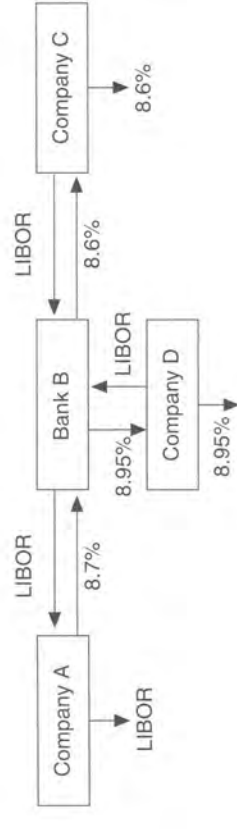
The Accord gives countries the option of using original or residual maturities of outstanding contracts in making their calculations. In Japan, banks using the original exposure method are required to use original maturities. The conversion factors have been set to reflect the market risk on the contracts — the possibility that changes in interest rates could expose the bank to loss if its counterparty defaulted.

On the date on which these contracts are entered into, each has three years to run. The asset equivalent amount of the two contracts is, thus, $\$10,000,000 \times .03 \times 2$, or $\$600,000$.⁸⁹ As prescribed by Basle, and as implemented in both the United States and Japan, this asset equivalent is then risk-weighted according to the appropriate risk-weight category, but with a weight no greater than 50 percent. Since these swaps are with private companies, the risk-weight would be 50 percent (the normal risk-weight for private sector credit is 100 percent). Thus, these two contracts would generate risk-weighted assets of $\$300,000$, or a capital requirement of $\$24,000$ ($\$300,000 \times .08$). After the contracts have been held for a year, regardless of changes in the market rates of interest, the capital requirement in Japan remains the same because original maturities must be used.

Under the current exposure method, the conversion process has two steps. First, a bank marks to market the replacement cost of contracts with a positive value (in the money). This reflects the cost the bank would incur if it entered into a new swap on the same terms. Second, the bank calculates the potential future credit exposure on the contract based on its residual maturity. This calculation reflects the potential risk of loss from counterparty default. Contracts with a residual maturity of less than one year are deemed to have no future exposure; contracts with one year and over are deemed to have 0.5 percent risk. The asset equivalent amount is the sum of these two calculations: replacement cost plus future exposure.

On the date on which these contracts are entered into, there is no replacement cost—they are entered into at market prices. Since both contracts are for one year and over, the asset equivalent amount of the two contracts is $\$10,000,000 \times .005 \times 2$, or $\$100,000$. The two contracts would generate risk-weighted assets of $\$50,000$ ($\$100,000 \times .50$), and a capital requirement of $\$4,000$ ($\$50,000 \times .08$).

Suppose that at the end of one year, interest rates have increased so that Bank B would now have to pay Company D a fixed rate of 8.95 percent to get a six-month LIBOR floating rate, if Company C defaulted. Bank B would then have the following contracts with Company A and Company D:



In this situation, Bank B would have a loss of 0.25 percent of \$10,000,000, or \$25,000 for each of the two remaining years on the two contracts, the difference between receiving a fixed rate from A of 8.70 percent and paying a fixed rate to D of 8.95 percent. This loss would be discounted to present value using an appropriate discount rate derived from interest rate yield curves for each of the two one-year periods remaining on the contract. If one assumed a flat yield curve at 9 percent for each period, the replacement cost would be \$43,978.⁹⁰ The potential future exposure, \$100,000, would be unchanged since the two contracts have two years to run. The credit equivalent amount would be the sum of replacement cost and future exposure, \$143,978, and the cost of capital would be \$5,759 (\$143,978 x .50 x .08).

The comparative cost of capital under the two methods is as follows:

	Original exposure	Future exposure
Contract date	\$24,000	\$4,000
One year later	\$24,000	\$5,759

Some general points can be made about the two methods. First, the original exposure method is always more expensive than the current exposure method on the swap contract date for swaps with a maturity of over one year, given the original exposure conversion rate of 1 percent compared with the future exposure conversion rate of 0.5 percent. For swaps of one year or less, the cost is the same, given the same 0.5 percent conversion rate. Second, under the current exposure method no capital is required against replacement value when the swap has a negative value (out of the money); only 0.5 percent capital is required for future exposure. However, under the original exposure method, more than 0.5 percent capital is always required, regardless of whether the swap is in or out of the money.

Over the life of the swap, the comparison between the two methods depends on the maturities of the swap portfolio and possible changes in interest rates. Table 9 compares the capital cost of a matched \$10 million notional amount swap at an original fixed

**Table 9. Capital Required for Swap Contracts,
Original and Current Exposure**

Change and original maturity (years)	Original exposure	Dollars			
		Current exposure			
		1	2	3	4
5 percent discount rate					
1 percent					
2	16,000	7,810	..	..	..
3	24,000	7,810	11,438	..	..
4	32,000	7,810	11,438	14,893	..
5	40,000	7,810	11,438	14,893	18,194
2 percent					
2	16,000	11,619	..	..	..
3	24,000	11,619	18,875	..	..
4	32,000	11,619	18,875	25,875	..
5	40,000	11,619	18,875	25,875	32,368
3 percent					
2	16,000	15,429	..	..	..
3	24,000	15,429	26,313	..	..
4	32,000	15,429	26,313	36,679	..
5	40,000	15,429	26,313	36,679	46,551
10 percent discount rate					
1 percent					
2	16,000	7,636	..	..	..
3	24,000	7,636	10,942	..	..
4	32,000	7,636	10,942	13,947	..
5	40,000	7,636	10,942	13,947	16,679
2 percent					
2	16,000	11,273	..	..	..
3	24,000	11,273	17,884	..	..
4	32,000	11,273	17,884	23,895	..
5	40,000	11,273	17,884	23,895	29,359
3 percent					
2	16,000	14,909	..	..	..
3	24,000	14,909	24,826	..	..
4	32,000	14,909	24,826	33,842	..
5	40,000	14,909	24,826	33,842	42,038

Note: Highlight indicates current exposure is larger than original exposure.

rate of 8 percent, under the two methods, with various assumptions about original and remaining maturities, and about changes in interest rates at the end of one year.⁹¹ Present value calculations are made by discounting all future losses at either 5 percent or 10 percent.

Table 8 shows that the original exposure method would be less expensive, in terms of capital, when the change in interest rates after one year of a contract is 3 percentage points or more, for contracts with remaining maturities of two years or more, assuming a discount rate of either 5 percent or 10 percent.

It is possible that Japanese banks have chosen the original exposure method to secure a competitive advantage over their U.S. and Japanese competitors using the current exposure method. As we have shown, one can posit swap contracts for which the original exposure method would require less capital. Available information does not permit us to determine whether banks using this method have such portfolios.

We do not believe that Japanese banks are selecting methods to secure a competitive advantage. Several banks have chosen the current exposure method, and it is unlikely that portfolios differ significantly among Japanese banks. Also, MOF requires Japanese banks that use the original exposure method to use original maturities even though the Accord permits the use of residual maturities. This requirement greatly limits the potential advantage of the original exposure method. Many Japanese banks do not have the administrative ability or technology to use the current exposure method. They are generally not used to mark-to-market accounting. This situation will quickly change, however. If we do not see rapid conversion to the current exposure method, we will be forced to reassess our conclusion on this point.

Under the 1993 proposals of the Basle Committee on Banking Supervision, banks would be able to calculate the capital requirements for swaps by using bilateral netting.⁹² Under the 1988 Accord, bilateral netting was permitted only under a rather restrictive form, bilateral netting by novation.⁹³ The Committee estimates that the use of bilateral netting to calculate replacement value could reduce the capital requirements for banks using the current exposure method by 25 percent to 40 percent. Under the original exposure method, there is no calculation of replacement value, but the Committee has reduced the credit conversion factors by 25 percent until such time as the market risk proposals go into effect; at that time the original exposure method will cease to be available for netted transactions. In the interim, U.S. banks using the current exposure method could be favored if capital savings from current exposure amounted to more than 25 percent. After the market risk proposal is implemented all banks will, in effect, be forced to use the current exposure method. As indicated, Japanese banks have already been moving in this direction.

Enforcement

Obviously, the effectiveness of any capital requirements imposed by the United States or Japan depends on the degree of enforcement. The 1988 Accord establishes no rules for measuring compliance with its standards nor agreed methods for enforcing compliance.⁹⁴ Enforcement seems much tougher in the United States.

It appears that Japanese authorities measure the compliance of Japanese banks with capital requirements only on the basis of end-period assets twice a year; on March 31, the end of the fiscal year, and on September 30, the end of the mid-fiscal year. This practice opens up the possibility of massive window dressing of balance sheets. One example that has been rumored relies on the difference between the calendar year accounting period for non-Japanese banks and the March 31 accounting period for the Japanese. The non-Japanese banks guarantee commercial credits for Japanese banks for a day, reducing the risk-weights of Japanese credits from 100 percent to 20 percent, while not increasing the risk for non-Japanese banks on a reporting date.

Also, failure to meet the requirements incurs no explicit penalties or consequences; MOF is given complete discretion. On the other hand, Japanese banks feel strong pressure to meet the requirements throughout the year. Bond ratings and the ability to attract funding could be affected by the inability of banks to meet the capital levels of their competitors within Japan and abroad. And, outside analysts can appropriately discount for obvious window dressing. But these private enforcement mechanisms rely on banks' reporting data on their capital positions, and such reporting is somewhat limited.⁹⁵

U.S. banks are subject to much stronger enforcement from regulatory authorities. Regulators formally monitor compliance with capital requirements quarterly, using call report information and average assets. But U.S. banks are expected to be in compliance with the requirements at all times. A type of random check of such compliance is available through the examination process. All major U.S. banks are examined once a year at an unscheduled time; the same cannot be said for every large Japanese bank.⁹⁶ Any failure of U.S. banks to maintain capital at Basle levels brings on specified consequences—for example, increased supervision (including limits on business expansion)⁹⁷ and higher deposit insurance premia.⁹⁸ Thus, U.S. banks are subject to strong public as well as private enforcement of capital requirements.

Notes

- ¹ 12 C.F.R. §3, Appendix A (1992).
- ² Regulation H, 12 C.F.R. §208, Appendix A (1992).
- ³ 12 C.F.R. §325, Appendix A (1992).
- ⁴ The differences are discussed in a report of the Board of Governors of the Federal Reserve Board, 59 *Federal Register* 1548 (January 11, 1994). This paper is based on the Federal Reserve Board's implementation of Basle and assumes all U.S. banks are subject to its requirements.
- ⁵ Regulation Y, 12 C.F.R. §225, Appendix A (1992).
- ⁶ 12 C.F.R. Part 208, Appendix B. For other than the most highly rated banks, the ratio is 4 percent to 5 percent.
- ⁷ Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, Risk-Based Capital Standards, Joint Advance Notice of Proposed Rule Making, 57 *Federal Register* 35507 (August 10, 1992).
- ⁸ Board of Governors of the Federal Reserve System, Final Rule, Prompt Corrective Action; Rules of Practice for Hearings (Press Release, September 18, 1992). Also, the assessment rate for a bank's deposit insurance premiums depends on its level of capital. Federal Deposit Insurance Corporation, Final Rule, Assessments, 57 *Federal Register* 45263 (October 1, 1992).
- ⁹ MOF Announcement No. 55, "Ginkouhou dai4jyou no2 nisadameru jikoshihonhitsu no kijun wo sadameru ken [Concerning the details of capital adequacy standards as in the Banking Law Article 14(2)]" (1993).
- ¹⁰ Reputational concerns also help explain why non-Basle Accord countries have unilaterally adopted the Basle Accord.
- ¹¹ In addition, if Basle were triggered only by international operations it might deter banks from operating abroad, particularly if such operations represented only a small part of their business.
- ¹² In the past the Board has also advanced the concern that a holding company failure could cause a run on a bank subsidiary. Depositors in a bank subsidiary may not understand that such a failure need not either cause or stem from the insolvency of their bank. Of course, an irrational run on a solvent bank is the most appropriate case for the use of the Fed's power as lender of last resort. Consolidated capital requirements that the Board imposes on the holding company also give the Board some power to offset low capital requirements that the OCC or FDIC might set.
- ¹³ "Shikaku [Viewpoint]," *Kinzai Weekly* (October 12, 1992), p. 15.
- ¹⁴ *Ibid.*
- ¹⁵ Ministry of Finance, Banking Bureau release, "Kinyukikan no Kashitsuke saiken no ryudoka tou jikoshihonhitsu koujousaku nitsuite" IV7(1) (April 1992).

- ¹⁶ One disturbing feature of this transaction involves the possibility that banks would seek to count the subordinated debt as Tier II capital without limitation (perpetual preferred debt) rather than subordinated term debt, which counts as Tier II capital to a maximum of 50 percent of Tier I capital. Given the promise to redeem within five years, it is clear these securities should be treated as subordinated term debt.
- ¹⁷ This is despite the fact that MOF prohibits lease and finance companies from offering subordinated loans to banks from which they are borrowing more than 20 percent of their funds. MOF, Banking Bureau Release, *supra* note 15, at IV2.
- ¹⁸ Although finance and lease companies borrow from and invest in the subordinated debt of multiple banks, there is a risk for the banking system as a whole.
- ¹⁹ Board of Governors of the Federal Reserve System, Revisions to the Capital Adequacy Guidelines (Press Release, January 14, 1992).
- ²⁰ 12 U.S.C. §371c (Section 23A of the Federal Reserve Act).
- ²¹ According to Article 222, Paragraph 3, and Article 346 of the Commercial Code, if shareholders who may be affected (prejudiced) by the legal rights of preferred shareholders with respect to dividends, issuance of shares, stock splits, and similar corporate actions are treated fairly when such actions are taken, or if a general meeting of shareholders approves such actions, the articles of incorporation do not have to specify the legal rights of preferred shareholders. However, these requirements are difficult to meet. The standard of fairness is very strictly interpreted, and the approval at the shareholders' meeting requires the affirmative vote of two-thirds or more of the shareholders present who hold more than one-half of the total number of issued shares for a particular class.
- ²² Torimoto, Kisho, "Yusen kabushiki-nikansuru jitsumuteki mondai [Practical Issues on Preferred Stock]," *Shoji homu* 1337-1341 (November 15 and 25, December 5 and 15, 1993).
- ²³ "Yusenkabushiki Hakkou-no Scheme-to Sono Igi," *Kinzai Weekly* (March 29, 1993).
- ²⁴ The issuing company may use the proceeds to redeem preferred if it decreases the amount of its legal capital, but this requires meeting very strict requirements of the Commercial Code. According to Articles 100, 212, 222, and 375-76, an issuing company that decreases the amount of its legal capital must inform all known creditors of the decrease and must pay off or provide security to creditors who do not consent to the decrease.
- ²⁵ *Asahi Shimbun* (March 9, 1994), p. 12.
- ²⁶ MOF, "Kinyuukikan no yuusuchitaiou nitsuite no shoken" (February 8, 1993).
- ²⁷ "Senmonkinyuukikanseido no arikata nitsuite [Report on Specialized Financial Institution System in Japan," Part 2, Chapter 1, Section 4, Kinyuuseidochousakai senmon'imkai [Financial System Subcommittee of Financial Research Council of the MOF] (1987).

- ²⁸ "Futsuuginko no youmuunei nikansuru kihonjikkouttou nitsuite [Basic Principles Concerning Management of Ordinary Banks]," MOF Banking Bureau Release No. 901, 5-3 (April 1, 1982). This restriction has been relaxed slightly by a later 1993 release, MOF Banking Bureau Release No. 610 (April 1, 1993).
- ²⁹ "Hikiuke nisaishi kyokainin ga junshusubeki hakkoukaisha no riekihaibun nitsuite [Concerning the standard of dividend payout which members of the Association should observe]," Japan Securities Dealers Association (March 24, 1992). In addition, the MOF also regulates the manner of dividend payouts. See "Futsuuginko no youmuunei nikansuru kihonjikkou-tou nitsuite [Basic Principles Concerning Management of Ordinary Banks]," MOF Banking Bureau Release No. 901, 5-1(4) (April 1, 1982).
- ³⁰ Other restrictions have also imposed obstacles to any bank's raising capital. These include a self-regulatory rule of the Japanese Securities Dealers Association that banks can increase capital only once a year. This rule makes it more difficult to take advantage of favorable turns in the market. Also, under the recently repealed Temporary Measures on Corporate Bond Act and the former provisions of Article 297 of the Commercial Law, Japanese banks were able to issue bonds, including convertible bonds and bonds with equity warrants, only up to 200 percent of their net assets. However, a bill to repeal these statutory restrictions was implemented on October 1, 1993, in response to the passage of the Commercial Law in the Diet on June 15, 1993.
- ³¹ Consultative proposal by the Basle Committee on Banking Supervision, "The Supervisory Treatment of Market Risks" (April 1993), paras. 18-21.
- ³² On an exceptional and temporary basis the percentage may be 2 percent.
- ³³ Sozei tokubetsu sochi hou dai 55 jou [Special Tax Treatment Law, Article 55]; MOF Banking Bureau Release No. 901, 5-1(4) (April 1, 1982).
- ³⁴ In fact, the general reserve cannot exceed the higher of 0.3 percent of total loans or the ratio of average loan losses to total loans over the previous three years. In practice, the average loan loss ratio has always been below 0.3 percent.
- ³⁵ Sozei tokubetsu sochi hou dai55jou [Special Tax Treatment Law, Article 55]. With respect to special reserves for foreign loans, the ceilings also seem to have been driven in large part by tax considerations.
- ³⁶ In the case of the special account for loan depreciation, the MOF has, in recent years, started to ease the restrictions. The MOF has allowed banks to credit the special account when a debtor has petitioned for bankruptcy, Kokuzeicho houjinzei kihon tsutatsu 9-6-5 [Tax Agency Release on Corporate Taxes]. For tax purposes, a bank can deduct up to half the amount of the unsecured portion of the bankrupt's loans. Banks may also credit the special account when it is difficult to collect more than 40 percent of a loan because a debtor has been

insolvent more than one year and has no expectation of recovery. The amount credited is tax deductible. The Tax Agency and the MOF require the certification of bank examiners before allowing the credit. Kokuzeicho houjinzei kihon tsutatsu 9-6-4 [Tax Agency Release on Corporate Tax]; Kaho 2-4, Sacho 4-4, "Nintei-niyoru saikenshokuyaku tokubetsu kanjou-nikansuru unyojono ryuuten-nitsuite [Concerning administration of special account for loan depreciation] (September 18, 1992).

Furthermore, a MOF Banking Bureau release clearly states that banks can increase the special account for amounts in excess of those that can be deducted for tax purposes if banks notify the Banking Bureau in advance of the contents of the loans in question. Kuragin dai901go [MOF Banking Bureau Release No. 901] (April 1, 1982). This was reemphasized in an administrative guidance of June 25, 1992, Kuragin 1237 [MOF Banking Bureau Release No. 1237]. According to the latest release, of February 8, 1994, banks can credit the special account for loan depreciation when there is a possibility of a loss from a loan that does not meet the above-described conditions for receiving a tax deduction. Kuraken dai53go [MOF Inspection Department Release No. 53].

In addition, the MOF Tax Agency permits the full write-off of loans that are very difficult to collect. Kokuzeicho houjinzei kihon tsutatsu 9-6-1, 9-6-2 [Tax Agency Release 9-6-1, 9-6-2]. As a condition for permitting such write-offs, the Tax Agency and the MOF require that banks have either the certification of bank examiners or a judgment from a bankruptcy court that losses have occurred.

³⁷ American Institute of Certified Public Accountants, *Industry Audit Guide, Audit of Banks* (May 1, 1992), instructs bank auditors to consider all relevant factors when evaluating the adequacy of loan loss reserves. Such factors include previous collection experience, changes in business trends, and the borrowers' financial abilities.

³⁸ Other assets especially mentioned are loans that are currently protected by the paying capacity of the obligor or pledged collateral but that show signs of a potential to become a loss asset. Substandard loans are loans inadequately protected by the current sound worth and paying capacity of the obligor or of the collateral pledged. Such loans must have a well-defined weakness that jeopardizes the liquidation of the debt. Doubtful loans meet all the definitions of standard loans, with the added characteristic that the weaknesses make collection or liquidation in full highly questionable and improbable. Loss loans are basically worthless and should be promptly charged off.

³⁹ J. Peek and E. Rosengren, "Reserving for a Rainy Day: Implications for Banking Reform," Federal Reserve Bank of Boston (November 6, 1992), p. 5.

⁴⁰ The 1991 amendment would exclude reserves created against "identified losses or in respect of an identified deterioration in the value of any asset or group or subset of assets...." ¶18.

⁴¹ I.R.C. §585.

⁴² Treasury Regulation §1.66-2(d)(1).

⁴³ Treasury Regulation §1.166-2(d)(3). Under FDIC Guidelines, CCH Federal Banking Law Reports para. 51,131, examiners order loans charged off when some qualifying event has occurred, such as foreclosure or the filing of bankruptcy, causing the realization of the loss to be certain. Low-dollar, high-volume loans (that is, consumer installment loans, credit card loans, and check credit plans) are subject to mechanical, automatic charge-off procedures. For example, consumer installment paper that is delinquent 120 days or more and credit card and check credit debt that is delinquent 180 days or more are considered loss assets for regulatory purposes.

⁴⁴ It has been reported that Japanese banks have recently started to increase reserves. *Nippon Keizai Shimbun* (May 28, 1993), p. 11.

⁴⁵ *Asahi Shimbun*, morning edition (May 25, 1993), p. 12.

⁴⁶ While Japanese loan loss reserves are limited by the 0.3 percent ceiling, banks appear to be increasing their reserves within these limits. Robert Thomson, "Japan's banks count the cost of bad loans," *Financial Times* (May 28, 1993).

⁴⁷ The Japanese banks have set up the Cooperative Credit Purchasing Company (CCPC) to help deal with the bad loan situation. The scheme uses an accounting sleight of hand reminiscent of the way the U.S. Federal Home Loan Bank Board dealt with troubled thrift institutions in the early 1980s. It works as follows: Suppose a bank had a ¥100 loan to a real estate developer that CCPC determined was worth only ¥70. The bank would lend CCPC ¥70, getting CCPC's note in return. CCPC would then use the loan proceeds to buy the loan from the bank for ¥70. The bank would write off ¥30, presumably reducing its capital by a like amount, and deduct the ¥30 loss from its taxable income. The net effect would be that CCPC rather than the developer now owed the bank ¥70, and the developer owed CCPC ¥70. If the loan were really worth ¥70, the bank should have been able to sell it to a third party for that amount. In effect, the validity of the loan valuations depends on CCPC being able to sell the loans in the longer term for close to their face amounts; otherwise it will not be able to pay the banks. The scheme is designed in part to allow the banks to take a tax write-off for "selling" the loan to CCPC when in fact it would be difficult or undesirable (from the government's perspective) to do so in the marketplace. See "Inter-view," *Kinzaï Weekly* (March 8, 1993), pp. 38-41.

The CCPC, as of January 1994, had bought ¥2.39 trillion of loans for ¥1.31 trillion, implying a 45 percent loss ratio. "Japanese Banks, Tough on the Taxpayer," *Economist* (February 26, 1994). But the losses could be considerably greater considering that CCPC has so far recovered only 0.6 percent on the loans it has bought.

⁴⁸ Japanese banks have had a huge amount of undisclosed and unrealized gains from real estate holdings. According to Nikko Research Center, at the end of March 1992, the twenty largest banks (eleven city banks, three long-term development banks, and six trust banks—Nippon Trust is excluded) had approximately ¥17.7 trillion (\$139 billion) of such gains as of March 31, 1992. See Katsuhito Sasajima,

"Ginkou no restructuring to 90mendai no tembou [Banks' restructuring and their outlook for 1990's]," Nikko Research Center Toshi Geppou (July 1992), pp. 38, 40.

⁴⁹ As of March 1992, the unrealized gains on listed stocks for all Japanese banks (city banks, long-term credit banks, trust banks, and first- and second-tier regional banks) was ¥19.9 trillion, or \$156.5 billion. The amount was even greater in March 1991, before the fall in the Nikkei, ¥26.8 trillion or \$211 billion (¥127/1\$).

⁵⁰ Debt securities bought at discount or premium are carried at amortized cost. Discounts are added and premia are subtracted from the cost of the securities over the remaining maturities on the instruments.

⁵¹ Financial Accounting Standards Board, Financial Accounting Standards No. 12, issued in December 1975. Under these standards, declines in the value of equities held as long-term investments need not result in a decrease in net income unless such declines are "other than temporary." But, they still are reflected on the balance sheet through a valuation allowance for assets and a debit to a capital account reserve, thus decreasing capital. While the SEC has concluded banks' bypassing the income statement in such cases, all decreases in the market value of equity securities lead to a decrease in capital. See K. Bialkin, "SEC's Valuation Views May Have Impact," *National Law Journal* (January 13, 1992), p. 16.

⁵² Report of the Subcommittee on Financial Institutions Supervision, Regulation and Insurance, Task Force on the International Competitiveness of U.S. Financial Institutions of the House Committee on Banking, Finance and Urban Affairs, H.R. Rep. No.7, 101st Cong., 2nd Sess. 7-8, 66, 189-90, 193-94 (1990); R. Gilson and M. Roe, "Understanding the Japanese Keiretsu: Overlaps Between Corporate Governance and Industrial Organization," *102 Yale Law Journal* 871 (1993).

⁵³ Until 1980, listed debt securities had to be carried at the lower of historical cost or market. The MOF changed the rule to allow banks to avoid recognition of huge losses in their government bond (GB) portfolios. Yoshiaki Koyama, "Ginkouhou [Banking Regulations]" (1992), p. 308. During the 1970s, primary issues of GBs at below-market rates were allocated to syndicate members. The MOF was reluctant to permit secondary GB transactions for fear of market pressure to increase rates, and so banks accumulated large GB portfolios. Nonetheless, a gradual increase in secondary market GB transactions forced down the market price of old GBs.

⁵⁴ The Nikkei index fell precipitously between 1991 and 1992. See Chart 2.

⁵⁵ There has been strong criticism of the MOF policy. Daigo, Satoshi, "Yukashoken teika hyoka-no saikento [Revaluating the lower of historical cost or valuation]," *Shoji homu* 1301 (October 15, 1992), p. 2, and Yanaga, Masao "Kinyukikan-no keisan-nikansuru jakkan-no kosatsu [Brief Review of Bank Accounting]" (October 15, 1992), p. 8.

City banks did not take advantage of the option to defer unrealized equity losses. On the other hand, seven trust banks (six of which are among the top twenty Japanese banks) did defer losses. Had Yasuda taken the losses (even as partially offset by gains trading), it might have fallen below the required 8 percent BIS ratio. Other trust banks may have deferred the losses either because such losses were embarrassingly large or because, as peers of Yasuda, they followed the Japanese custom of "being in it together."

⁵⁶ The national tax is 37.5 percent, the state tax is 12 percent, the local tax is 1.9 percent, and town and county taxes are 4.6 percent.

⁵⁷ Since most of the debt securities held by Japanese banks in the trading account are government bonds, which have a zero risk-weight, there is no capital cost attributed to replacing debt securities worth 100 with those worth 300.

⁵⁸ Under FASB Statement 12, unrealized losses on equities held for investment are marked down to market, but the losses do not necessarily get subtracted from income. Unless the bank determines that it is other than temporary, the loss may be shown as a separate entry on the equity account (by way of a "valuation allowance") rather than being subtracted from income. Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 12, *Accounting for Certain Marketable Securities* (December 1975), paras. 11, 21. The SEC's accounting rules, Staff Accounting Bulletin No. 59, have defined the factors to consider in determining whether losses are "temporary," and recent enforcement actions against banks seem to require that most losses *not* be regarded as temporary. As a result of either SEC pressure or their own accounting policies, many large bank holding companies apparently subtract equity losses directly from income, since their capital accounts do not reflect valuation allowances. See, for example, *Citicorp Annual Report 1990*, pp. 80-81.

⁵⁹ For all Japanese banks, the results are similar. Revaluation reserves, as of March 1992, were ¥9.5 trillion, which was 1.55 percent of total risk-weighted assets, compared with the average ratio of all capital to risk-weighted assets of 8.34 percent.

⁶⁰ General Accounting Office, *Debt Securities*, p. 13.

⁶¹ The three-month Treasury bill rate on new issues was 7.64 percent in December 1989 and 6.81 percent in December 1990. Council of Economic Advisers, *Economic Report of the President* (February 1991), Table B-71.

⁶² This result in 1990 may be explained on the grounds that long-term bond rates actually increased slightly during the same period. The Treasury's ten-year bond increased from 7.84 percent in December 1989 to 8.08 percent in December 1990. This increase in rates may have generated losses on long-term bonds that offset gains on short-term securities. But, this explanation clearly does not work for 1989. In that year three-month Treasury bill rates decreased from 8.09 percent in December 1988 to 7.64 percent in December 1989, while ten-year bond rates also decreased, from 9.1 percent to 7.84 percent. Nonetheless, total unrealized gains on domestic debt securities for the top ten banks were only 2 percent of market value.

⁶³ The top U.S. tax rate has been raised from 34 percent to 35 percent, retroactive to January 1, 1993, by the Omnibus Budget Reconciliation Act of 1993, H.R. 2264 (August 10, 1993); 60 *Tax Notes* 830 (August 12, 1993).

A more precise calculation of the tax cost of gains trading would rely on use of a bank's effective tax rate rather than the statutory rate. Banks in the United States have been permitted to take deductions, which have reduced their effective tax rate significantly below the statutory rate. For example, in 1988, the effective tax rate on U.S. banks (taxes/pre-tax income) was 16.12 percent compared with 25.92 percent for all industries. F. Marovelli and B. Moser, *Effective Tax Rates* 15 (1990). In 1992, the effective tax rate of the top ten banks was 29.2 percent, ranging from a low of -46.7 percent for Citibank, due to sizable losses, to a high of 47.2 percent for Wells Fargo.

The effective tax rates for Japanese banks are much higher. In 1991-92, the effective tax rate of the top ten banks was 53.8 percent, ranging from a low of 38.3 percent for the Industrial Bank of Japan to a high of 81.3 percent for Fuji Bank. These Japanese figures are calculated on a nonconsolidated basis. On a consolidated basis, the average effective tax rate for the ten banks was 50.1 percent.

⁶⁴ The advantage for U.S. banks can be illustrated. Assume banks own six equity securities, each of which cost 10, for a total of 60, and whose market values are now 20, 30, 40, 2, 3, and 4, for a total of 99. U.S. banks would carry the securities at 60, since aggregate cost was lower than market. Japanese banks, on the other hand, would mark down the securities to 39, the sum of the lower of cost or market for each individual security (10+10+10+2+3+4).

⁶⁵ To Japanese banks, making profits comparable to those of their peer banks is very important. Given losses in stock portfolios, which had to be realized, Japanese banks would all likely engage in offsetting gains trading. Although the stocks would be sold at prices above their cost, the sales would put downward pressure on stock prices. On the other hand, if cross-shareholding obligations required banks to buy back the stock, the net effect on stock prices should be negligible.

⁶⁶ While the MOF action may improve the capital ratio compared with actual results in 1991, Japanese banks would have been even better off recognizing all unrealized gains. As discussed, however, banks are reluctant to engage in this strategy.

⁶⁷ See generally Kazuo Ikeno, "Ginkou risuku to kisei no keizaigaku [Economics of Bank Risks and Regulations]" (1990), p. 157.

⁶⁸ See K. Bialikin, "SEC's Valuation Views May Have Impact," *National Law Journal* (January 13, 1992), p. 16.

⁶⁹ Financial Accounting Standards Board, Statement 115, "Accounting for Certain Investments in Debt and Equity Securities" (1993), paras. 6-14.

⁷⁰ Board of Governors of the Federal Reserve System, Proposed Rule, 58 *Federal Register* 68563 (December 28, 1993).

⁷¹ The Bankers Association of Japan, "Toitsu Kaiji Kijun [The Uniform Disclosure Standards]" (June 25, 1990). See Kinyu [Finance] (August 1990), p. 46.

⁷² Ministry of Finance, Securities Bureau release No. 2318 "Shijoseiaru Yukashoken oyobi Sakimono Option Torihiki tono Jikajyoho no Kaijitsuite [Disclosure of Market Value of Marketable Securities, and Futures and Option Transactions]" (December 25, 1990).

⁷³ 60 *Tax Notes* 834 (August 12, 1993).

⁷⁴ Under new §475(c)(1) of the Internal Revenue Code, a securities dealer is a taxpayer who "(A) regularly purchases securities from or sells securities to customers in the ordinary course of a trade or business; or (B) regularly offers to enter into, assume, offset, assign or otherwise terminate positions in securities with customers in the ordinary course of business." Since some (albeit a small percentage) of securities in the trading accounts of large banks will be subject to (A), banks will be subject to the tax mark-to-market rules. Even if the taint of these securities could be removed by transferring them to a holding company affiliate, for example a \$20 company, large banks would still likely be securities dealers because of their activities with respect to other "securities." The definition of securities is broad, and includes debt and derivative contracts. Thus, if the bank were a dealer in swaps, or even mortgage loans (originating them and then selling them to institutional investors, see Revenue Ruling 72-523), it would be a securities dealer.

⁷⁵ The new tax provisions are unclear as to whether securities that FASB classifies as "available for sale," and thus subject to accounting mark-to-market treatment, would be taxed on a mark-to-market basis. This question will have to be resolved by regulation.

⁷⁶ Consultative Proposal, at para. 9.

⁷⁷ Board of Governors of the Federal Reserve System, Final Rule to Capital Adequacy Guidelines (Press Release, February 4, 1993).

⁷⁸ Board of Governors of the Federal Reserve System, Proposed Revisions to Capital Adequacy Guidelines, 58 *Federal Register* 8007 (February 11, 1993). The DTA proposal on regulatory capital was a response to the FASB Statement, "Accounting for Income Taxes" (February 1992).

⁷⁹ Such revaluations would increase Tier I capital, compared with the use of revaluation reserves for fixed assets (which is prohibited in Japan), which would increase Tier II capital.

⁸⁰ *Nikkei Shimbun* (January 12, 1993), p. 3.

⁸¹ U.S. banks are major investors in these securities. Banks' holdings totaled \$235.3 billion as of September 30, 1991, out of the approximately \$1 trillion outstanding.

⁸² For example, FASB is considering whether to extend the market value accounting principle to certain restructured loans. If market rates were higher on such loans, banks would have to account for the differential through higher provisioning and consequently lower earnings and capital. See David Siegel, "Fair-Value Rule Being Extended to Bad Loans," *American Banker* (December 10, 1992).

⁸³ In a recent report mandated by the Congress to assess implementation of the Basle Accord by other countries, the Federal Reserve Board and the Treasury acknowledged that capital requirements for banks will differ as long as financial markets differ. Board of Governors of the Federal Reserve System and Department of the Treasury, *Capital Adequacy Report* (June 19, 1992), p. 19.

The report correctly notes that these differences are reflected only in Tier II capital, but provides no evidence to support its assertion that "taking these differences into account, there is broad equivalence among countries in the quality of Tier 2 capital as a supplement to core capital." *Id.*, p. 26.

⁸⁴ Board of Governors of the Federal Reserve System, Final Rule, Capital Adequacy Guidelines, 57 *Federal Register* 62180 (December 30, 1992).

⁸⁵ Responding to a congressional mandate, Section 618 of the Resolution Trust Corporation Refinancing, Restructuring, and Improvement Act of 1991, P.L. 102-233, 105 Stat. 1761, the Federal Reserve Board has expanded the coverage of this item to include certain construction loans for presold one- to four-family residential properties, Board of Governors of the Federal Reserve System, Final Rule, Capital Adequacy Guidelines, 58 *Federal Register* 28491 (May 14, 1993). Coverage was also expanded to include certain multifamily loans; Board of Governors of the Federal Reserve System, Final Rule, Capital Adequacy Guidelines, 58 *Federal Register* 68735 (December 29, 1993). It is questionable whether this expansion is consistent with the Basle Accord, which describes the 50 percent category as "Loans fully secured by mortgage on residential property that is or will be occupied by the borrower or that is rented". Obviously, the borrower on a construction loan for a presold house will not occupy the property.

⁸⁶ Indeed, one could argue that capital requirements should not be based on the riskiness of assets since the risk-adjusted returns on all assets are the same.

⁸⁷ Consultative Proposal by the Basle Committee on Banking Supervision, "The Supervisory Treatment of Market Risks" (April 1993), para. 14.

⁸⁸ MOF Announcement No. 55, "Ginkouhou dai14jou no2 nisadameru jikoshihonritsu no kijun wo sadameru ken [Concerning the details of capital adequacy standards as in the Banking Law Article 14(2)]" (1993).

⁸⁹ The conversion factor is 0.03 because each contact has three years to run, and there is a cumulative 0.01 factor for each remaining year.

⁹⁰ $(25,000/1 + .09) + 25,000/(1 + .09)^2$.

⁹¹ As in the above example, we assume that the bank has actually entered into two matched swap contracts, one fixed and one floating.

⁹² Consultative Proposal by the Basle Committee on Banking Supervision, "The Supervisory Recognition of Netting for Capital Adequacy Purposes" (April 1993).

⁹³ Under netting by novation an "obligation between a bank and its counterparty to deliver a given currency on a given value date is automatically amalgamated with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations." *Id.*, Annex 2, p. 1.

⁹⁴ The Basle Committee's Consultative Proposal on The Supervisory Treatment of Market Risks recognizes that regular reporting periods would be established by individual countries but further states that banks would be expected to have adequate capital for market risks on a daily basis. The short-term nature of trading risks may force supervisors to reach more agreement on enforcement than they have for longer-term banking risks.

⁹⁵ Data on capital ratios are made public twice a year: at midyear and year-end accounting periods, September and March. Immediately after the period end, banks customarily give public estimates of their overall ratios. More specific data are released within three months of the period end in the "securities report." The data consist of the capital ratios, and the amounts of Tier I, Tier II, and total risk assets. Revaluation reserves, general loan loss reserves and special reserves for foreign loans, and subordinated debt are included as breakdown items in Tier II.

⁹⁶ Both MOF and BOJ separately examine city banks and long-term credit banks every three or four years. For some banks, this may mean an examination only every two years.

⁹⁷ See the "Prompt Corrective Action" provisions of Section 131 of the Federal Deposit Insurance Corporation Improvement Act, as implemented by regulations of the Federal Reserve Board, 57 *Federal Register* 44866 (September 29, 1992).

⁹⁸ Federal Deposit Insurance Corporation, Final Rule on Risk-Based Insurance Premiums, 57 *Federal Register* 45263 (October 1, 1992).

V. Conclusion

The scorecard on the next page summarizes many of the points made in this paper. This scorecard shows that the capital factors affecting competition push in opposite directions for Japanese and U.S. banks. Although we are unable to measure the cumulative quantitative impact of these various factors, some qualitative observations are possible.

1. Non-Basle factors tend to favor the Japanese. The value of government bailout subsidies are likely, in our judgment, to give a sizable competitive advantage to Japanese banks that cannot be addressed by the Basle Accord. U.S. banks will always have to be better capitalized than their Japanese competitors to compete. Indeed, U.S. banks might have been better off with no harmonization of capital ratios. It might have been cheaper for U.S. banks to compete with Japanese banks holding 4 percent capital by, for example, holding 8 percent, than by pushing the Japanese up to 8 percent and thereby having to hold significantly more than 8 percent.

2. That U.S. banks must comply with capital ratios in addition to Basle, and must have higher than an 8 percent Basle ratio to avoid onerous supervision, is a distinct advantage for Japanese banks.

3. The fact that Basle does not apply to bank holding companies is, in principle, a significant advantage for U.S. banks. Japanese leverage from below improves only Tier II capital. However, the actual advantage to U.S. banks is currently limited by the decision of the United States to apply capital requirements to bank holding companies, although the United States still allows its holding companies to issue cumulative perpetual preferred stock as Tier I capital.

Capital Scorecard

Factor	Advantage	
	Japan	U.S.
Safety net	■	
Non-Basle policies		
Government subsidy	■	
Loan valuation	■	
Restrictions on equity (profits, dividend assurances)		■
Ratios in addition to Basle	■	
Scope of application		
Number of banks	■	
Bank holding companies	■	
Qualifying capital		
Noncumulative perpetual preferred	■	
Other hybrid instruments	■	
Subordinated debt	■	
Loan loss reserves	■	
Gains and losses on securities		
Trading account	■	
Investment account	unclear	
Intangibles	■	
Deferred-tax assets	■	
Risk-weighting of assets		
On Basle schedule	■	
Not on Basle schedule	■	
Importance of lower risk-weighted assets	■	
Enforcement	■	

4. U.S. banks generally benefit by having more qualifying sources of capital that are cheaper than equity. The Japanese banks, however, significantly increase Tier I capital through limiting reserves for loan losses. The U.S. banks probably generate more capital through marking to market and gains trading than the Japanese do through using revaluation reserves, but may lose more capital in cases of losses on investment accounts.

5. U.S. banks generally benefit by having assets with lower risk-weights. This advantage is particularly important for residential real estate mortgages, whose actual risk is likely to be much higher than that on a significant percentage of commercial loans held by Japanese banks. Japanese banks benefit to some degree by the U.S. decision to adopt higher risk-weights than Basle's for some assets, but this advantage is probably more than offset by the U.S. decision to assign lower than 100 percent risk-weights to some asset categories not on the Basle schedule.

6. Japanese banks are at a clear advantage with respect to enforcement. Public enforcement in Japan is quite weak compared to that in the United States. Although Japanese banks may face peer pressures to keep capital in line with their Japanese competitors, U.S. banks must be capitalized at over 8 percent to avoid onerous supervision.

A main objective of the Basle Accord was to level the competitive playing field between Japanese and U.S. banks. We believe it could not achieve this objective for several reasons. First, factors that Basle cannot remedy, like public subsidies, have a heavy impact on competition. Second, the effect of the Accord is highly influenced by accounting rules and other balance sheet regulations—for example, loan loss reserve policies. Since Basle did not harmonize these areas, the same capital requirement has different impacts in the two countries. Third, differences in legal regimes and capital markets between two countries can provide significant advantages in utilizing various capital instruments and in holding assets of different risk-weights. Fourth, differences in the public enforcement of capital requirements have not been remedied by the Accord. It would be an accident, we believe, if the Accord made even a modest contribution to diminishing competitive inequality between U.S. and Japanese banks.

We conclude that competitive considerations should not be adduced to justify the Basle Accord. Its value should, instead, be determined by its contribution to increasing the safety and soundness of international banks, as balanced against its possible role in contributing to credit crunches in periods of economic downturn.

Appendix A. Gains Trading versus Revaluation Reserves for Japanese Banks

Under certain conditions it would be preferable for Japanese banks to engage in gains trading rather than relying on revaluation reserves. Case 1 in Table A indicates how increased gains trading would affect the capital position of Japanese banks, given a statutory tax rate of 56 percent. Case 2 is discussed in the text.

Item	1991 Actual	Case 1 Gains trading	Case 2 MOF action
Investment account securities	54,637	66,515	54,637
Total unrealized gains	11,878	0	13,814
Total realized gains (after tax)	0	5,226	0
Total unrealized losses	(852)	(852)	(852)
Hypothetical gains trading (offsetting unrealized losses)	1,936	1,936	0
Total risk assets	359,603	371,481	357,667
Addition to BIS capital	5,345	5,226	6,216
Equity capital	16,262	21,488	16,262
Equity + revaluation reserves	21,607	21,488	22,478
Ratio of equity + revaluation reserves/total risk assets	6.01	5.78	6.28

Source: Japanese Securities Report.

The first column indicates the actual 1991 data. In Case 1, we assume that Japanese banks realize the unrealized gain by selling appreciated securities, and increase equity capital on an after-tax basis by ¥5,226 billion, given the 56 percent tax rate ($11,878 \times .44$). Risk assets and investment securities would be increased by ¥11,878 billion. This assumes that the gain assets are all stock (100 percent risk-weight) and that they will be bought back, after they are sold, at their new higher price. Tier I BIS capital would increase by the after-tax gain of ¥5,226 billion and the risk-based capital ratio would decrease to 5.78 percent, a loss of 23 basis points. Obviously, Japanese banks would be better off using revaluation reserves.

The following equation formalizes the comparison between gains trading and revaluation reserves, where X = total risk assets and U = unrealized gains:

$$\frac{0.44 \times U}{X + U} < \frac{0.45 \times U}{X} ;$$

$$-0.02222X < U.$$

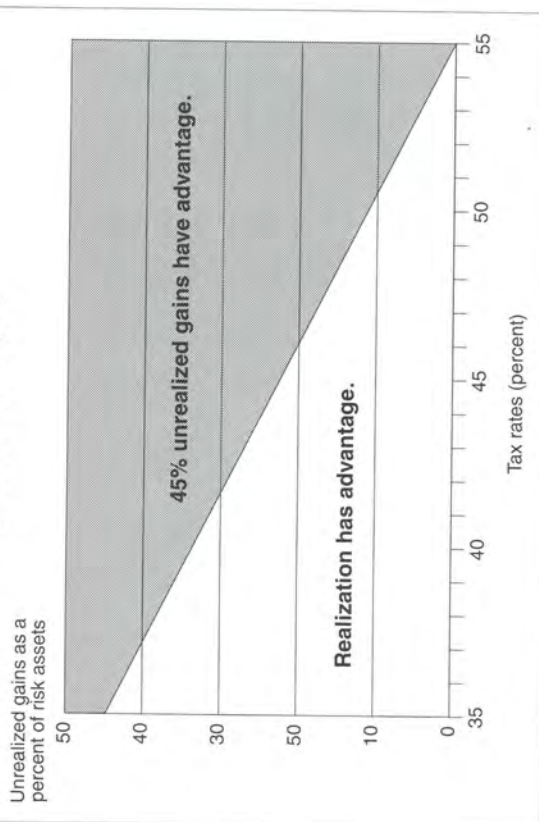
Gains trading is represented by the left-hand side of the equation. Given the 0.56 tax rate, the addition to capital from realizing gains is 0.44 of the gain. Risk assets increase by the amount of the gain on the assumption that the bank buys back the sold securities at the higher price. Using revaluation reserves is represented by the right-hand side of the equation, where the bank realizes 45 percent of the gain without increasing its assets. Given the fact that $-0.0222X$ is negative, it can never be better to gains trade with a tax rate of 0.56; revaluation reserves will always generate more capital than gains trading will.

The advantages of gains trading versus revaluation reserves depends on the tax rate and the percentage of unrealized gains of total risk assets. Chart A-1, based on the above equation, shows the relationship.

This chart shows that at tax rates over 55 percent gains trading never has an advantage, but that at tax rates under 55 percent, the preferable strategy depends on the percentage of unrealized gains. For example, at a 50 percent tax rate Japanese banks will be better off not to gains trade if and only if unrealized gains are more than 11.1 percent of risk assets.¹

We set out below the total unrealized gains as a percentage of risk assets (TUG/TRR), together with the real tax rates (RTR—

Chart A-1. Gains Trading versus Revaluation Reserves in Japan



amount of tax/pre-tax net profit) and the gains trading break point (GTB) for the ten largest Japanese banks for 1991 and 1992:

	1991	1992
TUG/TRR	6.63	3.30
RTR	44.20	53.80
GTB	24.00	2.67

Although the statutory rate during the period was over 55 percent, thus making gains trading unattractive, the real tax rate was lower, 44.2 percent in 1991 and 53.8 percent in 1992. According to the equation, Japanese banks were better off not to gains trade in 1992. In 1992, at a real tax rate of 53.8 percent, Japanese banks would have been better off gains trading only if TUG/TRR had been less than 2.67 percent.² This is the gains trading break point (GTB). Since the ratio was in fact 3.30 percent, Japanese banks were better off generating capital through revaluation reserves.

However, in 1991, the TUG/TRR of 6.63 percent was less than the GTB, 24 percent. Thus, Japanese banks would have been better off gains trading. Perhaps the reasons they did not do so have to do with other factors. Much of the stock held by Japanese banks is in group companies. Sale of that stock in the group may be risky for the cohesion of the group if it is not bought back and could hurt bank-customer relationships. The Ministry of Finance may also

discourage gains trading during declines in the Tokyo stock market. As Chart 3 in the text indicates, the Nikkei took a dramatic fall after the end of 1989.

The major point is that, under some conditions, Japanese banks may benefit by gains trading rather than using revaluation reserves.

Notes

1. In terms of the equation, with a 50 percent tax rate, $0.1111X < U$.

2.
$$\frac{0.538 \times U}{X + U} < \frac{0.45 \times U}{X} ;$$
$$0.0266X < U.$$

Appendix B. Transfer and Allocation of Assets from Securities Report

The risk-weight asset data for the top ten Japanese banks in Table 7 in the text is based on an accounting report these banks are required to submit to the Ministry of Finance in accord with the Securities and Exchange Law (“Securities Report”). Article 24 of that law provides that the Report be disclosed to the public. Banks also submit a report on their capital to MOF (“Capital Report”), but this report, except for certain aggregates—total risk assets and Tier I and Tier II capital—is not publicly disclosed. We had to estimate assets in risk-weight categories based on the data in the Securities Report.

There are some general problems in using Securities Report data. The Securities Report does not consolidate all of the banks’ financial subsidiaries and does not include off-balance-sheet data except for guarantees and loan commitments. Our data is, therefore, not complete.

We were able to allocate 100 percent of certain items in the Securities Report, Table B-1, to particular risk-weight categories, as follows:

Risk-weight category (percent)	Securities report item
0	5, 7, 8, 10, 18
10	6, 11
20	2, 3, 23, 24, 25, 27
100	4, 13, 14, 17, 19, 20, 26, 31, 32, 33

While item 4 includes mortgage certificates, we believe the amount of such mortgages properly assignable to the 50 percent risk

category is insignificant. Item 28 from the Securities Report was excluded from risk assets.

A major problem is that the Securities Report does not always have counterparty breakdowns. For example, the item "corporate bonds" in the Securities Report includes government-guaranteed bonds (0 percent risk-weight), bank debentures (20 percent), and corporate bonds (100 percent). In order to break down "corporate bonds" into their correct risk-weight components we relied on data from the Flow of Funds Accounts.

Table B-1 shows how we allocated assets in the Securities Report into risk-weight categories. For corporate bonds (item 12 in the Securities Report), we allocated 30 percent, 45 percent, and 25 percent of the bonds to respective risk-weight categories of 0 percent, 20 percent, and 100 percent. We based this allocation on the 1989 Flow of Funds data in Table B-2. These data give information on the corporate bond portfolio of all banks and eleven city banks. It shows that the city banks held government-guaranteed bonds of ¥2,328 billion, bank debentures of ¥3,523 billion, and corporate bonds of ¥2,357 billion. We used the respective percentages of these bonds in the total portfolio of the eleven city banks, 28.4 percent, 42.9 percent, and 28.7 percent, to break down the Securities Report data for the top ten banks into risk-weight categories.

Unfortunately, these Flow of Funds data for the city banks were not reported after 1989. We updated our allocations based on more recent data for all banks. Column (A) - (B) shows the changes in portfolio weights for all banks between 1989 and 1991; for example, government-guaranteed bonds increased by 8.3 percent. We used the direction and magnitude of these changes to adjust the 1989 data. The percentage adjustments we made are in column (C) - (D) for the city banks, and the resulting risk-weights used in column (C).

We also used proxy weights from Flow of Funds data to allocate item 15, other securities in the investment account, and item 9, money trust. The major part of item 15 is "Toshin," or mutual funds. Table B-3 gives the Flow of Funds data for Toshin. We grouped the individual items into their appropriate risk-weight category and calculated their percentage in the portfolio. For example, government bonds and government-guaranteed bonds accounted for 11.89 percent of the portfolio, and that percentage of item 15 was allocated to the 0 percent risk-weight category in Table B-1.

For allocation of item 9, we used Flow of Funds data on money trusts, Table B-4. In order to avoid double counting we excluded Toshin data from Table B-3. We also excluded two other items (loans and other external assets) from the Flow of Funds data on money trusts because these assets are not likely to be included in

banks' money trust data. As with item 9, individual items were grouped into the appropriate risk-weight category, and their portfolio percentages were used to allocate item 9, as shown in Table B-1.

Item 21, loans on deeds, includes loans to government-related entities and local governments (10 percent risk-weight), mortgage loans (50 percent), and commercial loans (100 percent). We know the amount of mortgage loans based on supplementary data published by banks at the time of reporting the Securities Report. We allocated the balance in item 21 between the 10 percent and 100 percent risk-weight categories. We used the Flow of Funds data in Table B-5 to determine that government-related entities and local governments financed 37.7 percent of their debt through bonds, and the rest, 62.3 percent, by loans. This ratio is 100 (bonds): 165.1 (loans). We assume banks hold bonds and loans from these entities in these same proportions. Based on Table B-1, we know the amount of bonds, 100 percent of items 6 plus 11, plus 30 percent of item 12. Therefore, 165.1 percent of this amount should be loans to these entities, and we thus allocate that amount of item 21 (after subtracting mortgage loans) to the 10 percent risk-weight category. The rest of the loans in item 21 are allocated to the 100 percent category.

When no proxy data were available from the Flow of Funds Accounts, we made rough informed guesses. For item 16, foreign bonds, we apportioned 50 percent to 0 percent (OECD government bonds) and 50 percent to 100 percent (corporate bonds). We also made a rough informed guess that 10 percent of item 22, overdrafts, is collateralized by deposits and thus assignable to the 0 percent risk-weight category.

Finally, item 29, accrued income, is allocated to each risk-weight category in proportion to the amount of all other assets (all items other than 29) allocated to each risk-weight category.

Table B-1. Allocation of Bank Assets to Risk-Weight Categories, March 1992

Asset	Risk-weight (percent)				
	0	10	20	50	100
1. Cash	100.0	..	..	..	..
2. Deposits	..	..	100.0	..	..
3. Call loans	..	..	100.0	..	..
4. Commercial paper and mortgage certificates	..	..	..	..	100.0
Trading account					
5. Government bonds	100.0	..	..	..	..
6. Local bonds	..	100.0	..	..	..
7. Government-guaranteed bonds	100.0	..	..	..	..
8. Securities lent	100.0	..	..	..	..
9. Money trust	23.5	1.9	22.5	..	52.2
Investment account					
10. Government bonds	..	..	..	..	..
11. Local bonds	..	100.0	..	..	..
12. Corporate bonds	30.0	..	45.0	..	25.0
13. Stocks	..	..	..	..	100.0
14. Own stocks	..	..	..	..	..
15. Other securities	11.9	0.6	28.0	..	59.5
16. Foreign bonds	50.0	..	..	..	50.0
17. Foreign stock	..	..	..	..	100.0
18. Investment securities lent	100.0	..	..	..	..
19. Bills discounted	..	..	..	..	100.0
20. Loans on bills	..	..	..	..	100.0
21. Loans on deeds	..	(6.11) x 1.65	..	input from the rest	..
	..	(12) x 0.3 x 1.65	..	supplement	..
22. Overdrafts	10.0	..	..	..	90.0
23. Foreign exchange deposits	..	..	100.0	..	..
24. Foreign exchange interbank loans	..	..	..	100.0	..
25. Export bills purchased	..	..	100.0	..	..
26. Export bills receivable	..	..	..	..	100.0
27. Unsettled bills	..	..	100.0	..	..
28. Prepaid expenses	..	..	..	..	100.0
29. Accrued income ¹	..	..	..	..	..
30. Futures margins	..	..	..	..	100.0
31. Futures gains	..	..	..	..	100.0
32. Other assets	..	..	..	..	100.0
33. Bank property	..	..	..	..	100.0

¹ Allocated using proportion of total assets in each risk-weight category.
Source: Bank of Japan, Flow of Funds Accounts.

**Table B-2. Holdings of Investment Corporate Bonds,
All Japanese Banks**

Type of debt security	March 1991		March 1989		Difference
	Billions of yen	Percent of total	Billions of yen	Percent of total	
	All banks		All banks		(A)-(B)
Government- guaranteed bonds	8,699	34.50	6,534	33.68	0.83
Debentures	10,679	42.35	7,535	38.83	3.52
Corporate bonds	5,836	23.15	5,334	27.49	-4.34
Total	25,214	100.00	19,403	100.00	0.00
	City banks		City banks		(C)-(D)
Government- guaranteed bonds	..	30.00	2,328	28.36	1.64
Debentures	..	45.00	3,523	42.92	2.08
Corporate bonds	..	25.00	2,357	28.72	-3.72
Total	..	100.00	8,208	100.00	0.00

Source: Bank of Japan, Flow of Funds Accounts.

**Table B-3. Other Investment Securities (Toshin),
All Japanese Banks, March 1991**

Type of security	Billions of yen	Percent
Government bonds	4,035	9.98
Local bonds	256	0.63
Government-guaranteed bonds	771	1.91
Debenture	5,124	12.67
Corporate bonds	2,217	5.48
Stocks	17,517	43.33
Call loans	6,205	15.35
Bills	2,445	6.05
Commercial paper	1,858	4.60
Total	40,428	100.00
Selected totals		
Government bonds and government-guaranteed bonds	4,806	11.89
Local bonds	256	0.63
Debenture and call loans	11,329	28.02
Corporate bonds + stock + bills + commercial paper	24,037	59.46

Source: Bank of Japan, Flow of Funds Accounts.

Table B-4. Holdings of Money Trust, All Japanese Banks, March 1991
Billions of yen except as noted

Type of security	(A) - (B)	
	Trust (A)	Toshin (B)
Government bonds	15,704	4,035
Local bonds	1,317	256
Government-guaranteed bonds	2,515	771
Debentures	9,386	5,124
Corporate bonds	7,401	2,217
Stock	39,234	17,517
Call loans	14,746	6,205
Bills	3,478	2,445
Commercial paper	3,684	1,858
Total	97,465	40,428
Selected totals		
Government bonds + government-guaranteed bonds	18,219	4,806
Local bonds	1,317	256
Debentures + call loans	24,132	11,329
Corporate bonds + stock + bills + commercial paper	53,797	24,037
		29,760
		52.18
		23.52
		1.86
		22.45
		100.00
		20.46
		1.86
		3.06
		7.47
		9.09
		38.08
		14.97
		1.81
		3.20

Source: Bank of Japan, Flow of Funds Accounts.

Table B-5. Holdings of Government-Related Entity and Local Government Obligations, All Japanese Banks, March 1992

Type of obligation	Billions of yen	Percent of total	Ratio
(1) Government-related entity bonds (all government guaranteed)	28,069	22.23	..
(2) Local bonds	19,567	15.50	..
(3) Government-related and local government loans	78,636	62.28	..
Total	126,272	100.00	..
Memoranda			
(4) Government-related bonds + local bonds	47,636	37.72	..
(5) Ratio of (3) to (4)	165.08

Source: Bank of Japan, Flow of Funds Accounts.

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