March 5, 1973

Dear Walt:

Thank you very much for the copies of Mr. Vojta's study of bank capital adequacy. I appreciate having this information.

With kindest regards,

Sincerely yours,

Arthur F. Burns

Mr. Walter B. Wriston
Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

NB/gkr
392

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

#392

February 27, 1973

NB-C

Dr. Arthur F. Burns
Chairman of the Board of Governors
of the Federal Reserve System
Washington, D. C. 20551

Dear Arthur:

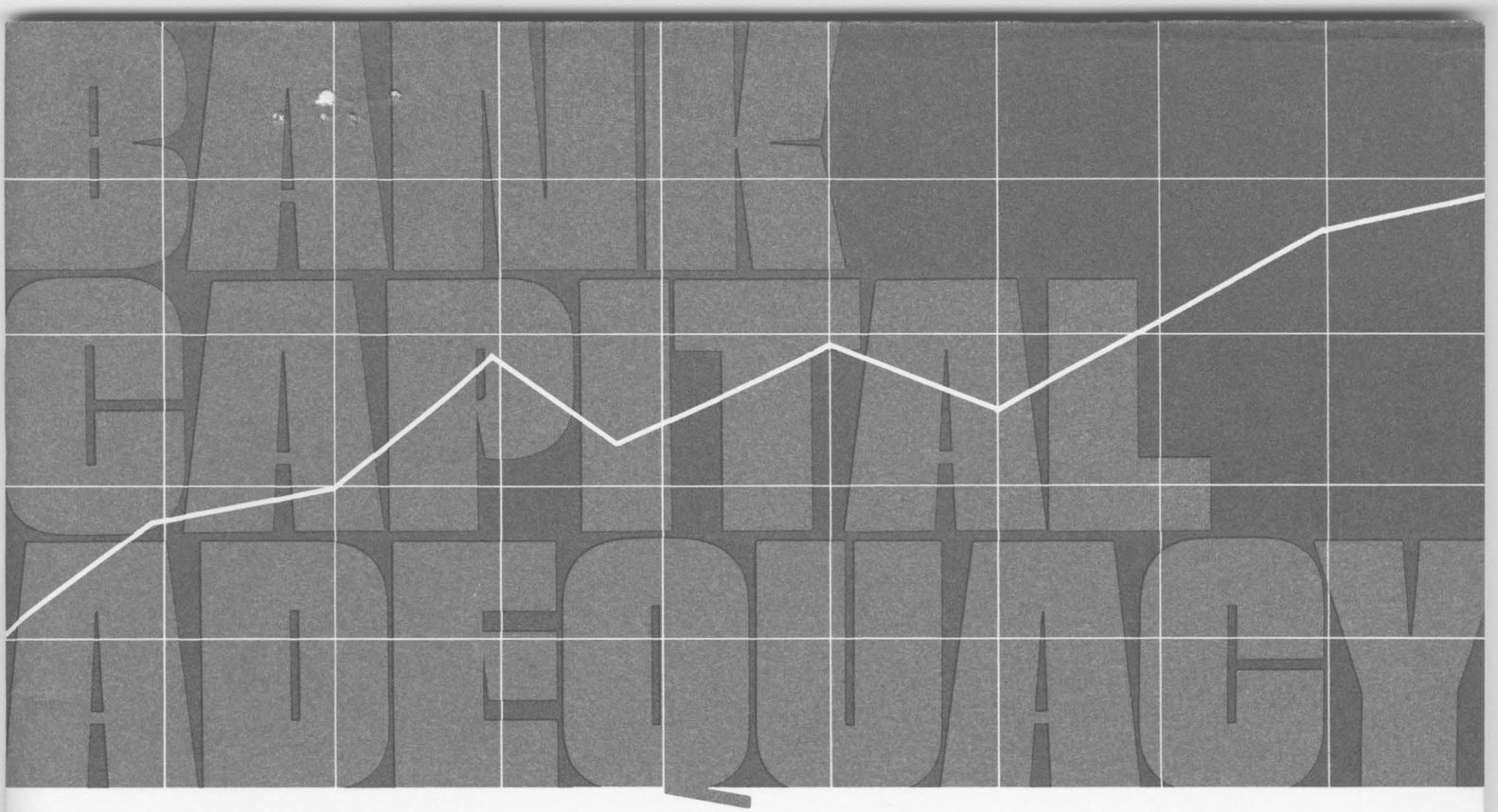
You will recall that we made a study in the Citibank about a year ago in which we related our loan loss experience to our earnings stream, our bad debt reserve, and our capital funds. You and Governor Mitchell expressed some interest in this study, and we have now published its basic conclusions in the financial section of our current Annual Report.

At the time you and I talked about the Federal Reserve Board's philosophy about capital adequacy, you expressed interest in our study and I mentioned that we were pursuing our investigation of existing literature on this subject. Mr. George Vojta, who is currently the Vice President in charge of our Corporate Planning, made a scholarly review of all existing literature and wrote the enclosed booklet entitled "Bank Capital Adequacy," which I sincerely hope you and your associates will find useful. Our purpose was to make a constructive contribution to the continuing dialogue on this subject. I have enclosed an extra copy in the event you would like to send it on to Governor Mitchell.

Sincerely yours,

Enclosures

Vojta B.C.



by George J. Vojta

introduction by
Walter B. Wriston

INTRODUCTION

Most of the people whose job it is to forecast the future developments in the world's economy are agreed on one point: the demand for capital will continue to increase. As financial intermediaries, banks will be expected to play their part in an expanding world economy, but in so doing they in turn will have to join the queue of those companies which will be required to tap the capital market. The pattern of capital adequacy of banks around the world is extremely uneven and, therefore, it seems both timely and important to restudy the entire problem in the hope of making some constructive contribution to this subject.

George Vojta, Vice President in charge of Corporate Planning in the Citibank, and I recently undertook to review the existing literature about bank capital adequacy and to put in place some computer programs which would allow us to test various assumptions. The experience of the banking community during the credit crunch of 1969 drove home once more the practical lesson that the strongest capital ratios do not insure liquidity. Mr. Vojta's extensive research validated this pragmatic conclusion. One authoritative study of the capital ratios of banks which failed and those which survived during the period 1921 to 1931 showed that the capital ratios of banks which survived were lower than for those which failed. Other scholarly research indicates that most of the banks which have closed their doors in the past have met or exceeded capital ratio tests applied by regulators immediately prior to their bankruptcy.

Since the record of history is so clear that capital ratios by themselves are no barrier against insolvency, it seems appropriate to rethink the whole problem of bank capital adequacy. In the pages that follow, Mr. Vojta has traced the history of capital adequacy tests, delineated the differences in philosophy which appear among various regulatory bodies, and has put forward some ideas looking toward a redefinition of capital adequacy. In the course of these studies, we have constructed analytical software which permits us to reconstruct historical loan loss experience over extended time frames. Various risks have been catalogued and analyzed, and we have built a simulation model for testing capital adequacy which is fully set forth in Appendix III.

We make no claim that the tests proposed for capital adequacy represent a final answer. Rather, all of us in the Citibank hope that this study will serve as a useful starting point in stimulating the various regulatory bodies, the academic community, and our colleagues in the banking world to rethink the whole problem. Hopefully, out of this dialogue will come some constructive ideas to help guide our industry in the years ahead.

WALTER B. WRISTON, *Chairman*
FIRST NATIONAL CITY BANK

February, 1973

BANK CAPITAL ADEQUACY[1]

On December 31, 1970, the President signed into law important and far-reaching amendments to the Bank Holding Company Act.[2] This legislation broadened the Act to cover one-bank holding companies, as well as multi-bank holding companies. It also broadened diversification possibilities by authorizing bank holding companies to engage in activities which, in the judgement of the Federal Reserve Board, are closely related to banking or managing or controlling banks and are expected to result in benefits to the public that outweigh possible adverse effects. Implementation of the amended act has been consistent with the intent of Congress. The Federal Reserve Board has approved nine areas into which bank holding companies with its approval may diversify, rejected nine others, and currently is holding two more under consideration.[3] The legislation created incentives for commercial banks to convert to holding companies and take advantage of permissible diversification opportunities. In a period of twelve months, bank holding companies became the dominant competitive factor in commercial banking. By December 1971, bank holding companies controlled 56.5% of domestic commercial bank assets and 55.1% of domestic deposit liabilities.[4] During 1972, the formation of holding companies continued. The holding company structure is rapidly becoming the norm. It is fair to conclude that the 1970 amendments have had the two-fold effect of stimulating bank diversification and reconstituting the organizational base of the industry.

In June 1969, the peak period of the "credit crunch", the Hunt Commission was established by Presidential order to analyze the nation's financial structure and recommend appropriate changes in public policy. In December 1971, the Commission submitted a report which called for legislative and regulatory change to encourage free competition

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[1] Written by George J. Vojta, Vice President—Corporate Planning, First National City Bank.

[2] The specific title of the statute is "Bank Holding Company Act of 1956" as amended by "Bank Holding Company Act Amendments of 1970" (Public Law 91-607, approved December 31, 1970; 12 U.S.C. 1841 et seq.).

[3] Pursuant to Section 4(c)(8) of the amended Bank Holding Company Act the Federal Reserve Board has determined the following as permissible activities for bank holding companies: (1) making and acquiring loans or other extensions of credit such as would be made by a mortgage, finance, credit card, or factoring company; (2) operating as an industrial bank, Morris Plan Bank, or industrial loan company; (3) servicing loans or other extensions of credit; (4) providing trust or fiduciary services; (5) acting as investment or financial adviser in specified respects; (6) leasing personal property and equipment on a full pay-out basis; (7) making equity and debt investments in corporations or projects to promote community welfare and economic rehabilitation and development of low income areas; (8) providing bookkeeping or data processing services for the internal operation of the holding company and subsidiaries, storing and processing banking, financial, or related economic data; (9) acting as an insurance underwriter, agent or broker for insurance related to banking and financial services. These rulings are found in Regulation Y (12 CFR 225.4(a)). The Board has ruled adversely on (1) underwriting life insurance that is not sold in connection with a credit transaction by a bank holding company or its subsidiary; (2) insurance premium funding, i.e. the combined sale of mutual funds and insurance; (3) real estate brokerage; (4) land development; (5) real estate syndication; (6) property management, except as permitted by law or regulation, i.e. management of properties in a fiduciary capacity, used in its own operations by a bank holding company or its subsidiaries or required in satisfaction of debts previously contracted; (7) non-full pay-out equipment leasing; (8) general management consulting; and (9) operation of savings and loan associations for the present. Matters currently under consideration are (1) performing armored car or courier services; (2) full pay-out leasing of real property.

Some of the Board's rulings currently are under challenge in the courts.

[4] Source: *Federal Reserve Bulletin*, hereafter cited as *Bulletin*, August 1972, p. A101.

between financial intermediaries and proposed far-reaching extensions of powers for commercial banks, thrift institutions, and credit unions.[5] Although these proposals have been criticized widely and implementing legislation at state and federal levels has not been forthcoming, the consensus of opinion is that the financial structure is likely to evolve—de jure or de facto—in the pro-competitive manner called for by the Report.

This sequence of events confirms that for the first time in 40 years the nation's financial structure and patterns of financial intermediation are in flux. A process of fundamental adaptation has been initiated. Public policy, expressed in the amendments to the Holding Company Act and most probably by the legislative consequence of the Hunt Commission report, has signalled the need for an evolutionary reform designed to render the financial structure more suited to the service requirements of today's trillion dollar economy. It is already obvious that commercial banking has been importantly affected by these underlying trends.

The 1970 amendments to the Holding Company Act did not alter primary supervisory and regulatory responsibilities for commercial banks. The amendments continued to vest responsibility for regulating the organization and expansion of holding companies and administering related diversification activity in the Federal Reserve Board.[6] In practical

[5] More specifically, the Commission recommended the abolition of interest rate ceilings on time and savings deposits; thrift institutions would be permitted to offer checking accounts, credit cards, consumer loans, to manage and sell mutual funds, and be granted broadened investment powers to service individual and non-corporate customers; over time thrift institutions would lose preferential treatment on taxation and reserve requirements vis-a-vis commercial banks. Similar powers would be granted to credit unions. Commercial banks would be permitted to manage and sell mutual funds, underwrite bonds secured by revenue from public services, issue subordinated debt instruments of all maturities, extend real estate loans free of restriction and benefit from the elimination of statutory limits governing the creation of acceptances; thrift institutions would be permitted to compete for corporate business by converting to commercial bank status organized on a stock or mutual basis. The Commission also recommended enactment of state-wide branching laws in all states and abolition of interest rate ceilings in the mortgage markets.

Presently the Administration is drafting implementing legislation to be introduced in the 93rd Congress. The nature of these proposals currently is not known. At least some of the Commission's recommendations are expected to be enacted into law at both Federal and State levels, notwithstanding the Commission's strong recommendation that the report be evaluated and acted upon in toto. Recommendations for a reform of the regulatory structure also were made, but are not material to this discussion. *The Report of the President's Commission on Financial Structure and Regulation,* Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. No. 4000-0272, December 1971.

[6] In hearings related to the amendments, the following exchange took place between Senator Cranston and Chairman Burns regarding the regulatory domain of the various Federal agencies involved with banks and bank holding companies:

Senator Cranston. You indicated you believe that it would be most effective to place responsibility for administration of this act in one agency.

Wouldn't that mean a significant shift of jurisdiction among the three Federal banking agencies?

Dr. Burns. I don't think so, Senator Cranston. We now have three Federal agencies regulating banks. The agencies that now regulate banks would continue to regulate the banks.

Let us say that you gave the power of regulation to the Federal Reserve Board. The Board would then be simply regulating the bank holding companies, not the banks themselves. The banks would continue to function under their present supervisory authorities.

All that we would do, if this came to us at the Federal Reserve Board, would be to determine whether a given acquisition is or is not in accordance with the principles of the legislation and regulations that we might have drawn; or whether a divestiture is or is not proper in the circumstances or whether it is or is not being carried out.

But, we would not be examining the banks which we are not presently examining. We would not be supervising banks we are not presently supervising. Therefore, the distribution of regulatory functions, as far as the banks are concerned, would remain entirely unchanged.

Source: *One-Bank Holding Company Legislation of 1970, Hearings Before the Committee on Banking and Currency,* U. S. Senate, May 14, 1970, pp. 157-158, U. S. Government Printing Office, Washington, D. C.

terms, these powers together with the pre-existing jurisdiction of the Board over international banking operations, established the Board as the dominant regulator of bank holding companies.[7]

Environmental Change

Need for banking reform was perceived early in the post World-War II period. By the mid-1950's, it was evident that commercial banks were being adversely affected by a restrictive regulatory climate, effective competition from non-bank intermediaries, and a profit squeeze resulting from the erosion of demand deposit growth and increasing reliance on market funds to finance earning assets.

Post-war bank supervision focused on achieving the objectives of the banking reform legislation of the 1930's. But the banking enterprise of the post-war period was hardly comparable to its pre-1935 counterpart. Banking institutions in the 20's and early 30's operated as wholesale banks, dealers and investors in government and corporate securities, and as principal lenders to securities and real estate related industries on a non-amortizing

[7] The language of the amended Bank Holding Company Act is broad enough to justify the primacy of the Board's regulatory role. In Section 5, the Board is authorized to issue such regulations and orders as may be necessary to enable it to administer and carry out the purposes of the Act and prevent evasions thereof; the Board also is authorized to require reports relative to compliance with the Act and the Board's orders and regulations. Section 5 further requires bank holding companies to register with the Board stipulating that such registration "include such information with respect to financial condition and operation, management, and inter-company relationships of the bank holding company and its subsidiaries and related matters" as the Board may deem necessary. The Board is authorized to examine each bank holding company and each subsidiary thereof and is given access to reports of examination by the Comptroller of the Currency, The Federal Deposit Insurance Corporation and state bank supervisors.

The only other reference in the Act to other bank supervisory authorities is in Section 3, which provides that before the Board approves or denies an application for the formation of a bank holding company or the acquisition of a bank by an existing company, the Board must advise the Comptroller of the Currency or the appropriate state bank supervisor as the case may be. If the Comptroller or the state supervisor recommends disapproval, then the Board must conduct a hearing on the proposal.

The financial condition of a bank holding company and its subsidiaries receives emphasis in that provision of Section 3 which sets forth specific matters to be considered by the Board in acting on applications. In acting on every application to form a bank holding company or expand its group of banks, the Board must consider "the financial and managerial resources and future prospects of the company or companies and the banks concerned", in addition to the needs and convenience of the community and the competitive effects of the proposal. Section 4(c) of the Act, in addition to authorizing the Board to define the areas of permissible non-bank activity, includes "unsound banking practices" among the factors to be considered by the Board in acting on applications to acquire non-banking interests or activities pursuant to that section. Although this change in regulatory responsibility has not been validated in the courts, the language of the Act contains adequate provision to permit the Board to act in reference to any aspect of a bank holding company's operations which in its judgement is material to the business.

basis. Assets were funded primarily by low cost demand deposits arising from the payment flows of corporate, retail, government, and correspondent bank customers. Integration of business functions was characteristic of the industry. The business base of the post-war commercial bank shifted to amortizing wholesale and retail credit, dealing and trading only in government and municipal securities, and investment advisory activity conducted in accordance with rigidly defined conflict of interest regulations. Securities and real estate-related lending operations were circumscribed and closely regulated. Increasingly, assets were funded by sale of government securities and by interest bearing deposits and borrowed funds taken at market rates of interest. Functional business integration was eliminated.

Strict regulation tended to eliminate possible abuses and increase public confidence in banks. The trade-off for increased stability in the banking system was a progressive erosion of competitive strength, and substandard earnings performance and rates of return on capital.

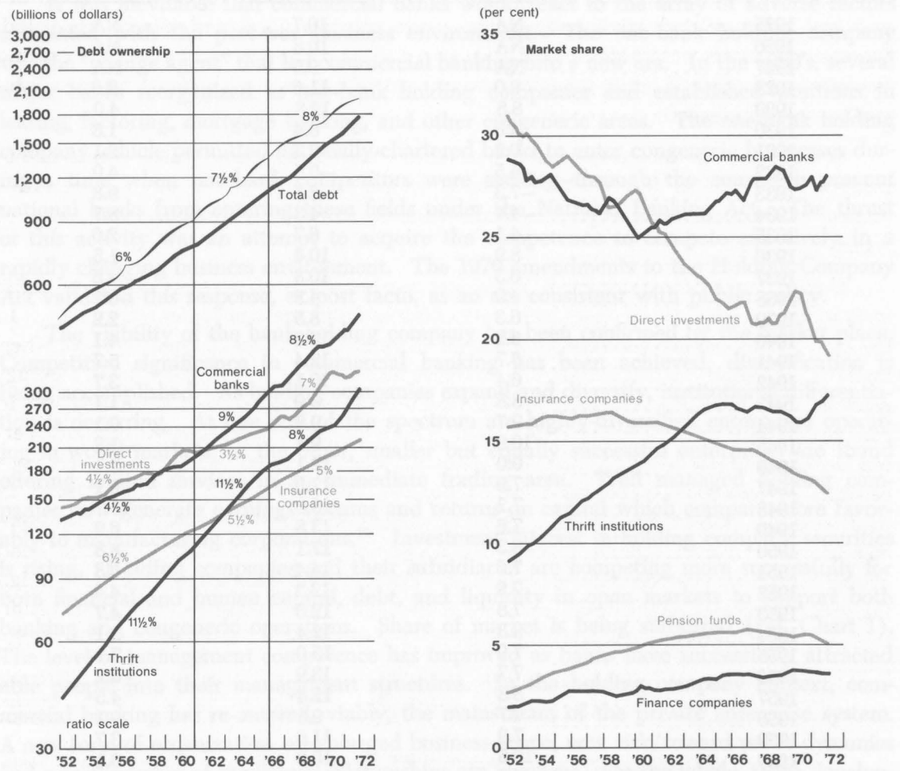
During the 1950's commercial banks lost market share of debt-ownership to thrift institutions, pension funds, insurance companies and finance companies (Chart I). In the early sixties, banks were regaining market share until the 1969-70 credit crunch, when market share again was lost particularly to direct investments. In the 1950's bank earnings recorded only modest gains, and rates of return on bank capital were extremely low in comparison with manufacturing enterprises. There was legitimate concern that commercial banks would not be able to maintain adequate levels of capital owing to relatively poor earnings performance, lackluster future prospects, and consequent lack of interest in bank securities (Chart II). In the 1960's new sources of competition emerged. The commercial paper market, private placements, leases and the intermediate corporate bond market vigorously competed for both short and medium term bank loans. Premier foreign financial institutions established a presence in the United States market, and major manufacturing based enterprises entered the financial services field.[8] The profit squeeze, deriv-

[8] In the 1950's and 60's major banks from the United Kingdom, Western Europe and Japan established direct business capabilities in the United States market. Most important are bank branches and agencies, direct ownership of full service banks, particularly in California and Illinois, and more recently securities related activity.

Entry by non-bank financial intermediaries into banking is well known. Bank ownership by major finance companies and thrift institutions is occurring. In the international banking field, in addition to non-bank financial intermediary banking involvements, (American Express is an important case), manufacturing corporations have opened up the field—Dow Chemical Corporation's Swiss Bank being the most prominent example. The growth of non-bank integrated data processing firms, the appearance of facilities management companies, data centers, data banks, and the Federal Reserve's entry into electronic payments processing is aimed directly at the traditional commercial bank dominance of payment and financial transaction processing. Competition with industrial based enterprise in the congeneric areas brings the bank holding company into direct competition with major industrial corporations. General Motors, Ford, Chrysler, General Electric, and International Harvester operate major finance companies. Competition in the credit card and consumer credit fields originates from the major petroleum companies and retailers (Sears Roebuck, J. C. Penney, etc.). The proliferating involvement of prime industrial and retail corporations in the financial services field is of major competitive consequence. These involvements extend to consumer credit, credit cards, insurance, mutual funds, investment banking, leasing and mortgage finance. In these areas, bank holding companies confront the best of enterprise in general in the market place.

CHART I

Who owns America's debt



Source: Economics Department, First National City Bank.

The graph on the left shows the increase in total debt over the last twenty years as well as the changing composition of debt ownership. The time interval is divided into three periods and the percentage figures indicate the compound growth rates of debt acquisition by the different financial interests as well as for total debt. For example, during the period 1960-1965, total debt grew at an annual rate of 7½%. During a similar period debt owned by banks and thrift institutions grew at annual rates of 9% and 11½% respectively. The chart on the right shows how the percent of total debt (market share) owned by the various entities changed between 1952 and 1972. For example, the commercial banks' market share of total debt dropped from 29% in 1952 to a low of 25% in 1960 before increasing during the 1960's.

CHART II

Average Annual Rates of Return
All Member Banks and Leading Manufacturing Corporations
1925-1971

	(1) Banks	(2) Manufacturing	(3)=(2)−(1) Difference
1925	NA	10.7	NA
1926	NA	10.8	NA
1927	NA	9.0	NA
1928	9.0	11.6	2.6
1929	8.8	12.8	4.0
1930	4.6	6.4	1.8
1931	0.2	2.3	2.1
1932	−4.5	−0.5	4.0
1933	−7.3	2.5	9.8
1934	−4.4	4.3	8.7
1935	4.1	6.7	2.6
1936	8.9	10.4	1.5
1937	6.3	10.8	4.5
1938	4.9	4.8	−0.1
1939	6.3	8.5	2.2
1940	6.2	10.3	4.1
1941	6.7	12.4	5.7
1942	6.4	10.1	3.7
1943	8.8	9.9	1.1
1944	9.7	9.8	0.1
1945	10.9	9.1	−1.8
1946	9.0	12.1	3.1
1947	7.9	17.0	9.1
1948	7.2	18.9	11.7
1949	7.6	13.8	6.2
1950	8.3	17.1	8.8
1951	7.6	14.4	6.8
1952	7.9	12.3	4.4
1953	7.8	12.5	4.7
1954	9.3	12.4	3.1
1955	7.9	15.0	7.1
1956	7.7	13.9	6.2
1957	8.3	12.8	4.5
1958	9.7	9.8	0.1
1959	7.9	11.6	3.7
1960	10.5	10.6	0.1
1961	9.6	9.9	0.3
1962	8.9	10.9	2.0
1963	9.0	11.6	2.6
1964	8.8	12.6	3.8
1965	8.7	13.9	5.2
1966	8.6	14.2	5.6
1967	9.6	12.6	3.0
1968	9.4	13.3	3.9
1969	10.1	12.4	2.3
1970	10.4	10.1	−0.3
1971	10.6	10.8	0.2

Average Annual Rate of Return is Net Income After Taxes as a Percent of Net Worth.
NA—Not Available.
Source: FNCB Corporate Profits Tabulations, Historical Summary 1925-1971, Economics Department, First National City Bank, 1972, New York.

ing from the changing liability mix continued, particularly for larger and money center banks. By the third quarter of 1972, for 331 reporting banks with $100 million or more in deposits, interest bearing time deposits accounted for over 50% of total domestic deposits, borrowed funds were slightly in excess of 10% of total loans, and interest expense was the largest element of total cost.[9]

It was inevitable that commercial banks would react to the array of adverse factors associated with the post-war business environment. The one-bank holding company was the "change agent" that led commercial banking into a new era. In the 1960's, several major banks reorganized as one-bank holding companies and established positions in leasing, factoring, mortgage banking, and other congeneric areas. The one-bank holding company vehicle permitted nationally-chartered banks to enter congeneric businesses during a time when non-bank competitors were seeking—through the courts—to prevent national banks from entering these fields under the National Banking Act. The thrust of this activity was an attempt to acquire the competence to compete effectively in a rapidly changing business environment. The 1970 amendments to the Holding Company Act validated this response, ex post facto, as an act consistent with public policy.

The viability of the bank holding company has been confirmed by the market place. Competitive significance in commercial banking has been achieved; diversification is being accomplished. As holding companies expand and diversify, institutional differentiation is occurring. At one end of the spectrum are highly-diversified enterprises operating in world markets; at the other, smaller but equally successful enterprises are found offering limited services in an immediate trading area. Well managed holding companies now generate earnings streams and returns on capital which compare more favorably to manufacturing corporations.[10] Investment interest in holding company securities is rising. Holding companies and their subsidiaries are competing more successfully for both financial and human capital, debt, and liquidity in open markets to support both banking and congeneric operations. Share of market is being stabilized (ref. Chart I). The level of management competence has improved as banks have successfully attracted able people into their management structures. In the holding company context, commercial banking has re-entered, viably, the mainstream of the private enterprise system. A new form of organization, an enlarged business scope, new risk/reward profit dynamics and a re-alignment of regulatory relationships are involved. On the whole, these developments have been constructive, but problems remain.

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[9] "How Banks Are Doing," *Bank Stock Quarterly,* Nov. 1972, p. 4.

[10] From 1961-1971, earnings per share of 24 leading banks and bank holding companies grew at a compound growth rate of 7.5%. During the same period, both the "Dow Jones Industrials" and the "Dow Jones Utilities" achieved a compound growth rate of 5.6% in earnings per share and the "Fortune 500 Industrial Corporations" grew at a rate of 6.87%. *Keefe Bank Stock Manual,* 1972, p. 6, "Fortune 500 Industrial Corporations," *Fortune Mazazine,* May 1972, Vol. 85, No. 5, p. 189. In 1970 and 1971, rates of return on net worth were 10.1% and 10.8% for Citibank's index of 2,319 manufacturing companies, 10.4% and 10.6% for all member banks, and 12.4% and 12.7% for 50 leading commercial bank holding companies respectively. Source: "Review of 1971 Profits", *Monthly Economic Letter,* First National City Bank, April 1972.

The final assurance that bank holding companies will prove capable of adjusting to the present business environment and achieve the larger objective of sustainable competitive vitality is a regulatory posture which is in sympathy with these purposes. A re-ordering of traditional regulatory priorities and a re-formulation of established supervisory norms are necessary. The Federal Reserve Board's capital adequacy standard for commercial banks merits this kind of attention. It is appropriate to suggest a prudent re-examination of this policy tradition at the regulatory level. Recent amendments to the Board's capital adequacy policies indicate that the Board intends to reemphasize a traditional approach which may not suit contemporary requirements. Application of this standard can complicate the constructive cause of banking reform to the detriment of the public interest.

Bank Capital and Capital Adequacy: Historical Perspectives

Bank capital ratios have been declining since the early 1800's. Throughout most of the 19th century, banks were heavily capitalized. In the early 1800's capital funds to total assets were in the 70% range, but moved to about 20% by 1900. The rapid expansion of bank assets during World War I and the economic expansion of the 1920's brought the ratio to just under 13%. From the Depression years to 1945 the ratio moved to 6%. In the post-war period the ratio adjusted to just under 10% through the 50's before reverting to the present 6-10% range. The ratio of capital to deposits showed a parallel trend, running somewhat above the ratio of capital to total assets. In the 1870's the ratio was as high as 80%. By 1920, the ratio had dipped just under the 20% level. From a low of 6% in 1945, the ratio rose before adjusting to the present 6-10% range. The ratio of capital to risk assets was nearly 60% in the late 1870's, 25% by 1900, 15-18% in the 1920's and in the post-war period reached the present 8-12% range.[11] The historical experience in this country is that a normative standard of bank capital in relation to assets or deposits has not been maintained.[12]

The consensus of scholarly research is that the level of bank capital has not been causally related to the incidence of bank failure. Historically, banking crises occurred in periods of prolonged cyclical instability. Failures resulted from a loss of public confidence in the banking system. The level of bank capital has not been established as a material factor in determining whether or not banks survived pressures of this nature. In periods of stability, bank failure has been caused principally by inept or dishonest management practices.[13]

As public policy progressively succeeded in reducing the amplitude and destabilizing effects of the business cycle, regulatory judgement became the more important factor bearing on confidence. Loss of regulatory confidence derived primarily from adverse

[11] Data are taken from Lindow, Wesley "Bank Capital and Risk Assets", *National Banking Review,* Vol. I, No. 1, September 1963.

[12] Foreign banking experience is equally inconclusive. The large money center banks in the United States historically tended to have higher capital/deposit ratios than comparable foreign banks. Further, "the decline in capital ratios in the United States has had a parallel in almost every foreign country".

Generally, banks in the Netherlands, West Germany, Switzerland, Belgium and the Scandinavian countries have been roughly comparable to equivalent U.S. banks in size of capital accounts, whereas banks in the United Kingdom, France and Italy tended to maintain much lower ratios. Conclusions and quotation are from Robinson, Roland I., and Pettway, Richard H., *Policies for Optimum Bank Capital: A Study Prepared for the Trustees of the Banking Research Fund,* Association of Reserve City Bankers, Chicago, 1967, pp. 25-6. . . . Data for the Robinson and Pettway Study came from Sayers, Richard D. (ed.) *Banking in Western Europe,* New York, Oxford University Press, 1962, and *Great Britain, Report of the Committee on the Working of the Monetary System* (Radcliffe Report) London, H.M. Stationery Office, 1959. . . . Major Japanese banks also maintain lower levels of capital than do U.S. banks. Since 1967, there have been no material developments which alter these conclusions.

[13] The weight of scholarly research is overwhelmingly to the effect that the level of bank capital has not been a material factor in preventing bank insolvency, and that ratio "tests" for capital adequacy have not been useful in assessing or predicting the capability of a bank to remain solvent. Further, the documented insolvency experience of the banking system suggests that the important causal factors relating to solvency are competence and integrity of management. This evidence is well known, but is summarized here.

Secrist studied 6784 ratios of capital to deposits for national banks which failed from 1921 to the year of failure, and 1221 ratios from 1921 to 1931 for national banks which did not fail. Testing these findings against the prevailing regulatory standard that a bank should maintain a capital/deposit ratio of 10% to minimize threats to solvency, Secrist found that the ratios were lower for non-failures than for failures, that the earlier the time of failure, the higher the average and prevailing levels of capital. "The assertion that banks in order to remain solvent must have a ratio of at least 10% is illusory. . . . According to this standard, the safer institutions are those first to fail." The same conclusion was reached in regard to the ratio of capital funds to total liabilities. Secrist, Horace, *National Bank Failures and Non-Bank Failures,* Bloomington, Indiana, The Principia Press, 1938, as quoted in Cotter, Richard V. "Capital Ratios and Capital Adequacy" *National Banking Review,* Vol. 3, No. 3, March 1966, p. 344.

Utilizing data for West Coast banks which failed between 1921-33, Cotter used statistical methods to test the hypotheses that ratios of capital to deposits, risk assets, and total assets showed significant differences in banks which have survived financial panics and depressions and those which did not. Such differences were not found among the banks studied. "Thus it was found that the ratios of capital to deposits, capital to total assets, and capital to risk assets would not have been useful in determining the need for capital in those cases" (Ibid p. 333). Other studies related to bank insolvency experience during the Depression which either omit reference to capital as a factor in insolvency or cite other reasons for bank failure. Federal Reserve System, *Case Histories of 225 Banks* prepared by the Branch, Chain and Group Banking Committee of the Federal Reserve System—unpublished, but available in Federal Reserve Libraries, Mosher, Curtis L., *The Causes of Banking Failures in the Northwestern States,* Minneapolis, Federal Reserve Bank of Minneapolis, 1930, Popejoy, T. L., "Analysis of Causes of Bank Failures in New Mexico", *University of New Mexico Bulletin,* 1931, Robb, T. Bruce, "State Bank Failures in Nebraska", Lincoln, Nebraska, *Studies in Business* No. 35, April 1934, Rodkey, Robert, "State Bank Failures in Michigan", Ann Arbor: *Michigan Business Studies,* Vol. 7, No. 2, 1935. Additionally, a study by Howard Crosse, formerly of the Federal Reserve Bank of New York, of 50 banks, 31 of which failed or were required to recapitalize before re-opening after the Bank Holiday, and 19 of which survived the Depression unscathed, showed that "For the banks which were required to raise additional capital, the ratio (of capital to risk assets) averaged somewhat higher (22.8) than for the banks which survived. For the latter, the comparable figure was 18.7 percent. . . ." Crosse, Howard D. *Management Policies for Commercial Banks,* Englewood Cliffs, N. J. 1962, p. 181. Although one of the important figures in influencing the Federal Reserve's ratio approach to capital adequacy, Crosse in testifying in the Continental Bank case on the Depression experience of banks presented examples of banks which failed in the Depression and stated, "Their difficulty was not the amount of capital they had, but the frozen nature of the assets." Quoted in Hahn, Philip J. "The Conflict in Standards of Bank Capital", *The Bankers Magazine,* Vol. 148, No. 3, Summer 1965, p. 38. Robinson and Pettway conclude that the Depression experience does not contain "much of a message for us with respect to capital adequacy. . . ." Robinson, Roland I., and Pettway, Richard H., op. cit. p. 28.

In the post Depression period, the evidence is even clearer. FDIC experience is the best record on bank failures available. From 1934 through December 31, 1968, the FDIC made disbursements to protect depositors in 473 insured banks, with 1.6 million depositors, with total deposits amounting to $838.7 million. 99.7% of depositors were fully paid off, representing 97.1% of total deposits. From January 1969 to April 1972, 20 banks closed with a total of 129,698 depositors and total deposits of $219.8 million. In 9 cases deposit liabilities were assumed by the FDIC resulting in no loss to depositors; in the remaining cases, depositors were paid up to the total insured amount and assets assumed in receivership. Distributions "therefore are expected as a whole to approximate our averages". All failures have involved smaller banks; causes of bank failure have been wholly related to incompetent or dishonest management practices. "There

appraisals of bank solvency through the examination process.[14] Capital adequacy has been a principal factor in these assessments.

The transition from note issue to deposit based banking took place in the 50 year period after the Civil War. During that time, deposit liabilities rose seven times as fast as notes in circulation. The first explicit regulatory approach to capital adequacy was logically conceived as a relationship between capitalization and deposit liabilities. At the turn of the century, the familiar 10% capital to deposit ratio was well established. By the late 30's, as a consequence of the World War I and the Depression experience, nearly all banks fell below the 10% standard. In the late 30's, the Federal Deposit Insurance Corporation began to use a capital to total asset ratio in place of capital to deposit ratio. During the Second World War, the inflation of bank assets, primarily riskless government securities associated with war financing, rendered the total asset test obsolete and regulatory focus on the ratio of capital to risk assets (which excluded government securities) emerged as the prevailing benchmark. Originally a 20% ratio was considered sufficient. The capital-risk asset standard evolved in recognition of the material difference in default risk between government securities and loans. During this period the concept of capital adequacy became associated with risks inherent in the earning asset portfolio. This relationship remains dominant in regulatory policy.

In the 1950's, stimulated by research in the industry, Federal Reserve regulators moved to a capital to adjusted risk asset approach to capital adequacy, which related capital funds to risk assets, computed as total assets less a more broadly defined category of relatively riskless assets; the standard usually applied was $1 of capital funds required for $6 of risk assets on the balance sheet.

have been no banks in recent times that were closed principally because of economic factors" Barnett, Robert E., Assistant to the Chairman, Federal Deposit Insurance Corporation, "Anatomy of A Bank Failure". *The Magazine of Bank Administration,* Vol. 48, No. 4, April 1972, pp. 20-21.

In the tradition of Cotter's work, Vincent R. Apilado and Thomas G. Gies tested statistically the applicability of the Federal Reserve Bank of New York's adjusted capital risk asset tests for capital adequacy and an excess capital approach as defined by Cotter on 1969 data covering a sample of 90 successful banks and 43 banks that failed over the 1960-69 period. The overall results show that the Federal Reserve Bank of New York's formulation "does not clearly show, particularly at the group level, that banks that failed would likely be capital deficient at the time of failure". The authors found an excess capital approach (excess capital defined as total capital accounts less capital stock) to be more promising, as did Cotter, but concluded that for aggregate comparisons on a group basis the significance of the predictability was "spotty" and noted the impracticality of the concept. In summary, the authors state "It cannot be unequivocally concluded . . . (from this study) that ratio analysis is useful in measuring capital adequacy" Apilado, Vincent R. and Gies, Thomas G. "Capital Adequacy and Commercial Bank Failure", *The Bankers Magazine,* Vol. 155, No. 3, Summer 1972, pp. 24-30.

The conclusions from these data are that bank failure cannot be attributed to particular standards of capitalization that have been maintained. In the Depression banks failed because they became illiquid as a consequence of the deterioration in asset portfolios. In more normal conditions, incompetent management practices were the primary cause of failure.

[14] To quote Crosse, "The primary function of bank capital funds is to assure both the public and the bank supervisor (especially the latter) that the bank is in a position to withstand whatever strains may be placed upon it" Crosse, Howard D., op. cit. p. 159.

In 1952, the Federal Reserve Bank of New York established its present formulation which categorized all assets according to risk and assigned capital requirements to each. Minimum capital required was defined as equal to 100% of computed capital requirements; banks with capital funds of over 125% of requirements were rarely questioned.

The adjusted risk asset approach was carried out to an additional dimension by the Federal Reserve Board, which in 1956 adopted an adjusted risk asset approach together with a liquidity test for capital adequacy which required more capital from banks which were less liquid. Non-balance sheet factors were also considered. In March 1972, the Board proposed amendments to the 1956 standard, the refinements reflecting an ex post analysis of the credit crunch experience of 1969-70.[15] The evolution of the capital to adjusted risk asset standard for capital adequacy and its later modifications represented an endeavor to carry the ratio approach to higher degrees of sophistication. Greater complexity in the concept resulted.

In 1962, the Comptroller of the Currency departed from the prevailing regulatory standard by officially de-emphasizing traditional ratio analysis as an approach to capital adequacy in favor of a focus on managerial performance articulated in general guidelines appropriate for banks operating in normal conditions.[16]

[15] The Board of Governors' 1956 and 1972 capital analysis forms are reproduced in Appendices I and II. These will be discussed in detail in a later section.

[16] The Comptroller of the Currency's present approach to capital adequacy was succinctly summarized by Charles Van Horn, Regional Administrator of National Banks for the Second Region in a speech reported in the *American Banker,* August 2, 1972.

"The traditional capital-to-risk assets and capital-to-total deposit ratios are no longer relied upon, because such arbitrary formulas do not always take into account important factors.

"In evaluating capital adequacy, the Comptroller's Office considers the following factors: the quality of management; liquidity of assets; the history of earnings and of the retention thereof; the quality and character of ownership; the burden of meeting occupancy expenses; potential volatility of the bank's deposit structure, the quality of operating procedures and the bank's capacity to meet present and future financial needs of its trade area, considering the competition it faces.

"In addition, we use a formula which relates capital to the volume of loans and discounts. In making the calculation, the numerator is gross loans and discounts. Total capital accounts, including reserves, are the denominator. This loans-times-capital ratio is a first, quick test of capital adequacy. Where gross loans exceed seven times the total capital accounts, the bank is scrutinized more closely.

"Application of any-rule-of-thumb obviously requires judgement. The Comptroller's Office analyzes the loan portfolio for quality and liquidity. Such loans as commercial paper, brokers' loans, municipal loans and loans guaranteed or insured by the United States Government are taken into consideration. By carefully evaluating all relevant factors, we avoid penalizing well-managed, profit-conscious banks.

"Earnings are extremely important from a supervisory standpoint. Generally, a bank with a good earnings record is in a position to do better in five vital areas: (1) pay adequate salaries and thus attract and retain executive talent; (2) withstand a shrinkage in asset values; (3) raise new capital because of greater investor appeal; (4) permit the payment of competitive interest rates on deposits; and (5) support investment in modern and efficient premises, fixtures and equipment. A good-earning bank is a more viable competitor and normally, a more progressive institution overall.

"A bank's asset quality is measured initially by relating the aggregate volume of assets classified Substandard, Doubtful or Loss, to gross capital funds, including reserves. Each bank is assigned to one of four categories.

"Generally speaking, banks with total classified assets of less than 20% of gross capital funds receive an "A" rating. Banking, after all, is a risk business and the evaluation of credit involves

Currently, regulatory opinion is deeply divided on the issue of capital adequacy. In essence, the Federal Reserve Board's adjusted risk asset/liquidity approach quantifies capital required to protect a bank under abnormal conditions. Additionally, non-balance sheet factors are weighed in judging the bank's capital position. The Federal Deposit Insurance Corporation continues to rely on a ratio of capital funds, net of investments in fixed and substandard assets, to average total assets. The Comptroller of the Currency de-emphasizes static ratios, relying instead on guidelines for appraising management performance and viewing the bank as a going concern under normal conditions.[17] Practice in state and various Federal Reserve jurisdictions varies widely, but in general is more in line with Board and FDIC standards than those of the Comptroller of the Currency.

judgment. It is certainly no reflection upon management or the directors if an examiner criticizes a moderate volume of the bank's assets.

"When classified assets amount to more than 20% but less than 40% of gross capital funds, banks earn a "B" rating. At this point, the board of directors usually receives a letter from the Regional Administrator directing attention to the volume of criticized assets and requesting to be advised as to actions taken or contemplated to rectify the weaknesses cited in the report.

"A "C" rating goes to banks with classified assets aggregating more than 40% but less than 80% of gross capital funds, and a "D" rating to banks with classified assets in excess of 80% of gross capital funds. With few exceptions, a bank in the "C" or "D" category, with classified assets equal to 40% or more of the capital structure, constitutes a so-called "Problem Bank".

"In connection with the examination of "C" and "D" banks, a National Bank Examiner usually convenes the board of directors to appraise them of the situation and to obtain assurances that corrective measures will be instituted. Incidentally, examiners' meetings with directors are not limited to "Problem Bank" situations. National Bank Examiners are always pleased to meet with directors at the conclusion of an examination. Such meetings give the directors and officers of National banks the benefit of seeing their banks through the examiner's eyes.

"Only after weighing capital adequacy and asset quality is management assigned a rating. It would clearly be difficult to assign the highest management rating, "Strong", in a bank which had a heavy volume of classified assets, inadequate controls and safeguards, violations of law, or inadequate capital protection. Conversely, it would not be consistent to give management a rating of "Poor", the lowest rating in a bank free of asset, operating or capital problems.

"In judging the quality of management, we take into consideration the overall condition of the bank, its liquidity position, its earnings compared with banks of similar size, the adequacy of its credit files, the effectiveness of collection efforts, the quality and distribution of the investment account, the adequacy of internal controls, the efficiency of operations, provision for management succession, and the bank's service to the community.

"Based largely upon the combination which results from the earlier evaluation of capital, asset quality and management, a group or composite rating is assigned to each examination report.

"Group #1 banks are sound in every respect. Fortunately for supervisors, most banks fall into this category.

"Group #2 banks have one or more unfavorable factors, such as asset weaknesses ranging from moderate to moderately heavy, inadequate capital, or less-than-satisfactory management. This rating might also apply when certain special factors prevail such as lack of adequate supervision by the directors, detrimental domination by one or more persons, significant deficiencies in auditing or internal controls, or unfavorable effects resulting from local economic conditions.

"Group #3 banks are characterized by an excessive volume of asset problems in relation to capital, serious management deficiencies, exposure to extremely adverse local economic conditions, or a combination of these or other problems which could reasonably develop into a situation urgently requiring emergency aid from shareholders.

"Group #4 banks are confronted with asset problems of an extremely serious nature and with gross inadequacy of management and directorate so that shareholder aid is urgently required. If such aid is not forthcoming drastic supervisory measures appear to be warranted."

17 Summary taken from Mayne, Lucille S. "Impact of Federal Bank Supervisors on Bank Capital", The *Bulletin, New York University Graduate School of Business Administration, Institute of Finance,* Nos. 85-86, September 1972, pp. 9-12.

An absolute standard of capitalization has not been characteristic of commercial banking, nor have regulatory approaches to capital adequacy converged to a generally accepted position. Levels of capitalization appear to have had no causal relationship to incidence of bank failure. The historical record documents a secular trend of asset and deposit growth in excess of levels of capital; bank capitalization has tended to adjust materially in periods of structural change in the economy or in the industry with regulatory standards adapting ex post facto.

The Federal Reserve Board's Capital Adequacy Standard

The Federal Reserve Board's approach to capital adequacy bears particular examination, since it is the present controlling standard for all banks in holding company systems.[18] The Board views bank capital as necessary to acquire premises and other fixed assets, but more importantly as providing protection against the threat of insolvency arising from materially adverse disposition of assets, shrinkage of deposits or other liabilities, and/or occurrence of loss from trust operations and other contingencies. The function of capital is to protect a bank in abnormal conditions to assure that the institution is not forced to close its doors to the public. In general, equity capital instead of debt capital is preferred.

The Federal Reserve Board's 1956 standard quantifies the capital provision necessary to protect against asset disposition by applying judgementally differentiated ratios against asset values on the balance sheet. On the liability side, volatility ratios are applied to the liability accounts to derive total gross capital provision required for liquidity purposes. From the total gross capital provision for liquidity is subtracted the liquidity inherent in segments of the asset portfolio—less capital provision—to derive net capital required for liquidity purposes. Capital provision required to cover trust department liabilities (300% of gross earnings)—if any—and other contingent factors peculiar to the bank are added to the total requirement for capital.

The general capital adequacy test compares the amount of actual capital funds (capital, surplus, undivided profits, and all other reserves except depreciation and amorti-

18 Ref. footnote 7. There is abundant evidence that the Board has exercised its general authority under the Holding Company Act to assure compliance with its standard of capital adequacy. This antedates the passage of the 1970 amendments to the Act. The Board has used its authority to rule on the financial condition of bank holding companies to express judgements on the capital position of both holding companies and subsidiary banks. In several cases, the Board has approved applications under the Act only on the condition that equity capital or debt position be improved or strengthened ref. *Bulletin* 1968, 511, 515, 773-775; 1969, 611, 612-13, 962, 964; 1970, 291, 293, 845, 847; 1972, 298, 299. When the Board has deemed the situation sufficiently serious, it has denied applications ref. *Bulletin* 1964, 1261, 1263; 1966, 971. There is evidence of a growing concern by the Board with the capital position of bank holding companies. For example in approving the application of Michigan National Corporation's application to form a bank holding company, which included 5 national banks, the Board expressed "serious concern over what it considered to be the inadequate capital positions of the proposed subsidiary banks" . . . and the "Board's view that the capital position of each of the banks should be improved without delay" ref. *Bulletin* 1972, 804. In denying the North Shore Capital Corporation's application to become a bank holding company, the Board's action was based principally on what it regarded as excessive acquisition debt and the need for "an infusion of capital" for the proposed subsidiary bank "to what the Board deems to be an acceptable level". The Board observed that the applicant had been "unreceptive" to the suggestion ref. *Bulletin* 1972, 809. Other cases of approvals conditioned on effecting increases in capital can be cited ref. *Bulletin* 1972, 812-814, 817-818, 819-21, 826-7, 827-8, 829-31, 836-7.

zation reserves) with required capital computed as the sum of capital provision for fixed assets, asset protection, liquidity, trust operations and other contingencies. A ratio of actual capital to required capital of 80-85% or better for well managed banks has in practice been deemed adequate. If actual capital is significantly less than required capital, the presumptive judgement is that the level of capital is below standard and corrective action is called for to increase capital.

The 1972 revisions to the Board standard extend the 1956 approach to a more conservative extreme. Asset categories are redefined by separating secondary reserve assets into a distinct category calling for separate treatment for capital purposes. Asset classifications are more conservative. Asset risk factors are separated into "credit risk" and "market risk", the former involving loss exposure arising from credit considerations, the latter from value deterioration owing to adverse external market factors governing asset disposition. The conceptual approach to capital provision for liquidity is unchanged. Capital requirement ratios are more conservative in the 1972 form in comparison to 1956 standards. Capital provision for trust operations is reduced from 300% to 200% of gross trust earnings. Capital provision for special factors is continued. An additional capital requirement of 2% of adjusted net assets (computed as total assets net of assets classified doubtful or loss) appears. Total required capital is defined as the sum of capital required for asset-related market risk, for asset-related credit risk, for total assets and gross trust earnings and for special factors. The liquidity calculation compares total liquidity requirements from liabilities against net liquidity available from assets, after provision for credit and market risk. The liquidity aggregation from net assets may not exceed the total liquidity required for capital purposes; a short-fall of net liquidity in reference to requirements would call for additional capital funds.

The total capital requirement calculation is compared against the "adjusted capital structure" of the bank (total capital accounts plus reserves on securities and loans, minus assets classified loss and 50% of assets classified as doubtful) and to "adjusted equity capital" (adjusted capital structure minus debt capital).

Capital ratios to adjusted total assets and total deposits are re-introduced. "Adjusted capital structure" as a percent of total assets (total assets minus primary reserves, U. S. Treasury and agency securities) and total deposits are computed and adjusted equity capital as a percentage of total assets and deposits are calculated.

The intent of the 1972 amendments is to create a bias to more conservative levels of capitalization and to favor equity capital as opposed to debt capital in banks. The Board's standards for judgemental interpretation of the 1972 Board form are not known. The conservative modifications in the 1956 standards and the formal reintroduction of the traditional capital ratios are most significant.

The implicit assumptions of the Federal Reserve's analytic methodology (in both the 1956 and 1972 standards) need to be recognized. For capital adequacy purposes, banks

continue to be viewed in static terms. Incidence of major adversity in the business environment is pre-supposed. "Worst case" probability assumptions establish the magnitude of the ratios applied to assets, liabilities, and the capital provision formula for trust operations and other contingencies. The ratios applied to assets and liabilities, and the aggregate capital-asset/deposit ratios have presumptive validity for all banks. The implicit governing perspective is that banks are in essence public utilities to be sufficiently capitalized to assure solvency and the continuation of essential services notwithstanding occurrences of crisis proportion.

The presumptive current mandate of public policy is that commercial banking in the holding company context is to re-enter the mainstream of private enterprise, diversify into related fields, and compete in the market place. It follows that public policy requires that banks be regulated in terms generally appropriate to private enterprise. Most enterprises operate as going concerns and are measured in terms of profit results and rates of return on capital. A capital adequacy standard which posits the level of capitalization as that necessary to protect a business against the incidence of simultaneous "worst case" loss experience in all categories of risk is at variance with the view of banking as an on-going business enterprise. Capital in an on-going business must be sufficient to anticipate periods of relative difficulty and provide a prudent margin of safety; a business which maintains a level of capital sufficient to withstand judgementally exaggerated risks of ruin will incur competitive disadvantage in the market place. Earnings performance cannot be overlooked as a factor of paramount importance to bank capitalization.

Finally, it must be recognized that the liquidation, volatility, and other contingency ratios employed to compute capital requirements reflect judgemental standards instead of the business experience of a prudently managed enterprise. The effect of the Board's test(s) of capital adequacy is to create a bias for all banks to capitalize to the lowest standards of competence, the highest standard of risk, and to disregard the factual differentiation in business performance that is now characteristic of commercial banking. The structure of the financial system and of commercial banking are changing at a rapid rate. It is consistent with historical experience to anticipate that standards of capital adequacy will adapt to these new realities. A re-assertion of traditional and in some cases discarded standards, which issue from an obsolete public policy definition of commercial banking, can only inhibit the ability of a bank to adjust to the new environment in which it now competes.

Toward a Redefinition of Capital Adequacy

Regulators presently perceive banks as core businesses of bank holding companies. Presently, the typical holding company is dominated by the balance sheet and profit and loss results of subsidiary bank(s); dividends from the bank(s) are a major factor in the holding company's cash flow, essential to the financing of acquisitions and to the servicing of dividend payments and debt. Over time the bank(s) ought to be viewed as an important

business in a holding company portfolio, together with consumer finance companies, leasing companies, mortgage banks, etc. In the latter position, the financial condition of the holding company is strengthened by dividend payments from the larger investment portfolio; the long-run role of the holding company is to maintain appropriate levels of capital in subsidiary businesses, including banks, and to stand ready to provide additional support in case of need.[19]

The overriding objective of regulatory policy must be to prudently promote the evolution of banks and bank holding companies in pro-competitive terms. Cognizance must be given to the fact that banks can only perform the intermediation function by competing against a formidable array of competitive bidders for funds in the money and capital markets. Success in the market place necessitates management of banks to prudently maximize earnings and return on capital. As appropriate, weight must be given to the supportive role of the parent holding company in determining capital adequacy for subsidiary bank(s).

From this point of view, the functions of bank capital are two-fold: first to permit acquisition of the institutional structure necessary to perform the intermediation function and provide related services, and second in conditions short of total economic collapse to provide protection against unanticipated adversity leading to loss in excess of normal expectations. The capital provision against excessive loss permits the bank to continue operations in periods of difficulty until a normal level of earnings is restored.[20]

The first function is self-validating and consistent with the Board's current formulation. Capital funds permit an enterprise to acquire the physical and skill base to compete in the markets it chooses to enter. It is legitimate to expect the shareholders, as principals at interest, to finance these requirements. Banks, as enterprises, require capital funds for the same purposes and it is the shareholders' responsibility to provide them.

The second function of capital requires precise definition. There are six generic risks in commercial banking which occasion loss, or stated another way, negative claims on earnings and capital. These are: *credit risks,* losses arising from externally—or internally—caused deterioration in the quality of earning assets; for purposes of this discussion, the proxy for credit risks is assumed to be the loss experience in the loan portfolio; *investment*

[19] Articulation of this position can be found in *Bulletin* 1972, pp. 301 and 717.

[20] Stated another way, capital permits a bank to absorb losses while earning its way out of difficulty. The pivotal relationship between earnings and solvency is avowedly emphasized by these definitions of capital functions. Regulatory bias tends to view "profit maximization" as imprudent, because it leads banks to assume a higher than desirable level of risk which can cause future problems. Factual cases exist to illustrate the point. Excessive risk taking and profit maximizing managerial behavior are properly associated with institutions not recognized as business enterprises. Since banks now are compelled to compete as enterprises, risk taking and profit maximization must be accepted as integral to bank management processes. The regulatory psychology must empathize with management's view of the world in these terms. The post-war experience, particularly in the 50s, confirms that inhibiting risk-taking and profit maximization functions at the regulatory level can only cause banks to lose ground to competition in the market place; and over time the demise of the banking system as a viable vehicle of intermediation is involved. Managers of banks are employed to assume and manage risks and they must be permitted to seek the verdict of the market place in validating or invalidating performance in this regard.

risks, defined as losses in the principal values of bank investments, primarily the securities portfolio and fixed assets; *liquidity risks,* losses arising from financing mismatches in the tenor of assets and liabilities and from liquifying assets or switching liabilities in adverse market conditions to meet liquidity claims; *operating risks,* losses arising from operating errors, inefficiencies, and other contingencies which are uninsured and chargeable to earnings and capital funds; *fraud risks,* losses arising from the malfeasance or dishonesty of staff and customers; to the degree that these risks are not insured, contingent claims on earnings and capital are involved; and *fiduciary risks,* losses arising from the improper discharge of fiduciary responsibilities. In most businesses, risks of loss are both known and predictable and unknown and unpredictable in terms of frequency of occurrence and magnitude of exposure. Loss of both types inheres in each of the generic categories of risk.

Little progress has been made in systematically analyzing the recurrent loss experience associated with commercial banking. Instead, attention has focused on losses related to crisis periods. Incidence of loss in banking exhibits reasonably regular patterns. In stable market conditions portfolio and operating losses tend to occur within narrow ranges of amplitude, and losses related to the investment portfolio, management of the liquidity position, operating error, fraud and fiduciary risks tend to be negligible. Unanticipated loss tends to rise in periods of instability in all categories of risk; more importantly, unanticipated loss tends to occur in random sequence. The concept of capital adequacy should properly derive from the analysis of risk dynamics and loss phenomena in the business. In these terms two general "tests" of capital adequacy can be suggested.

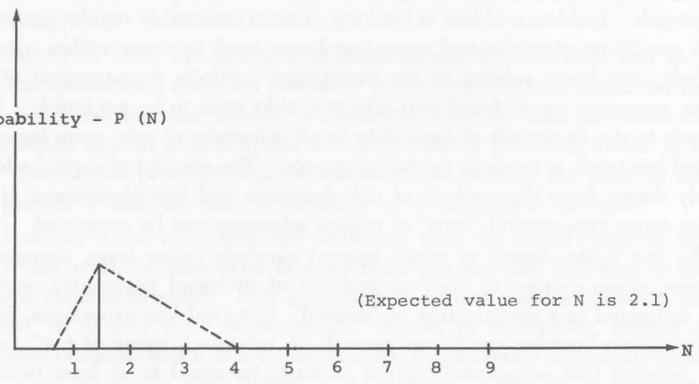
The first is the degree to which current earnings (after taxes, accounting provision for losses, other charges to reserves and net of dividend payments) cover anticipated losses, estimated as a continuation of "normal", historical loss experience, on the assumption that stable business conditions prevail. A proposed "earnings test" for capital adequacy requires that annualized current earnings be equal to at least twice the amount of actual loss anticipated by management. The "two for one" earnings test warrants that earnings coverage to this extent provides a reasonable cushion. Actual loss is computed as the five year moving average of total charges to loan and other contingency reserves expressed as a percentage of total risk assets net of cash and due from banks modified by a variable representing management expectations concerning departures from the historical mean as indicated by future business plans, as well as known factors in the environment.[21]

[21] A five year moving average of net losses (defined as total net charges to all reserves) expressed as a percent of average total assets less cash and due from banks is the basis for estimating total net losses in the current year. The average loss factor is applied to average total assets less cash and due from banks for the current period in order to gain an estimate of total net losses consistent with historical experience. Management can recognize that actual net losses during the current year will show some variance with respect to the calculated value for average historical losses. To capture this variability, a multiplicative relationship can be established between historical loss and expected actual loss. For example, assume that by employing the moving average formulation net losses were determined to be $25 million. Using the assumption of a triangular distribution for the multiplicative factor, N, management can define its expectations for current net losses in terms of the average net loss value experienced historically. The distribution for N is described in terms of low, most likely and high estimates equal to .8, 1.5 and 4

The second proposed test of capital adequacy is the extent to which capital funds (capital, surplus, undivided profits, and all reserves except depreciation and amortization reserves) cover "unexpected" losses, expressed as a deviation from average historical loss expectations by a prudent margin, say a factor of two. Capital funds aggregating to twenty times twice the average value of historical loss experience (as computed above) can be regarded as providing a reasonable margin of protection against unanticipated loss.[22]

respectively. In numerical terms, management's expectations regarding actual net losses in the current period would range from a low of \$20 million (.8 × \$25MM) to a high of \$100 million (4 × \$25MM) with the most likely amount being \$38 million (1.5 × \$25MM). Expected actual loss in the current period is calculated by multiplying the expected value of N (E (N) is ⅓ (.8 + 1.5 + 4.0), equal to 2.1) times the value of average historical loss (2.1 × \$25MM = \$53MM). The expected value of N can be confirmed in a practical sense within a simulation framework and represents a valid proxy for the numerical value of N utilized to determine the expected actual loss.

In graphic terms the distribution for N is illustrated as follows.



P (N) on the vertical axis represents the probability of N. N is measured along the horizontal axis and management has said in effect that the probability of N falling between .8 and 4 is 1 or P (.8≦N≦4) = 1.

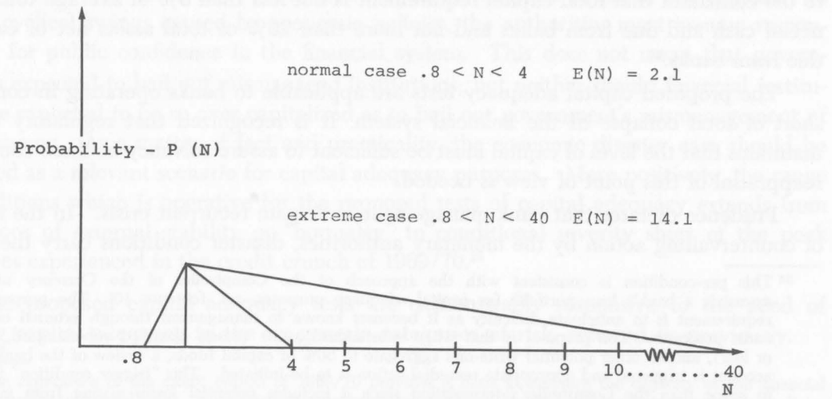
The curve as drawn evidences a triangular distribution pattern. Obviously this is an implicit assumption. A more sophisticated mathematical-statistical approach would be required to establish the true nature of the observed distribution of N. However, in the real world, management of an enterprise cannot totally risk business solvency by literal adherence to a theoretical formulation. Management has no choice but to anticipate risk in expectational terms based on past experience, what is known, probabilistically, about the future and allow for a prudent margin of error. Random values of N, within the limits imposed by the distribution, can be produced and evaluated within the confines of a simulation model. A simulation model also can provide a framework for evaluating extreme values of N since the probability of generating extreme values with a random draw mechanism is very low. Simulation techniques can be utilized as a cross check on management's expectational assumptions as well as to permit management to work toward more precise insights about future loss experience. The case for the use of expectational considerations is not dependent upon theoretical satisfaction of the risk distribution question but the nature of the assumptions must be clearly understood. A simulation model which fully elaborates the approach is presented in appendix III.

Another way to analyze the problem is to express net losses as a percent of average total assets less cash and due from banks. Suppose, on average, net losses equal 0.5% of average total assets less cash and due from banks. Using the previous range of values for N, expected actual net losses would range from 0.4% (0.8 × 0.5%) to 2% (4.0 × 0.5%) of average total assets net of cash and due from banks. The expected value of actual losses would be 1.05% (2.1 × 0.5%), representing \$1.1 million of pre-tax losses for every \$100 million of average total assets less cash and due from banks forecasted.

22 The capital cushion or "rule of twenty" test can be illustrated in additive terms to the example utilized in Footnote 21. If average historical losses are \$25 million and N is within a normal range, the "rule of twenty" test requires that there be sufficient capital to cover twenty times twice the average historical loss or N = 20 × 2 = 40. Capital in this instance would have to exceed \$1 billion (40 × \$25MM) to satisfy the "rule of twenty" test.

An illustrative example using the triangular distribution with the high value of N is outlined below.

The "rule of twenty" test applies as a minimal level of capital required provided a bank meets the following preconditions; first, the "two for one" earnings test is satisfied;[23] second, that management performance is rated superior by the regulators;[24] and third,



By moving the high value from 4 to 40 the expected value of N increases from 2.1 to 14.1 with the expected value of actual losses increasing from \$53 to \$353 million. The result of spreading out the distribution is to increase the probability that significant losses will be realized. For example, every \$100 million of average total assets less cash and due from banks forecasted would result in expected losses of \$7.1 million (14.1 × 0.5% = 7.1 × \$100MM = \$7.1MM) as opposed to \$1.1 million in the normal case.

In the extreme case (N = 40), the required level of capitalization could run quite high depending upon loss experience. If loss experience reached the 1% level than the "rule of twenty" test would require capital equal to 40% (40 × 1.0%) of average total assets net of cash and due. This is excessive in real terms and tends to work against banks with small footings if a significant loss occurs. It is impractical to expect a 40% level of capitalization even though this in fact may be prudent to protect the smaller bank, with a highly concentrated loan portfolio. In these cases the regulators may place an upper bound on the "rule of twenty" test which limits total capitalizations to 20% of average total assets net of cash and due, provided that other factors are favorable.

23 Current earnings significantly in excess of the "two for one" test would obviously permit greater flexibility in management of the capital account and the cash flow of the bank. For example assume average historical losses in year (t) are \$20 million, and expected net earnings are \$100 million, in excess of anticipated loss by a ratio of 5:1; aggregate capital funds required total \$800 million (2 × \$20MM × 20). At the end of the year management would have \$80 million in surplus undivided profits. After allowing for forecasted earnings, losses and asset growth in the following year (t + 1), management options then exist to increase dividends, build up capital, seek acquisitions, etc.; on the other hand, if earnings were 0 in the year t, and losses were \$20 million, required capital would be deficient both in the current year (t) and in the following year (t + 1); management would doubtless have to raise capital in these instances.

Another possibility in the first case would be to temporarily reduce capital during year (t) in anticipation that earnings in year t would be retained to restore capital to the prudent limit of 40 times average historical losses. A strong earnings performance would permit this to occur without jeopardizing the capital position of the bank.

24 Management "rating" in this sense involves assessments as currently made by the Comptroller of the Currency and the Federal Reserve Examiners, ref. footnote 16. Relevant considerations are the overall condition of the bank's liquidity position, earnings compared with banks of similar size, the adequacy of credit files, the effectiveness of collection efforts, quality and distribution of the investment account, the adequacy of internal controls, efficiency of operations, provision for management succession, and the bank's service to the community.

that known adverse contingent claims on capital in the form of loans classified sub-standard, doubtful or loss, and other known potential write-offs are not in excess of 50% of total capital funds.[25] A supplementary requirement of the "rule of twenty" test relates to asset/liability concentration factors. A proposed rule of prudence is that the total capital cushion must increase by 5 points for every risk asset/liability concentration by industry/customer group in excess of 10% of total non-bank private risk asset/liabilities respectively.[26] The two tests for capital adequacy and three pre-conditions operate subject to the constraint that total capital requirement is not less than 5% of average total assets net of cash and due from banks and not more than 20% of total assets net of cash and due from banks.[27]

The proposed capital adequacy tests are applicable to banks operating in conditions short of total collapse of the financial system. It is recognized that regulatory opinion maintains that the level of capital must be sufficient to assure solvency in these conditions; reappraisal of this point of view is needed.

Prudence dictates that bank management anticipate recurrent crisis. In the absence of countervailing action by the monetary authorities, disaster conditions carry the risk of

[25] This pre-condition is consistent with the approach of the Comptroller of the Currency utilized in assessing a bank's loan portfolio for capital adequacy purposes, ref. footnote 16. The purpose of the requirement is to anticipate difficulty as it becomes known to management through external or internal audit processes. The proposal is that when substandard assets (assets classified sub-standard, doubtful, or loss), and/or other potential write-offs aggregate to 50% of capital funds, a review of the bank's capital account is triggered and appropriate remedial action is to be initiated. This "trigger condition" is broader in scope than the Comptroller's formulation since it includes potential losses arising from investment, liquidity, operational, fraud and fidelity risks as well as from credit risks. The trigger condition is designed to assure the maintenance of timely audit coverage of the bank's operations and permit maximum lead-time to work out of emerging difficulties.

[26] As an illustrative case, a bank satisfying the earnings test, management performance, and "trigger" conditions, would be required to maintain a capital provision of 20 times twice the average value of historical losses, provided the loan portfolio did not contain an industry loan/asset concentration in excess of 10% of total non-bank private risk assets or a non-bank private liability concentration (from deposits or borrowings) of the same amount. If one such concentration existed, the rule of twenty requirement would require total capital funds to aggregate 25 times twice the average value of historical losses; if an asset/liability concentration exceeded 20% of risk assets, the test would require maintenance of 30 times twice the average value of historical losses.

In evaluating concentration factors in the asset/liability structure definitional precision and prudent regulator judgement would be required. Utilization of established business loan and liability classification formulae for reporting purposes would be a prudent point of departure. Personal credit extended to a widely diffused set of borrowers probably need not be given as much analytic weight in the regulatory judgement.

Clearly, concentration factors could escalate the capital cushion requirement to excessive impractical levels of capital on a formula basis. Again a maximum of 20% of capital to total assets net of cash and due from banks might be prudently accepted as a maximum condition for those banks deemed excessively vulnerable to solvency problems owing to concentration factors.

[27] The maximum ratio condition of capital funds not to exceed 20% of total assets net of cash and due from banks established a prudent limit to which bank capital can be extended by formula. A bank which is required, by formula, to maintain a higher level of capitalization is either substandard in risk terms or is not in a position to shift assets or defend against liquidity pressure to any significant degree. This is in fact the real world of banking. This degree of vulnerability would require careful continuing management attention, or the ready availability of external assistance should adverse conditions materialize. The minimum 5% condition is intended to set a prudent "floor" to assure that significant capital is maintained in the business. If actual losses over a five-year period are zero or trivial, obviously the proposed formulation will require only nominal capitalization. In practice most banks will fall within the ranges. Regulatory judgment at the extreme conditions will obviously be needed to establish reasonable standards for the particular banks involved.

massive deposit/liability shrinkage and totally illiquid asset portfolios. In these circumstances capital funds aggregating to not less than 100% of total liabilities, held in cash, are required to prevent insolvency. Since the banking system operates on a fractional reserve basis, a capital cushion to this extent is, by definition, not available. It is time to draw the realistic conclusion that in environments which bring the financial system close to collapse, the only recourse of all institutions—including banks—is to the capability of the authorities to manage the economy out of crisis. Public confidence is and must be retained by the general expectation that the authorities will not hesitate to act in this manner. In severe cyclical swings caused by economic policies, the authorities must assume responsibility for public confidence in the financial system. This does not mean that government is expected to bail out mismanaged institutions; but neither should financial institutions be expected to be so over capitalized as to bail out government's mismanagement of the economy. As a matter of fact and practicality, the economic disaster case should be excluded as a relevant scenario for capital adequacy purposes. More positively, the range of conditions which is operative for the proposed tests of capital adequacy extends from conditions of external stability or "normalcy" to conditional severity short of the peak pressures experienced in the credit crunch of 1969/70.[28]

The proposed capital adequacy tests are demonstrably responsive to the need of relating capital adequacy to the six generic categories of risk, referred to previously.

[28] The experience of the credit crunch of 1969/70 provides a basis to measure the capacity of the financial system to withstand crisis. Severe inflationary pressures triggered by expansive monetary and fiscal policies associated with the Vietnam War, brought inflationary expectations to a peak. The attempt by the Federal Reserve to restrict growth in the monetary aggregates, caused more sustained upward pressure on the interest rate structure. In time, more fundamental stress occurred which threatened the viability of the entire financial system. Severe commercial bank illiquidity resulted from operative interest rate ceilings on certificates of deposit imposed by Regulation Q. Massive disintermediation from the banking system forced money center banks to Eurodollar sources to off-set the run-off of domestic CD's caused by Regulation Q ceilings. Ensuing crises in the international exchange markets, commercial paper market and the stock market, bankruptcy declarations by Penn Central and several major brokerage houses threatened the level of public confidence.

It was not until the monetary and fiscal authorities re-established direct support to the credit markets, lifted Regulation Q ceilings, and suspended the convertibility of the dollar, that public confidence was restored, and the level of inflationary expectations abated. The significance of the credit crunch experience is that in contrast to the 1930's, the authorities acted to stabilize the financial system and provide liquidity to maintain the credit base, while leading the economy out of danger. This policy mix permitted commercial banks and other financial intermediaries to survive. Had the Federal Reserve not stood ready to intervene in the markets, incidence of insolvency in the banking system, the brokerage houses, and among distressed corporations would have been high and the commercial paper market probably would have been near collapse. No level of capital would have been adequate to permit affected institutions to withstand general stress of this magnitude.

This is not to say that what is proposed is that the authorities permit banks to operate free of capital constraint in normal times and support banks in difficult periods. The point is that, in crisis, maintenance of solvency in the banking system necessitates official support to the credit markets if the system as a whole is to survive.

The nature and frequency of future crises cannot be predicted with any certainty. What is certain is that the viability of the system depends finally upon the successful execution of stabilization policy by the authorities. Individual institutions can and should be adequately capitalized to deal with relative and individual adversity but not to withstand a pervasive crisis as severe as the 1969/70 credit crunch.

Interestingly, incidence of bank failure in 1969 and 1970 was not excessive. Between January 1969 and March 1971, nineteen commercial banks failed. The Honorable Frank Wille, Chairman of the Federal Deposit Insurance Corporation, testified before the House Committee on Banking and Currency on various

CREDIT RISK

Analytic software now permits banks to reconstruct historical loan experience over extended periods. Utilizing these techniques, loss occurrence, gross and net of recoveries, can be charted and correlated with parallel earnings experience and net changes in provisions for loan losses, criticized loans, and in the total reserve for loan losses. Historical loss experience provides a basis for estimating future loss experience within prudent ranges of expectational probability.[29]

Anticipated loss experience derived in this manner can be expressed as a weighted percentage of total assets, net of cash and due from banks.[30]

aspects of these failures. The 19 closed banks had 126 thousand depositors with a total of $219 million in total deposits. Of the 19 banks, 4 were closed because of irregularities in loan or deposit records. The remaining 15 banks were closed because of weakness in management of the loan portfolio. Closings in 7 of the 15 cases were the result of losses on loans to borrowers outside the bank's normal market area. Elsewhere improper loans to bank officers, directors, or owners of the bank or their affiliated interests where volume and quality exceeded prudent limits produced failure. Of the 19 banks that failed, ranging in size from $1-$113 million in assets, only 6 were members of the Federal Reserve System. As of June 30, 1969, 212 commercial banks were identified as "problem banks" with 31 designated as "serious". On June 30, 1970, the number of problem banks had risen to 244 with 54 being designated as serious. During this period, 108 banks were declassified and 140 new ones were added. Source: *Recent Bank Closings; Hearing Before the Committee on Banking and Currency, House of Representatives;* March 9, 1971, U. S. Government Printing Office, Washington, D. C.

[29] An internal staff study at Citibank, focused on adverse loan experience over a ten-year period from 1962-1972. Charting the results of eleven National Bank Examiner reports, charge-off experience was recaptured for the 10-year period of total loans classified sub-standard, doubtful or loss, excluding personal finance and charge card losses. Gross charge-offs ranged from 1.7% to 8.4% of loans classified, and net charge-offs after recoveries (often involving a time-lag) ranged from 0% to 7.4%; the results also showed that gross charge-offs as a percentage of classifications was declining with the exception of 1970 when the Penn Central bankruptcy occurred.

A computer data base, consisting of the 11 year classification results was created to chart the course of each classified loan over time. The study showed that cumulative gross charge-offs ranged from 2% to 10% of classified loans over the time period extending from the date of original classification, with average net charge-offs in the 2% range. The study also showed that well over 80% of loans classified were ultimately paid or declassified, that most gross charge-offs occur within 2 years after classification, and that over time recoveries tend to reduce net charge-off.

The 10 year period shows that in no year did after tax loan charge-offs exceed 13.1% of after tax earnings and that on average charge-offs in that period were 6% of annual earnings (notwithstanding changes in the accounting for loan losses). Average charge-offs as a percentage of loan loss reserve was 3.5%, with a peak experience of 7%. After tax loan losses averaged less than 0.5% of total capital accounts and in the worst year—(the Penn Central bankruptcy) charge-offs aggregated 1.3% of total capital accounts. Charge-offs as a percentage of total assets net of cash and due from banks—averaged .11% with a high of .26%.

Prudent expectations would hold that expected future losses would average 6% of annual earnings, 3.5% of reserves, 0.5% of capital accounts; and .11% of average total assets net of cash and due from banks. Peak/trough experience also is known.

During the same period charge-offs in personal and installment credit averaged between 0.5%-1% of outstandings and were fully absorbed by annual earnings on the portfolio. The quantitative results are not material, except to illustrate the facility with which this data can be captured and organized.

A comparable analysis on business loans was done by Wu for a stratified sample of 56 national banks, to assess the fate of criticized loans on bank balance sheets over time. The study was empirically oriented and cited the importance of the Examiner's role in identifying loan situations requiring additional management supervision. Citibank's results supported one of Wu's conclusions that a key factor in reducing loan losses was management's reaction to classification of loans by the Examiners. Generally, Wu's study also indicated charge-off experience on classified loans in line with the Citibank study. Wu, Hsin-Kwang, "Bank Examiner Criticisms, Bank Loan Defaults, and Bank Loan Quality", *Journal of Finance,* Vol. 25 No. 4, pp. 637-651, June 1972.

[30] The analytic derivation of expected loss has been discussed in footnotes 21, 22, and 29.

For capital adequacy purposes, the first line of defense against loss is current earnings. The appropriate focal relationship is the ratio of current earnings, after taxes, provisions for loan losses and dividends, to actual loss expectations.[31]

In the universe of banks, the possibilities can vary (see Fig. 1) from an earnings stream which exceeds loan losses by a comfortable margin (because earnings are high and/or losses are low), to cases in which losses exceed earnings (because of low profit performance and/or high losses). In the first set of cases the positive earnings gap will lead to a build-up of reserves and capital funds over time, assuming the incremental earnings are achieved and retained. In the second set, excess losses will reduce reserves and progressively erode the capital base.

A pattern of positive earnings growth in excess of net losses tends to validate the relative constancy of expected loss ratios and to reduce total capital requirements over time, because a larger cushion of current earnings exists to absorb losses. The obverse holds; continuous losses in excess of earnings produce a negative capital gap tending to increase expected loss ratios and capital requirements. Consideration of unpredictable loan losses, which of course might exceed normal expectations, is a more complex matter. An example of risks of this nature is an abrupt deterioration in the quality of the loan portfolio caused by adverse conditions in industries or markets in which the bank has an unduly large concentration of loans. A composite risk distribution curve, which represents loan losses, as an element of risk in the loan portfolio, is illustrated in Figure II.[32]

The vertical axis plots the expectational probability of loss experience in the total loan portfolio, the horizontal axis the percentage of the loan portfolio which is expected to be written off. The shape of the distribution curve implies that in management's view there is a higher probability that loan loss experience will occur within the range of historical experience and a lower probability that loan losses will exceed historical experience by a significant amount.

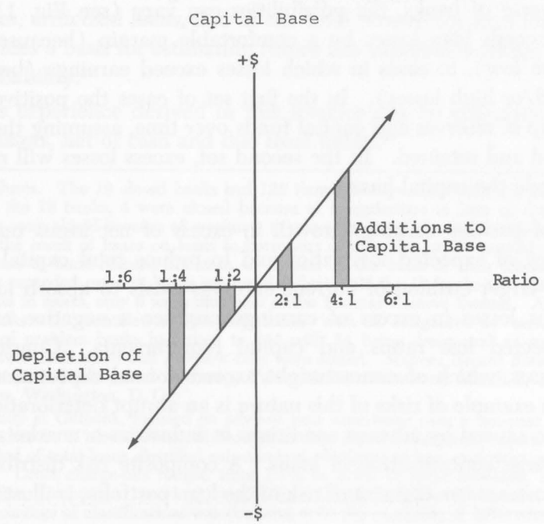
The distribution curve defined in expectational terms will vary from bank to bank depending on the scope of operations, the number of customers, and the nature and degree of market/industry concentrations in the loan portfolio. A one-office bank with 5 million dollars in loans, all of which are extended to wheat growers in an immediate trading area, would be out of business if blight ruined the wheat crop; a money center bank with 20 billion dollars in loans at risk in 50 states in the United States and 80 countries abroad, with a loan concentration of .001% of total loans to wheat growers in the entire United States, would not be affected to any material extent by the same occurrence of

[31] In the context of this discussion of credit risk, *loan* loss expectations are related to total loans, as a subset of the larger relationship of total expected loss and total expected assets less cash and due from banks in the general formulation. The subset relationship aggregates into the general capital adequacy tests.

[32] Again it is emphasized that the triangular distribution is assumed and in fact is a reasonable approximation for the major portion of the distribution shown in Figure II.

FIGURE I

Ratio of Current Earnings to Net Loan Losses



Effect on Capital Base of Various Ratios
of Current Earnings to Net Loan Losses Over Time

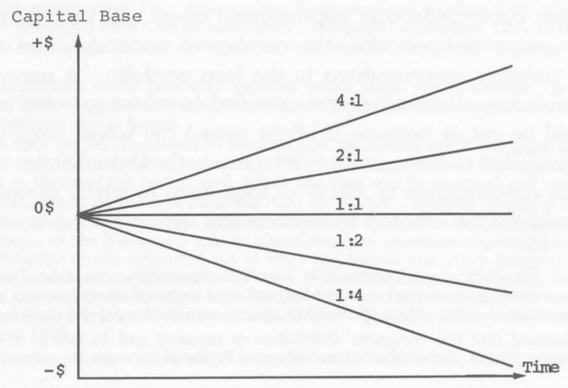
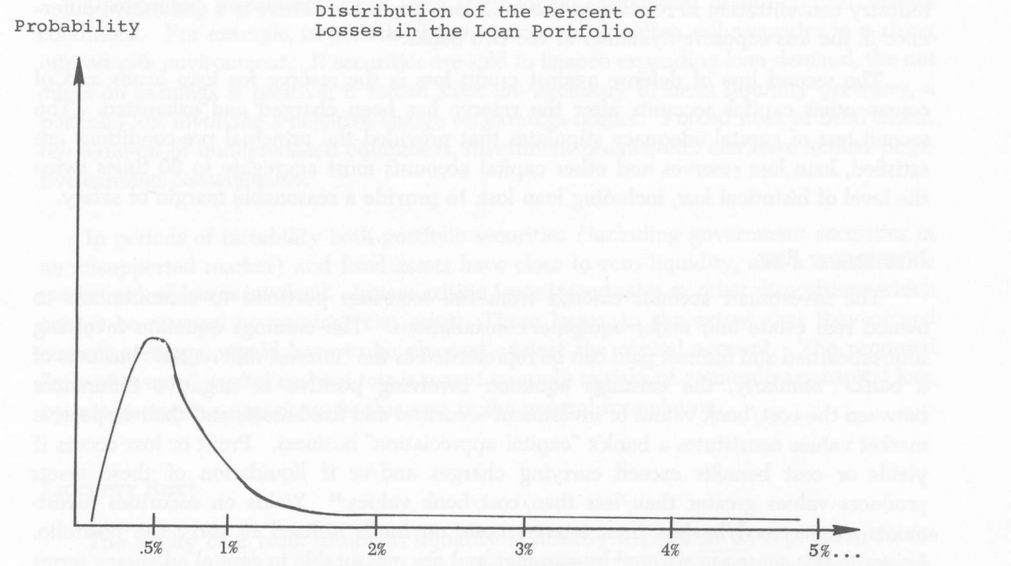


FIGURE II



blight. Unanticipated loan loss would occur for both banks; for the first bank the impact is ruinous, for the second bank it is negligible. Obviously, the smaller, undiversified bank must be more conservatively capitalized than the second bank because of the degree of industry concentration in relation to the total loan portfolio. There is a qualitative difference in the loss exposure dynamics of the two banks.[33]

The second line of defense against credit loss is the reserve for loan losses and of course other capital accounts after the reserve has been charged and exhausted. The second test of capital adequacy stipulates that provided the principal pre-conditions are satisfied, loan loss reserves and other capital accounts must aggregate to 20 times twice the level of historical loss, including loan loss, to provide a reasonable margin of safety.

Investment Risk

The investment account extends from the securities portfolio to commitments to owned real estate and major equipment installations. The earnings equation involving interest earned and interest paid can be represented as the "interest differential" business of a bank. Similarly, the earnings equation involving positive or negative differences between the cost/book values of investment securities and fixed assets and their respective market values constitutes a bank's "capital appreciation" business. Profit or loss occurs if yields or cost benefits exceed carrying charges and/or if liquidation of these assets produces values greater than/less than/cost/book values.[34] Yields on securities investments may exceed/be less than interest costs on funds utilized to carry the portfolio. Losses in this sense are covered by earnings and are measurable in capital adequacy terms by the proposed "two for one" earnings test.

Concerning investments in fixed assets, one of the valid functions of capital has been represented as permitting the bank to acquire the institutional structure necessary to commence and maintain a business presence. If investment decisions are correctly taken, earnings generated by these assets will more than cover depreciation expense and other carrying charges, permitting the institution to earn a residual profit. If the investment decisions are incorrectly taken, earnings will be insufficient to cover charges and a negative impact on earnings results. The capital adequacy implications of investment risks are covered by the proposed earnings and capital cushion tests. So long as total earnings

[33] In practical terms, it must be recognized that the small bank, with a loan portfolio totally committed to wheat growers, cannot survive the incidence of a ruinous blight—or in other words the destruction of its earning asset base caused by exogenous variables. In these and comparable cases, the only recourse would be to reorganize the bank, and protect depositors by pursuing remedies from public sector support.

[34] Again a "subset" relationship of income to carrying charges can be discussed in terms similar to the analysis of credit risk in the previous section. To avoid redundancy the process will not be repeated here or in the consideration of liquidity, operating, fraud and fidelity risks to follow. The analytic approach is similar and all sub-set conclusions aggregate to the general formulations for capital adequacy discussed earlier. The purpose here is to segment the analysis to highlight the qualitative aspects of the risks.

comfortably exceed the costs of carrying securities/fixed assets, the bank is not in difficulty; negative earnings net of carrying charges require a build-up of capital funds over time.

Unexpected investment losses arise from forced liquidation in sub-optimal market conditions. For example, in periods of tight money banks often sell securities in a rising interest rate environment. If securities are sold to finance expanding loan demand, the net effect on earnings is positive; if forced sales are necessary to meet liquidity pressures, a portfolio loss involving a negative charge on earnings occurs. Forced sales of fixed assets, the write-off of undepreciated equipment, investment premia, etc. can have similar negative earnings consequences.

In periods of instability both portfolio securities (including government securities in an unsupported market) and fixed assets have close to zero liquidity, and a considerable market risk of loss is involved. Losses arising from forced sales or other dispositions which cannot be covered by earnings can arise. These losses, to the extent that they exceed current earnings, would have to be charged against the capital account. The proposed "rule of twenty" capital cushion test is meant to apply to risks of extraordinary capital loss, by integrating loss experience in this area in the general formulation.

Liquidity Risks

The ability of a bank to obtain liquidity is directly dependent on reputation in the market place. Liquidity pressures require the institution to liquify assets or acquire incremental liabilities to refinance maturing claims; favorable/unfavorable market reputation influences the ability to finance liquidity, especially in periods of stress. The tenor mix of the asset and liability structure defines liquidity gaps which must be financed. Current and anticipated money market conditions and the time frame in which action can or must be taken are the important external variables.

At the peak of a money crunch, the range of available asset/liability choices is restricted. In these circumstances, a bank may find that all assets are illiquid and that the only method of refinancing liabilities is borrowing from the lender of last resort. In stable market conditions, with longer time periods in which to act, the array of options is broader, making liquidity management an easier task. The ability of banks to withstand liquidity pressures is a function of market reputation and business scope. Money center banks, operating on a global scale, can access every significant money market in the world. They are further supported by the financing power of the parent holding company which has broader options than does the bank itself. A small rural bank, experiencing comparable liquidity pressure, has a narrower scope of operations, fewer options available, and generally less time to react before reaching an extreme state of difficulty.

Regulatory tradition and current practice recognize the relationship between capital and liquidity. The Federal Reserve capital analysis approach views bank liquidity as a function of liability refinancing and asset liquification, and considers capital funds as the last line of defense. What is not recognized in the Board's capital adequacy formulation, but obviously is recognized in the formulation of monetary policy, is the fact that the history of monetary crisis indicates that a fractional reserve banking system cannot survive a prolonged period of liquidity pressure, unaided by the monetary authorities. In the 1930's, the operative cause of the massive incidence of bank failure was the withdrawal of official support to the credit markets, which had the effect of destroying the credit base of the economy. In the credit crunch of 1969/70, the ability of the authorities to intervene and maintain the credit base, permitted the financial system to withstand the crisis.

The capital account of a bank is not adequate to maintain solvency in the event of a major liquidity crisis, nor can the capital account withstand the pressure of a major run once public confidence in the particular bank has been irretrievably lost. Effective defense against ultimate crisis comes from lenders of last resort. The admissable liquidity related risks for capital adequacy purposes are the earnings risks associated with suboptimal asset liquification or liability refinancing. Negative effects on earnings and, if losses are major, on capital funds, can of course arise. For capital adequacy purposes, liquidity related losses can be treated according to the proposed earnings and capital cushion tests of capital adequacy. Loss experience arising from liquidity related risks need only be integrated with other loss experience in quantifying capital requirements to accomplish this.[35]

Operating/Fraud Losses

"Normal" operating losses are susceptible to historical analysis in the same manner as are other "normal" losses. Operating losses are charged directly to earnings or against reserves created by charges to earnings. Unanticipated major loss not covered by earnings occurrence is chargeable directly to capital funds. For capital adequacy purposes, the two for one earnings test covers expected normal loss and the capital cushion test covers extraordinary non-recurring loss.

Fraud losses of minor amount also are relatively predictable by management; non-recurring major losses can eventuate. Since banks usually are insured to a degree against major fraud loss, capital implications tend to be minimized. The two tests of capital adequacy can embrace this category of risk with facility.

[35] Extraordinary capital losses from forced sales of securities would of course be treated as below the line losses, i.e. adversely affecting income after securities gains or losses as discussed in the previous section on investment risks.

Fidelity Risks

The proposed rule of twenty test extends to loss exposure arising from trust operations. No separate provision need be made.

Loss experience, as understood in terms of the generic categories of risk incurred by commercial banks, can be dealt with by the two proposed tests for capital adequacy. The "earnings" and "capital cushion" tests are premised on a dynamic, "going concern" view of the bank operating in relatively normal conditions. In the revised formulations, capital provision is quantified on the basis of *factual* analysis of historical risk dynamics and prudent managerial expectations concerning future loss. Positive weight is assigned to earnings as a first defense against loss, and total capital funds are measured by the degree to which protection is afforded against extreme variations of the on-going risk experience of the bank. The proposed new tests reward managerial competence in assessing and managing risks instead of penalizing it and are consistent with conditions in the business climate in which banks now compete.

Public Policy Implications

Commercial banks have been stimulated by changes in public policy to compete in the market place as viable businesses. This is the significance of the emergence of commercial banking in the holding company context. Public policy also stipulates that institutions performing the intermediation function and offering permissible related services to the public are to develop in a pro-competitive direction. Commercial banking has been deemed a business to be professionally managed to achieve optimum rates of return on capital to the long-run benefit of the public.

The disciplines of the market place to which banks are now subject are worth emphasis. Services must be offered on a quality and price-competitive basis; capital must be acquired at least cost, on risk/reward terms prevailing in the market place and employed to most productive uses. Business costs must be managed to minimal levels consistent with proper standards of internal control. Commercial banks and parent holding companies must by law and equity accept the discipline of fuller disclosure including the revelation of materially adverse loss exposure to customers and investors, in addition to regulators. These are the new rules of the game. Failure to follow the rules certainly will result in a competitive deterioration of the banking system and produce dysfunctional social effects in the long-run.

Ultimately the market place must determine the extent to which both commercial banks and parent holding companies are capitalized. The market can be expected to assess the increasingly differentiated performance of banking enterprises, the appropriate new earning dynamics, and the progressive distinction between the financing power of parent holding companies and wholly owned subsidiary bank(s). If allowed to work, market forces will assure that appropriate cognizance of these factors is taken and establish

relevant capital standards for a restructured banking industry. The market also will vote sub-standard banks out of existence, relying on public policy and the regulatory structure to assure protection of the general public. Based on previous FDIC experience in liquidating substandard banks this need not cause undue concern. As market mechanisms operate in this manner, banks can be expected to adapt and perform as the economy requires and to become more capably managed. The proposed tests of capital adequacy are not intended to substitute for the ultimate judgment of the market place, but are designed on an interim basis to permit banks to prudently maintain an adequate level of capital without compromising their ability to compete as charged. It is recognized that the capital adequacy tests now utilized by regulators are employed as aids to but not substitutes for judgement. They assist supervisors in assessing the overall condition of a bank. The proposed new tests are warranted as more appropriate aids to bank supervisors because they relate in a dynamic fashion the vital measures of a bank's strength—the ability to assume and manage risks and to achieve stable earnings in a competitive environment. It is time for regulatory policy to adapt a new perspective and adjust to a point of consistency with the new priorities. Regulatory policy which issues from the obsolete public policy context of the pre-1971 period can only frustrate achievement of the larger objectives explicit in the amended holding company legislation.[36]

This article has endeavored to delineate a new set of premises on which to base an approach to capital adequacy in the context of current conditions. New tests for capital adequacy have been proposed. Careful consideration of the capital adequacy issue in these terms is needed.

Summary

The 1970 amendments to the Bank Holding Company Act permitted commercial banks to re-enter the mainstream of private enterprise, compete more successfully in the market place, and commence an era of expansion and diversification. Regulatory practice remains traditionally oriented and tends to work against the cause of banking reform now sanctioned by the law.

Regulatory approaches to bank capital adequacy are symptomatic of this problem. Bank capital ratios have been adjusting downward for 150 years. The historical record indicates that the level of bank capital has not been materially related to bank failures. Rather bank failures have been principally caused by illiquidity. Regulatory approaches have not converged to a generally accepted position and currently are at variance with one another and with the operative conditions governing contemporary commercial banking. A more appropriate standard of bank capital adequacy is required.

Viewing banks as on-going businesses operating in normal conditions, capital adequacy standards are best determined in relation to bank earnings and loss experience. The level of capital is an issue separate and distinct from liquidity. The functions of bank capital are to permit a bank to acquire the institutional structure required to maintain a business presence and to protect a bank against unexpected loss. Since loss is related to business risk, risk exposures in commercial banking must be explicitly recognized. For capital adequacy purposes, six generic risk categories—credit risk, i.e. loan loss experience, investment risk, liquidity risk, operating risk, fraud risk, and fidelity risk—should be considered.

Analytic techniques permit bank management to quantify historical loss experience in terms of these six categories of risk and to utilize this information to prudently forecast most likely total loss experience in the immediate future.

Two capital adequacy tests are proposed; first an "earnings test", which requires that current earnings amount to at least twice the level of total expected normal loss, and a "capital cushion test", which requires that total capital funds aggregate to twice times the five year average of total loss experience multiplied by twenty. The capital cushion test measures the bank's ability to withstand unexpected loss. The "rule of twenty" capital cushion test is deemed a minimally prudent margin of safety provided the bank satisfies the two for one earnings test, management is rated superior by the examiners, substandard loans and other potential losses do not exceed 50% of total capital funds and concentration of more than 10% of non-bank private risk assets/liabilities do not exist.

The two proposed tests are demonstrably responsive to the need to relate the level of bank capital to historical loss experience and anticipated loss exposure. Simulation techniques can be utilized to assist management in forecasting loss experience scenarios for capital adequacy purposes.

The proposed capital adequacy tests relate to banks operating in environmental conditions short of total economic crisis. Factually, the level of capital in an individual bank cannot be adequate to permit the bank to withstand a total economic collapse, as in those circumstances only the central bank can supply the liquidity to bridge the crisis.

[36] Lucille Mayne writes that one way to view the regulatory role in the long-run is that "bank supervisory agencies should abandon completely the use of capital adequacy standards in the examination process and concentrate instead on the competency of bank management. Implicit in this course of action is the premise that it is not possible to devise a generally applicable measure of capital adequacy since the essential function of capital is to serve as a defense against the occurrence of unpredictable events. Moreover, such a policy would imply that the key to soundness and success of a banking enterprise lies not so much in the amount of its capital funds as in the ability of its management to assess and absorb the risk inherent in its own particular operation and environment. Certainly, sound management would not wish to operate with less capital than a knowledgeable supervisor would specify. . . . Focusing primarily on management competency, therefore, may well be supervisory agencies' best assurance of banks' maintaining capital in an amount sufficient to protect the public interest". Mayne, Lucille S., op. cit. p. 49.

APPENDIX I

FR 363
April 1956

FORM FOR ANALYZING BANK CAPITAL

(See Notes on Reverse Side)

BANK: _____

LOCATION: _____

BASED ON REPORT OF EXAMINATION AS OF _____ DISTRICT NO. _____

(Dollar Amounts in Thousands)

	AMOUNT OUTSTANDING	CAPITAL REQUIREMENT Per Cent	CAPITAL REQUIREMENT Amount
(1) PRIMARY AND SECONDARY RESERVE			
Cash Assets	$	0%	
Guar. Portion of CCC or V-loans			
Comm. Paper, Bnk Accept. & Brks' Lns			
U.S. Govt. Secs:		0.5%	$
Bills			
Certificates, etc. (to 1 yr.)			
Other (1-5 yrs.) (Incl. Treas Inv. Series A & B)			
Other Secs. Inv. Rtngs 1 & 2 or Equiv. (to 3 yrs.)		4.0%	
TOTAL	$		
(2) MINIMUM RISK ASSETS			
U.S. Govt. Secs. (5-10 yrs.)			
Ins. Portion FHA Rep. & Modr'n Loans			
Loans on Passb'ks, U.S. Secs. or CSV Life ins.			
Short-term Municipal Loans			
TOTAL	$	4%	
(3) INTERMEDIATE ASSETS			
U.S. Govt. Secs. (Over 10 yrs.)			
FHA and VA Loans			
TOTAL	$	6%	
(4) PORTFOLIO ASSETS (Gross of Res.)			
Investments (not listed elsewhere)			
Loans (not listed elsewhere)			
TOTAL	$	10%*	
(5) FIXED, CLASSIFIED & OTHER ASSETS			
Bk Prem., Furn. & Fixt., Other Real Est.		100%	
Stocks & Defaulted Secs.			
Assets Classified as "Loss"			
Assets Classified as "Doubtful"		50%	
Assets Classified as "Substandard"		20%	
Accruals, Fed. Res. Bk. Stock, Prep. Expen.		0%	
TOTAL ASSETS	$		
(6) ALLOWANCE FOR TRUST DEPT. (Amt. equal to 300% of annual gross earnings of Department)			
(7) EXTRA CAP. REQD. IF ANY ASSETS IN GROUPS 2-4 USED FOR LIQUIDITY (zero if line C in Liquidity Calculation is zero, otherwise Total in line H)			
(8) ALLOW. FOR SPEC. OR ADDIT. FACTORS, IF INFO. AVAILABLE (+ or –) (see notes on reverse side)			
(9) TOTAL CAPITAL REQUIREMENT (1 thru 8)			$

* Plus 15% of 1st $100,000 of portfolio, 10% of next $100,000 and 5% of next $300,000.

LIQUIDITY CALCULATION

47% of Demand Deposits i.p.c.	$
36% of Time Deposits i.p.c.	
100% of Deposits of Banks	
100% of Other Deposits	
100% of Borrowings	
Allow. for spec. factors, if info. available (+ or –)	
A. Total Provision for Liquidity	
B. Liquidity available from Prim. and Secondary Res. (*amt. outstanding* less cap. required thereon)	
C. Liquidity to be provided from assets in Groups 2, 3 or 4 (zero if B equals or exceeds A, otherwise A less B)	
D. Liquidity available from Min. Risk Assets (90% of *amt. outstanding* in line 2)	
E. Liquidity to be provided from assets in Groups 3 or 4 (zero if D equals or exceeds C, otherwise C less D)	
F. Liquidity available from Intermediate Assets (85% of *amt. outstanding* in line 3)	
G. Liquidity to be provided from Portfolio Assets (zero if F equals or exceeds E, otherwise E less F)	

* * * * * * * * * * * * *

Extra Capital Required on Any Assets in Groups 2-4 Used for Liquidity

6.5% of line C	
4.0% of line E	
9.5% of line G	
← H. Total Extra Cap. Req.	$

(10) ACTUAL CAP., ETC. (Sum of Cap. Stock, Surplus, Undiv. Profits, Res. for Conting., Loan Valuation Res., Net unapplied Sec. Valuation Res., Unallocated Charge-offs, and any comparable items) (Exclude Depreciation and Amortization Reserves) $

(11) AMOUNT BY WHICH ACTUAL IS:
- MORE than requirement (10 minus 9) +$
- or
- LESS than requirement (9 minus 10) –$

(12) RATIO OF ACTUAL CAPITAL, ETC. TO REQUIREMENT (10 divided by 9) %

NOTES REGARDING FORM FOR ANALYZING BANK CAPITAL

A thorough appraisal of the capital needs of a particular bank must take due account of all relevant factors affecting the bank. These include the characteristics of its assets, its liabilities, its trust or other corporate responsibilities, and its management--as well as the history and prospects of the bank, its customers and its community. The complexity of the problem requires a considerable exercise of judgment. The groupings and percentages suggested in the Form For Analyzing Bank Capital can necessarily be no more than aids to the exercise of judgment.

The requirements indicated by the various items on the form are essentially "norms" and can provide no more than an initial presumption as to the actual capital required by a particular bank. These "norms" are entitled to considerable weight, but various upward or downward adjustments in requirements may be appropriate for a particular bank if special or unusual circumstances are in fact present in the specific situation. Such adjustments could be made individually as the requirements are entered for each group of assets; but it usually is preferable, particularly for future reference, to combine them and enter them as a single adjustment under Item 8, indicating on the Analysis Form or an attached page the specific basis for each adjustment.

The requirements suggested in the Analysis Form assume that the bank has adequate safeguards and insurance coverage against fire, defalcation, burglary, etc. Lack of such safeguards or coverage would place upon the bank's capital risks which it should not be called upon to bear.

ITEM (4) – PORTFOLIO ASSETS

Concentration or Diversification. – The extra requirement of 15% of the first $100,000 of portfolio, 10% of the next $100,000, and 5% of the next $300,000, as specified in item 4, is a rough approximation of the concentration of risk (lack of diversification) which is likely in a smaller portfolio, and which is usually reflected in the somewhat larger proportion of capital shown by most banks with smaller portfolios. This requirement is applied to all banks, but is naturally a larger portion of the total capital requirements of banks with smaller portfolios. However, a particular portfolio, whatever its size, may in fact have either more or less concentration of risk than other portfolios of similar size. If there is in fact substantially greater or lesser concentration of risk in the portfolio assets of the particular bank--as for example dependence upon a smaller or larger number of economic activities--it would be appropriate to increase or decrease requirements correspondingly.

Drafts Accepted By Bank. – When drafts have been accepted by the bank, ordinarily the customers' liability to the bank should be treated as Portfolio Assets if the acceptances are outstanding, or the acceptances themselves should be so treated if held by the bank.

ITEM (5) – FIXED, CLASSIFIED, AND OTHER ASSETS

Rental Properties. – Bank premises, furniture and fixtures, and other real estate are assigned a 100% requirement as a first approximation, since these assets usually are not available to pay depositors unless the bank goes into liquidation, and even then they usually can be turned into cash only at substantial sacrifice. However, some properties which bring in independent income, such as bank premises largely rented to others, may be more readily convertible into cash by selling or borrowing on them, and in such situations it may be appropriate to reduce the 100% requirement by an amount equal to an assumed "sacrifice" value, such as, say, two or three times the gross annual independent income.

Stocks. – In the case of stocks, their wide fluctuations in price suggest a 100% requirement as a first approximation. However, in some cases it may be appropriate to reduce the 100% requirement against a stock by an amount equal to an assumed "sacrifice" value, such as the lowest market value reached by the stock in, say, the preceding 36 or 48 months.

Hidden Assets. – In some cases assets may be carried at book values which appear to be below their actual value, and may thus appear to provide hidden strength. However, any allowance for such a situation should be made with great caution, and only after taking full account of possible declines in values and the great difficulty of liquidating assets in distress circumstances.

ITEM (6) – ALLOWANCE FOR TRUST DEPARTMENT

Deposited Securities. – The requirement for the trust department should in no event be less than the amount of any securities deposited with the State authorities for the protection of private or court trusts, since such securities are not available in ordinary circumstances to protect the bank's depositors.

LIQUIDITY CALCULATION

Percentages of Deposits. – The provision for 47% liquidity for demand deposits of individuals, partnerships and corporations actually represents 33-1/3% possible shrinkage in deposits, plus 20% of the remaining 66-2/3%. 36% of time deposits i.p.c. represents 20% shrinkage, plus 20% of the remaining 80%. In both instances, the provision for 20% liquidity for remaining deposits is to help the bank continue as a going concern even after suffering substantial deposit shrinkage.

Among possible special factors to be considered in connection with the liquidity calculation would be concentration or diversification of risk among deposits. This might be due to such things as dependence upon a smaller or larger number of economic activities, or preponderance of large or small deposits--large deposits usually being more volatile.

Liquidity Available from Assets. – Liquidity available from primary and secondary reserves is assumed to equal the amount of those assets less only the regular capital required thereon, since the regular capital specified for these assets assumes forced liquidation. However, the regular capital specified for other assets (i.e., those in Groups 2-4) is only a portion (approximately 40%) of that required for forced liquidation. Therefore, in determining the liquidity available from such other assets, the amount of such other assets must be reduced by more than the regular specified capital.

Extra Capital Required. – This extra capital is to cover possible losses in forced liquidation of assets other than primary and secondary reserves in case they had to be used to provide liquidity. The 4% indicated for Line E amounts to an automatic addition to the 6.5% that has already been applied to Line C, and results in a total extra requirement of 10.5% of the liquidity to be provided from Intermediate Assets. Similarly, the total extra requirement on the liquidity to be provided from Portfolio Assets is 20%. If the same amounts of extra capital were stated as percentages of the assets to be liquidated rather than of the liquidity to be provided, the percentages would be smaller, namely, 6% of Minimum Risk Assets, 9% of Intermediate Assets, and 15% of Portfolio Assets.

APPENDIX II

FR 363 (Form ABC)
Rev. 3/72

FORM FOR ANALYZING BANK CAPITAL

(Amounts in thousands of dollars)

BANK _____ CITY _____ STATE _____

IDENTIFICATION: ABC 2 (File) _____ (District) _____ (State) _____ (Bank) _____ Exam. Date (Yr. Mo. Day) _____

	LIQUIDITY CALCULATION Amount Outstanding	Per Cent	Calculation
Demand deposits, IPC		35	
Savings deposits		25	
Time deposits, IPC, under $100,000		30	
Time deposits, IPC, $100,000 & over		80	
Deposits of banks		80	
Other deposits		80	
TOTAL DEPOSITS			
Borrowings		100	
Other liabilities (a)		100	
Special factors: _____		100	
TOTAL LIQUIDITY CALCULATION (b)			

MEMORANDA

(a) "Other liabilities" and "Loans: Consumer instalment" are shown net of:
Dealers reserves ..... _____
Income collected but not earned ..... _____

(b) "LIQUIDITY AVAILABLE FROM ASSETS" is to be aggregated only until it equals "TOTAL LIQUIDITY CALCULATION."

(c) "Cash assets" are shown net of:
Required reserves ..... _____

(d) "TOTAL ASSETS" are shown net of assets classified as:
Doubtful ..... _____
Loss ..... _____

	AMOUNT OUTSTANDING	CAPITAL CALCULATION CREDIT RISK Per Cent	CAPITAL CALCULATION CREDIT RISK Amount	CAPITAL CALCULATION MARKET RISK Per Cent	CAPITAL CALCULATION MARKET RISK Amount	LIQUIDITY AVAILABLE FROM ASSETS (b) Amount	LIQUIDITY AVAILABLE FROM ASSETS (b) Aggregate
(1) PRIMARY RESERVE							
Cash assets (c)		0	0	0	0		
Federal funds sold		0	0	0	0		
(1) TOTAL			0		0		
(2) SECONDARY RESERVE							
Commercial paper & bankers acceptances		1		1			
Securities maturing under 1 year:							
U.S. Treasury		0	0	*			
Government agencies		0	0	*			
State, county & municipal		0	0	*			
Other Group 1		0	0	1			
(2) TOTAL			0				
(3) MINIMUM RISK ASSETS							
Securities maturing 1-5 years:							
U.S. Treasury		0	0	*			
Government agencies		0	0	*			
State, county & municipal		2		*			
Other Group 1		2		8			
(3) TOTAL							
(4) INTERMEDIATE ASSETS							
Securities maturing 5-10 years:							
U.S. Treasury		0	0	*			
Government agencies		0	0	*			
State, county & municipal		3		*			
Other Group 1		3		15			
Loans specially secured or guaranteed		3		15			
(4) TOTAL							
(5) PORTFOLIO ASSETS							
Securities maturing over 10 years:							
U.S. Treasury		0	0	*			
Government agencies		0	0	*			
State, county & municipal		5		*			
Other Group 1		5		25			
Loans: Real estate		5		25			
Consumer instalment (a)		5		25			
All other		5		25			
(5) TOTAL							
(6) FIXED, CLASSIFIED & OTHER ASSETS							
Bank premises		50					
Furniture & fixtures; other real estate		100					
Group 2 securities		50					
Groups 3 & 4 securities		100					
Assets classified substandard		20					
Accruals & other assets		0	0				
(6) TOTAL							
(7) TOTAL CAPITAL CALCULATED FOR MARKET RISK							
(8) TOTAL CAPITAL CALCULATED FOR CREDIT RISK				→	2		
(9) TOTAL ASSETS (d)							
(10) TRUST DEPARTMENT GROSS EARNINGS					200		
(11) SPECIAL FACTORS: _____							
(12) TOTAL CAPITAL CALCULATION (sum of lines 7 through 11)							

(13) ADJUSTED CAPITAL STRUCTURE[1] & CAPITAL STRUCTURE INDEX (Adjusted capital structure divided by line (12)) ..... $_____ _____%

(14) ADJUSTED EQUITY CAPITAL[2] & EQUITY CAPITAL INDEX (Adjusted equity capital divided by line (12)) ..... $_____ _____%

* See reverse side for securities computations which take account of quality, yield and narrower maturity ranges.

CAPITAL RATIOS

Adjusted capital structure as a percent of:
total assets _____%; total assets minus primary reserves, U.S. Treasury and Agency securities _____%; total deposits _____%.

Adjusted equity capital as a percent of:
total assets _____%; total assets minus primary reserves, U.S. Treasury and Agency securities _____%; total deposits _____%.

[1] and [2] Footnotes appear on reverse side.

NOTES REGARDING FORM FOR ANALYZING BANK CAPITAL

A thorough appraisal of the capital needs of a particular bank must take due account of all relevant factors affecting the bank. These include the characteristics of its assets, its liabilities, its trust or other corporate responsibilities, and its management—as well as the history and prospects of the bank, its customers and its community. The complexity of the problem requires a considerable exercise of judgment. The groupings and percentages suggested in the Form for Analyzing Bank Capital can necessarily be no more than aids to the exercise of judgment.

The requirements indicated by the various items on the form are essentially "norms" and can provide no more than an initial presumption as to the actual capital required by a particular bank. These "norms" are entitled to considerable weight, but various upward or downward adjustments in requirements may be appropriate for a particular bank if special or unusual circumstances are in fact present in the specific situation. Such adjustments may be entered under "Special factors" indicated on the Analysis Form.

The requirements suggested in the Analysis Form assume that the bank has adequate safeguards and insurance coverage against fire, defalcation, burglary, etc. Lack of such safeguards or coverage would place upon the bank's capital risks which it should not be called upon to bear.

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* **SECURITIES COMPUTATIONS** which take account of quality, yield and narrower maturity ranges. For determining market risk take the following steps:

1. Distribute the bank's holdings of U.S. treasury, U.S. Agency and State and Political Subdivisions in the following matrices:

Years Over Through	U.S. Treasury Avg. Cpn. Rate[1]	U.S. Treasury Par	U.S. Treasury Book	U.S. Government agencies and corporations Avg. Cpn. Rate[1]	U.S. Government agencies and corporations Par	U.S. Government agencies and corporations Book	States and political subdivisions Avg. Cpn. Rate[1]	States and political subdivisions Par	States and political subdivisions Book
1		$	$		$	$		$	$
1 2									
2 5									
5 10									
10 20									
20									
Totals		$	$		$	$		$	$

Years Over Through	U.S. Treasury Avg. Cur. Mkt. Yld.[2]	U.S. Treasury Market[2]	U.S. Government agencies and corporations Avg. Cur. Mkt. Yld.[2]	U.S. Government agencies and corporations Market[2]	States and political subdivisions Avg. Cur. Mkt. Yld.[2]	States and political subdivisions Market[2]
1		$		$		$
1 2						
2 5						
5 10						
10 20						
20						
Total market value		$		$		$

HIGH YIELDS		
U.S. Treasury	U.S. Government agencies and corporations	States and political subdivisions
7.75	8.21	5.02
7.78	8.23	5.11
7.82	8.29	5.32
7.64	8.39	5.65
7.30	7.98	6.08
7.07	8.12	6.43

[1] Average coupon rate. The preferred method is to obtain by computing actual annual coupon income generated by securities in a given cell and dividing such annual coupon income by the par value of the cell. In the alternative, the average coupon rate may be imputed as described below.

[2] (Not necessary to complete if average coupon rate is known.) Average current market yield (approximate yield base for market value shown) may be obtained from actual knowledge of yields used to obtain above market value or by selecting a single investment issue for each cell that is representative of that particular cell. e.g., for State and political subdivisions with maturities of from 10-20 years, select a medium grade issue maturing in 15 years or as close to 15 years as is available. Divide the market value of the issue by par value and locate the resultant value in the **Comprehensive Bond Value Tables** under the coupon rate of the issue selected and trace across to maturity yield. Enter maturity yield under "Avg. Cur. Yld." above. If information concerning the individual securities comprising each cell is unavailable, enter market yields obtained from a general review of rates prevailing at or near the time of pricing.

2. Price the securities in each cell to yield at the high yield rate set forth in the high yield matrix. Note: Price as though each cell was a single issue using average coupon rate and total par value. Assume maturities for each cell as follows: 1—(1 year); 1-2 (1½ years); 2-5 (3½ years); 5-10 (7½ years); 10-20 (15 years); 20 (25 years [except assume 20 years for U.S. Agencies]). Note: If bank has a concentration of lower quality municipal securities add about 50 basis points to high yield for "States and political subdivisions".

3. Determine the amount of maximum probable market depreciation in each cell by subtracting the market value obtained from step 2. above from the book value of securities. Enter actual figure for maximum potential market loss in the appropriate market risk column, combining where necessary in order to conform to distribution as appears on the front of the Form. If computations show potential market appreciation enter zero for market risk.

Method for Imputing Coupon

Par value ÷ Market value = Assumed price

Locate assumed price in the Comprehensive Bond Valuation Tables assuming a coupon equal to average current yield. Trace the price to the yield to maturity column in the tables. **The yield to maturity is the imputed average coupon rate of that particular cell.** (Note: Owing to the restraints of the table size the yield may have to be interpolated; a more precise method for obtaining the yield may be achieved by utilizing the mathematical equation for determining such yields.)

Note: If the above data are unavailable and as an alternative but less desirable method, the following percentage charges may be used:

All securities maturing under 1 year, 1 per cent; 1-5 years, 8 per cent; 5-10 years, 15 per cent; over 10 years, 25 per cent.

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[1] Adjusted capital structure—Total capital accounts plus reserves on securities and loans minus assets classified loss and 50 percent of assets classified doubtful.
[2] Adjused Equity Capital—Adjusted capital structure minus debt capital.

APPENDIX III

A SIMULATION MODEL FOR TESTING CAPITAL ADEQUACY[1]

The following set of equations provides an analytic framework for management to evaluate business plans in terms of future expectations. The purpose of these evaluations is to determine the adequacy of the bank's capital base in reference to business plans. The model also intends to be a vehicle through which bank management and regulators can interface to arrive at assessments of a bank's capital position.

Theoretical work on the capital adequacy question has tended to concentrate on predictive aspects of determining whether or not bank capitalization would permit the institution to withstand adversity and regulatory reaction to particular levels of capitalization.[2] This formulation is designed to establish in positive terms adequate levels of capital, on a basis consistent with the reasoning in the text. The model is premised on the assumptions that the best tests for capital adequacy relate to the measurement of management competence (the "earnings test") and the impact of expansion and unanticipated events on the capital position of the bank (the "capital cushion test"). The determination of capital adequacy in reference to all publics—regulators, customers, bank management—is a subjective process. The model is presented as a method of facilitating the subjective process between regulators and management. Ultimately however, the market place establishes the level of capitalization and penalizes/rewards management performance.

The variables in the model are highly aggregated to indicate the impact of various scenarios for total earnings and loss experience.

$$(1)\quad ATA(t) = g(t) \times ATA(t-1)$$

Average total assets in the current period (t), $ATA(t)$, depend on the business plans of management, expressed in terms of $g(t)$, an anticipated rate of asset growth. The values selected for $g(t)$ represent asset expansion plans as forecasted by management or as extrapolated from most recent past experience. The rate of growth in assets, $g(t)$, is a key to earnings performance, which in turn affects the bank's ability to generate internal capital. Management can reduce $g(t)$ if asset expansion is not desirable or if market conditions warrant a moderate or reduced rate of growth.

$$(2)\quad ACA(t) = c \times ATA(t)$$

Average cash and due from banks, termed average cash assets, (ACA), are expressed as a constant percentage (c) of average total assets (ATA) in period (t). The value of

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[1] The primary work to develop the model was done by Philip J. Mahoney, Assistant Cashier, Citibank.

[2] For example see Dince, Robert R. and Fortson, James C. "The Use of Discriminant Analysis to Predict the Capital Adequacy of Commercial Banks", *Journal of Bank Research*, Vol. 3, No. 1, Spring 1972; and Meyer, Paul A. and Pifer, Howard W., "Prediction of Bank Failures", *Journal of Finance*, Vol. 27, No. 3, September 1970, pp. 853-868.

ACA differs between large money center banks and other commercial banks, but for both classes, the value of (c) is relatively constant.

$$(3)\ \text{HLoss(t)} = [(\sum_{i=1}^{5} \text{NLoss(i)}) \div (\sum_{i=1}^{5} (\text{ATA(i)}-\text{ACA(i)}))] \times [\text{ATA(t)}-\text{ACA(t)}]$$

Total historical net losses (HLoss) are expressed as a function of average total assets less cash and due, computed as a five year moving average of net losses to average total assets less cash and due. Average historical loss serves as the basis for the accounting provision for expected loss at the beginning of the current year (t) by management.

Future losses cannot be predicted, but historical experience plus the additional risk associated with asset expansion, changes in the environment, etc. provides management a prudent basis on which to estimate future loss experience. Business plans and environmental factors introduce an element of variability that must be considered. Expected actual losses in the current period can be derived by combining historical loss experience and management's expectations about the future.

$$(4)\ \text{NLoss (t)} = \text{N(t)} \times \text{HLoss (t)},\ \text{N(t)} > \text{O}$$

The value for NLoss (t) can be determined in the simulation, assuming a triangular distribution for N. Management is asked to give a low, most likely, and high estimate of N, based on expectations about the economic environment, internal factors, or business plans. By sampling from this distribution of management's expectations for N, the simulation technique can be used to examine the impact of various loss scenarios on business plans. N in the triangular distribution has an expected value of $E(N) = 1/3 \times$ [most likely + high + low] and a variance of [low^2 + most likely^2 + high^2 − low × most likely − low × high − high × most likely].[3]

The assumption of a triangular distribution of N is *presumed* to have intuitive value for management. Range and most likely values of N are the terminology of managerial expectations; variations can be tested to assess the impact of the range and most likely values. If the range of values for N is wide, the variance for N is high despite the value management picks as most likely. Consequently, even though the distribution may be skewed to the lower range of values, the effects of management's uncertainty about N would still have an impact on business plans. Repeated runs of the simulation can assist in evaluating hedge strategies.

[3] In an appendix Hillier discusses a similar approach using a beta distribution to calculate expected value and variance. The expected value formulation for the beta distribution Hillier used puts more weight on the most likely value as opposed to either of the extreme values. On the other hand the expected value formulation in a triangular distribution gives equal weight to each of the parameters. For purposes of this model the triangular distribution is more appropriate since the probability of realizing higher losses is greater than for a beta distribution with the same low, most likely and high parameters. Hillier, Frederick S., *The Evaluation of Risky Interrelated Investments*, Appendix A. 1., North Holland Publishing Co., Amsterdam, London 1969.

Implications for the two proposed tests of capital adequacy now appear, since historical and actual loss in the current period have been derived. The model treats current earnings as the first line of defense against actual loss. If the accounting provision for historical loss (HLoss (t)) is not sufficient to cover actual losses, additions to undivided profits from earnings in the current year must be reduced, after allowing for tax consequences. As the model is not directly concerned with predicting stock price or shareholder behavior, there is no difference between reducing the earnings after dividend *stream* and leaving the undivided profits *base* untouched or leaving the stream untouched and reducing the base. If earnings after dividends are insufficient to cover the excess of actual over historical loss, management may decide to reduce or eliminate dividends, depending on the severity of the excess. The second line of defense is the bank's capital funds, capital stock, surplus, undivided profits, unallocated reserves, and debt.

The equations reflective of this discussion are

$$(5)\ \text{if NLoss (t)} > \text{HLoss (t)},$$
$$\text{Diff (t)} = \text{NLoss (t)} - \text{HLoss (t)},$$

which shows the excess of actual loss over historical loss in the current period.

$(6)\ \text{EAD(t)} = [(1 - \text{d(t)}) \times (\text{SP(t)} \times \text{ATA (t)})] - (\text{Diff(t)} \times (1 - \text{TR}))$ where EAD equals earnings after dividends, d(t), the dividend rate expressed as a pay-out ratio to EAD, SP is the after tax "spread" earned on assets, and TR is the current effective tax rate. Earnings after dividends are adjusted for the excess of actual loss over historical loss after the tax implications have been accounted for. Equation 6 can be written to express dividends in a number of different formats in order to reflect the bank's particular policy. If earnings after dividends are less than zero after accounting for Diff(t) then reserves (RES) are reduced in the current year.

$$(7)\ \text{RES(t)} = \text{RES(t} - 1) + \text{EAD (t)},\ \text{EAD (t)} < 0$$

If EAD > 0 after adjusting for Diff(t) then,

$$(8)\ \text{RES(t)} = \text{RES (t} - 1)$$

If HLoss (t) ≧ NLoss (t)

$$(9)\ \text{EAD(t)} = (1 - \text{d(t)}) \times (\text{SP(t)} \times \text{ATA (t)})$$

The after tax "spread" earned on assets (SP(t)) is the other key factor in determining the bank's earning power. The values for this variable reflect the bank's investment capabilities as well as the ability to finance investments at the lowest possible cost. The simulation can be run continuously using different scenarios of this variable in order

to assess the impact of the trade-offs between spread and volume and the possible implications for capital policy.

In the case where HLoss (t) exceeds NLoss (t) then the reserves are increased:

$$(10)\ \mathrm{RES}(t) = \mathrm{RES}(t-1) + \mathrm{HLoss}\ (t) - \mathrm{NLoss}\ (t)$$

The capital base–CAP(t − 1)–is defined to include the loan loss reserve as well as other unallocated reserves. In order to avoid double counting only the year to year changes in the reserves (DRES) need to be added to the capital base in the current year.

Depending on HLoss (t) $\gtreqless$ NLoss (t) and the attendant impact on earnings after dividends and the reserves, the capital base (CAP) is changed accordingly:

$$(11)\ \mathrm{DRES}(t) = \mathrm{RES}(t) - \mathrm{RES}(t-1)$$

$$(12)\ \mathrm{CAP}(t) = \mathrm{CAP}(t-1) + \mathrm{EAD}(t) + \mathrm{DRES}(t)$$

At this point no new external capital has been raised. The issue then becomes whether or not these operations violate the constraints of the two capital adequacy tests. Initially current retained earnings must be twice as large as actual loss.

$$(13)\ \mathrm{EAD}(t) \geq 2 \times (\mathrm{NLoss}\ (t))$$

If this minimum requirement is met it is apparent that earnings coverage is sufficient. In terms of equation 6, EAD would be greater than zero. There may be circumstances where equation 3 does not hold. Earnings after dividends could be positive but less than the prudent coverage rule of 2 × (NLoss (t)). This condition should put examiners and management on notice. Asset/liability, dividend, credit and other policies should be reviewed to insure an adequate future stream of internally generated capital. In cases where EAD in equation 7 is less than zero, examiners should request management to submit plans for corrective action. Plans for raising additional capital may have to be developed at this time. This condition is clearly the most critical and ties in directly with equation 13. The impact of low earnings or high losses, which causes a failure in meeting the earnings test, results in a slower growth in the capital base or a reduction in the cushion to protect against future loss. In either case if a bank fails the earnings test for a number of years in succession the cushion between available and required capital would be seriously impaired or eliminated.

The earnings test for capital adequacy serves to raise a warning flag, which could point to a number of problems ranging from operating difficulties, unsatisfactory asset/liability management, etc. Capital may or may not have to be raised at this point but

close attention to the problem is called for. The capital cushion test indicates the impact of these difficulties on the capital base.

The capital cushion test relates adequacy of the capital base to the bank's ability to absorb large unexpected losses as well as for the cases where equation 13 does not hold. A value for N = 40 was chosen as being a prudent cushion against unexpected loss. The capital cushion test is stated as:

$$(14)\ \mathrm{CAP}(t) \geq 40 \times \mathrm{HLoss}(t) + \mathrm{FA}(t), \text{ or}$$
$$\mathrm{CAP}(t) \geq N \times \mathrm{HLoss}(t) + \mathrm{FA}(t),\ N = 40$$

Where CAP(t) is total capital funds in the current period, and FA is the book value of fixed assets.[4]

If this minimum requirement is met, additional capital is not required. If the test is not met, new capital from external sources NC(t) is required and the capital stock is adjusted upward accordingly.

$$(15)\ \mathrm{NC}(t) = 40 \times \mathrm{HLoss}(t) - \mathrm{CAP}(t) + \mathrm{FA}(t)$$

$$(16)\ \mathrm{CAP}(t) = \mathrm{CAP}(t) + \mathrm{NC}(t), \text{ provided}$$

$$(17)\ .05 \times [\mathrm{ATA}(t) - \mathrm{ACA}(t)] \leq \mathrm{CAP}(t) \leq .2 \times [\mathrm{ATA}(t) - \mathrm{ACA}(t)]^{5}$$

The constraint condition in equation 17, establishes a minimum and maximum level of capital required to cover cases in which loss experience is quantitatively very low and/or vulnerability is very high. Over time, the minimal/maximum constraint can be altered as experience is gained. For example, if the earnings test was passed consistently by a bank and as a result the capital base became larger relative to the historical loss experience, it would not be unreasonable to see the minimum capital constraint of 5% reduced to a lower figure.

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[4] The provision for fixed assets is added to the capital cushion test to insure that banks, which have a very low historical loss experience, have sufficient capital to cover their investment in premises. Management can forecast the value of FA(t) based on business plans. For example, banks planning to develop large branching systems as a means of penetrating a market will show a different pattern for FA(t) than a bank using a new call program to stimulate loan demand. The statutory requirement of financing fixed assets with capital stock is of course involved.

[5] The pre-conditions with respect to satisfaction of the capital cushion test (management performance, asset quality, and concentration tests) mentioned in the text have not generally been included in the simulation model. The pre-conditions are appropriate for banks today, but, as mentioned, could change. A certain percentage of the bank's portfolio may be classified or heavily concentrated in one area. The model is more instructive if the results from the different runs are compared after the fact to these constraints. For example, given the current level of classified assets, will the results of business plans add sufficiently to or erode capital to the point where classified loans decrease to less than or exceed 50% of capital? The minimum/maximum constraint on capital as reflected in equation 17 was introduced to keep the results of the simulation with respect to capital adequacy within respectable levels.

Summary

To recapitulate, the primary assumption of the model is that past loss experience is a prudent basis for management to predict—in expectational terms—future losses. The triangular distribution of N describes the range and most likely values which management applies to historical loss to establish "actual loss". Historical loss is the basis for establishing a prudent level of capital protection against abnormal loss. The model focuses on management's *forecasting skills.* Managerial competence in assessing and managing risks is an essential benchmark of the viability of the bank. The model facilitates management/regulator dialogue on the *risk dynamics* of the business to establish adequate levels of capital. The model is simplistic, but of considerable utility, since it can be run to test extremes in the key variables and assess the implications for earnings, loss and capital. Although the model is aggregative, disaggregative analyses of the loan portfolio, investment risks, liquidity, operating, fraud and fidelity risks can be made. The model also is suited to the data capture competence of most banks.

The model does not relate the adequacy of capital to the liability structure. The rationale for this exclusion is premised on the fact that, in normal conditions, sharp declines in liabilities are offset by shifting assets or switching liabilities. Liquid assets and the cash flow generated by asset turnover and liability refinancing should allow the prudently managed bank to meet liquidity pressures successfully.

The important model relationships are the pace of asset growth, spread, dividend policy, and the level of capital as derived from the level of assets net of cash and due from banks, earnings and losses. The simulation technique produces results which are associated with mean values of the key variables, but the model can be evaluated for extreme conditions to test the effectiveness of the two proposed tests for capital adequacy. In addition, the simulation model can be expanded by employing triangular distributions to reflect management's future beliefs about asset growth, spreads, and dividend policy. In evaluating the model at the extremes, the results for Citibank were well within the limits prescribed by the two proposed capital adequacy tests. To have general applicability, additional tests need to be run on various sizes of banks as well as on data from banks that have failed. A numerical example of the model's relationships, utilizing Citibank's 1971-1972 figures is shown in the following exhibit.

Capital Simulation Model—Numerical Example; Citibank 1971-1972

Equations	Explanation	Numerical Values(*) ($ in MM)
1) ATA (t) = g (t) * ATA (t-1)	Average total assets in the current period are equal to a forecasted growth rate [g(t)] applied to average total assets in the preceeding period.	$33537 = 1.168*$28713
2) ACA (t) = C *ATA (t)	Average cash assets are a constant percent of average total assets.	$7042 = .21*$33537
3) HLoss (t) = Avg. Loss Factor * [ATA (t) - ACA (t)]	Historical loss is determined by applying an average loss factor (5 year moving average of net losses to average assets less cash and due from banks) to average total assets less cash and due from banks for the current period.	$37 = .0014*($33537-$7042)
4) NLoss (t) = N (t)*HLoss (t)	Actual expected losses for the current year are expressed as a function of historical experience. Values for N are based on managements judgements about the business environment.	$44 = 1.2*$37
5) NLoss (t)> HLoss (t) Diff (t)=NLoss (t) - HLoss (t)	Actual expected losses exceed the historical experience.	$7 = $44 - $37
6) EAD (t)=[1-d(t)]*SP(t)* ATA (t) - Diff (t) *(1-TR)	Earnings after taxes and dividends are adjusted for the amount that actual losses exceed historical losses	$202=(1-.0)*(.0061)*$33537 - $7*(1- .542)
Equations 7, 9, 10 are not applicable because NLoss > HLoss but EAD remained positive		
8) RES (t) ≥ RES (t-1)	Reserves for losses are at least equal to last year's level because earnings were sufficient to cover the excess losses.	$319 ≥ $311
11) DRES (t) = RES (t)- RES (t-1)	This represent the increment to reserves in the current year.	$8 = $319 - $311
12) CAP (t) = CAP (t-1) + EAD (t) + DRES (t)	This equation determines the new capital base which adds current earnings and additions to the reserves to last year's base.	$1906 = $1696 + $202 + 8 (**)
13) EAD (t) ≥ 2 *NLoss (t)	Earnings Test	$202 ≥ 2*$44 - True
14) CAP (t) ≥ 40 * HLoss (t) +FA (t)	Capital Cushion Test 5%/20% Constraint	$1906 ≥ 40*$37 + $88= $1768 $1325 < $1906 < $5299

Equations 15 and 16 are not applicable since both capital tests were satisfied.

* Values for the current year (t) corresponds to year-end 1972 Citibank results.

** Debt raised at the holding company level and used to buy additional shares of Citibank Common Stock during 1972, was not included.

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CITICORP

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

January 5, 1973

Dr. Arthur F. Burns
Chairman of the Board of Governors
of the Federal Reserve System
Washington, D. C. 20551

Dear Arthur:

It was good to see you this week and, as promised, I am sending you a copy of the "Bank Stock Quarterly" for December 1972, published by M. A. Schapiro & Co., Inc. As you will observe, in 1971 all 13,612 F. D. I. C. insured commercial banks needed an overall yield of 5.18 per cent to break even. The whole issue is of interest, and I also draw your attention to the chart on page 4 which shows the cost of credit for all insured banks.

All the best.

Sincerely yours,

Enclosure

Some items in this folder were not digitized because it contains copyrighted materials. Please contact the Gerald R. Ford Presidential Library for access to these materials.

DECEMBER 1972

Bank Stock Quarterly

Published by

M. A. SCHAPIRO & CO., INC.

Underwriters • Brokers & Dealers in Bank Securities

One Chase Manhattan Plaza
New York, New York 10005

Telephone 212 425-6600
Teletype NY 212 571-0768

HOW BANKS ARE DOING

The year's major development in U.S. banking was the recovery of the profit margin. The change got under way in early March when open market yields on Treasury bills, commercial paper and bankers' acceptances rebounded from their lows in response to the growing credit demands of a stronger economy and mounting financing needs of the Federal government. The profit margin is the after-tax differential between the yield realized on domestic loans and investments and the yield required to avoid an operating deficit. This key factor and the volume of credit outstanding are major determinants of bank earnings.

IN THIS ISSUE: *Page*

The profit margin came under severe pressure when the Federal Reserve embarked on a program of active monetary ease following President Nixon's announcement of the country's New Economic Policy in August 1971. Short-term interest rates fell sharply while operating costs continued to rise. The resulting squeeze virtually ended earnings growth in 1971 despite the year's 11.5 per cent expansion in domestic loans and investments.

In 1971 all 13,612 F.D.I.C. insured commercial banks needed an overall yield of 5.18 per cent to break even. The actual yield realized of 6.58 per cent produced a pre-tax profit of $14.00 per $1,000 of loans and investments. The after-tax profit margin of $10.46 on $480.4 billion average credit outstanding created income before securities gains or losses of $5,024 million, or $70 million more than the $4,954 million earned in 1970. The 1971 increase over 1970 was a bare 1.4 per cent, the result of an 11.5 per cent growth in loans and investments, offset by a 9.0 per cent narrowing of the profit margin. Parenthetically, in the ten years, 1961-1971, earnings of all insured commercial banks increased at a rate of 9.6 per cent compounded annually.

The recovery in banking's profit margin started a full two years after bank credit began its climb. It was in the first quarter of 1970 when the Federal Reserve shifted monetary policy from pressure and contraction to availability and expansion. Since then the volume of domestic loans and investments of the

Mrs. Mallard

December 27, 1972

Mr. Walter B. Wriston, Chairman
First National City Bank
399 Park Avenue
New York, N. Y. 10022

Dear Mr. Wriston:

I read with interest your observations of December 6, 1972, concerning our new monthly Report of Condition for Edge Act Corporations. I recall also your letter of June 17, 1971 outlining in more comprehensive detail the heavy reporting burden from which you seek relief.

The new Edge Act form and its coverage were determined by the simplifying and systematizing methods reported to you by Governor Mitchell in his response of August 20, 1971 to your earlier letter. I understand that a full statement of the purposes of the report, its coverage and requirements were sent to the President of each of your Edge Act Corporations by the Reserve Bank President for that District. We kept in mind comments such as yours and tried to exercise care during development of this Report to achieve our policy purposes overall with as little burden as possible on the reporting institutions.

Balancing benefits and costs in these instances, of course, is always a matter of judgment. We feel impelled to restructure our data collection to reflect the greater influence on the U.S. financial system of banking methods and practices nonexistent a few years ago. At the same time, we appreciate the merit of communications from our respondent banks that can help us better evaluate and control the reporting burden.

As your letter of December 6 has noted, some moderate reductions in your reporting requirements have been accomplished since your previous letter to us on this subject.

I assure you that the Federal Reserve is continuing high-priority efforts to identify and reduce reporting items where we can, while still aiming at a first-rate data collection system to

support our policy decisions. I am hopeful that within about nine months we will have conclusions and recommendations from various projects now underway at the highest levels in the System on this subject which we expect to yield significant further overall improvement.

In the meantime, I hope you and your colleagues will continue to give this subject your constructive attention.

Sincerely yours,

(signed) Arthur Burns

Arthur F. Burns

bc: Gov. Mitchell
Gov. Brimmer
Gov. Daane
Mr. Partee
Mr. Nissen
Mr. Slocum
Mrs. Mallardi (2)
Miss Griffin

RCH:LG/g

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

Office Correspondence

Date December 11, 1972

To Bob Holland

Subject:

From Catherine C. Mallardi CCM

Dr. Burns asked me to send you the attached letter from Walter Wriston. He would like to see something done about cutting down the number of reports. He would also like a reply to Mr. Wriston for his signature.

Thank you.

#1550

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

December 6, 1972

Dr. Arthur Burns, Chairman
Board of Governors of the
Federal Reserve System
Washington, D. C. 20551

Dear Mr. Chairman:

In June, 1971, I wrote you concerning the heavy burden we bear in providing increasing data to the Federal Reserve System. Since that time a very small number of reports have been eliminated but requirements for new reports keep coming in, so that we are now submitting more than 2,700 reports a year to the Federal Reserve System.

The latest example of the proliferation of reports that my associates have called to my attention is the request for submission of a new Monthly Report of Condition for Edge Act Corporations Engaged in Banking (F.R. 886b).

While we understand this new report will be in part a substitute for another report required only semi-annually, there is a net addition of 50 reports per year on our organization. Not only are there more reports, the detail requested in the 886b hardly seems justified in view of the limited business permitted to these Edge Act Corporations.

We would welcome any relief of the growing reporting burden with regard to this report or other reports called to your attention last year.

Sincerely yours,

90-day Commercial Paper Rate	Changes at 1/8% intervals (incl. brokers commission) Spread	Base Rate	Changes at 1/4% intervals Spread	Base Rate
5-1/8	5/8 1/2	5-3/4		
~~5-1/4~~	~~5/8~~	~~5-7/8~~	1/2 ? 3/8	----
5-3/8	5/8	6	1/2	----
5-1/2	5/8	6-1/8	1/2	6
5-5/8	5/8	6-1/4	1/2	----
5-3/4	5/8	6-3/8	1/2 3/8	6-1/4 (1) 1 1/8

This includes broker's commission

(212) 559-4285

FIRST NATIONAL CITY BANK
PUBLIC AFFAIRS DEPARTMENT
399 PARK AVENUE, NEW YORK, N. Y. 10022

OR RELEASE: AMs Thursday
November 30, 1972

NEW YORK, N.Y., Nov. 29 - First National City Bank announced today that, in view of the general level of short term interest rates, it is altering the formula it uses in arriving at its floating base rate.

Temporarily, Citibank will reduce the spread between its base rate and 90-day commercial paper rate from one-half of one per cent to three-eighths of one per cent, the spread generally prevailing during the period of the August 15 freeze last year. Additionally, in order to reduce the volatility of the rate, the base rate will henceforth be moved in increments of one-quarter instead of one-eighth of one per cent.

These two changes are being made in response to concern voiced by some members of the Committee on Interest and Dividends that short-term rates might go up too far or too fast, the bank said. Leif Olsen, Citibank senior vice president and economist, said that in his view, "short-term rates were not likely to increase to extraordinary levels in the year ahead, but would only rise moderately in response to normal economic expansion."

- more -

In announcing these changes, Citibank noted that the floating base rate concept was implemented in response to another public policy issue - that on more than one occasion high government officials leveled criticism at the banks by alleging that the old prime rate was "an administered rate" and presumably, therefore, not as responsive as it might have been to the tides in the credit market.

In the 57 weeks that Citibank has been operating on the floating base rate system, the rate has changed 32 times, with 15 increases and 17 decreases, reflecting faithfully changes in the 90-day commercial paper market.

Citibank ties its floating base rate to the 90-day commercial paper market for two reasons: 1) The market is sensitive to supply and demand, is highly visible and is one in which commercial banks play no direct role, and 2) corporations borrow more money today in the commercial paper market than they borrow from all the weekly reporting member banks in New York City combined.

Non-bank commercial paper outstanding on November 15 was $32 billion while commercial and industrial loans and loans to financial institutions reported by weekly reporting New York City banks were $30.9 billion.

In announcing the immediate change in its formula, Citibank added that if, contrary to the expectations of its economists, short-term rates moved up very sharply and very materially, the bank would consider whether other changes might be appropriate in its floating base rate formula.

OK

RATE FORECAST - 11/3/72

1972 /	Trnsf. Pool	FNCB Base Rate	90-Day Treas. Bills	90-Day Comm. Paper	90-Day CDs	30-Day FNCC Paper	90-Day FNCC Paper	Fed Funds	Aa. 5-7 Year Util. Bonds	Aa Long-Term Util. Bonds	Long-Ter Governme
Oct.*	5.51	5.81	4.73	5.21	5.15	4.83	5.15	5.04	N.A.	7.53	5.69
Nov.	5.73	5.90	4.80	5.35	5.35	5.05	5.35	5.20	6.70	7.40	5.70
Dec.	5.83	6.00	4.90	5.45	5.45	5.20	5.45	5.25	6.80	7.50	5.70
Ann. Avg.	4.97	5.28	4.06	4.67	4.65	4.34	4.65	4.44	N.A.	7.46	5.65
1973											
Jan.	5.87	6.10	5.00	5.50	5.50	5.30	5.50	5.35	6.80	7.50	5.70
Feb.	5.92	6.15	5.05	5.55	5.55	5.35	5.55	5.40	6.80	7.50	5.70
Mar.	5.98	6.15	5.10	5.60	5.60	5.40	5.60	5.45	6.80	7.50	5.70
Apr.	6.03	6.20	5.15	5.65	5.65	5.45	5.65	5.50	5.85	7.50	5.70
May	6.03	6.25	5.15	5.65	5.65	5.50	5.65	5.50	6.85	7.50	5.70
June	6.03	6.25	5.15	5.65	5.65	5.50	5.65	5.50	6.85	7.50	5.70
July	6.03	6.25	5.15	5.65	5.65	5.50	5.65	5.50	6.80	7.45	5.65
Aug.	5.98	6.25	5.10	5.60	5.60	5.50	5.60	5.45	6.75	7.40	5.65
Sept.	5.98	6.20	5.10	5.60	5.60	5.45	5.60	5.45	6.70	7.35	5.60
Oct.	5.92	6.15	5.05	5.55	5.55	5.40	5.55	5.40	6.70	7.35	5.60
Nov.	5.92	6.15	5.05	5.55	5.55	5.40	5.55	5.40	6.65	7.30	5.55
Dec.	5.92	6.15	5.05	5.55	5.55	5.40	5.55	5.40	6.65	7.30	5.55
Ann. Avg.	5.97	6.19	5.09	5.59	5.59	5.43	5.59	5.44	6.77	7.43	5.65
1973 Budget Ann. Average	6.14	6.32	5.24	5.74	5.74	5.54	5.74	5.64	6.85	7.31	5.62

*Actual

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

November 29, 1972

Dear Arthur:

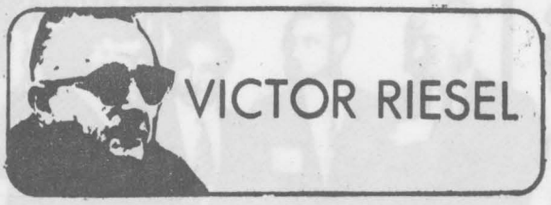
This is one thing I am counting on to help me win the ice cream soda!

Sincerely yours,

Dr. Arthur F. Burns
Chairman of the Board of Governors
Federal Reserve System
Washington, D. C. 20551

THE JOURNAL NEWS
NOVEMBER 17, 1972

Businessmen worried by labor strategy



WASHINGTON — On any clear day, at any one of a hundred rambling hotels surviving the old baronial Mauve Decade, always with golf courses attached, from Lake Louise to French Lick to Key Biscayne, one can see scores of business leaders, eagerly but futilely eyeing the links.

Roundtable, headed by U.S. Steel's former chairman of the board, Roger Blough, and something with a low visibility, the Labor Law Study Committee.

In this new management movement will be some 140 corporations — not to be con-

Objectives? Those who are the main spirits of the new management movement (some six years in the merging) say they want to

match labor's power at the bargaining table. Or get some new laws. Especially they want to end public welfare and

tion Bargaining," a high council formed by 10 or 12 unions for a special assault on a company or industry (expected to be used against GE next year). There will be a drive to neutralize the power of the union hiring hall, which supplies all manpower on a unionized project. Or to ease the obtain-

The need to increase minority enrollments in engineering was emphasized by Joseph M. Bertotti, manager, education relations, General Electric Co., when he addressed NAM's Education Committee at its fall meeting in Atlanta. Left to right are Dr. Charles W. Merideth of Atlanta University, Mr. Bertotti, Dr. Edsel T. Godbey of the Southern Association of Schools and Colleges, Dr. Z. W. Dybczak of Tuskegee Institute, Dr. F. W. Schutz of Georgia Institute of Technology, and James F. Kelly, president, Aeroglide Corp. and chairman of the NAM committee. The college representatives reported on programs to enlarge minority enrollments.

TELEVISION/RADIO AGE
NOVEMBER 13, 1972

Sears to be honored at TvB membership meeting

One of television's most increasingly active advertisers, Sears & Roebuck, will be honored with the Television Bureau of Advertising's "Advertiser of the Year" award at the 18th Annual Membership Meeting, at New York's Waldorf-Astoria Hotel, November 14-16. Receiving the award and appearing as speaker at the November 15 luncheon session will be Gar Ingraham, Sears national retail sales promotion manager.

Other features of the three-day conclave, which includes a combined luncheon with the International Radio & Tv Society on the closing day, are: a keynote address by Virgil Day, vice president, business

June 27, 1972

Dear Mr. Wriston:

I am writing in Chairman Burns' absence to thank you for your letter of June 22 regarding a Board action involving the Royal Trust Company, Montreal. Your letter will be brought to Chairman Burns' attention upon his return to the office.

Sincerely yours,

Catherine C. Mallardi
Secretary to the Chairman

Mr. Walter B. Wriston
Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

CCM:NB:ml

Mrs. Mallardi (2)

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON

OCT 6 1971

Mr. Walter B. Wriston, Chairman,
Clearing House Committee,
New York Clearing House,
100 Broad Street,
New York, New York, 10004.

Dear Mr. Wriston:

In your letter of September 24, 1971, you state that in view of Judge Gesell's opinion in Menard v. Mitchell the F.B.I. no longer processes fingerprints taken from applicants applying for employment in banks. You note that the Department of Justice feels Congressional action will be required if this service to banks is to be reinstated.

The Board has given preliminary and brief consideration to the substance of the proposed legislation which you attached to your letter. The Board is inclined to support legislation that would permit the F.B.I. to process fingerprints taken from applicants for employment in banks and then inform the prospective employer about an applicant's conviction record and arrest record for major crimes such as embezzlement.

At such time as the Board receives a request for comments on any proposed legislation, it will be carefully reviewed and it is probable the Board will comment generally along the lines indicated above.

Very truly yours,

(Signed) Arthur F. Burns

Arthur F. Burns

cc: Mrs. Mallardi (2)

BCL:dch
No. 266
10-4-71

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

September 2, 1971

Mr. George W. Mitchell
Board of Governors of the
Federal Reserve System
Washington, D. C. 20551

Dear George:

We appreciate your letter of August 20th responding to our June 17th letter to Chairman Burns. We have reviewed the attachment thereto which outlines the dim prospects for relief from the inordinate burden of reports to the Fed.

We will follow the suggestion of communicating directly with Treasury regarding such reports as you indicate are of Treasury origin, with the Fed merely the vehicle.

I am asking John Reed to find a mutually convenient time to respond to your suggestion that he be briefed on the Steering Committee's efforts and offer his reactions thereto.

Internally, we are progressively making use of more and more sampling techniques, and we are hopeful that the Board is so inclined in order that at some point in time some of the report requests need not encompass the majority of our domestic and/or overseas branches.

Sincerely yours,

FIRST NATIONAL CITY BANK

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

GEORGE W. MITCHELL
MEMBER OF THE BOARD

August 20, 1971.

Mr. Walter B. Wriston,
Chairman,
First National City Bank,
399 Park Avenue,
New York, New York. 10022

Dear Walter:

Your letter of June 17 to Chairman Burns raised questions with respect to reporting burden both at a general level and in connection with a number of specific reports. Your letter and the attachments to it were referred to me as chairman of the Board's Committee on Financial Statistics, the other members of which are Governors Daane and Brimmer.

We and our staff have looked into the issues you have raised with some care and in detail. I am writing to you now to convey our reactions to your questions and suggestions relating to specific reports. The detailed reactions are contained in the enclosed staff memorandum. You will note that the responses to your specific requests are mixed. In some cases, there is little that we can do to reduce the reporting requirements at this time; in others, we can report steps we have already taken, or about to take, that will result in some reduction; in one case, judgment has been deferred. While we can thus indicate some fairly immediate reductions in reporting burden along the lines of your inquiries, most of the forms cited in your letter are closely related to Federal Reserve regulatory and policy responsibilities or to Treasury operations. Overall, there is little prospect for a major reduction in your compliance costs.

The problem of reporting burden on banks is, of course, an important one and I assure you that we take it seriously. We go to considerable pains trying to avoid

adding unnecessarily to that burden. System procedures governing reporting requirements lay much stress on respondent burden. We have on occasion refrained from asking for information that would be valuable to us in the discharge of our responsibilities because of the heavy reporting costs involved. We keep our reporting requirements under continuing surveillance to avoid collecting information that is no longer needed. It is in our own interest, as well as yours, that we keep down the reporting burdens imposed upon banks.

Nevertheless, the basic problem remains that the System does require a substantial amount of information to carry out its responsibilities, which are large in number and diverse in character. Both the Federal Reserve and, I assume, the commercial banks have the greatest interest in making sure that Federal Reserve policy is based on reliable and adequate information even though the bank reporting involved results in significant compliance costs. The major money market banks, like the FNCB, whose activities reach into every area of the Board's foreign and domestic policy and supervisory responsibilities are, because of their very size and diversity, particularly subject to calls for information. It is unlikely that these calls for information, in the aggregate, will decrease. Indeed, because of a number of recent developments, our needs for information have been increasing the last few years and will undoubtedly continue to increase in the future.

In these circumstances, it is our view that significant reductions in the reporting burdens borne by banks must be sought through simplifying and systematizing our reports and reporting procedures so that they can be tied into bank automated information systems. We have underway a number of projects -- some with long-term and some with short-term horizons -- directed toward this end. One of these is a joint effort with a group of representatives from commercial banks -- the Steering Committee on Bank Information. The present commercial bank membership of this group is Robert Wilmouth (First National Bank of Chicago), who is chairman of the group; Russell Fenwick (Bank of America); Graham Dozier (Wachovia Bank and Trust Company); James C. Cooper (Irving Trust Company); David M. Ahlers (Bankers Trust Company); Joseph A. Hall (Citizens and Southern National Bank); W. Thomas Castleberry (Crocker Citizens National Bank); John C. Farrell (Republic National Bank of Dallas); and Gordon B. Cutler (now retired from Citizens and Marine Bank of Newport News, Virginia). Since John Reed has been doing so much effective work in the information area, I think it would be helpful to get his reactions to the directions we have taken with this group.

If there is any question at all about our reply to your letter or any further comments on our reporting requirements, please do not hesitate to get in touch with us. If John wants to visit us we would be delighted to see him.

Sincerely yours,

George W. Mitchell

Enclosure.

for Mitchell (w memo & package)

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON

JUN 25 1971

Mr. Walter B. Wriston, Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

Dear Mr. Wriston:

I read with considerable interest your letter of June 17, 1971 outlining the burden of reports that banks such as yours are bearing and asking that we consider whatever lessening of that burden is possible without loss of essential statistical data.

Your documentation of this statistical burden is impressive, and I appreciate the effort that you have gone through in order to try to demonstrate the scope of the problem and flag possibilities for reduction of reporting requirements as you see them.

I have asked the appropriate officials here to study the material you submitted with a view to timely action thereon. You may be sure this will receive our diligent attention, and I expect our people may be in contact with yours as we try to attack the problem.

Sincerely yours,

(Signed) Arthur F. Burns

Arthur F. Burns

bc: Gov. Mitchell
Mr. Partee
Mrs. Mallardi (2)
Mr. Holland

Dr. Holland
Gov. Mitchell

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

TEL: 212-559-1000

June 17, 1971

Dr. Arthur Burns, Chairman
Board of Governors of
the Federal Reserve System
Washington, D. C. 20551

Dear Mr. Chairman:

Over the course of years, there has been a growing burden on larger commercial banks in providing increasing data to the Federal Reserve System. In a bank such as FNCB with a world-wide network of branches, we spend innumerable man-days preparing such reports.

The reporting burden on major banks is so heavy because of the number of reports, the complexity of reports, insufficient lead time for the banks to prepare for new or revised reporting requirements and numerous phoned inquiries for further details or clarifications. Also, at times the reporting deadlines set by Fed. appear to be unnecessarily demanding, in view of the fact that the feed-back thereon follows by several weeks or even months.

In the fall of 1969, we found that we were submitting more than 3,800 reports annually to Fed., or an average of about 15 reports each business day. This translates into significant dollar cost to us in salaries, computer costs and other operating expense as well as interruptions in our operations. We, together with other New York Clearing House banks, discussed the situation with representatives of the New York Fed. and gave them suggestions for revisions and simplifications, or less frequent preparation of certain reports. Since then we have been in contact with Fed. personnel in New York and Washington but the progress made has not had a noticeable impact on the overall reporting burden.

We note that the Board of Governors approved a Bank Report Reform Project to consider revisions of bank reports. However, we think such a group will necessarily take considerable time to effect any significant changes.

With the above in mind, I asked our people to review our reports to Fed. in order to identify reports which are prime candidates for discontinuation or revision as to complexity or frequency without the loss of statistical data considered essential to the Federal Reserve System. To the extent that further streamlining is possible, our reporting burden would be

lessened and Fed. would reap benefit from time saved in compiling and processing the data supplied by reporting banks. Some of the suggestions that resulted from this review are attached for your consideration together with a blank copy of each report mentioned.

We shall be pleased to work with your staff with a view to providing essential data but at the same time reducing the demands on the bank.

Sincerely yours,

Balance of Payments Reporting Series

We file with Fed., which acts as collecting agent for the U.S. Treasury Department, in excess of 750 reports each year relating to the balance of payments. In these reports, we are required to classify deposits, loans and other similar information with respect to foreigners into innumerable categories by type of customer, by political boundary, by type of transaction, by U.S. dollar or foreign currency, etc.

The balance of payments series of reports (enumerated below) continues to be the single most burdensome reporting area for us. For example, the basic B-1, B-2, B-3 and S-1 reports require in total detailed classifications of transactions with foreigners each month into almost 2,400 categories (excluding sub-totals and totals) and the annual B-1 Supplement contains 1,152 categories. These reports are compiled from such detailed breakdowns that must be prepared by hundreds of our overseas and U.S. branches and dozens of Head Office departments.

We do not know all of the uses to which these reports are put and are, therefore, not in a position to make specific recommendations for reducing the reporting burden. However, it occurs to us that if we, as one bank, file in excess of 750 reports each year (an average of three each business day) containing thousands upon thousands of figures, the total data supplied by all banks must be staggering and must challenge the ability of Fed. to process and effectively utilize all of the information. Moreover, the sheer weight of information flowing to Fed. may tend to obscure the basic trends that these reports are intended to identify, and the huge number of categories must inevitably result in mis-classifications by the reporting banks. We also note that several of the reporting forms have not been revised since 1963.

In view of the above, we think it appropriate to re-evaluate the entire balance of payments reporting series. In so doing, in the interests of Fed. as well as the reporting banks, we feel that an attempt should be made, to where possible:

(1) eliminate reports,
(2) reduce the number of categories on reports,
(3) reduce frequency of reports,
(4) increase the minimum reporting limits, and
(5) permit overseas offices to report as of fiscal month-ends rather than as of the last business day of each month.

Balance of Payments Reports Filed by FNCB#

Report Form Number	Number of Categories on Report Form	Frequency	Approximate Number of Reports Filed by FNCB Each Period	Each Year	
B-1	754	Monthly	5	60	
B-2	522	Monthly	6	72	37,500
B-3	522	Monthly	3	36	
S-1	580	Monthly	1	12	7,000
S-2	*	Monthly	1	12	
B-1 Preliminary Summary	2	Monthly	1	12	
F.R. 501	15	Monthly	8	96	
F.R. 502	42	Monthly	22	264	11,100
F.R. 391	19	Monthly	1	12	200
FR 392	25	Quarterly	1	4	100
B-1 (Branches Only)	754	Quarterly	1	4	
B-1 Supplement	1,152	Semi-Annually	4	8	4500
F.R. 503	12	Annually	175	175	2100
48S-71001	40	Annually	1	1	
				768	57,000

#Does not include a special three-part Supplement to Form S-1 as of January 31, 1971. Banks were advised of this report by letter dated January 26, 1971, thereby allowing only three business days to prepare for obtaining the data for about 300 categories.

*Each specified transaction is reported separately.

FNCB questions

REPORTS TO FEDERAL RESERVE #2

Report of Condition, etc. (Form F.R. 314, pages 1-6)

We must complete a report as of December 31 each year for each foreign subsidiary of the bank, each Edge Act company and subsidiary thereof, and each Agreement Corporation and subsidiary thereof. Reports in less detail also must be supplied as of June 30 for certain of these companies, unless waived by Fed.

The reports as of December 31 each year are required to be prepared on prescribed forms which include a number of schedules giving voluminous detailed breakdowns and other data for securities, loans, overdrafts, amounts due from banks, cash items in process of collection, deposits, borrowings, income and expenses, and reconcilements of capital accounts.

In our case, we filed for about 80 companies last December 31. The detail required for each company far exceeds the information supplied for FNCB in Call Reports of Condition although all 80 companies in the aggregate do not constitute a significant subsidiary of FNCB.

In March 1970, we pointed out to Fed. two major problems in the reporting requirements: (1) the detailed nature of the required information, and (2) the calendar month-end reporting date. We stated that for our own management purposes our foreign subsidiaries report their figures as of the 20th of each month, that their fiscal year ends December 20, and that the information we receive as of the 20th is used in the preparation of our published consolidated reports and for our periodic Call Reports. We further pointed out that the additional cost and pressure on staff both here and abroad to produce two sets of financial figures in a two-week period is considerable. We requested permission to furnish Fed. with the same type of statement information which we prepare here for our own management purposes, as of the 20th of the month.

Fed. advised in June 1970 that the June 30, 1970 reports would not be required for foreign subsidiaries and that a review of the reporting requirements would be considered in connection with the year-end report for 1970. In December, we were told that no changes would be possible for the year-end 1970 report. We, therefore, had to supply all the voluminous detail in the prescribed format for each of the 80 companies as of December 31, 1970.

In late February 1971, in reply to another inquiry from us, we were told that some progress in reviewing the requirements with the aim of revising them was being made then and that some alternative drafts already had been proposed. As of the middle of June 1971, we have heard nothing further on the subject.

We continue to believe that it should be possible for Fed. to give us reduction in details required and flexibility in reporting format and date of preparation of the reports.

Report of Loans to Purchase or Carry Securities Other Than Loans to Brokers and Dealers (Form FR U-4M)

Designated commercial banks, including FNCB, are required to break down such loans monthly into seven classifications.

At one reporting date, we had such loans at our Head Office and at approximately 55 branches. About 40 of these branches had less than $250,000 of such loans each, aggregating less than 2% of the bank-wide total.

The report is onerous to us because each branch with such loans (including the 40 branches with less than $250,000 each) must (1) understand and classify its portfolio of such loans according to ten pages of definitions, instructions and illustrations, and (2) review each loan each month for the proper classification since the classification may change if the borrower substitutes collateral, or if FRB changes the list of over-the-counter stocks subject to margin requirements, or if a stock is registered on, or de-registered from, a national securities exchange.

For banks not designated to report monthly, a report is required once each year on Form FR U-4A. This annual report contains the same seven classifications as the monthly report, but banks with less than $250,000 of such loans report the total only and are not required to provide a breakdown by classification. This option, however, is not available to our 40 branches noted above which in total account for less than 2% of our bank-wide total of these loans.

The reporting burden could be substantially reduced if (1) the breakdown into seven classifications were required only for any branch which had such loans in excess of $250,000, (2) in view of the relative stability of such loans, reports were required less frequently than monthly, and (3) re-classification changes were not required or were required only once each year.

REPORTS TO FEDERAL RESERVE

Report of Bank Dealers (Schedules I-1, I-2, J, K and K-1)

Required annually from banks which are dealers in U.S. Government securities.

The report consists of a balance sheet as of year end, an income statement for the year and supporting details, treating the dealer operation as if it were a separate corporation. Thus, the reporting bank is required to (1) determine the amount of "Capital" that would be appropriate for the operation if it were a separate company, (2) determine an appropriate interest rate to be charged to the assumed separate company on the remaining funds "borrowed" by it to carry the dealer inventory, and (3) estimate appropriate allocations to the operation for salaries, telephone and miscellaneous costs.

We see no value in a report which provides one-day balance sheet figures for a highly volatile operation and arrives at a net profit or loss which is substantially affected by allocations of capital, interest rates and expenses which are determined by each reporting bank.

This report has been reviewed recently by representatives of the General Accounting Office. We are hopeful that their study will result in discontinuation of the report.

Dealer Cost Ratios and Maturities on Automobile Installment Loans (F.R. 584a)

Selected commercial banks report monthly on this form the number of automobile contracts acquired, segregated into 16 separate categories. The categories depend upon (1) whether the contracts are for new cars or used cars, (2) whether the contracts arise from direct loans or purchased paper, and (3) the period to maturity on the loans.

In the fall of 1969, we referred this report to Fed. because we thought it was of little or no value. We were advised that there was a review of the entire consumer credit statistics program under way and that Fed. preferred to defer any further comment about any consumer credit series report until the review committee reached at least some tentative conclusions. We have heard nothing further.

We continue to believe that the report is of little or no value and think it should be discontinued.

Interest Rates on Loans to Business (Form F.R. 467)

Loaning units of the bank designated by the Fed. (in our case our uptown and downtown headquarters) must report certain data for all loans made in the first seven business days four months each year to nonfinancial businesses in excess of $1,000 with certain exceptions. The required data includes the amount of each loan, the interest rate (with an indication whether the interest charge is on a discount basis), maturity classification, due date if over one year, and for loans in excess of $200 thousand the Standard Industrial Classification code of the borrower.

We attempted to have changes made in the reporting form in the fall of 1969. Fed. advised that Budget Bureau approval expired at the end of 1969 and that Fed. planned to request only very minor modifications, if any, at that time. We heard nothing further and the four quarterly reports for 1970 requested by Fed. were on the old form on which Budget Bureau approval had expired December 31, 1969.

The form was revised in early 1971 and there was some reduction in reporting requirements, the most important of which was to reduce the reporting period from 15 days to 7 days. The changes were advised to the banks by Fed. letter dated January 27, 1971, and these new instructions were to be applied to loans made beginning February 1, 1971, i.e. loans made three days after the date of the revised Fed. instructions. This gave the banks virtually no time to interpret the new forms and prepare for properly completing them.

We have received no response to our suggestions made in the fall of 1969 that (1) the report be limited to exclude loans less than $50,000, rather than $1,000 as at present, and (2) the filing date be more realistic than three business days. We continue to feel that these suggestions would reduce the burden and the pressure.

In connection with the second suggestion above, it should be noted that banks are asked to meet a three-day reporting deadline; however, the feed-back from Fed. of the data compiled on the reports submitted in mid-February 1971 was sent out by Fed. on April 12, almost two months later.

AUG 17 1971

Dear Walter:

Thanks very much for your letter of July 12, which, as you know, arrived when I was away from the office.

I want you to know that the three suggestions contained in your letter are very much under review here at the Board. There is one question of fact on which I would like to comment. Although the amount of Eurodollar borrowings by American banks in the aggregate has fallen considerably from the original base levels, there is quite a lot of diversity among the banks in the percentage of their original Eurodollar liabilities still held.

I hope that you will always feel free to pass on your ideas to me.

Sincerely yours,

Arthur F. Burns

Mr. Walter B. Wriston
Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

RS:nss
8/13/71

cc: Mrs. Mallardi (2)
Messrs. Pizer and Gemmill

BS-07

July 14, 1971

Dear Mr. Wriston:

Your letter of July 12th has been received in Dr. Burns' absence from the office. I shall bring it to his attention upon his return.

Sincerely yours,

Concetta M. Nobilio
Secretary

Mr. Walter B. Wriston
Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

Chairman
Burns

MAY 4 1971

Mr. Walter B. Wriston, Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

Dear Mr. Wriston:

Thank you for your letter of April 20 with which you enclosed a copy of "The Anatomy of an Investment." I very much appreciate your courtesy in making this interesting report available to me.

Sincerely yours,

(Signed) Arthur F. Burns

Arthur F. Burns

WA:geb
5/4/71

NOTE: Original incoming letter and documentation attached to copy sent Gov. Mitchell for use of his Board Committee.
lg 6/23/71

JUN 25 1971

Mr. Walter B. Wriston, Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

Dear Mr. Wriston:

I read with considerable interest your letter of June 17, 1971 outlining the burden of reports that banks such as yours are bearing and asking that we consider whatever lessening of that burden is possible without loss of essential statistical data.

Your documentation of this statistical burden is impressive, and I appreciate the effort that you have gone through in order to try to demonstrate the scope of the problem and flag possibilities for reduction of reporting requirements as you see them.

I have asked the appropriate officials here to study the material you submitted with a view to timely action thereon. You may be sure this will receive our diligent attention, and I expect our people may be in contact with yours as we try to attack the problem.

Sincerely yours,

(Signed) Arthur F. Burns

Arthur F. Burns

bc: Gov. Mitchell
Mr. Partee
Mrs. Mallardi (2)
Mr. Holland

RCH:lg
6/23/71

1.

June 23, 1971

Dear Mr. Wriston:

It was good of you to check into the matter of the antitrust laws and I want you to know how much I appreciate your letter of June 15th.

With kind regards,

Sincerely yours,

Arthur F. Burns

Mr. Walter B. Wriston
Chairman
First National City Bank
399 Park Avenue
New York, New York 10022

CM:cmn

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

June 15, 1971

Dr. Arthur F. Burns
Chairman
Board of Governors of the Federal Reserve System
Washington, D. C.

Dear Mr. Chairman:

When we were together in Munich, we talked briefly about the impact of the antitrust laws on American companies' ability to compete in overseas markets. You inquired whether we had done any research on the subject, and I told you that I would look into the matter.

It is my understanding that the staff in the Treasury Department was queried by Secretary Connally as to specific instances in which they felt the application of our antitrust laws had had an adverse effect on the United States balance of payments. I am unaware of the results of that study, but it is doubtless available to you.

It is also my understanding that there was an informal group drawn from the Council of Economic Advisors, Commerce Department, Justice Department and State Department which was assembling data on the subject. As you are also aware, Senator Javits has been actively concerned with this subject and over the years has held hearings.

From the foregoing it is clear that the matter is being ventilated within the Government, and I find that we have no specific original research of our own which might contribute materially to any resolution of the problem.

Sincerely yours,

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

April 13, 1971

Dr. Arthur F. Burns
Chairman
Board of Governors of the Federal Reserve System
Washington, D. C.

Dear Dr. Burns:

From time to time you have mentioned to some of us that we have perhaps not taken as strong a public position as we might against the Latin American concept of reserves against assets. With the thought in mind that you may not have seen our May, 1970 Monthly Economic Letter, I am enclosing a copy from which you will observe that we took a very strong position against the concept. So far as I know, with a circulation of over 300,000, this is the most widely read economic journal currently published.

If it would be useful, I would be glad to enter this article on the record of the Proxmire Committee.

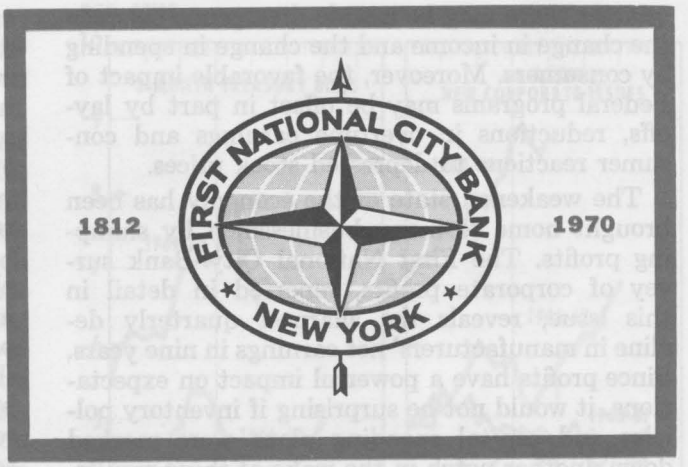
Kind regards.

Sincerely yours,

Enclosure

May 1970

Monthly Economic Letter



General Business Conditions

In the wake of the sweep across the borders of Cambodia, the fog of war shrouds all economic calculations. But if the new moves in Indochina are a tactical maneuver consistent with the Administration's strategic design of withdrawing 150,000 troops from Southeast Asia by next spring, much of the uncertainty over the business outlook could disappear in the months immediately ahead.

For what is apt to prove truly decisive for business is the implementation of the new goals for monetary policy announced by Federal Reserve Board Chairman Arthur F. Burns on March 18—a restoration of moderate growth in the monetary aggregates.

The impact of the new monetary policy was hard to see early last month. The disruptive effects of the mail strike on the transactions of the banking system complicated day-to-day Federal Reserve operations and led to confusing movements in statistical measures of monetary policy. On balance, however, the monetary statistics have been behaving in a way that is consistent with moderate easing.

Adherence to the new monetary targets makes it likely that the economy will not stray very far from the "game plan" announced by the Chairman of the Council of Economic Advisers, Paul W. McCracken, when the Administration first took office. Recognizing that monetary policy operates with a lag, the Council's plan called for a return to moderate ease before restraint had had its full impact on prices. The easing is, therefore, an essential move in a policy designed to reduce the rate of inflation by measures that stop short of producing a severe slump.

Premature Judgment

This does not mean, however, that it is safe to conclude that the decline has run its course. Although scattered evidence suggests that the momentum of the downturn may have been interrupted in March, the subsequent decline in stock prices, disappointing profits reports and the impact of strikes by truckers suggest that March is more likely to be a pause in the descent than the bottom of the downslide.

It is doubtful whether a sustained economic rebound will materialize without a substantial resurgence of consumer spending. And thus far there is little to indicate that consumers have become markedly more eager to buy. Optimistic assessments of consumer spending continue to be largely based not on actual sales figures but rather on the expectation that tax cuts, increased Social Security benefits and the retroactive Federal pay raise will boost future spending. In this regard, it is well to remember that in any given

CONTENTS PAGE

JUL 2 3 1970

Mr. Walter B. Wriston, Chairman,
First National City Bank,
399 Park Avenue,
New York, New York. 10022

Dear Mr. Wriston:

Thank you for your letter of July 7 and the enclosed copy of your paper on the subject of bankers' acceptances.

As you know, an inquiry was initiated some time ago by the Federal Reserve System to elicit views and suggestions from the banking industry on the role of bankers' acceptances in present-day credit transactions and on the regulation of acceptance practice. Since that inquiry was made, monetary and credit conditions have changed markedly and it became apparent that industry views on the subject were undergoing modification. In the interim, the Board's staff has accordingly sought to keep abreast of these developments, notably through contacts with the acceptance committee of the Bankers Association for Foreign Trade. The results of the recent work of that committee have been forwarded to the Board staff and are currently being evaluated.

Please be assured that your letter and paper will be included in current consideration being given to the role of bankers' acceptances in money and credit markets.

Sincerely yours,

(Signed) Arthur F. Burns

Arthur F. Burns

FRD/SHA:pac
7-22-70

cc: Mrs. Mallardi (2)
Mr. Dahl
Mr. ~~Axilrod~~

#83

FIRST NATIONAL CITY BANK

WALTER B. WRISTON
CHAIRMAN

399 PARK AVENUE, NEW YORK, N. Y. 10022

July 7, 1970

Dr. Arthur F. Burns
Chairman
Federal Reserve Board
Federal Reserve Building
Washington, D. C.

Dear Dr. Burns:

Knowing that you and your colleagues are exploring many facets of the current situation in the money market, I would like to raise again for your consideration the mechanism of the "Bankers Acceptance." As you well know, the Acceptance is the oldest instrument in the banking business, but in this country its use has been limited by archaic regulations and laws. Some time ago I raised the question of the use of an ineligible Bankers Acceptance in lieu of commercial paper, and it is my understanding that your colleagues in the Federal Reserve System are studying what could be done to make the regulations more nearly responsive to the times.

There is enclosed for your ready reference a copy of a short paper on the subject which I delivered a couple of years ago at the Reserve City Bankers. It occurs to me that the time is propitious for reopening the question.

Kind regards.

Sincerely yours,

Walter Wriston

Enclosure