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BANK EARNINGS AND CAPITAL ADEQUACY

by

Henry C. Wallich
Member, Board of Governors of the Federal Reserve System

before the

Twelfth Annual Banking Law Institute

New York City

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Bank regulation does not occur in a vacuum. It has to move with the changing economic environment. For the last ten years, a very adverse part of that changing environment has been inflation. Much as we hope and intend to overcome inflation, we cannot ignore its effects in the present, as well as in the past. Today I want to address myself to an aspect of inflation that is of great importance for bank regulation: the impact of inflation on bank earnings and bank capital.

My principal conclusion will be that inflation has severely reduced the true income of commercial banks. Taking the years 1973-75 together, the banking system paid out more in dividends than its inflation-adjusted earnings. The seemingly large additions to bank capital from retained earnings shown on the books were largely offset by the shrinkage

I am indebted to Don Tucker and Ellen Harvey for the computations of inflation-adjusted bank earnings and capital.

of bank capital due to inflation. This raises fundamental questions about the ability of the banking system to generate sufficient earnings in order to maintain capital ratios or to sell enough new stock to achieve that purpose.

In an inflation, banks are born losers. They are net creditors or, in the language of the accountants, they have a positive net monetary position. That is to say, their monetary assets, which account for everything except the building and its equipment, exceed their monetary liabilities. Having more assets that lose value through inflation than liabilities, the real (constant dollar) value of their capital suffers.

One way of analyzing the impact of inflation is to apply the techniques of General Price Level Accounting.^{1/} Doing this for the years 1973-75, it appears that the earnings of all insured commercial

^{1/} Adjustment of earnings for inflation by means of General Price Level Accounting is not the same thing as adjustment of earnings for inflation by restatement in constant dollars. Restatement in constant dollars simply means to divide current dollar earnings by a price index. General Price Level Accounting is a complex process involving a distinction between monetary and non-monetary items on a balance sheet, the non-monetary alone being adjusted by a general price index. The resulting change in the relation of assets (partly monetary, partly non-monetary) and liabilities (almost always monetary) causes a change in net worth which in turn raises or lowers income. GPLA, unlike current value accounting, does not take into account changes in asset values that result from changes in interest rates or from debt restructuring.

banks, instead of the reported \$20.9 billion, work out at only \$7.3 billion stated in current (not constant) dollars. The dividends that banks paid out during this period amounted to 112 per cent of those inflation-adjusted earnings. Applicable Federal income taxes during the same period, instead of the reported 19 per cent of earnings, totaled 54 per cent of inflation adjusted earnings. These data and others are shown in the appendix prepared by Don Tucker and Ellen Harvey of the Federal Reserve Board.

The General Price Level Accounting Adjustment indicates that over the three-year period inflation-adjusted earnings were less than half of reported earnings. To pay out more in dividends than their adjusted earnings under ordinary accounting procedures, banks, in most circumstances, would require the permission of the regulators. And finally, instead of paying a relatively low effective tax rate, as is commonly believed, banks on an inflation-adjusted basis paid a rate higher than the regular 48 per cent corporate rate. The rate of return on capital, instead of 11.0 per cent as per book, was 3.6 per cent on an inflation-adjusted basis.

These inflation-adjusted figures also have an implication, of course, for the banks' capital position and for the safety and soundness of the system. After correction for inflation, the substantial increase in bank capital from \$55.1 billion in 1972 to \$73.3 billion in 1975 largely disappears. Since banks issued some equity capital during this period and had other adjustments to capital and reserves, the

excess of dividends over inflation-adjusted income did not cause capital actually to shrink in inflation-adjusted and constant dollar terms. But the increase in inflation-adjusted capital stated in 1975 (i.e., constant) dollars was small, from \$75.4 billion in 1972 to \$80.5 billion in 1975. Meanwhile the ratio of bank equity capital to total assets rose from .071 in 1972 to .075 in 1975, stating both capital and total assets in inflation-adjusted terms, since bank assets in real terms rose even less than bank capital.

General Price Level Accounting, of course, is only one of several ways in which corporate accounts can be adjusted for inflation. It is not necessarily the most logical way for adjusting the accounts of a manufacturing enterprise, for example, because manufacturers have to do with the prices of many individual products that may move differently from a general price index like the consumer price index or the GNP deflator. But for a bank, which is only minimally concerned with particular product prices, use of a general price index as a measure of depreciation of its assets and liabilities seems particularly appropriate. That is what General Price Level Accounting does.

It should not be surprising to find that bank capital tends to shrink during inflation. Bank capital is essentially money, and money loses value through inflation. To maintain the real value of their capital during inflation, and its normal growth from retentions, banks would have to earn a rate that, after taxes, would cover the rate of

inflation in addition to providing a normal return. If we regard the very roughly 10 per cent rate of return that banks have earned over long periods as the norm, recent rates of inflation would require a rate of return after taxes higher by at least a factor of one-half to maintain capital in real terms and keep it growing through retentions. I very much doubt that either bankers, or the public, or legislators, would regard such a rate of return on bank capital as at all appropriate. The area of bank earnings and capital seems to be one of the last bastions of money illusion.

The stock market, to be sure, seems to have read the numbers correctly. For several years, bank stocks have sold at relatively low price/earnings ratios. Some observers have attributed this to concern over possible loan losses that banks might incur. At least equally plausible an explanation is that the market has become aware of the attrition that inflation wreaks on bank earnings and bank capital.

What are the implications of these findings for the bank regulator? For the most part, the bank regulator probably will say that he deals with bank earnings and capital as they appear on the books, not as they appear after some theoretical adjustment for inflation. This reaction is a sensible one for many practical purposes. It does not allow the regulator and the banks, however, to escape the logic of the analysis.

That logic is that inflation makes it very difficult to maintain an adequate level of bank capital. The inflation adjustment merely bares the bones of a mechanism that is perceivable broadly also

in unadjusted terms. To use purely illustrative examples, when bank assets expand at the rate of 5 per cent per year, a rate of return of 10 per cent on capital allows payment of a dividend of 5 per cent while accumulating enough retained earnings to maintain the capital/assets ratio constant. But it is the nature of inflation that bank assets and liabilities expand at a rapid rate in current dollars, even though they may rise little or even shrink in constant dollars. If, for example, they expand at 10 per cent, a 10 per cent rate of return on capital will allow no dividends at all to be paid if the capital/assets ratio is to be maintained without new stock issues. Beyond that, there is no way of maintaining that ratio from retentions unless bank earnings and the rate of return on bank capital rise.

The inflation-adjusted analysis makes clear why efforts of the banks, stimulated by regulatory concern, to improve their capital ratios, may have only limited success under these conditions. Bank earnings are not large enough to permit retentions that would keep capital abreast with assets rising rapidly in current dollar terms. The underlying weakness of earnings as revealed by the analysis and as observed by the stock market makes it difficult, meanwhile, to increase capital by new equity issues. Issuance of subordinated debt can help, but is no fundamental solution. If the obvious answer to the problem -- to stop the inflation -- is not immediately in sight, maintenance of adequate capital ratios will be difficult.

From an economic point of view, moreover, there is a real question whether it is advisable, even if it were possible, to increase the flow of equity capital into an industry that experiences so low a real rate of return. Low earnings are the market's way of signaling that capital should flow out of, rather than into, an industry.

If the regulators, for reasons of public policy, believe that the verdict of the market should be ignored, they are in need of some conception of how this public policy, based on considerations of soundness and safety of the banking system, is to be accomplished. Are the regulated banks to sell stock at prices that would dilute equity and earnings, thereby further increasing the difficulty of raising additional capital later on? Do they believe that banks should limit the growth of their assets until acceptable capital/assets ratios are achieved? Curbing the growth of bank assets and therefore of the money supply is the job of monetary policy which would have the highly desirable result of curbing inflation. But if the economic situation does not allow the monetary authorities to do that in the short run, limiting the growth of bank credit and money supply through more stringent capital requirements for banks would not be appropriate either. In the best of cases, it would cause a larger proportion of the total flow of credit to move outside the banking system. In other words, if monetary policy is unable, for the time being, to perform the job of halting inflation, regulatory policy restraining monetary expansion through the clumsy device of capital ratios will not do it either but may in the process do damage to the flow of credit and to the economy.

All this does not mean that regulators should give up the objective of advancing bank soundness by improved capital ratios. There will always be phases of the business cycle, and individual banks in particular circumstances not reflecting the average of the banking system, that permit progress in improving capital ratios to be made. But bank regulators will do well to look for alternative means of ensuring the soundness and safety of the banking system that are less at odds with the present signals of the market.

I shall now examine some of these alternative approaches.

Protection through adequate capital, including, if necessary, subordinated debt, reflects in essence the principle of self-insurance. Each bank provides individually against the risks to which it is exposed. The alternative is the principle of collective or pooled insurance as implemented by the FDIC. Insurance of deposits up to \$40,000 has the twofold effect of (1) reducing the probability and potential magnitude of depositor runs, thereby enhancing the safety of the bank and (2) assuring depositors that up to the insured limit they will get their money back in case failure does occur. If the principle of self-insurance meets with obstacles during inflation, an extension of pooled insurance can be contemplated.

The principle of pooled insurance obviously has not been pushed very far today. One reason why it is wise to be cautious in moving in that direction is that this form of insurance tends to reduce the discipline that the market imposes upon banks. Today, depositors

with accounts over \$40,000 have reason to watch their banks. A large bank that has not kept itself in sound condition may find itself confronted with a tiering of CD rates, i.e., with having to pay a premium for large CDs. Going to 100 per cent deposit insurance would remove this discipline. The Chairman of the FDIC recently discussed the many pros and cons that might be involved in such a step.^{2/}

Going to 100 per cent deposit insurance, moreover, would not protect a bank fully against runs, since there may be other creditors with liquid claims, such as Federal funds. Insurance of all creditors might prevent runs, but not insolvency. Stockholder discipline thus would be preserved.

Stockholder discipline alone, of course, is not as effective a form of protection against unsound banking as is the combined discipline of creditors and stockholders. Moreover, stockholder discipline may evaporate in cases of small banks where management and stockholders are identical. Yet it is important to note that even 100 per cent insurance does not altogether do away with all forms of market discipline.

Another extension of the insurance principle is action by the insurer to preserve the continuity of an endangered bank in one form or another. The FDIC employs this option either in the form of assisted merger or of purchase and assumption in case of a failing bank. In the first case the bank survives, in the second it does not. In either case, however, the ultimate outcome for stockholders will depend on the condition

^{2/} Robert E. Barnett, "FDIC Six Alternatives to the Present Deposit Insurance System," FDIC Press Release, PR-82-76.

of the failing bank. Even if stockholders were to contemplate an FDIC arranged merger as the ultimate outcome in case their bank does not prosper, they will have a reason to discipline their management. Stockholder discipline, therefore, will have been preserved.

Various techniques suggest themselves to enhance the discipline of the market under the various foregoing insurance options. Instead of 100 per cent insurance, for instance, one could contemplate a form of co-insurance, leaving some degree of risk, perhaps a very small one, with the creditor. Even 99 per cent insurance might be sufficient to keep bankers interested in maintaining a good market rating in order to avoid tiering of their liabilities, without causing depositors and other creditors to run at the slightest sign of trouble.

Graduated insurance premia would be another way of exerting a form of discipline over bank risk taking. A high risk portfolio would call for higher insurance premia than a low risk one. This would, of course, require careful supervision of banks' portfolios and perhaps other risk-related practices. There might be a danger that the supervisors would ultimately end up as controllers, while the purpose of the proposal should be, of course, to give the banker a wider range of risk options instead of tying his hands. But the trend toward a growing use of quantitative methods and systems analysis in bank supervision might facilitate the employment of graduated premia for insurance of bank liabilities.

In conclusion, I would like to repeat that there exist several routes toward the achievement of safety and soundness for the banking system. Adequate capital has been the traditional major safeguard. It remains the first line of defense in protecting bank creditors. But if inflation makes it difficult for banks to maintain adequate capital ratios out of earnings and simultaneously makes it very costly, if not impossible, to raise capital through new issues, there are alternatives. These would require very careful study before anything decisive can be said. But that study should be undertaken before we either accept a resumption of the trend toward lower capital ratios or seek to maintain these ratios by uneconomic means.

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APPENDIX

Table 1

Inflation Corrected Net Income After Taxes

All Insured Commercial Banks, 1973-1975

<u>Year</u>	<u>Book Net Income, After Taxes (\$ Thousand)</u>	<u>Loss on Net Monetary Assets (\$ Thousand)</u>	<u>Increase in Depreciation Deductions (\$ Thousand)</u>	<u>Adjusted Net Income a/ (\$ Thousand)</u>	<u>Adjusted Income as Percent of Book Income</u>
1973	6,578,831	3,522,183	232,309	2,824,339	42.9
1974	7,090,908	5,537,192	332,060	1,221,656	17.2
1975	7,254,611	3,351,954	617,405	3,285,252	45.3
1973-1975 ^{b/}	23,543,443	14,010,357	1,295,425	8,237,661	35.0

Notes: a/ Income figures reported in mid-year dollars for that year, computed as book net income minus loss on net monetary assets minus increase in depreciation deductions, assuming loan loss reserves to be a nonmonetary item.

b/ The individual yearly figures were converted to 1975 year-end dollars before summing; the 1973-1975 totals are not the sums of the individual yearly figures reported above.

Table 2

Inflation-Adjusted Dividend Payout and Effective Tax Rate Ratios

All Insured Commercial Banks, 1973-1975

<u>Year</u>	<u>Dividends</u>		<u>Tax Rate Percentage</u>	
	<u>As Percent of Book Income</u>	<u>As Percent of Adjusted Income</u>	<u>Based on Book Income</u>	<u>Based on Adjusted Income</u>
1973	36.9	85.9	20.3	47.3
1974	39.0	226.4	19.1	111.1
1975	41.8	92.2	16.9	37.3
1972-1975 ^{a/}	39.1	111.9	18.8	53.8

Note: a/ The yearly income, dividend, and Federal tax figures were converted to 1975 year-end dollars before summing to compute these ratios.

Table 3

Inflation-Adjusted Equity Capital and Reserves

All Insured Commercial Banks, 1972-1975

Year	Equity Capital and Reserves		Ratio (2)/(1)	Book	Adjusted
	Book Values (\$ Thousand) (1)	Adjusted Values ^{a/} (\$ Thousand) (2)		Values In Constant 1975 Dollars	Values In Constant 1975 Dollars
1972	55,145,918	58,887,078	1.068	70,592,290	75,381,349
1973	61,152,228	65,772,769	1.076	72,508,197	77,986,772
1974	67,395,971	73,803,926	1.095	71,614,959	78,424,052
1975	73,318,913	80,453,233	1.097	73,318,913	80,453,233

Note: ^{a/} Adjusted values in year-end dollars of relevant year.

Table 4

Rates of Return on Capital and Capital/Risk-Asset Ratios

All Insured Commercial Banks, 1973-1975^{a/}

Year	Book Net Income As Percent of Book Capital	Adjusted Net Income as Percent of Adjusted Capital ^{b/}	Capital Ratios	
			Book Capital as Percent of Risk Assets	Adjusted Capital as Percent of Risk Assets
1973	11.9	4.4	8.8	9.5
1974	11.6	1.5	8.6	9.4
1975	10.8	3.3	9.3	10.2
1973-1975 ^{c/}	11.0	3.6	8.9	9.7

Notes: ^{a/} Rates of return are based on capital at end of previous year.

^{b/} Based on previous year's adjusted capital expressed in mid-year dollars of the current year.

^{c/} The individual yearly figures for income and capital were converted to 1975 year-end dollars before summing to derive these ratios.

Table 5

Reconciliation of Capital Accounts

All Insured Commercial Banks, 1972-1975

	Reported Figures	Inflation Adjusted Figures: 1975 Year-End Dollars	
<u>1972 Capital a/</u>	55,145,918	75,381,349	
+ 1973 Income	6,578,831	3,479,586	
- 1973 Dividends	- 2,425,904	- 2,988,714	
+ 1973 Adjustments to Equity Capital	1,318,829	1,624,797	
+ 1973 Adjustments to Reserves	911,261	1,122,674	
	<u>61,528,935</u>	<u>78,619,692</u>	
Correction Factor <u>b/ d/</u>		- 186,267	(.24%)
	<u>61,528,935</u>	<u>78,433,425</u>	
- Restatement Factor <u>c/</u> <u>1973 Capital</u>	- 376,707	- 446,661	
	<u>61,152,228</u>	<u>77,986,764</u>	
+ <u>1974 Income</u>	7,090,908	1,371,309	
- 1974 Dividends	- 2,765,561	- 3,104,342	
+ 1974 Adjustments to Equity Capital	1,319,442	1,481,074	
+ 1974 Adjustments to Reserves	903,193	1,013,840	
	<u>67,700,210</u>	<u>78,748,645</u>	
Correction Factor <u>b/ d/</u>		- 1,309	(.002%)
	<u>67,700,210</u>	<u>78,747,336</u>	
- Restatement Factor <u>c/</u> <u>1974 Capital</u>	- 304,239	- 323,284	
	<u>67,395,971</u>	<u>78,424,052</u>	
+ <u>1975 Income</u>	7,254,611	3,386,766	
- 1975 Dividends	- 3,030,230	- 3,123,864	
+ 1975 Adjustments to Equity Capital	1,304,866	1,345,186	
+ 1975 Adjustments to Reserves	393,695	405,860	
	<u>73,318,913</u>	<u>80,438,000</u>	
Correction Factor <u>b/ d/</u>		+ 15,233	(.02%)
<u>1975 Capital</u>	<u>73,318,913</u>	<u>80,453,233</u>	

[See notes on following page.]

Table 5 Continued

- Notes: a/ "Capital" is defined as Equity Capital plus Reserves; capital notes and debentures are not included.
- b/ It is assumed that the transactions giving rise to the various capital adjustments occurred at or were centered around the midpoint of the year. The inflation correction applied, therefore, to them was based on this assumption. This gives rise to a discrepancy where this timing assumption is not correct. In addition, the corrections for depreciable capital and for depreciation were approximations derived from an inexact fitted model of the bank's premises and equipment investments. The correction factor reflects the adjustment that is necessary, for these reasons and possibly reasons of reporting inconsistencies, to reconcile the GPLA income figures with the GPLA capital figures.
- c/ Reported capital figures were taken from the Board RIAD tapes for the years 1972 through 1975. Each tape reports figures for capital at the end of the present year and capital at the end of the previous year. The "Restatement Factor" arises where the figure for any given year reported as the present-year figure does not match the figure reported as the previous-year figure on the next year's tapes. [Example: 1973 year-end Capital was reported as \$61,528,935 on 1973 tapes and as \$61,152,228 on 1974 tapes]. This Restatement Factor averages 0.5% of Capital.
- d/ The number of all insured commercial banks increased from 1972 to 1975. However, the figures reported on "all insured commercial banks" for each year were used, as the "banking system" was considered the sum of all insured commercial banks. This may give rise to some of the discrepancies indicated by the size of the correction factor. The number of banks for each year was as follows:

1972	13733
1973	13976
1974	14228
1975	14384