CAPITAL ADEQUACY IN BANKS: REFLECTIONS ON SELECTED BANKS IN TANZANIA

By:

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Abstract: In principle, bank capital serves two functions. First, it represents the value of shareholder's equity, and secondly, it is the value of the buffer stock available to absorb unexpected losses. Because of this second function, it is argued that a bank's capital must be adequate. Adequate capital is the foundation of any banking system. It offers protection to depositors, creditors, deposit insurance funds, central banks and ultimately the government. Due to the protection it provides against unexpected losses, the maintenance of adequate capital is undoubtedly the main source of public confidence in individual banks and the entire banking system. This paper is of the opinion that, regardless the legally established minimum standards, the amount of capital appropriate for an individual bank is a function of its likelihood to incur unexpected losses. Banks with greater risks are exposed to greater degree of unexpected losses and should therefore hold adequate amount of capital.

1. INTRODUCTION.

The concept of capital adequacy has a direct link with the performance of individual banks and, more often than not, the entire banking system. Capital adequacy, therefore, is concerned not only with the liquidity of a bank but also with its solvency i.e. the ability of a bank to meet all its obligations in the longer term. In particular, capital adequacy is concerned with the ability of a bank to absorb any losses which may be incurred (Cox, 1990). In the following sub-section of the paper it is argued that the amount of capital needed by a bank is a reflection of its assets and the degree of risk attached to those assets. These kinds of risks have been in existence for a long time (Sylla, 1996 and Flood, 1996).

Historically, the problem of loan default which eventually leads to bank instability and failures, began as early as the 12th century. According to Dale (1992), the problem began in the late 1200s when commercial banks in those days[1] were used by the rulers (Kings) to finance their developmental ambitions. At the moment banks are supposed to act as financial intermediaries transforming liabilities (deposits), possessing certain characteristics into assets possessing a different set of characteristics. They are adding value in that they are transforming funds deposited by individuals and companies into loans of various maturity.

As part of their portfolio management, banks will also hold government securities which possess virtually no risk of default but bear a positive rate of return. All in all, the process of financial intermediation has to be a successful one.[2]

This paper sets out to show the need for banks to be adequately capitalized - perhaps more so than any other type of business. This is due to the nature of bank liabilities, which mainly consist of its customers' deposits. The starting point is a definition of bank capital and a discussion of factors determining it. The remainder of this paper is arranged as follows. Part two deals with the relationship between risk and bank capital. Part three deals with measures of capital adequacy as well as its relationship with bank operations and profitability . In part four the paper analyses capital trends in selected banks in Tanzania - in particular after the enactment of the Banking and Financial Institutions Act of 1991.[3] This section analyses, albeit briefly, the supervision of capital adequacy by the respective authority. Finally, part five of the paper provides some concluding remarks.

[1] Banks in those days were simply institutions that pooled the surplus funds of business and offered credit.

[2] A key requirement for the success of any financial intermediary is its ability to control both actual and perceived default risks of its customer held liabilities (See for example Rose, 1988).

[3] This Act is an outcome of the Nyirabu Commission that consequently repealed the Banking Ordinance Cap 530.

II. Meaning and Determination of Bank Capital

Definition of Bank Capital

The definition of capital in the banking industry is somewhat different from the definition of capital used in ordinary business. Furthermore, the definition of bank capital is not universal in the sense that different countries use this term differently. While in the ordinary business, especially for companies, capital means the sum subscribed by the members of the company (shareholders) it has a slightly different definition in banking.

The capital of a commercial bank may be defined as the value of its net assets (i.e. total assets less total liabilities). The capital base normally comprises the bank's share capital, various forms of accumulated capital reserves and certain types of subordinated loan stocks (notes and debentures).

In Tanzania the Banking and Financial Institutions Act (BAFI), 1991 provides under s.12(2) that capital includes: core capital, disclosed reserves, off balance sheet items, and supplementary capital. In general terms, therefore, capital will include things like: permanent shareholders' equity in the form of issued and fully paid-in shares of common stock plus all reserves created or increased through share premiums, retained profits and general reserves. On the other hand, off balance sheet items include all items not shown on the balance sheet but which constitute credit risk. Such items include guarantees, acceptance, performance bonds, and letters of credit (LCs). With regard to supplementary capital, the 1991 Act refers to general provisioning which are against future, presently unidentified losses and are freely available to meet losses which subsequently materialize.

Factors Determining Bank Capital

For purposes of convenience, the paper adopts a simple method of determining the capital needed by a bank. It will be required to specify the following variables which, in turn, will be multiplied together to arrive at the internal capital generation rate (ICGR). The variables are:

i) Desired leverage ratio which is the amount of assets divided by the amount of capital;

ii) Return-on-assets ratio, where this ratio is defined as the ratio of after-tax profit to total assets;

iii) Earnings retention ratio, which is defined as the ratio of retained earnings[4] for a period divided by net income.

Given these variables, the bank's management can determine the amount by which their bank can expand without reducing its capital ratio (Rose, 1988).

The amount of capital that is so determined has to be adequate or should be well over and above the minimum capital pre-set by the authorities charged with the duty of bank supervision.[5] The BAFI Act, 1991 provides, under s.13(1), the minimum capital required for a bank to commence operations in the country. It provides that every bank shall: (a) commence operations with a minimum core capital of not less than T. shs.[6] 1,000,000,000/= and shall maintain this minimum amount at all times. The minimum amount of core capital may be changed from time to time by the central bank to reflect growth in the banking sector; (b) maintain, at all times, core capital at not less than 6% of its total assets plus off-balance sheet items; (c) maintain, at all times, total capital[7] at not less than 8% of its total assets plus off-balance sheet risks. The minimum capital for financial institutions other than banks is also given.[8] It remains the duty of the central bank to ensure that the level of capital in banks within its jurisdiction is maintained. In its endevour to, *inter alia*, expand the banking network in the country, the Bank of Tanzania (BoT) issued guidelines for measuring capital adequacy. These guidelines, shown in table 1, give some adjustments on the minimum capital for banks operating in the capital city of the country.

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[4] Defined as net income less cash dividends

[5] By bank supervision, we mean oversight of the safety and soundness of banks and other depository institutions.

[6] Moreover, any bank which is involved on trust functions, has to maintain core capital of not less than 1,500,000,000 shillings. While capital of a bank with a branch abroad is 5,000,000,000 shillings.

[7] According to the 1991 Act, total capital refers to the sum of core capital (tier 1 capital) and the supplementary capital (tier 2 capital).

[8] s.13 (2) BAFI Act. 1991

Table 1: *Minimum Capital for Banks and Financial Institutions in Tanzania.*

Location of bank's Head Office	Banks' minimum Core Capital	Financial Institutions minimum Core Capital
Regional Capital /Municipality	200,000,000	100,000,000
Regional Central (Town)	100.000,000	75,000,000
Outside regional capital	50.000,000	50,000,000
Other Banks and Financial. Institutions	1,000,000,000	500,000,000

Source: BoT (1993)

By using the percentages discussed in the preceding section an individual bank is required, depending on its location, to operate above these limits in order to be rated as a good bank. This can be obtained within the set up of complete contingent markets; and for that banks have to be completely indifferent to their asset portfolio and capital ratios. For this reason banks have to behave as competitive portfolio managers in the sense that first, they take prices (and yields) as given, and second, that they choose the composition of their balance sheet (including liabilities) so as to maximize expectation of some (*ad hoc*) utility function of the banks' financial net worth.

Risk and Bank Capital

Risk usually refers to those situations whereby there are variable possible alternative outcomes, and the probability of each occurring is known. It must, however be noted that the amount of risks differ from one type of asset a bank has to another and that the major quantifying indicator of a bank's risk will be the composition of its portfolio. Banking is unfortunately an inherently risky business and is regulated to offer some measure of protection against systemic risk. On the other hand capital requirements make banks to change their behaviour. According to Koehn (1980), imposing a capital regulation will, in general, lead banks not only to reduce the total volume of their risky portfolio but also to recompose it in such a way that asset allocation becomes inefficient. As a consequence, it is quite possible that the failure probability of some banks may increase when the capital regulation is imposed. Nevertheless, it is possible to compute "theoretically correct risk weights" such that these adverse effects are eliminated.

It is from this perspective that the amount of capital should be related to the degree of risk acceptable by the banking industry in fulfilling its basic functions and thereby capturing the inherently risky nature of the business. In line with this, a simple relationship between risk and capital would be that: the more the risk attached to a particular asset the bigger the percentage of capital to total weighted assets will be required.

Different scholars have identified different types of risks that bank's assets are exposed to. These risks again differ from one country to another due to various reasons. Some of the reasons are economical while others are simply due to the level of understanding of the bank's management. According to Parrington (1989), the risks are: credit risk, foreign exchange risk, interest risk, operational risk, contagion risk, and concentration risk. A closer look at these risks is, at this juncture, necessary.

i) ***Credit Risk.***

This is a risk of default arising from business on or off balance sheet. This would cover a bank's direct lending, for example advances, as well as a banks obligations in the form of acceptances, or guarantees and indemnities. Credit risk or precisely the prospect of contract default by a firm is , of course, a concern of all transactors with that firm, whatever its business. However, unlike most firms, the efficiency of the central business activities of many banks depends critically on their customers liabilities being default-free. The implications for bank capital adequacy requirement however have tended to be addressed in different compartments by most researchers with some notable exceptions.[9]

ii) ***Foreign Exchange Risk.***

This risk arises to banks taking deposits and obtaining assets in both local and foreign currencies. In this regards the exchange rate may

[9] See Inyangete (1997).

alter the size of bank's commitments when measured in another currency.

iii) ***Interest Risk.***
As the name suggests this is a type of risks whose source is changes in interest rates. Changes in interest rates[10] will change the capital value of certain financial assets such as government bonds or certificates of deposit (CDs).

iv) ***Operational Risk.***
Such risks include the possibility of negligence or incompetence in the management of either bank's own assets or others, for example in investment management.

v) ***Contagion Risk***
A bank may be placed at risk because of risks arising from subsidiaries and other connected companies which might expose the bank to direct financial costs or general loss of confidence. In some cases the risk starts from the main bank and spreads over towards its branches regardless of their location.

vi) ***Concentration Risk.***
The risk which a bank incurs may vary because of the nature of the business and its concentration in particular area. In the case of Tanzania and, pursuant to s.45 of the Bank of Tanzania Act, 1995 the Bank of Tanzania has issued a circular whose objective is to encourage risk diversification and curtail excessive concentration of risk exposure of any bank or financial institution. The circular intends to address among other things the possibilities of controlling risk.

Although it is fairly easy to describe the risks which banks might face, it is another matter to quantify such risks in order to decide whether a particular bank has adequate capital. The essential approach is to weight, as far as possible, the various risks attached to the different assets within a balance sheet. This can be done by multiplying the different assets by their risk factor (for example, an asset with no discernible risk would have a zero weight, with weights increasing as risk increases) and then adding these risk-adjusted assets to form a bank's total weighted assets.

Risk Measurement and Control
It has been pointed out that riskiness addresses the likely variability of future returns from the assets. Since it is true that the assets held by a bank in its portfolio carries different levels of returns and hence risks, the paper gives some highlights on the measurement of risk. Risk is usually measured by use of standard deviation and coefficient of variation. In its portfolio, a bank, like any other business must examine the actual return against the expected returns and be able to see deviations, if any and thereafter the variance.[11]

In general, the coefficient of variation is used when appraising returns on individual assets while the standard deviation is used to appraise the riskiness of returns on portfolio assets. The rule of thumb is that the smaller the standard deviation and the coefficient of variation, the tighter the probability distribution and accordingly, the lower the riskiness of the assets portfolio. Larger coefficients (standard deviation and coefficient of variation) on the other hand are indication to the bank that its capital is at risk.

On the risk side of the capital adequacy proposals and, along the lines of the system for weighting the risk characteristics of different assets used by the Bank of Tanzania is based on the Bank for International Settlement (BIS) proposals specifying risk weighting for the various categories of assets. These include:

i) Cash: 0%. Included here are cash and balances with BoT on current accounts and special deposit accounts for all banks in the country. These assets, by its nature, have no discernible risk. They are simply ready money for use.

ii) Call money at the discount houses: 10%. Investment in debt securities, particularly treasury bills with residual maturity of 1-91 days, carry insignificant amount of risks and therefore, according to BIS, the weight of any risk in this type of assets should also be small; i.e. 10%.

iii) Fixed interest securities issued by OECD countries: 20%. Those balances with banks abroad but incorporated in OECD(Organization for Economic Co-

[10] A rise of interest rates generally causes asset values to fall and a fall in interest rates causes asset values to rise.

operation and Development) countries are subject to a twenty percent risk weight.

iv) Cheques and items for clearing including mortgage loans are assigned a weight of 50% . This percentage roughly reflects the level at which default is likely to occur and consequently jeopardizing the capital of the bank.

v) Commercial loans: 100%. For the purpose of measuring capital adequacy of banks it is assumed that all loans(except mortgage loans), advances and overdrafts, even if given to the governments, both The Government of Tanzania (United Republic of Tanzania) and The Revolutionary Government of Zanzibar, carry the maximum risk. With the same assumptions, therefore, the probability of banks losing their money so invested is the highest one; i.e. 100%.

In addition, account is also taken of off-balance sheet risks (that is, risks-carrying activities with which a bank might be involved and which do not need to appear on the bank's balance sheet), These includes activities like forward currency exchange contracts, underwriting commitments and guarantees. Such items are included in the calculations by means of "credit conversion factors" that are designed to provide a measure of their value weighted for credit risk.[11] To minimize the risk so attached to their portfolio some control measures have to be in place; and we discuss them here below.

Risk Control

There are essentially three ways for a bank with credit-sensitive activities to provide assurances against default risk to the customers who hold its liabilities. The first control measure is by way of hedging. In this case the bank has to hold assets that have pay-outs that match those promised on its contractual liabilities and it must choose a transparent structure so that customers can easily verify that such a matching policy is being followed.

Secondly a bank can control risks by way of Insurance. Here the firm has to acquire guarantees of its customer liabilities from a reputable third party such as government or deposit insurance funds.[12] However, the providing of such guarantee is a large financial intermediation[13] which in itself, according to Merton and Bodie (1992), is quite credit-sensitive (risky). The third one will be by capital cushions whereby the firm raises additional capital beyond that required for the funding of the physical investments and the working capital needed to run the bank. Included in this category is the common practice of collateralizing contract performance, as for example, with repurchase agreements, future contracts, and broker margin loans. The distinction between the collateral approach and hedging being that the collateral assets are not chosen to match the promised payment obligation on the contract.[14]

III. Measures of Capital Adequacy and Their Limitations.

It is important to recognize that capital is an important component of the safety and soundness regulation of banks. When measured appropriately capital provides an important protection for depositors (or the deposit insurer). More capital generally means more protection. The measurement of capital in any case is not a trivial issue. In deed, the proper measure of capital is at the heart of the issue of capital adequacy for banks. However, it has to be made clear that if capital measurement framework is faulty, there is far less assurance that any claimed amount of capital will be sufficient to provide the needed protection to depositors.

Unfortunately, the amount of risk cannot be specified precisely. In other words it is impossible to determine exactly how much capital is adequate to overcome the inherently risky business of banking. In this paper we consider the traditional approaches to determining capital adequacy. These are capital-asset ratio (CAR) and capital-deposit ratio

[11] See details for calculations in BoT, 1993.

[12] A Deposit Insurance fund (DIF) was established following the enactment of the BAFI Act in 1991 to provide the cushion to banks failure. For in-depth discussion see Urassa (1997).

[13] This concept of financial intermediation refers to the lending, investing or placement of funds and/or securities received, acquired or obtained from the general public or from a well-defined group of persons by way of deposit, borrowing, contributions, premium, or in a fiduciary capacity, either for the account of the persons receiving such funds or securities or for the account of others.

[14] See Merton, 1995.

(CDR) as well as capital -risk assets ratio(CR-AR). Like any other ratios the figures that will be obtained are deemed meaningless unless they are either compared with a certain pre-determined benchmark or by examining the trends.

Capital-Asset and Capital-Deposit Ratios

The Capital-Asset Ratio (CAR)[15] and Capital-Deposit Ratio (CDR)[16] are the simplest and oldest measures employed to ascertain capital adequacy (Rose, 1988). For CAR, the actual performance by banks in Tanzania as at 30th September, 1996 was 12.32% which is an outstanding performance when compared to the benchmark which stands at 6% of the total assets plus off balance sheet items.

There is, however, a shortcoming of the CAR that makes it difficult to use it as an effective means of judging capital adequacy (Berger, 1995). CAR makes no attempt to relate the amount of capital to the amount of risk carried by the banking organization. Rather, the capital-asset ratio ignores the risk structure of the bank's assets. Consequently, banks with highly risky loan portfolios may face the same capital adequacy requirements as very conservative banks with "low risk" portfolios.

To illustrate this limitation let us assume that two imaginary banks A and B have identical ratios of capital to assets, but A has invested all of its funds in cash and government securities such as treasury bills. Bank B on the other hand has invested all its funds (with exception of statutory reserves) in speculative forms of loans. The capital-asset ratio would indicate that these banks are identical in terms of capital adequacy; yet, the capital adequacy of bank A is much greater than that of B. This is because in periods of high interest rates, institutions having heavy commitments to long term securities face a large risk of depreciation in the value of their portfolios. While this depreciation is not recognized in the carrying value of the securities on the balance sheet, it does reduce the liquidity of the bank and increase its risk of insolvency.

Capital-Risk Assets Ratio

For the purpose of remedying the above drawback on CAR, a ratio of capital to risk weighted assets is usually applied in most cases. This ratio is more finely tuned to the risk profile of the bank, but is more difficult to calculate (Sheng, 1990). The most difficult part of assessing capital adequacy using this ratio is the assessment of adequacy of assets loss provisions. Here, the supervisors have to be clear and firm in introducing standard accounting treatment on interest-in-suspense and loan provisioning (including valuation of security) procedures to be followed by the commercial banks. Amongst the controversy between supervisors and bank management, in this regards, is the size of provisioning required . The actual figure for this ratio in our banks (Tanzania) as of 30th September, 1996 was also impressive. It stood at 20% compared to the minimum set standard of 8%.[17]

The question here arises as to whether the 20% or any other figure above the legally set benchmark assures the non-failure of banks. Kaufman(1996) indicates that the answer to this is no. This is based on the idea and evidence that some banks in US failed due to poor measurement of capital position. He asserts, however, that for the most effective implementation of this supervisory role (i.e. capital adequacy assurance) and especially to allow the prompt corrective action and least cost resolution to take place, the capital position of banks should be measured in market or current value terms. He goes further by indicating that substantial evidence in the US suggests that banks, particularly those in financial distress, tend to delay reserving for loans losses and to under-reserve when they do. If this is the case in developed economies the Bank of Tanzania has to watch carefully with those figures they arrive at when determining their capital positions; hence the capital adequacy. For that the Bank of Tanzania has to ensure that all banks in the country take both the market values of their asset portfolio and inflation aspect into consideration.

The need to maintain adequate capital has an impact on the general operations of the bank and

[15] The total of all items that count as capital are added together and divided by the total amount of bank assets.

[16] Here the total of all items that count as capital are added together and divided by the total amount of the deposits of the bank.

[17] See BoT(1996)

its profitability especially in the long term. The implementation of s.13 BAFI Act, 1991 in Tanzania and the Basle Accord, 1988, [18] means that banks require more capital to support their assets than perhaps would be chosen if the matter were left to the banks themselves. Nevertheless, once a bank is not able to meet the capital adequacy criteria, then it must strive to achieve appropriate capital ratios either by accumulating more capital of the right type,[19] or by reducing the size of the asset base so that with a given amount of assets (fixed) on a risk weighted basis match the capital currently in place. Consequently, this latter approach brings some adverse effects to the bank's performance in terms of liquidity and profitability.

Under conditions of falling stock market values,[20] rising interest rates and worries concerning bank safety it may be difficult for some banks to raise the extra capital. Squeezed profitability will also make some difficulties to banks to increase reserves from retained profits, especially, if a proportion of the bank's assets are non-performing. In such cases the alternative for a bank will be to reduce the size of its assets base (Pawley, 1991).

IV. Capital Trends and Its Supervision in Tanzania.

The Bank of Tanzania (BoT) has a legal duty to regulate the capital adequacy of banking institutions in Tanzania. Since the enactment of the BAFI Act of 1991, this duty was strengthened in the mid 90s by the Bank of Tanzania Act of 1995. Nevertheless, it was not easy for BoT to be able to inform the general public on the capital position of banks until 1996 when BoT started issuing an annual report through its Directorate of Banking Supervision.

In discharging its duty of supervising banks and ensuring their capital adequacy, BoT has issued a circular on prudential guidelines on management of risk assets. The objective of these guidelines is to maintain public confidence in banks and financial institution's by ensuring that these bodies lend and invest within the acceptable and established norms of banking, and their operations as regards loans and investments are administered with the highest degree of prudence.

For compliance with the stated requirements in this circular every bank should, in its financial reports, indicate the amount that have been provided for bad and doubtful debts. In 1996, only four banks - Standard Chartered Bank, NBC(before the 1997 split), Stanbic Bank, and Eurafrican Bank - provided shillings 3,104 millions for bad and doubtful debts.[21] Continuing reports over an item categorized as non-performing items, depending on the accounting policies, entails writing off such item. If this happens then the profit level of the bank will eventually be undermined causing deterioration in capital position of the respective bank.

To show how serious the continued provisioning for losses impairs the capital positions and in long run its adequacy, let us look at the UK and the US in late 80s and early 90s. In UK the four big banks (Barclays Bank, NatWest Bank, Midland Bank and Lloyds Banks) incurred loan write offs of over 11 billion British pounds in the period 1990-92, while in the US loan losses provisions recorded by all domestic banks amounted to no less than US $124 billion in the four years 1989-1992 (Dale and Sutcliffe, 1994). Furthermore, failed banks are frequently found to have made inadequate provisions against loan losses: the more spectacular examples, according to Dale and Sutcliffe, include Continental Illinois (1984), Johnson Matthey Bank (1984), Bank of New England (1991), and *Banco Espanol de Credito* (1993).

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[18] This accord seeks, among other things, to establish a common approach to measurement of bank's capital, and to achieve broad competitive equality between banks by imposing uniform minimum capital adequacy standards.

[19] For example, Eurafrican bank issued to the public more of its share last year on the move to enhance its capital using this approach.

[20] Where a country has no stock exchange market(s) in place, matters are even worse.

[21] Figures were extracted and consolidated from different newspapers.

In Tanzania trends in capital positions for banks and financial institutions has shown improvements on average. For instance in 1996 only total capitalization was shillings 784,851 million with a total debt of shillings 688,157 million and the total equity at shillings 96,694 million. Total tier 1 capital (core capital) and total tier 2 capital (supplementary capital) was shillings 60,409 million respectively (BoT, 1997).

Ratios on the other hand show that banks maintained tier capital equivalent to 18% of the total risk weighted assets and off balance sheet exposure (OBSE), where the prescribed minimum ratio is 6%. They also maintained total capital equivalent to 20% of total risk weighted assets and off balance sheet exposure while the prescribed minimum is 8%.

In 1997 the Bank decided to exclude government owned banks in order to determine the adjusted position. The reason for doing this was that the government owned banks had in their portfolio a large number of non-performing assets in terms of loans and overdrafts mainly granted to cooperatives and other government agencies and were undergoing some restructuring.

Again both the figures and the ratios were so impressive (according to BoT, total capital stood at 407,982 million while the total risk weighted assets stood at 169,353 million; with the percentage of total capital/risk weighted assets plus off-balance sheet exposures (OBSE) standing at 36.51% in July, 1997). These ratios seem to be well above the standards set by the supervisory authority to the extent of requiring a close look. There is a double digit gap which needs to be studied to analyze whether it is justifiable for the benchmark to remain that low. On one hand, such a big gap between the benchmark and the actual percentage may indicate either that the minimum standard for capital is extremely low or that the level of risks from the eyes of individual banks' management is higher than what the central bankers think, while on the other hand it suggests that banks are much risk-averse by holding more assets with zero risk such as cash. Although this latter scenario may reduce the likelihood of bank failure, it is however likely to impair the economic growth of the country. In the UK it is different as the ratios seem to be close to the 8% mark. For example trends show that from 1983 to 1987 the ratio for total capital to risk weighted assets and off balance sheet exposure has been consistent to some extent in the sense that it moved from 8.1%, 7.6%, 9.7%, 10.5% and 9.8% respectively (Pawley, 1991).

V. Conclusion

The capital base of a bank is vital for the protection of its creditors (its depositors) and hence for the maintenance of general confidence in its operations and the underpinning of its long-term stability and growth. If the bank suffers from defaults on advances or incurs losses on investments these reduce the value of operating profits. However, large provisions for bad debts may be greater than the concurrent operating profits of the bank, and so these excess losses will have to be absorbed by the bank capital base. In other words, it is the bank's shareholders who incur the loss (through reduced capital reserves, as well as through lower dividends) rather than the bank's depositors. It is for these reasons, we conclude that the adequacy of bank's capital is very crucial than in any other type of business. It has been indicated earlier that the adequacy of any given capital base depends not only upon the absolute volume of liabilities to be covered, but it is also affected by the quality of the bank's assets. Thus, the more risky the assets, the greater must be the cushion of capital funds, *ceteris paribus,* to maintain a given level of capital adequacy. It should also be recognized that official requirements for capital adequacy in Tanzania are laid down by the Bank of Tanzania, within the provisions of the BAFI Act 1991, and so capital adequacy is necessary for a bank to obtain and keep its authorization to operate.

As we have pointed out above, the Central Bank must have a policy in place which, among other things, will emphasize on banks to measure their assets at the current or market rates. This will hopefully involve taking into account the component of inflation so as to arrive at real values of their portfolios, consequently reducing the current gap between the actual ratios and the benchmarks.

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