



Distr.: GENERAL  
E/ECA/CODI/4/9/Add.2

**UNITED NATIONS  
ECONOMIC AND SOCIAL COUNCIL**

**Original: ENGLISH**

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**ECONOMIC COMMISSION FOR AFRICA**

**Fourth Meeting of the Committee on  
Development Information (CODI IV)**

Addis-Ababa, Ethiopia  
23 – 28 April 2005

**Information in the Banking Sector**

**STATISTICAL INFORMATION AND THE BANKING SECTOR**

**BY**

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**FOR PRESENTATION AT THE**

**FOURTH MEETING OF THE COMMITTEE ON DEVELOPMENT  
INFORMATION (CODI-IV) – SUB-COMMITTEE ON STATISTICS**

**PLENARY SESSION 1: INFORMATION IN KEY ECONOMIC SECTOR**

**UNITED NATIONS CONFERENCE CENTRE (UNCC)  
ADDIS ABABA, ETHIOPIA**

**APRIL 24-28, 2005**

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## **STATISTICAL INFORMATION AND THE BANKING SECTOR**

### **Introduction**

I wish to express profound appreciation to the UNECA for giving me the opportunity to participate and share my thoughts with distinguished participants at this important conference. The theme of the conference, *Information as an economic resource*, and in particular as it relates to specific sectors, which is the focus of this session is very significant. Our economies these days can only function efficiently if the public at large, markets and policy-makers are appropriately informed about developments in various sectors. The appropriateness of the overall objectives of CODI-IV which are to increase the understanding of the key role of data and information in planning and implementing government programmes and examining and investigating the opportunities offered by the information economy in relation to the African continent need not be overemphasized.

In this session on information in key economic sectors, my focus will be on the banking sector. I will attempt to demonstrate how statistical information is critical for banking and more broadly for monetary and financial activities and highlight the challenges faced in providing them.

### **2.0 Sector definition, structure, objectives and stylised facts**

In order to characterize the role of statistical information in the banking sector, without any attempt to bore you, it would be useful to appreciate in a succinct manner the structure of the sector, the sector objectives and some stylised facts about how the banking industry have evolved in recent years including the challenges they pose for attainment of the sector objectives.

According to the *Monetary and Financial Statistics Manual (2000)*, the banking sector consists of all resident corporations mainly engaged in financial intermediation in any given economy<sup>2</sup>. These corporations consist of the central bank which is the national financial institution that exercises control over key aspects the financial system and other depository corporations (such as commercial banks, merchant banks, savings banks, credit unions, credit cooperatives, rural and agricultural banks etc), which are principally engaged in the allocation of savings to investment opportunities (financial intermediation) in the interest of making profits. Although the focus of this paper is on the banking sector, there is the broader concept that cannot be omitted in a discussion of this nature, the financial sector, which consists of the banking sector and other financial corporations (such as insurance corporations and pension funds, brokers, public exchange and securities markets etc)<sup>3</sup>. However, in the context of our continent, the banking industry carries the greater share of the financial system and largely influences financial intermediation.

The task of financial intermediation is well promoted in a stable operating environment for the institutional units engaged in such activity. Therefore, the central bank which is the monetary authority that oversees the banking sector has as its principal responsibility the job of ensuring monetary stability and financial sector soundness in order to create the enabling environment for financial intermediation<sup>4</sup>. For the depository corporations mainly deposit money banks, their principal objective is undertaking financial intermediation to make

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<sup>2</sup> Where financial intermediation is defined as a productive activity in which these corporations raise funds by incurring liabilities on their own accounts for the purpose of channelling the funds to other institutional units by way of lending or otherwise acquiring financial assets.

<sup>3</sup> Definitions of these institutional categorizations are covered in detailed in the *Monetary and Financial Statistics Manual (2000)*

<sup>4</sup> By definition, monetary stability is a synonym for price stability, where price stability refers to a stable price level or low level of inflation. According to Mishkin (1991), financial stability is defined as the prevalence of a financial system which is able to ensure in a lasting manner, and without disruption, an efficient allocation of savings to investment opportunities. Padoa-Schioppa (2002,p 21) offered a similar definition of financial stability, stressing the shock resilience and payment processing dimension.

profit and increase their shareholders value. For both fields of activities, sound and broad statistical basis are needed. As Jean-Claude Trichet (2004) put it, the importance of official monetary, financial and other economic statistics should not be underestimated in this field.<sup>5</sup>

The importance of statistics for banking or more broadly monetary and financial activities have gained more attention because of the structural changes the banking industry has been going through since the last three decades. These changes have pose threat and challenges to the safeguard of banking sector or more broadly financial sector stability. They have mainly reflected the prevalence of banking crisis, that have been difficult to detect because of the increasing integration of international financial markets and international nature of banking business, deregulations and openness to international competition, technological improvements and consolidation of banks.

### **3. Importance of Statistical information for Banking and Financial Sector Activities**

In demonstrating the importance of statistics for banking and broadly monetary and financial activities, I shall take in turn how statistics are used to achieve the objectives of the various players in the sector. These include the objectives of monetary authority (central bank), the depository corporations and the public at large.

#### **3.1 Role of Statistics in Central Banking**

As noted above, the central bank is the key authority that oversees the banking sector and is concerned with the overall stability of the financial sector and the

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<sup>5</sup> Trichet, J-C (2004) : Euro Area statistics and their use for ECB policy making: opening address, delivered at the second ECB conference on statistics , 22-23 April, 2004.

efficiency of financial intermediation of the banking sector, in particular. Sound statistics provide the backbone for addressing these concerns.

**a) Use of general economic statistics**

In pursuit of the monetary stability objective, a comprehensive analysis of the risks to monetary stability is required. Given that monetary stability is synonymous with price stability, such analysis will focus on the assessment of the current economic and financial developments and their implied short term risks to price stability from the perspective of the interplay between supply and demand in goods, services and factor markets. The economic and financial statistics supporting the economic analysis include for example the main aggregates of the national accounts, government finance statistics, short-term business and labour market indicators, exchange rates, the balance of payments, and financial market statistics. All of these statistics help to assess the dynamics of the real economy activity and the likely development of prices over the shorter horizon.

**b) Use of monetary statistics**

A comprehensive monetary analysis focusing on money and liquidity considerations in the economy is also important for monetary policy purposes. Key liquidity indicators such as central bank credit to financial institutions, deposits as a share of monetary aggregates, loans to deposit ratios, are important for open market operations and liquidity management. For example, a large increase in central bank credit to banks and other financial institutions as a proportion of their capital or their liabilities often reflects severe liquidity problems in the financial system. Also a decline in the ratio of deposit to broad money may signal a loss of confidence and liquidity problems in the banking system. It could also indicate that nonbank financial institutions are more efficient in that they

offer more financial products. All of these statistics could be sourced from the detailed consolidated balance sheet of the banking system.

### **c) Use of financial soundness indicators**

The soundness of financial institutions is a key part of the infrastructure for strong macroeconomic performance and effective monetary policy at the national level. Hence central banks and governments are paying increasing attention to monitoring the health and efficiency of the financial institutions and markets and to macroeconomic and institutional developments that pose risks to financial stability.

Recent efforts at developing indicators of financial system soundness are very instructive demonstrations of the importance of statistical information for the banking sector. These indicators which are broadly divided into two categories: (1) aggregated microprudential indicators; and (2) indicators of macroeconomic developments or exogenous shocks that could affect the financial system, are well supported by both the theoretical and empirical literature on financial system instability or soundness<sup>6</sup>.

The aggregated microprudential indicators which are based on the so-called CAMEL framework are a core set of statistical information reflecting the health of financial institutions and that provides incentive to encourage prudent behaviour on the part of individual participants or institutions in the financial system. They provide support to the internal governance of financial institutions, public sector oversight and market discipline. These set of statistics provide a measure of the financial strength of the banking sector as well as the basis for assessing the vulnerabilities of the sector. They include the sets of Capital adequacy indicators,

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<sup>6</sup> See Davis, E. Philip (1999) Financial data needs for macroprudential surveillance – What are the key indicators of risks to domestic financial stability?, Centre for Central Banking Studies (London: Bank of England) for a concise review of the theory and empirics of financial instability and related indicator variables.

Asset quality indicators, Management soundness indicators, Earnings and profitability indicators, Liquidity and Market risks indicators that are largely derived from the balance sheets of banks. Their specific uses in assessing the banking sector soundness are elaborated below.

**i) Provide measures of financial sector strength**

Information on capital adequacy and availability helps in determining the robustness of financial institutions to shocks to their balance sheets. The most commonly used indicator is the aggregate risk based capital ratio (that is, the ratio of capital to risk-adjusted assets). A declining trend in this ratio may signal increased risk exposure and possible capital adequacy problems. In addition to capital adequacy, it may be useful to monitor indicators of capital quality. The morale is that, in many countries, bank capital consists of different elements that have varying availability and capability to absorb losses. If these elements can be reported separately, they can serve as more reliable indicators of the ability of banks to withstand losses and help in putting overall capital ratios into context.

**ii) Provide measures of financial sector vulnerability**

The literature points to the importance of the quality of assets held by financial institutions as a measure of solvency. In fact the reliability of capital adequacy depends on the reliability of asset quality indicators. As Diamond and Dybvig (1983) noted in their analysis of bank runs, imperfect information regarding banks' assets, may give an incentive for panic runs on banks even if they are solvent. From the perspective of the lending institution, indicators such as sectoral concentration of credit in the economy, foreign currency-denominated lending, profile of non-performing loans, loans outstanding to loss-making public sector entities, risk profile of assets etc are important statistical information for monitoring the asset quality of the banking sector.

For instance, a large concentration of aggregate credit in a specific economic sector or activity, especially commercial property, may signal an important vulnerability of the financial system to development in that sector. Evidence from many financial crises indicates that downturns in particular sectors of the economy have had spilling over effects into the banking system through concentration of loan books of financial institutions to those sectors.

Non performing loans: An increasing trend in the ratio of nonperforming loans to total loans signals deterioration in the quality of credit portfolios and consequently, in the banking institutions' cash flow, net income and solvency. This information may be supplemented with information on nonperforming loans net of provisions for loan losses. It is possible to determine the level of effort or the ability of financial institutions to cope with high nonperforming loan portfolio by monitoring information on recovery rates using the ratio of cash recoveries to total nonperforming loans.

### **3.2 Statistical Information for Deposit Money Banks**

As earlier noted, the objective of deposit money bank is to engage in financial intermediation with the aim of profit making and increasing their shareholders value. They certainly need information about their operating environment, in this case, the stability of the macroeconomic environment, and sectors of the economy to invest in. The bank need proper information on their internal management, profitability and earning, their asset quality and capital adequacy as they need to comply with prudential benchmarks to stay in business.

#### **a) Use of Macroeconomic Indicators/general economic statistics**

The operation of a financial system is dependent on the overall economic activity and financial institutions are significantly affected by certain macroeconomic developments. A lot of empirical studies dating far back to Fisher (1933) and in

the wake of the Mexican crisis in 1994 and the Asian crisis in 1997, by Demirguc-Kunt and Detragiache (1998), Kaminsky and Reinhart (1996), Hardy and Pazarbasioglu (1998), point to falling growth rate, deterioration in the balance of payments, high inflation, volatile exchange rates, weak performance of export sectors and deterioration in terms of trade are sources of financial fragility. Therefore statistics on these indicators are very important for banking business. Low or declining growth rate for example signals information on the debt servicing capacity of domestic borrowers and credit risk in the economy. A low ratio of international reserves to short term liabilities is seen particularly by investor as a major indicator of vulnerability. Volatility in inflation makes the accurate assessment of credit and market risk difficult while volatility in interest and exchange rate are strong indications of risks to the financial system.

#### **b) Use of Management soundness indicators**

In addition to statistical information on the macroeconomic environment, banks would need information on the quality of their management both for prudential purposes and for internal governance or evaluating their internal control systems. Indicators such as ratio of expenses to total revenue may show whether a bank is operating efficiently. A high expense ratio may mean a bank is not operating efficiently. Earnings per employee are measures of overstaffing. Another possible ratio of management soundness is the rate of expansion in the number of banks and other financial institutions which indicates the level of competition in the banking system.

#### **c) Information on Earnings and profitability**

The key objective of a bank is profit making. Banks would therefore need to monitor profitability ratios such as returns on assets (net profit to average total assets) and return on equity (net profit to average capital) which reflects the average return investors get from holding bank capital. Also, in order to get a

clearer picture of the sustainability of profits and of the extent of risk-taking by banks, it is useful to look at the sources of profitability such as net interest income, commissions, trading and foreign exchange results and other operating income. Expense ratios can reveal sources of profitability problems. They can be calculated to reveal various kinds of expenses, such as staff expenses, administrative expense etc. These can be set against total income or total assets. In addition to these current profitability ratios, forward looking indicators can also be constructed. For example information on the customer base would signal degree of competitiveness of the institution and ability to foster financial deepening.

#### **d) Information from the non bank public**

The quality of the banking sector's loan portfolio is directly dependent on the financial health and profitability of their borrowers. Therefore in assessing asset quality, it would be necessary to take into account the likelihood of the borrower to repay. Indicators such as debt-equity ratios can be used to monitor non financial private sector borrowing. Also household debt to GDP which serves as a measure of leverage and the ratio of household debt service and principal repayment which measures the burden of debt and therefore the risk of default are important indicators that banks would be encouraged to collect.

### **3.3 Information for the Non-Bank Public**

Market based assessment of the financial sector as implied by the prices (yield) of financial instruments and creditworthiness rating of financial institutions and large corporations are very valuable information for the public and investors. A decline in the stock price of a financial institution relative to average stock prices may signal adverse market perceptions of the health of such institution.

#### **4. Data sources and Limitations**

The interesting characteristic of the banking sector is that its institutions are both producers and users of statistics. Central banks are active producers of some official statistics such as monetary statistics, banking statistics, balance of payments statistics, and business cycle statistics of special interest for monetary policy. In the areas in which the central bank do not generate data but require such data for policy purposes, they rely on national statistical institutes as in the case of real sector data and government finance data. Statistics for financial sector soundness and other depository corporation analysis are mostly derived from balance sheets or financial statements disclosed by financial institutions and corporations.

A major limitation in the provision of these data is timeliness and quality. This cuts across most of the macroeconomic statistics in our economies. National accounts data are largely available annually and with lags. For the compilation of monetary statistics, although central bank balance sheets are mostly available in time, inputs are drawn from the depository corporations which in most of our countries are sent in delays. The quality concerns cut across most of the indicators and they border on coverage, out dated surveys of sectors etc for macroeconomic data. This certainly have grave implication on decision making. In a significant number of financial problems, available statistics have not been of sufficient timeliness and or quality to provide early and clear warning of emerging difficulties. In this regard, the significance and quality of monetary, balance of payments and financial system data as well as the need for comprehensiveness in the collection, methodological soundness of the compilation, accuracy of compilation as well as timely and informative public disclosure are now emphasized as the core to ensuring monetary and financial stability.

## **5. Approaches to addressing the effects of data limitations**

A lot of efforts have been made at the international level to address the limitations of available statistical information for banking and more broadly monetary and financial activities. These have largely included the development of compilations guides for monetary and financial statistics, financial soundness indicators, national accounts, government finance statistics, balance of payments, consumer price indices, etc. The primary purposes of these guides are to provide guidance to compilers and users on these statistical information on concepts and definitions, data sources and compilation techniques.

## **6. Conclusions**

The wide range of statistics required for banking and monetary and financial activities are daunting. They drive policy makers, markets and the public alike. They are the raw material from which policy proposals and forecast are constructed therefore they need to be of high quality if the end product is to be of real use. Economic policy and business decisions are all driven and formulated using the building blocks of statistics. I

With this, it is crucial to identify the ultimate beneficiary of good economic, monetary and banking statistics. It is not the policy maker who uses them and need them ; nor is it the markets which base their economic stance on them. It is rather the public that is, you and me, who ultimately reap the benefits or bear the brunt of good or bad policy making based on accurate statistics. The public is more active and direct user of statistics. There, statistics has to be made accessible, understandable and useful as guidance to them in their everyday activities.

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