# Applied economics

Literature, Russian Literature

There is a general concern in most of the central banks on the financial stability of most of the banking institutions. It is well appreciated that a well functioning and efficient financial system is a prerequisite to maintaining a stable functional financial environment. The development and the proper usage of efficiency measures could thus serve as an important indicator on the banking fragility, (Athanassopoulos 1998). Measurement of banking efficiency There are several conditions that a good measure of efficiency should meet irrespective of the approach.

One is that the approach should be consistent with a standard non frontier performance measurement irrespective of the computational approach used. Studies on the UK banking sector efficiency have been scarce. When banks deviate from the optimal saving-investment plan, they generate a welfare cost (Drake and Howcroft 1994). Some of these deviations usually arise from inefficiencies in the financial system or even from the instabilities in the system itself. These two factors are closely interlinked but they should also be considered to have distinct behaviorally.

An increase in competitiveness may for example increase the financial systems vulnerability to financial shocks while at the same time a guarantee of the system safely as a whole may see the efficiency reduce. This potential trade off between the efficiency and financial stability maybe reduced by having a financial infrastructure in place that is adequate enough to serve as the intermediate between the settling of payments and flow of funds and thus regulate the financial system (Daraio and Simar 2003).

Banking crises are usually associated with period that are characterized with low out put relative to the measures of the pre-crisis trend levels. It should

be noted that banking crises is not just the reserve of the developing economies since 12 out of 54 global banking crisis that were documented by the IMF occurred in the industrialized countries. It has also been noted that banking crises has had the tendency to last longer in the developed countries as compared to the developing economies. The effect of financial inefficiencies has been evaluate din various studies for over 30 years now (Drake and Howcroft 1994).

Monitoring the financial distress risk A six monthly financial Stability Review (FSR) published by the Bank of England summaries the current as well as prospective risks of the United Kingdom financial stability and even internationally. Some of these risks take such forms market risks, credit risks and even liquidity risks. Though the assessments of the international risks likely to affect the UK financial stability is a key task of the bank of England, the objective and consistent evaluation is not even currently straightforward (Athanassopoulos 1998).

The bank management is charged with the responsibility of collecting and analyzing information regarding to the office expenses, customer bases and revenues collected all with the common aim of maximizing profit that the banks are making. The faster growing countries have been associated with a large stock market capitalization and larger non-bank financial sectors (Charnes et al. ,. 1988). There thus appears to be an important factor that banks do considered when trading off between financial stability and financial efficiency.

This trade off can be improved for example by improving the financial system infrastructure where this may include but is not limited to having a

prudent oversight from the authorities (Banker et al. , 1984). The bank of England is charged with the responsibilities of assessing the financial risks that may affect the UK financial stability. Since this is not a straightforward work the bank is currently employing simple techniques that so allow it to have some rough drafting of the key risks likely to affect the UK financial stability (Banker et al. 1984) . Indicators of financial instability There is currently different sources of information that the banks do rely on as indicators to financial instability. Two most important of these are currency crisis and banking crisis as well as their interaction. Since as early as 1970s, supervisors in banks have made use of early warning systems during the usual monitoring of their banks (Banker et al. , 1984). An approach to this method is having composite indices of potential probability crisis with an economically chosen weights.

Other than the world bank and the IMF, the bank of England have also used the same technique in trying to understand why some small UK banks failed in the early 1990s (Athanassopoulos and Giokas 2000). The approach of the bank of England has however all the same been different in the analysis. The bank has employed the so called signaling approach methods to identify the leading indicators of potential financial risks. In this kind of an approach a wide range of early warning signals of a potential crisis are usually assessed relative to some threshold values (Boufounou1995).

If any of the investigated indicators happens to reach a certain threshold, then caution needs to be taken. The next step in this case would be carried out a detailed assessment of the potential risk (Charnes et al. ,. 1988). At the moment, there is still very little yet known about the origin of a crisis. Of

late, crisis have significantly differed in severity and form from those that were experienced in the 1970s and 1980s. recent studies have evaluated the fiscal costs of a currency crisis or banking i. . the financial stability that is equivalent to “ sacrificial ratio”. Though this kind of evidence maybe simple, it does not have a clear map onto the welfare of the bank. This can only be achieved through the use of an model such as stochastic equilibrium models that do explicitly evaluate the inflation of the welfare costs (Athanassopoulos 1998). . The use of “ third generation model” that came up in 1999 doe s show that foreign exchange illiquidity can result into the collapse of the currency regime.

It has also been observed that banking crisis do result to currency crisis though it is not very clear if the former cause the latter (Boufounou1995). The probability of a banking crisis ever occurring can be drastically reduced if there a good system infrastructure, contracts are enforceable, absence of corruption and there is a high quality supervision (Charnes et al. ,. 1988). Sample study The sample study used in this paper considers the issues of noise to signal estimation, hypothesis testing and finite sample performance for a new stochastic and nonparametric estimation technique.

In this kind of research, the technique was applied to analyze European banks efficiency from various regions but in this case only the analysis of the UK banks is given much attention (Fried et al 1995) . This technique does seem to fit well in this area of banking since the inputs and outputs of a bank are usually measured with an error. In this regard it is worth noting that the banking production technology has not yet been well defined and thus large

banking data sets for example BankScope do give an opportunity for nonparametric analysis (Boufounou1995).

The empirical techniques of analysis are generally categorized into either the deterministic versus the stochastic methods or parametric versus the nonparametric. The nonparametric technique model is one that fails to assume the functional form of the frontier production or even the statistical deviations from the frontier and the inefficiency of distribution is put in to consideration (Daraio and Simar 2003), .

This thus serves as an attractive feature since the production theory does not give a particular functional form and thus the empirical tests are not available in most of the cases. Unfortunately this approach does also fail to satisfy the statistical power needed especially when there are small samples and thus the approach can only be successful if the sample does include many observations from a wide range. In comparison to this is that the deterministic techniques assume absolute accuracy of the output and input data.

Contrast to this, the stochastic techniques do account for possible errors in the variable such as uncontrollable external factors or depreciation as well as debatable valuation of accounting data (Daraio and Simar 2003),. The techniques that are most popular are the stochastic frontier analysis (SFA) which is a parametric analysis and data envelopment analysis (DEA) which is both deterministic and nonparametric analysis (Athanassopoulos 1998). .

Postel et al 2003 (PCK) did introduce a novel stochastic and nonparametric technique. They have been able to demonstrate that the technique is

asymptotically unbiased and also has asymptotic variance which is comparable to SFA estimators. It has also bee noted that PCK approach is attractive since the efficiency levels cane be computed using a simple algorithm. This is highly important as the nonparametric approach have failed to be used previously because of lack of the requires computational intensity (Dekker and Post 2001).