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Comments Welcome

**The State of Economic Heterodoxy in Research on the
Banking Sector in Africa**

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Abstract

The paper reviews the literature on the financial sector in Sub-Saharan Africa. It shows that there is a vast literature on the effects of financial liberalization in SSA. There is a general recognition in the literature that financial sector reforms did not generate the fruits expected. In this area, there is work from both the mainstream and heterodox schools attempting to understand the reasons for the failure of liberalization. Secondly there is a vast literature, again from both the mainstream and the heterodox school on micro finance and informal finance in SSA. The paper contends that in comparison, there is very little attention paid to the formal banking sector in SSA. The majority of studies in this area are from the mainstream school. The first set of studies consists of large Africa wide, econometric cross country studies that attempt to understand the links between finance and growth or the causes of fragility. These are misguided as they make no attempt to understand the individual country specific problems of different economies in SSA. Single country case studies consists of studies that follow a 'Structure-Conduct-Performance' paradigm where it is assumed that the poor performance of African banking and in particular high interest rate spreads can be attributed to high levels of concentration and low levels of competition. These are flawed in their very naïve understanding of competition. There are also country case studies that attempt to understand the efficiency of banks in SSA. This paper presents criticisms of these studies in terms of methodology. The paper asserts that in terms of heterodox work, following an open system ontology with the use of qualitative data, there is very little work done on the formal financial sector in SSA. The paper then analysis qualitative interview data on the ability of banks to raise deposits in Kenya, in an attempt to give an alternative understanding of the sources financial sector fragility in Kenya.

“A major irony of African development history is that the theories and models employed have largely come from outside the continent. No other region of the world has been so dominated by external ideas and models.”

Mkandawire and Soludo (1999 pp., vii)

“African Studies enjoys an increasingly close connection with bilateral and multilateral development co-operation, providing research and researchers (along with their own conceptual frameworks and concerns) to assist in defining and providing direction for aid and related policies. This is leading to unhealthy practices, whereby African research is ignored in the formulation of international policies towards the continent; while external Africanists assume the function of interpreting the world to Africa, and vice versa. This dynamic reinforces existing asymmetries in capacity and influence, especially given the crisis of higher education in most African countries. It also undermines Africa's research community, in particular the scope for cross-national and international exchange and the engagement in broader development debates, with the result that those social scientists who have not succumbed to the consultancy market or sought career opportunities elsewhere are encouraged to focus on narrow empirical studies.”

Olukoshi (2006 pp., 533)

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1.1 Motivation and Context

The key policy question in Africa is - how can financial sector institutions be used to attain real economy objectives of growth and poverty eradication? (Mkandawire, 1999, Stein et al., 2002, Serieux, 2008). Therefore there is a need for financial institutions that are able to finance long term productive investment (French-Davis 1994; Mkandawire 1999; Nissanke & Stein 2003). However, financial systems in Africa in general and Kenya specifically, are both shallow and fragile and therefore cannot fulfil these objectives. This paper reviews the literature on the formal financial sector in SSA to show that there is very little heterodox work in this field. The paper asserts that it is necessary to carry out qualitative work that focuses on non-price factors to understand the sources of financial fragility in SSA.

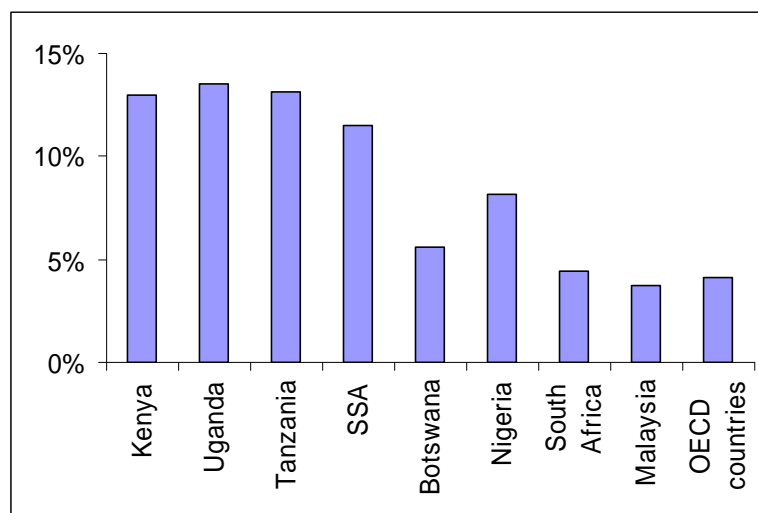
1.2 Depth, Breadth, Efficiency and Stability of Financial Markets in Africa

Two standard measures of banking depth are: ratio of liquid liabilities to GDP and ratio of private credit to GDP (Honohan & Beck 2007). The former is a measure of monetary resources mobilised by banks and the latter a measure of the ability of banks to channel resources to productive uses and therefore the growth potential of financial intermediation (Honohan & Beck 2007). At a micro, bank specific level, they are the liability and asset side of individual banks balance sheets. In general African financial markets are shallow compared to financial markets in emerging and high-income countries (Honohan & Beck 2007). In 2004 – 2005, the ratio of liquid liabilities to GDP averages 32% in SSA, compared to 49% in East Asia and Pacific and 100% in high-income countries. The ratio of private credit to GDP averages 18% in Africa compared to 30% in South Asia and 107 % in high income countries (Honohan & Beck 2007). By regional standards, the Kenyan banking system is fairly well developed - ratio of private credit to GDP was 27% compared to SSA average of 15% in 2001.

However there are several areas for concern in terms of breadth, efficiency and stability. In terms of breadth or access to finance, surveys of firms in Kenya have identified access

to finance as a major constraint to firm growth¹. Through constructing industry wide balance sheets of manufacturing firms it has been found that in the majority of firms equity and retained earnings form 85% of liabilities and only multinational subsidiaries rely on non-owner financing of over 30% (Isaksson & Wihlborg 2002)². Interest rate spread is most common measure of bank (in)efficiency³. Interest rate spreads in SSA are generally higher than the rest of the world (see Figure 1). Between 2000 and 2004 net interest margin for African banks was 8% compared to 4.8% for the rest of the world⁴ (Honohan & Beck 2007). Interest rate spreads in Kenya are high and though comparable with neighbouring countries and the average for Sub-Saharan Africa, much higher than other emerging economies or the average for OECD countries.

Figure 1 : Interest Rate Spreads 2001



Source: Beck and Fuchs (2004), Ngugi and Wambua (2004)

¹ There is a plethora of papers from the World Bank's Regional Program on Enterprise Development (RPED) which conducts surveys amongst small and medium enterprises (SMEs) in Africa and finds that access to finance is a major constraint facing SMEs.

² In this thesis I only refer to access to finance in terms of access to formal finance. The low provision of financial services to the poor has been widely addressed in the microfinance literature.

³ The spread is often thought of as a 'premium in the cost of external funds' introduced due to informational and enforcement frictions (Gertler & Rose 1994)

⁴ Though interest rate margins in SSA are comparable to those in Latin America (Honohan & Beck 2007)

Banks in SSA also suffer from endemic high liquidity in asset portfolios which implies that they are not carrying out their intermediation function (Nissanke & Aryeetey 1998; Honohan & Beck 2007). In Kenya, the statutory minimum liquidity ratio, measured in terms of net liquid assets over deposit liabilities is 20%. However the average liquidity for all banks was over 50% from 2000 – 2005, that is excess liquidity of on average 30%. There is also a high level of non-performing loans. In Kenya in 2001, the average non-performing loans over total loans ratio stood at 41%. There have been several bank failures in SSA and Africa and these are listed in Appendix 1 and

Appendix 2.

Having considered the stylised facts about banking systems in SSA, I now review the literature that attempts to understand these features.

The importance of informal finance in the financial landscape in Africa was established by heterodox economists (Wai 1992; Aryeetey & Udy 1997; Nissanke & Aryeetey 1998). Following this, there has been significant research on informal finance - the segmentation between informal and formal finance, the role of microfinance institutions, and access to finance for poor -by both mainstream and heterodox economists. With specific reference to Kenya, some of the most interesting heterodox work in microfinance is by Susan Johnson and it emphasizes the importance of social or 'real' factor affecting financial markets (Johnson 2004b, c, a, 2005).

With reference to the formal financial sector or banking in SSA, Nissanke and Aryeetey (1998) was one of the first, and remains, one of the key heterodox texts. The authors highlighted the extremely complex nature of the failure of liberalization in SSA and were of the first to draw attention to the problem of excess liquidity of commercial banks in

SSA. Following this, as the broad literature review below shows, the majority of the work done on formal financial sector and banking in Africa is from mainstream schools. This work is focussed on quantitative methods, following a closed system ontology, with very little attention paid to the structural and historical factors affecting the banking sector⁵. The literature review also highlights, that the majority of these studies do not consider the social or non-price factors that are essential to understanding the structural features of a banking system in SSA.

1.3 Studies on the Impact of Financial Liberalization in Africa

In the 'financial repression' literature, it is advocated that financial liberalization would end credit rationing by the state and allow other investors to borrow from financial intermediaries (McKinnon 1973; Shaw 1973). This argument formed the rationale for financial liberalization - which was undertaken in most African countries in the 1980s and early 1990s as part of the structural adjustment policies advocated by the World Bank and the IMF. It was expected that that liberalization would increase financial deepening, private savings, investment and in turn growth.

There is a general recognition in the literature that financial sector reforms did not generate the fruits expected in terms of increase in savings and investment, improvement in financial sector intermediation and reduction in interest rate spreads (World Bank 1994; Soyibo 1997b; Brownbridge & Harvey 1998; Ngugi & Kabubo 1998; Nissanke & Aryeetey 1998; Mkandawire 1999; Ndung'u & Ngugi 1999). The main mechanism through which financial liberalization was going to impact resource mobilization was through impact on savings. In an early study on a cross section of African countries it was found that the effect of real interest rates on savings is weak or non-existent (Mwega 1990).

There is also recognition that financial liberalization was accompanied with increased instability and higher incidence of bank insolvencies (Soyibo & Adekanye 1992;

⁵ This is as opposed to open system ontology. An open system is defined as a system that is very complex, in which not all relevant variables are known, where boundaries of the system cannot be specified, where interrelation within the system changes, and knowledge is rarely held with certainty (Dow 2002).

Brownbridge & Harvey 1998; Brownbridge 1998a). Experience from African countries suggests that credit to the private sector did not grow after liberalization and in fact banks shifted their portfolios towards government stocks (Nissanke & Aryeetey 1998; Serieux 2008). Instead of lending long term banks maintained highly liquid portfolios and there was a high incidence of non-performing loans (Aryeetey *et al.* 1997a; Nissanke & Aryeetey 1998; Chirwa 2001).

However, there is still significant debate as to why the reforms did not bear fruit. At a theoretical level, working from within a new institutional framework, Joseph Stiglitz has emphasised that credit rationing in the credit markets is not merely the result of ‘financial repression’, but inherent to any realistically defined financial market due to pervasive information asymmetries and incomplete markets (Stiglitz & Weiss 1981; Stiglitz 1993). Furthermore, the increase in interest rates following liberalization tends to worsen the risk composition of banks’ loans portfolios, aggravating the problems of adverse selection and moral hazard (Stiglitz *et al.* 2000).

In general, mainstream authors have argued that liberalization failed due to the incompleteness of reforms, poor sequencing and lack of government will (World Bank 1994; Reinhart & Tokatlidis 2003). With specific reference to banks, it was observed that following liberalization, banks followed two dramatically opposite directions – they either avoid all but the lowest risk lending or they exhibited a reckless expansion of lending even to insolvent clients (Caprio *et al.* 1994). Both these reactions can lead to an increase in fragility of banks’ balance sheets. Following this observation, it is argued that it is necessary to understand the ‘initial conditions’ of bank portfolios and need to build the ‘institutional capacity’ before undertaking reforms (Caprio 1994).

“In designing reform programs, African governments and external donors have sometimes placed too much faith in quick fixes. Reform programs overestimated the benefits of restructuring balances sheets and recapitalizing banks – and underestimated the time its takes to improve financial infrastructure in an environment where the main borrowers (the government and the public enterprises) are financially distressed and institutionally weak’ (World Bank 1994 pp., 204).

The recognition of the importance of institutional factors is useful; however, there is a methodological issue with as this sort of analysis reduces historical development to a small set of ‘initial conditions’. In carrying out a review of articles that attempt to

understand why financial liberalization did not achieve the desired results in SSA, it is argued “A common theme that runs through the papers in this supplement is the *peculiarity*⁶ of African economies and institutions.....A low quality of institutions appears to have constituted a primary culprit in this limited success” (Fosu *et al.* 2003).

In methodological terms, the idea of institutions ‘peculiar’ to Africa implies a bias towards monolithic idea of what ‘good’ institutions are. A review of institutional developments in Europe and Asia reveals great institutional diversity yet this is not reflected in work on African institutions. I concur with Olukoshi (2006) who charged that,

“Contemporary processes on the African continent are frequently considered as being subject to a unilinear evolutionism, replicating an earlier epoch in the history of Europe and the solutions to the challenges associated with such processes also, naturally, replicating the ‘models’ that had been employed by Europe. Scholars ignore the fact that every facet of the development history of Europe and North America is under permanent debate, and revision makes it difficult to capture past experiences as historical truths that have been settled once and for all. Instead, in the culture of scholarship by analogy, many Africanists are tempted to present the histories of Europe and America in a frozen form that is bereft of all contradictions. In the worst cases, the result is an attempt by Africanists to read Africa through a simplistic, one-sided, incomplete, and ill-digested history of Europe and America” (Olukoshi 2006 pp., 541)

Heterodox economists have emphasised that the problem is more complicated. In countries such as Ghana and Malawi where reform was more gradual, yet there have been few positive changes in financial indicators and outcomes are similar to countries where reform was much more rapid (Nissanke 2001). They have emphasised that fragmentation and segmentation between formal and informal markets (Soyibo 1997; Nissanke & Aryeetey 1998) and the fact the liberalization was carried out as a response to severe economic crises and acute macroeconomic instability (Aryeetey *et al.* 1997b; Brownbridge & Harvey 1998).

⁶ Emphasis added.

1.4 Studies on the Link between Finance and Development in Africa

There is an extremely large debate on the links between finance and growth with empirical studies providing very mixed results (Khatkhate 1988; King & Levine 1993a, 1993b; Evans *et al.* 2002). This debate has also been tested empirically with data from SSA and MENA regions, and these papers are discussed below.

In one of the early cross country studies of 32 SSA countries Ndebbio (2004) attempts to measure the link between finance and growth using 2 variables of financial deepening – the first is ratio of M2 over GDP and the second is growth rate of per capita money balances. He concludes that financial deepening positively affects per capita growth in output⁷. The author reaches this conclusion even though the co-efficient of ratio of M2 over GDP was insignificant. “Fair enough... that of financial intermediation was insignificant. Both variables coefficients, however, had the right signs. This is *important for policy*” (Ndebbio 2004 pp., 16)⁸. Drawing extremely strong conclusions from such weak quantitative data is high problematic.

Ghirmay (2004), carries out a cross country study of 13 African countries concludes that there is a positive and casual relationship between financial development and economic growth⁹. The author himself acknowledges that whilst there is evidence for causality in 8 out of 13 countries, there is reverse causality in 9 countries in the sample. The conclusion is based on evidence of bi-directional causality in just 6 countries in the sample, and is therefore highly questionable.

Akinboade (2000) studied the relationship between financial deepening and growth in Tanzania using bank deposit liability to measure financial deepening. The paper finds that in line with McKinnon-Shaw hypothesis, removal of interest rate restrictions and positive real interest rates led to increase in bank deposit liability. However the regression results

⁷ The author uses ordinary least squares (OLS) regression and covers the period 1980-1989, using decade averages for the variables.

⁸ Italics inserted.

⁹ The author uses vector autoregression (VAR) framework. Economic growth is measured in terms of increase in real GDP and financial development is measured in terms of level of credit to the private sector by financial intermediaries.

of the relationship between financial deepening and growth was more mixed. The relationship is negative and significant during the period of financial liberalization (1982-1996) but insignificant during the period of financial repression (1966-1981).

Two studies of the link between finance and growth in the MENA region also show conflicting results. A panel data analysis of 11 MENA countries shows that besides public credit, no other indicators of financial development have a significant impact on growth (Al-Zubi *et al.* 2006)¹⁰. Another paper, of 6 MENA countries finds a strong bidirectional relationship between financial development and growth in 5 of the 6 countries (Abu-Bader & Abu-Qarn 2008).

At a methodological level, several arguments can be raised about these papers. By its nature regression analysis works within a closed system where it is assumed that all variables are known and measurable. I concur with Kenny and Williams (2001) who carry out a large survey of the growth literature and argue that “any account which takes as an assumption that the process of economic growth works more or less unaltered across enough countries to be proved or disproved through the statistical testing of variables in large cross country regressions is likely to be inadequate” (Kenny & Williams 2001 pp., 2). Therefore econometric studies by their nature will have disappointing results as they assume that the process of development is homogenous, whereas history has shown that it is highly heterogeneous (Kenny & Williams 2001). By their nature, these studies are looking for unrealistic ‘empirical regularities’ across the world (Dow 2002).

The concerns raised above, have also been raised by Marianne Bertrand who reviewed the finance and development research carried out by the World Bank for the ‘Deaton Report’. While recognizing that the World Bank research agenda in this area can be termed a success in terms of the number of publications accepted in top finance and economics journals she questions the over-reliance on cross country regressions. It is worth quoting her remarks in full in particular as the research agenda in SSA largely follows this pattern.

“While (and maybe because) fundamental, these questions are also extremely difficult to answer convincingly. In particular, the cross-country approach that is adopted in much of the research I have reviewed suffers from serious limitations. While this

¹⁰ They use the methodology of Levine (1997)

research approach has established clear correlation patterns between many of the key variables of interest, the policy takeaways of this research are often quite limited due to obvious interpretational issues. Also, this research approach is often too “black-boxy” to provide practical guidelines for those in charge of policy design and implementation. While I am certainly not advocating abandoning the cross-country research methodology, I was nevertheless surprised by how prevalent this research methodology was in the various projects I reviewed. In particular, I found detailed case studies, where one can delve deeper into the specific experiences of a given country (or a given financial institution within a country), remarkably scarce. My prior going into this evaluation is that Bank researchers had a strong comparative advantage in such case studies compared to researchers at academic institutions, not only given the huge amount of field experience within the Bank but also given the many contacts the Bank has with financial institutions and financial agencies around the world. I was surprised not to see this comparative advantage more strongly reflected in the Bank research” (Deaton *et al.* 2006 pp., 111)

Referring once again to the specific studies discussed above, all 5 papers are by mainstream economists. Therefore, even when the expected positive relationship between finance and growth is not found in the data, policy conclusions are drawn pointing towards increased liberalization. Ndebbio (2004) argues “this apparently less than satisfactory performance of the financial intermediation variable is due basically to the shallow finance and the absence of well functioning capital markets in most SSA countries” (pp., 17). Akinboade (2000) attribute the mixed results to the “erstwhile socialist orientation” (pp., 948) of banking in Tanzania. Al-Zubi et al. (2006) state that “financial sectors are still underdevelopment and need more efforts to be able to exert its functions effectively in the Arab countries”. They are based on a closed system analysis with little recognition that there may be factors that cannot be captured by the data that are affecting the relationship.

1.5 Studies on Market Structure and Competition in Banks in Africa

Neoclassical economics begins with the assumption that increased competition would lead to lower costs and enhanced efficiency in the financial market. However there is now a growing recognition, even in the mainstream literature, that assuming “competition is unambiguously good in banking is naïve” (Claessens & Laeven 2003 pp.,

4). It is argued that the information intensive nature of banking implies that banking is naturally less competitive than other sectors (Caprio & Levine 2002). Oligopolistic competition may lead to higher intermediation costs and higher spreads and inefficiency or may lead to more efficient market through exploitation of economies of scale (Buchs & Mathisen 2005).

Not only are the links between competition and efficiency complex, the links between competition, efficiency and stability are just beginning to be explored (Beck *et al.* 2006). A certain degree of market power may be beneficial in banking as it would moderate banks risk taking incentives. A bank with higher market power, franchise value and higher profits has more to lose if it takes an excessively risk policy (Vives 2001). In the same vein other authors have argued that the reduction in franchise value and rents led to an increase in bank failures in the 1980s (Keeley 1990; Stiglitz *et al.* 2000).

Despite recent recognition in the literature, that “different countries may have different optimal level of competition intensity” (Vives 2001) empirical work done in Africa continues to follow a Structure-Conduct-Performance (S-C-P) paradigm where it is assumed that the poor performance of African banking and in particular high interest rate spreads can be attributed to low level of competition.

In a wide survey of the financial sector in Africa, Ncube (2007) argues that the oligopolistic nature of the banking market is a key reason for the high interest rate spreads.

Chirwa (2001) in an extensive study of the Malawian banking industry also carries out an S-C-P hypothesis by analyzing the determinants of profitability. He finds that support for collusion in the Malawian banking industry as market concentration has a positive and significant impact on profitability¹¹. He argues that competition exists only on the fringes – with 9 banks competing for 25% of the market whilst 2 (government-owned) banks control 75% of the market. This leads to a policy conclusion that there is a need to privatize government owned banks to encourage competition. Without going into the extensive debate on the merits of privatization here, it is useful to note that in other

¹¹ In the case of Malawi interest rates were controlled and the main source of profits was fee income (Chirwa 2001).

African countries privatization has not led to reduced a domination of a few strong banks (Ngugi & Kabubo 1998).

Industrial organization literature has developed to show that competition is not only determined by concentration and market structure indicators alone, but that contestability is important (Baumol *et al.* 1982; Besanko & Thakor 1992)¹². Empirically there have been a lot of studies conducted to measure competition, now defined in terms of contestability generally following the seminal work by Panzar and Rosse (1987).

Panzar and Rosse model investigates the extent to which a change in factor input prices is reflected in (equilibrium) revenues earned by a specific bank. The model provides a measure – the H statistic as a measure of the degree of competition. Table 1 below explains the interpretative value of the H statistic.

Table 1: Interpretation of H Value

Value of H	Implied Market Structure
$H \leq 0$	Monopoly, colluding oligopoly
$0 < H < 1$	Monopolistic competition
$H = 1$	Perfect competition, natural monopoly in perfectly contestable market

Source: (Claessens & Laeven 2003)

Claessens and Laeven (2003) use this model to estimate the degree of competitiveness in a cross section of 50 developed and developing countries for the period 1994 – 2001. Buchs and Mathisen (2005) also apply the Panzar and Rosse model to estimate the H statistic for Ghana for the same period. A selection of the results are summarised in the table below.

Table 2: H Statistic for Different Countries / Regions

¹² Competitive outcomes are possible in concentrated systems and collusive actions can be sustained even in the presence of many firms. Therefore, it is the threat of entry, contestability that is more important.

Country	Period	<i>H</i> – Statistic
Kenya	1994-2001	0.58
Ghana	1998-2003	0.56
Nigeria	1994-2001	0.67
South Africa	1994-2001	0.85
North America (median)	1994-2001	0.67
South America (median)	1994-2001	0.73
East Asia (median)	1994-2001	0.67
South Asia (median)	1994-2001	0.53
Western Europe (median)	1994-2001	0.67
Easter Europe (median)	1994-2001	0.68

Source: (Claessens & Laeven 2003; Buchs & Mathisen 2005)

It can be seen from the above table that an *H* statistic of between zero and one seems to be the ‘default’ result of this applying this methodology and therefore the usefulness of this model is highly questionable¹³. In banking in particular, full monopoly or perfect competition are unlikely. Furthermore, the model is based on several restrictive assumptions including that banks are operating in (long run) equilibrium.

Some authors using this model do to recognise this problem. For example Buchs and Mathisen (2005) state “what constitutes equilibrium in the banking sector remains elusive” (p 15) and “cross-country comparisons should be treated with caution¹⁴” (p. 17).

¹³ For example Buchs and Mathisen (2005) find that only significant result of their empirical work is that bank profits are highly correlated to the treasury bill rate and “banking sector and the government are trapped in a co-dependency scheme” (p 20)

¹⁴ Buchs and Mathisen (2005) note that the *H* statistic implies Ghana is only slightly less competitive than Nigeria, yet it is known that Nigeria has significantly lower spreads than

Surprisingly, they justify continuing to use this model by stating that they are “following existing literature” (p 16).

However, many authors do not seem to recognise the limitations of this methodology. Mugume (2006) uses the Panzar and Rosee methodology to analyse the competitiveness of the Ugandan banking sector from 1995 to 2005 and again finds H statistic with a value of 0.28 on average for the entire period, 0.40 for the 2000-2005 period and 0.31 for the 1995-1999. He argues that this displays that the Ugandan banking sector is characterised by monopolistic competition with improved competition in the later period, due to “cleaning up of the sector” (Mugume 2006 pp., 39). The H-statistic calculated is used a measure of competition and regressed against concentration. The author argues that concentration negatively affects competition. However, concentration did not change dramatically in the period under consideration and there is little specific analysis as to why competition improved during the period.

Musonda (2008) uses the Panzar and Rosee methodology to analyse the competitiveness of the Zambian banking sector from 1998 to 2006. Table 3 below summarises his results.

Table 3: Summary of H Statistic for Zambia from Musonda (2008)

<i>H</i> – Statistic	
Total Revenue (all banks)	0.711
Interest Revenue (all banks)	0.721
Foreign Banks (total income)	0.678
Local Banks (total income)	0.594
Foreign Banks (interest income)	0.64

Ghana. Furthermore, H- statistic calculated by Claessens and Laeven (2005) for USA is 0.41 (p. 30 table 2) – the lowest in their sample. Their results contradict Shaffer (1989).

Local Banks (interest income)	0.654
Large Banks (total income)	0.592
Small Banks (total income)	0.656
Large Banks (interest income)	0.656
Small Banks (interest income)	0.667

As over the 5 largest banks in Zambia control over 80% of the industry, concentration ratios would imply that the industry is oligopolistic (Musonda 2008). However, using the Panzar-Rosse model, the author argues that “key findings of the study are that Zambian banks earned their income under conditions of monopolistic competition. The *H*-statistic derived from the interest income specification is greater than that obtained with total income suggesting that commercial banks still regard traditional banking activities as important” (Musonda 2008 pp., 42). The author’s bias towards foreign banks is also evident, as it is argued “Estimates for bank ownership indicate that foreign banks compete more intensely than domestic banks, supporting evidence from previous studies” (Musonda 2008 pp., 42). This is despite the fact that the authors own data shows that a rather mixed picture - whilst competition is higher amongst foreign banks for total income, it is lower when looking at interest income. In the introduction, the author highlights that the Bank of Zambia believes that the strong control of foreign banks is a problem for the market (Bank of Zambia 2004). Yet, the author does not address this question in light of the results of his model. The author is also surprised that there is higher competition amongst small banks than large banks and argues that large banks have a higher regulatory burden.

I would like to argue that whilst this paper is extremely sophisticated in its application of econometric and panel data analysis it reflects a poor understanding of the exact nature of competition in the Zambian banking market, in particular the social and historical factors that are shaping reputation and competition of banks.

I think it is more useful to try and assess the exact nature of competition and whether it actually led to improvements in performance or not. This sort of analysis has been carried out in an interesting study that links competition issues to bank failures in Zambia by Maimbo (2002). The author highlights that besides monitoring CAMELS, the analysis of other factors such as the business strategies of local banks, for example, over reliance on cost-based competition, would have revealed weakness in banks that later failed (Maimbo 2002).

1.6 Studies on the Efficiency of Banks in Africa

Another recent trend in the literature has been to estimate the efficiency of banks in SSA. This follows the trend in mainstream literature where there are innumerable studies that attempt to move beyond a simple comparison of financial ratios to econometric modeling measuring the efficiency of financial institutions using frontier analysis. In this section I will discuss briefly the theory of frontier analysis followed by the application of this type of analysis to banking in SSA. The main aim of this section is to show that this form of analysis is becoming dominant in the research on banking in SSA and is based on a false sense of rigour of the analysis. Even if this sort of methodology is accepted, the papers discussed here can be criticized in their own terms. I will also discuss more serious methodological issues with this type of analysis and show that they do not generate a deeper understanding of the banking system in SSA.

Frontier analysis involves the establishment of a benchmark or frontier and the distance of a firm from the frontier is the extent of the firm's (in)efficiency. The frontier is usually established in terms of technical or cost efficiency (maximum output for given input) or allocative efficiency (given output for minimum input). Hasan (2005) provides a good, critical summary of the theoretical underpinnings of these studies and highlights that theoretically, allocative and technical efficiency measure different concepts, even though they are used inter-changeably in the empirical literature.

The majority of empirical studies follow two stages. In the first stage, (in)efficiency from the frontier is measured. The two most common methods of measuring efficiency are:- parametric stochastic frontier analysis (SFA) or a non-parametric development envelope analysis (DEA). The models of the output and input functions have become highly sophisticated deploying translog or flexible functional forms in favor of the more traditional Cobb-Dougllass production function. It should be noted, that this frontier

analysis can be applied across a variety of industries. In studies of banking, there are no consistent measures of input or output used to define the frontier. Input measures used include labor costs, physical capital costs and costs of deposits or total value of deposits. Measures of output used include the total value of loans, total assets, income from loans or off balance sheet variables. Following Fare, Grosskopf et al (1994), the efficiency results are sometimes decomposed using a Malmquist decomposition into technical efficiency and technological change, with the former further decomposed into a pure efficiency change and scale efficiency change, to understand changes over time or between companies or between regions.

In the second stage of the analysis the calculated measures of (in)efficiency are then used as a dependent variable in a model with selection of determinants of (in)efficiency as independent variables. Berger and Humphrey (1997) provide a summary of 121 studies in 21 countries based on these efficiency models, and though they are generally proponents of this method, they raise several limitations of the studies some of which will be discussed below.

Here I discuss two such studies in SSA - Egesa (2006) who attempts to understand the efficiency of banks in Uganda and Aikaeli (2008) whose analysis looks at banks in Tanzania.

Reforms of the financial sector in Uganda started in 1992 and Egesa (2006) measures the changes in efficiency or productivity from 1993 – 2005 for 11 banks¹⁵. Productivity or efficiency is measured using non-parametric Malmquist Index. At an aggregate level, the author finds an overall decline in productivity from 1993 – 2005. However, the steep decline in productivity after 1993, is slightly reversed by the increase in productivity from 2002 (Egesa 2006). Results for productivity change at an individual bank level are shown in Table 4.

¹⁵ The total number of commercial banks in Uganda was 15 in 1993, which increased post liberalization to 20 banks in 2000 but then decreased to 15 in 2004 (Egesa 2006)

Table 4 : Bank and ownership efficiency change measures in Uganda 1993 – 2005

Bank	Ownership	Technical Efficiency change index	Technological change index	Pure efficiency change index	Scale efficiency change index	Total factor productivity change index
1	Foreign	0.997	1.009	0.996	1.001	1.006
2	Foreign	1.000	1.013	1.000	1.000	1.013
3	Foreign	1.000	0.982	1.000	1.000	0.982
4	Local	0.985	1.021	0.992	0.993	1.006
5	Local	1.000	0.974	1.000	1.000	0.974
6	Foreign	1.000	0.999	1.000	1.000	0.999
7	Foreign	0.994	1.011	0.996	0.999	1.005
8	Local	1.000	0.984	1.000	1.000	0.984
9	Foreign	1.000	0.975	1.000	1.000	0.975
10	Foreign	1.000	1.025	1.000	1.000	1.025
11	Foreign	0.994	0.980	0.998	0.996	0.974
Mean		0.997	0.997	0.998	0.999	0.995

Source: Egesa (2006)

The author argues “improvements among four foreign banks and one local bank over the entire period, explained entirely by technological improvements. There were no changes in pure and scale efficiency for the majority of banks. However, three foreign banks had a decline in pure efficiency compared to one local bank. The same local bank also had a decline in scale efficiency although the gains in technological efficiency were more than enough to offset the decline in efficiency change” (Egesa 2006 pp., 23). Besides giving an explanation of the results, this analysis does not give us any meaningful understanding of the changes in efficiency banking system in Uganda from 1993 – 2005, including what sort of technological improvements were taking place.

In the second stage, the author then assesses the determinants of productivity using two way error components model. The results are summarised in Table 5¹⁶.

Table 5 : Regression Results of the Determinants of Productivity in Uganda

VARIABLE	MEASURED BY	EXPECTED SIGN	HYPOTHESIS	EMPIRICAL RESULTS
Size	Assets of bank / Total assets of banks in industry	+ve	Economies of scale, large size → high productivity	-ve but not significant at 10% level
Capital Adequacy	Core Capital / Risk Weighted Assets	+ve	high capital → high productivity	-ve
Asset Quality	Non-performing Loans / Total Loans	-ve	High non performing loans → low productivity	+ve but not significant
Shareholder Stake in Bank	Equity / Total Assets	+ve	High shareholder stake, reduces agency problems → high productivity	+ve
Liquidity	Total Assets / Total Deposits	-ve	High (excess) liquidity → low productivity	+ve

¹⁶ The author gives results for 3 different estimates, a random period effects model, a fixed cross section and random period effects model and a fixed cross section and period effects. The results quoted here are for the third - fixed cross section and period effects model which has the highest adjusted R-squared.

VARIABLE	MEASURED BY	EXPECTED SIGN	HYPOTHESIS	EMPIRICAL RESULTS
Return on Assets	Return on Assets	+ve	Higher profits lead to increased productivity	+ve
Adjusted R-squared				0.0652

Source: Egesa (2006 pp., 26)

It should be noted that very little thought has been put into deciding the independent variables in particular return on assets. It is tautological to use return on assets as an independent variable. This variable is an output that is used to calculate the efficiency frontier in the first stage. Therefore, it is not surprising that the most significant variable¹⁷ in the model is return on assets. Furthermore, whilst the level of econometrics applied is sophisticated, there is little analysis as to why the results of the analysis are in most cases opposite as to what would be expected.

The second study by Aikaeli (2008) is based on the banking system in Tanzania using data from 1998 – 2004^{18,19}. The author carries out non-parametric DEA, non-parametric Malmquist indices of efficiency change and parametric SFA. The paper is useful as it makes some attempt to understand the segmentation in the market as the efficiency indexes are calculated for different segments²⁰. Results for productivity change at segment level are shown in Table 6.

¹⁷ With a t value of 4.09, it is significant even at the 0.1% level.

¹⁸ It is not clear from the study the number of banks that are included in the sample.

¹⁹ This paper is based on research done by the author during this PhD thesis which was awarded in 2006 by University of Dar-es-Salam, sponsored by the AERC's Collaborative PhD Programme.

²⁰ It is not clear why for the non-parametric approaches the banks are divided into three groups – large banks, international banks and small banks, yet for the parametric they are divided only into two groups - large banks and small banks.

Table 6 : Bank and ownership efficiency change measures in Tanzania 1998 – 2005

Group	Technical Efficiency change index	Technological change index	Pure efficiency change index	Scale efficiency change index	Total factor productivity change index
Large Private Owned	1.000	1.131	1.000	1.000	1.131
Large Foreign Owned	1.000	1.056	1.000	1.000	1.056
Small Private Owned	1.002	0.992	1.000	1.002	0.994
Mean	1.001	1.058	1.000	1.001	1.059

The results indicate that the largest change in productivity occurred amongst the large private owned banks, and that overall productivity in the small private owned banks went decreased. However, it should be noted that this finding contradicts the results of the other 2 models – in the DEA, the productivity of small banks increased and according to the SFA analysis, the inefficiency of small banks decreased.

In the second part of the analysis, the indexes of in-inefficiency calculated through the parametric SFA model are regressed against determinants of inefficiency using a Tobit model. The results of the analysis are summarized in Table 7.

Table 7 : Regression Results of the Determinants of Bank (In)efficiency in Tanzania

VARIABLE	MEASURED BY	EXPECTED SIGN	HYPOTHESIS	EMPIRICAL RESULTS
Size	Assets of bank / Total assets of banks in industry	-ve	Economies of scale - Small size → high inefficiency	+ve and significant
Capital Adequacy	Spending on capital goods (fixed assets, office fittings)/non-tax expenses	- ve	Low capital → high inefficiency	-ve and significant
Assets quality	Non-performing Loans / Total Loans	+ve	Low asset quality → high inefficiency	Not significant
Labour compensation	Salaries and Remuneration / Other Non-Tax Expenses	-ve	Low compensation → high inefficiency	-ve and significant
Excess Liquidity	Liquidity – Statutory Liquidity	+ve	High (excess) liquidity → high inefficiency	+ve and significant
Pseudo R squared				-0.1634

Source: Aikaeli (2006 pp. 101, 135)

The analysis has serious flaws even within its own terms. The use, by Aikaeli, of expenditure on capital goods as the measure of capital adequacy shows a clear lack of understanding of a bank's balance sheet. Capital in this context, is the equity of the shareholders and clearly very different from expenditure on capital goods that is used for industry. Again there is no clear attempt to understand the why the variable size gives the opposite result expected, or why asset quality which according to theory would be a significant determinant of efficiency is not significant.

Both these papers are from the mainstream, but I would like to argue that they do not meet the standard set by good mainstream economists. They do not acknowledge some of the limitations of efficiency models highlighted by even the strongest proponents of this method of analysis. Berger, Hunter et al. (1993) highlight that the key difference between the parametric SFA and the non-parametric DEA is that they maintain different assumptions about the probability distribution of banking data. They caution that there is no simple rule for determining the true distribution of banking data and stress that this is extremely problematic as the choice of measurement method strongly affects the measurement of inefficiency (Berger *et al.* 1993). Both papers do not attempt to understand how this limitation would impact their analysis. Egesa (2006) uses non-parametric model on the grounds that a parametric model requires large data sets which are not available for these countries. However, if the banking process in these specific countries is characterised largely by stochastic elements, then the non-parametric approach may not be appropriate (Hasan 2005). Based on the discussions by Berger, Hunter et al. (1993) it should not come as a surprise that when Aikaeli (2006) carries out all three methods - non-parametric DEA, non-parametric Malmquist decomposition and a parametric SFA, and as the cases in which these different methods, he gets conflicting results (as discussed above). What is surprising, is there is no attempt made to understand why each of the method gives different results in the context of the banking

Again, even if we view these papers from a mainstream perspective, these papers can be criticized as they draw strong conclusions on extremely weak basis. Using the DEA model, the average efficiency of all banks during the period is Tanzania is 97.4% and therefore it is concluded that "The *remarkable* comment from the findings of this study is that efficiency status of commercial banks in Tanzania is *not disappointing* to the financial

sector reforms because the *scores* turned out to be fairly high” (Aikaeli 2008 pp., 20)²¹. This conclusion is based on a comparison with efficiency scores of 25 other studies based on frontier models in various countries where even developed countries such as the UK scores 83.3 and Italy scores 80 (Aikaeli 2006 , Appendix 9). This sort of simple comparative analysis is not justified considering that each study or country will have had a different input / output combination used to measure the frontier. This conclusion is also startling in light of all the problems of the Tanzanian banking system, including regionally low levels of credit to the private sector and high margins, that the author highlights in the introduction to his thesis (Aikaeli 2006). Based on the negative coefficient between size and productivity Egesa (2006) concludes “there is also a need to relax entry requirements by way of relaxing the capital requirements. The findings on the determinants of productivity suggest that there is room for increased productivity if rather than blocking entry by way of higher requirements; more pro-competition measures are pursued”(Egesa 2006 pp., 29). It is astonishing how this conclusion can be reached when in all three model specifications bank size is not a significant determinant of productivity²².

In heterodox terms, six methodological criticisms can be raised of this type of frontier analysis. First, in the second stage of analysis, there are innumerable factors that can influence efficiency - agency problems, regulation issues, legal issues, organisational issues, scale and scope issues, CAMELs issues. The tendency in the analysis is to use a ‘pick-and-mix’ approach to choose the independent variables as the determinants of efficiency²³.

Second, the link between bank efficiency and intermediation is not necessarily direct. It is argued, “If these institutions are becoming more efficient, then we might expect improved profitability, greater amounts of funds intermediated, better prices and service quality for consumers, and greater safety and soundness if some efficiency savings are applied toward improving capital buffers...” (Berger *et al.* 1993). Whilst efficiency may

²¹ Emphasis added.

²² Again there is a tendency to make simple conclusions on size and competition that were discussed Section 5

²³ Refer to the general criticisms of this type of analysis in section 4 with reference to growth equations.

lead to more profitable institutions, it is a leap of faith to assume that technical or allocative efficiency will automatically lead to or lower margins for clients, or higher intermediation or increased safety of institutions.

Third, due to specialization of banks, it is problematic to assume that all banks produce a homogenous output and operate on the same efficiency frontier (dos Santos 2007) . Fourth, the nature of a lending decision means that there will be several cases in which a bank rejects applications in which does not meet its criteria particularly in terms of repayment. This decision is likely to improve the efficiency of the bank and reduce future non-performing loans, yet in the above analysis this would imply use of an ‘input’ without any corresponding increase in ‘output’ (dos Santos 2007). Fifth, this analysis does not capture non-price or social factors that are extremely important in the lending decision undertaken in developing countries (dos Santos 2007). Finally, and most crucially the analysis cannot account for the impact of segmentation of the market, which again means that it is unrealistic to assume that banks operate on a single efficiency frontier.

1.7 Studies on the Excess Liquidity of Banks in Africa

One of the first studies to recognize and highlight the problem of excess liquidity of asset portfolios is Nissanke and Aryeetey (1998). From a regulatory point of view, excess liquidity is not a problem.²⁴ However in terms of the role of banks as intermediaries excess liquidity presents and inability of banks to lend long term and voluntary credit rationing (Nissanke & Aryeetey 1998; Kagira & Kirkpatrick 2001). Before liberalization, excess liquidity is attributed to the high level of reserve requirements, set at between 40-80% by central banks in SSA (Nissanke & Aryeetey 1998). However, as described in chapter 1, post-liberalization, excess liquidity remains high.

²⁴ The Central Bank of Kenya does not view excess liquidity as a problem. In fact, banks are rated according to their liquidity. Therefore successive reports state “overall liquidity was strong as in the previous year. Thirty six institutions with a combined market share of 77% were rated strongly with only one bank with a market share of 5% was rated unsatisfactory” (Central Bank of Kenya, 2003 p. 23).

It has been suggested that the reasons for highly liquid asset portfolios are:- the inability of banks to assess risks (Nissanke & Aryeetey 1998), the high level of non-performing loans which make banks extremely cautious (Nissanke & Aryeetey 1998), a ‘co-dependency syndrome’ between government and banks where banks invest heavily in government securities (Buchs & Mathisen 2005) and the lack of acceptable and “bankable” loans applications (Honohan & Beck 2007).

Aikaeli (2006) carries out an econometric study to understand the causes excess liquidity in Tanzania from 1999 – 2004. In Tanzania, the statutory level of liquid assets is 20% whereas during this period, the average liquidity was 53% (Aikaeli 2006) The results are summarized in Table 8.

Table 8 : Causes of Excess Liquidity in Tanzania 1999 – 2004

Independent Variable	Hypothesis	Expected Sign of Correlation Co-efficient	Results of Simple ADL model	Results of Error Corrected ADL model
Statutory reserve requirements	Increase in statutory reserves would lead to a reduction in excess liquidity as banks move liquid assets to reserves	-ve	-ve	3 rd and 4 th order lags are +ve and significant
Deposit holders’ cash preferences (measured as deviations from average cash held by banks)	Higher volatility of demand of cash leads to higher excess liquidity	+ve	+ve	Not included in the model presented
Illiquidity cost (measured as	Higher cost of borrowing from	+ve	+ve and but not significant	3 rd order lag is +ve and

Independent Variable	Hypothesis	Expected Sign of Correlation Co-efficient	Results of Simple ADL model	Results of Error Corrected ADL model
banks' borrowing rate)	market leads to higher excess liquidity			significant
Credit Risk (measured as deviation of returns of loans from average)	More following income stream from loans lead to higher excess liquidity	+ve	+ve but not significant	Unlagged variable is +ve and significant
Past excess liquidity				-ve and significant

Source: Aikaeli (2006) pp. 102, 151, 152

Several criticisms can be raised about this analysis. First, the simple ADL model is found to be co-integrated and the co-efficients are not significant and therefore one can question the validity of the conclusions that the author draws from the results. Second, there is also little explanation as to why deposit holders' cash preferences is not included in the final 'parsimonious' specification of the ADL ECM model that is presented when theoretically this is thought to be a key determinant of excess liquidity. Third, the same author, when trying to understand the efficiency of the banking system, attempted to understand the difference between segments; yet this is not carried out for the analysis of liquidity. Fourth, it is not clear how from this analysis the author then concludes that high T-bill rates are leading to excess liquidity (pp. 167). Again, this has become typical of some of the work sponsored being carried out by young African economists where deeper understanding is clouded by a focus on econometric analysis.

It should be noted, that in the papers discussed above, even the mainstream economists such as Honohan and Beck (2007), have relied on qualitative interview or survey data to understand the issue of excess liquidity. In summary it can be argued, that whilst these studies form a useful starting point, they fail to recognize the importance of segmentation. As I will show later, the causes of excess liquidity may vary for different segments of the banking sector in Kenya.

1.8 Studies on the Ability of Banks to Raise Deposits in Africa

It has been argued that the low ratio is also affected by capital flight as Africa has amongst the highest ratios of offshore deposits to domestic bank deposits (Honohan & Beck 2007). There has also been recognition that amongst government owned banks, there is an over-reliance on government and parastatal deposits. Besides this, there is very little work done on the constraints that banks face in raising deposits.

1.9 Studies on Bank Failures in Africa

Authors that have specifically tackled the issue of bank failures in Africa are Brownbridge (1998a), Brownbridge (1998b), Kane and Rice (2001), and Daumont et al (2004), Alashi (2002) and Kirpatrick and Kagira (2001).

Daumont et al 2004 is a cross country analysis of bank crises in Africa. They attempt to give overview of what went wrong with banking systems in SSA but even in their own words “with a broad brush, illustrating major themes” (Daumont *et al.*). They consider a list of factors that can contribute of financial system fragility. This includes:-

- 1) operating environment (macro environment, exogenous shocks, lack of diversification of economy)
- 2) market structure (bank ownership, bank concentration, sources of bank funding)
- 3) bank’s conduct (internal governance and lending practices)

They then find evidence of existence of these factors in different African countries. This ‘pick and mix’ analysis glosses over country specific complexities and peculiarities that are essential to understanding the causes of bank failures.

Kane and Rice (2001) suggest that the two main causes of financial distress in Africa are (a) depositors’ inability to monitor banks due to depositors’ inability to obtain information on bank’s condition and also act on this information (b) failure of regulation to counteract these weaknesses due to limited fiscal capacity and incentive conflicts. Both factors make it more likely for banks to experience runs based on false information. Therefore they form a testable hypothesis where the persistence of unresolved loan losses in a country’s banking system is directly related to press restraint (PR) (used as a measure for lack of information) and corruption (C) (used as a measure for regulatory failure). Kane and Rice (2001) run a regression with number of years that a country has

experienced financial stress as a dependent variable with GDP, PR and C as the independent variables. They find that only C has a significant co-efficient. Not only are the proxies used for PR and C highly questionable but again the same criticisms applied above to Daumont et al 2004 can be leveled against this approach.

In the case of Nigeria, Alashi (2002) identifies the causes of bank distress as 1) inhibitive policy environment, capital inadequacy, economic downturn, management problems and political interference.

Brownbridge (1998a) is a detailed analysis of bank failures in Kenya, Nigeria, Uganda and Zambia up to 1995. It uses the P-A framework and highlights factors that led to bank owners' taking excessive risk with depositors' money. As a starting point it, recognises the segmentation in African financial markets and makes the useful distinction between foreign-owned banks (foreign banks), government-owned bank (government banks) and locally-owned banks (local banks). The author concentrates on analysing the failures of local banks. Factors highlighted are "low level of bank capitalisation, access to public sector deposits through political connections of bank owners, excessive ownership concentration, and regulatory forbearance²⁵...and high costs of deposit mobilisation" (Brownbridge 1998a p. 186). The author concludes that regulatory policies need to enhance the incentives faced by banks to take lower levels of risk.

Mpuga (2002) analyses the impact of new bank capital regulation that came into effect in December 1996 on local bank failures²⁶ that occurred in 1998-99 in Uganda²⁷. He finds

²⁵ Interestingly they find that deposit insurance was prevalent but not a crucial factor in contributing to moral hazard as the level of deposit insurance was very low. However, there was a high level of liquidity support provided by the Central Banks for long periods before banks were closed. This regulatory forbearance was an important factor in increasing moral hazard of bank owners / managers. (Brownbridge 1998 p. 182).

²⁶ Between 1998-99 four banks – International Credit Bank Ltd., Greenland Bank Ltd, The Co-operative Bank Ltd and Trust Bank Ltd were closed. The author classifies the first 3 as local banks and Trust Bank as a foreign bank. However Trust Bank was a subsidiary owned by the Kenyan Trust Bank, and therefore a local bank, if ownership is considered on an East African basis rather than solely Ugandan basis.

that: 1) there was no significant break or change in trend after the new regulation came into place 2) foreign banks performed well after new regulation came into place however 3) local banks “suffered more in terms of reduction in capital and increased risk” (p. 236) 4) capital regulation did not lead to the failure of local banks but “failure seems to have been rooted more in internal problems” (p. 233). Whilst this work is useful in highlighting that regulation can have differential impact on foreign and local banks, it does not go far enough in explaining why these differences occur. Furthermore, I would like to argue that the author is asking the question from the wrong end. Instead of asking whether capital requirements led to bank failures, it would be more useful to ask – why did the introduction of capital requirements not prevent banks from failing?

1.10 Studies on the Banking Sector in Kenya

Having reviewed the literature on banks in SSA, I turn specifically to literature on the banking sector in Kenya with reference to each of the debates discussed above.

The credit for the facility (loan) to begin the financial sector liberalization process in Kenya was approved in June 1989, and by July 1991, interest rates were fully liberalized. Ngugi (2000), provides a good summary of the pre-liberalization macroeconomic imbalances, details on the liberalization process and also a synopsis of post-liberalization indicators. Liberalization did not achieve the expected aims of resource mobilization – increase in real interest rates led to an increase in the deposit ratio but advances as a percentage of deposits declined (Ngugi 2000). However, as a mainstream economist Ngugi (2000) views this failures of liberalization purely in terms of poor sequencing. It is argued

“The sequencing of events in the financial sector, however, seemed to miss the set of preconditions – for example, interest rate liberalization was accomplished before a sound and credible banking system was achieved. Credit controls were relaxed and open market operations initiated when the financial sector was facing excess liquidity...”(Ngugi 2000 pp., 70). As said above, it is only post liberalization that ‘pre-conditions’ have emerged.

With reference to the empirical debate on the link between finance and growth, similar to Africa wide studies mentioned above, empirical work on Kenya suggests that financial

²⁷ The model used is based on simultaneous equations of between bank capital, portfolio risk, and risk-based capital requirements using the two-stage least square (2LS) approach.

savings are not responsive to real deposit rates (Oshikoya 1992; Kariuki 1993). Though there is a dissenter – Azam (1996) argues that if savings is measured in terms of national saving and not private saving, and if you control for external shock and use the square of the real interest rate as a proxy of level of financial repression, then, there is a positive and significant relationship between the real interest rate and national saving in Kenya in the period 1967-1990. Again, the various arguments discussed above regarding this type of empirical work also apply here.

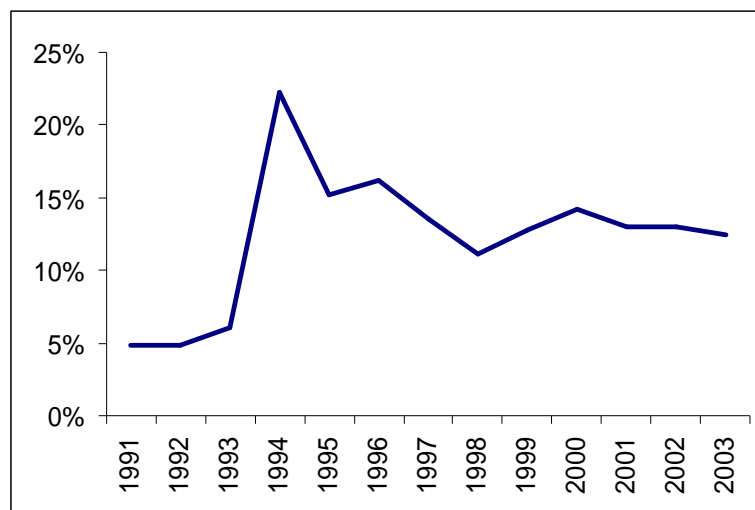
Kamau et al (2004) construct the Hirschman-Herfindall Index (HHI) and concentration ratios and conclude that the Kenyan banking sector is characterized by oligopolistic market structure. This leads to a policy conclusion that minimum capital standards should be reduced to a “reasonable” (p. 36) level to increase competition²⁸. They reach this conclusion despite recognizing that capital requirements are necessary for the stability of the banking system and that “most banks that fall under the category of under-capitalisation are the ones that eventually collapse” (p.34). Similarly, Kirkpatrick and Kagira (2001) argue that the CBK policy from 1999 onwards of encouraging bank mergers is whilst useful in preventing bank failures is leading to an oligopolistic market structure that will in turn exacerbate the problem of access to finance, in particular in the rural areas. I do not agree with this synopsis. Not only are small banks fragile, they also lack the resources to extend credit to rural areas. Furthermore, experience has shown that a large number of small banks have not led to the anticipated increase credit or resolved the issues of access to long term finance faced by growing enterprises²⁹.

There has been significant econometric work done attempting to understand the causes of interest rate spread in Kenya. Figure 2 shows the trend in interest rate spread after liberalization. Immediately after liberalization, the spreads jumped dramatically. Though they have fallen from the highs of 1993, they are still relatively high.

²⁸ They argue that “since banks that had initially met the capital requirements had effective increase in capital [after regulation was put in place], it is a fair assumption that reduction in capital requirements would lead to effective increase in capital and a more competitive banking system” (p. 36). I do not think this is a reasonable argument.

²⁹ See data on Kenya in Section 4 below.

Figure 2 : Trend in Interest Rate Spread in Kenya 1991 – 2003



Source: Ngugi (2004)

Using national level, time series data from 1991 - 1999, and bank level panel data from 1998 – 2002, Ngugi (2001) and Ngugi (2004) to analyse the causes of the high interest rate spreads.

Surprisingly, the extremely high treasury bill rates post liberalization, which are widely believed to have led to crowding out of lending to the private sector are found to have a negative relationship in the short run and an insignificant relationship in the long run (Ngugi 2001). However there is no clear explanation for this. The studies find that non-performing loans (NPLs) are a significant determinant of the high interest rate spread. It is argued “wide interest spread is sustained by inefficiency in the credit market. For example, high non-performing loans signal high credit risk to which the banks respond by charging a premium, and this keeps the lending rates high (Ngugi, 2004 p. 27). Though not explicitly stated in the paper it is useful as it highlight that the 2 factors are inter-linked – high non-performing loans lead to higher spreads but high lending rates in turn increase default risk and non-performing loans in the future. Policy suggestions that results from the study include, the need improve inefficiency in the credit market include “ensuring enforcement of financial contracts and also by individual banks building information capital and enhancing management quality” (Ngugi 2004 p. 27). However, besides pointing to the poor legal environment, there is very little analysis as to why loans go bad in the first place.

As shown in Appendix 2, there have been bank failures in Kenya, pre-liberalization, immediately post liberalization and then from 1998 – 2003. Brownbridge (1998b) outlines the political factors that influenced bank failures in Kenya during the first 2 periods. “Political connections were used to secure public sector deposits and in several cases to circumvent the requirements of the banking laws.....Their dependence on political connections to obtain funds in turn influenced lending decisions, with adverse implications for the quality of the loan portfolio” (Brownbridge 1998b).

The regulatory failures that contributed to bank failures have also been analysed by Kirkpatrick and Kagira (2001). Their main source of information is from interviews conducted with Central Bank of Kenya (CBK) officials. They identify the causes of banking crises as:

- 1) Liberal Licensing Policies – prior to amendment of the Banking Act in 1985 the Finance Minister had absolute power to grant licenses and licenses were issued without due regard to the quality of management staff proposed to run the banks or that the capital raised was adequate
- 2) Lack of regulatory independence – the Finance Minister was able to exempt banks from the provisions of the Act even. Banks that had been identified by the CBK to be in breach of the regulations were allowed to continue functioning.
- 3) Insider Lending to bank directors – over 80% of bank failures can be attributed to unsecured lending to directors of the banks
- 4) Non-performing loans – this problem was compounded due to a regulatory loophole that allowed banks to continue accruing interest on non-performing loans and expending these through dividends
- 5) Under-Capitalisation – again a loophole allowed banks to revalue assets to cover hide capital shortfalls
- 6) Forbearance of errant banking institutions - regulations that were in place was not followed. For example, regulation restricted investment in real property to 15% of total deposits. However, these regulations were not enforced.

They then study the changes in regulation policy. Several of the loopholes identified above have now been amended in theory – that is in the Act. However they identify 4 major remaining weaknesses – lack of regulatory independence, the lack of clarity on

circumstances under which CBK can intervene, lack of legal provision for the development of credit bureaus and inadequate capacity of CBK to carry out supervision. There are not studies that have attempted to understand the causes of bank failures from 1998 – 2003.

In summary, it can be argued that the majority of studies on the banking sector in SSA and Kenya have focussed on quantitative analysis. There is some qualitative work on regulatory failures, but there is very little qualitative analysis focussing on the constraints that banks face either in terms of raising deposits.

1.11 Segmentation of Banking Sector in Kenya

I would like to argue that the key to understanding the performance of the banking system in Kenya is to understand the segmentation in terms of ownership and size. Whilst the segmentation between formal and informal finance is well documented, very few authors have attempted to understand the segmentation *within* the formal financial sector. In an early study, it was noted that the Kenyan banking system remains largely oligopolistic with the 3 large banks – Barclays Bank, Standard Chartered Bank and KCB operating an informal cartel in setting interest rates and charges (Brownbridge 1998b). These banks are protected by their size, their reputations for deposit safety, their extensive local branch networks and their international links (Brownbridge 1998b)³⁰.

One of the most interesting recent papers on the Kenyan banking system is from the mainstream. Beck and Fuchs (2004), who work for the World Bank, use data collected during the IMF-World Bank FSAP of Kenya³¹. They decompose the interest rate spread and analyse the structural factors underlying the high spreads

³⁰ Recently KCB has experienced severe level of non-performing loans but has survived due to government support as it is considered ‘too big to fail’.

³¹ FSAP stands for the joint IMF-World Bank Financial Sector Assessment Programme. The IMF & World Bank encourage countries to release the findings of FSAPs and the country reports for some countries are available on though their web page <http://www.imf.org/external/np/fsap/fsap.asp>.. However, the results for Kenya are not in public domain. Therefore this working paper provides extremely interesting results from data that is not widely available.

and margins³². It begins to attempt to understand the segmentation in the banking industry and recognises 3 segments – foreign banks, government banks and local banks separately³³. The results are displayed in Table 9.

Table 9: Decomposition of Interest Rate Spreads in Kenya (%) 2002

	All Banks	State-owned banks	Domestic private	Foreign banks
Overhead cost	5.6	4.4	5.3	6.6
Loan loss provisions	2.5	4.9	1.5	1.8
Reserve requirement	0.3	0.3	0.4	0.2
Tax	1.9	2.2	1.6	2.1
Profit margin	4.5	5.2	3.7	4.9
Total spread	14.9	16.9	12.5	15.5
Return on assets (after tax)	1.4	-0.4	1.0	3.0

Source: Beck and Fuchs (2004)

They begin their argument based on the liberalization agenda that “Cross-country comparisons have shown the benefits of foreign bank ownership for developing countries...they impose competitive pressure on domestic banks, increasing efficiency of financial intermediation” (Beck & Fuchs 2004 pp., 4). However, from the decomposition of interest rates exercise, it is recognised, though not explicitly, that foreign banks cannot be termed the most efficient as the spread they charge, whilst lower than government banks is much higher than private banks (Beck & Fuchs 2004). There is belated recognition that “foreign bank entry is not a panacea” (Beck & Fuchs 2004 pp., 5).

³² Interest rate spread is the difference between the deposit and lending rates. The net interest margin is the net interest revenue relative to total earning assets (Beck and Fuchs, 2004).

³³ I would like to argue that there is segmentation even within the local banks in terms of size and this will be discussed in details in chapters that follow.

Overhead costs and loan loss provision form the bulk of the interest margin and the authors argue that these are because of high wage costs and a deficient legal framework (Beck & Fuchs 2004). More interestingly there is an explicit recognition of the segmentation leading to a high profit margin for foreign and government banks and that this segmentation is based on reputation (Beck & Fuchs 2004 pp., 13). “*Anecdotal evidence* suggests that most customers below the top tier of corporate and wealthy borrowers face a non-competitive banking market” (Beck & Fuchs 2004 pp., 11). Therefore whilst qualitative data has given one of the most interesting insights or helped to solve the ‘puzzle’ of ‘inefficient’ foreign banks, it is still referred to as ‘anecdotal’. There is also no explicit recognition that reputation is non-price factor and one would need qualitative data and social and historical analysis to understand this.

1.12 Interview Data on the Relationship between Banks and Depositors

For the rest of the paper I focus specifically on qualitative interview data on the constraints banks face in raising deposits. I analyse each of the segments of the banking sector and attempt to understand the constraints faced across the sector (in all segments) and those faced by just certain segments. The four segments that are analysed are: foreign-owned banks (FOB), the government-owned banks (GOB), large private locally owned banks (LPOB), small & medium private locally owned banks (SPOB)³⁴. The implications for mainstream theory and competition are then discussed.

Mainstream theory focuses on relationship between banks and their borrowers and the information asymmetry between them. The liability relationship, that is, between the bank and the depositor, is not analysed in depth as it is assumed that central bank in its capacity as regulator and lender of last resort provides the basis for this trust in this relationship.

³⁴ Banks are classified as LPOB and SPOB, on an economic measure - share capital of the banks. Banks with capital of KShs. 1 billion (USD 15 million) or more are classified as LPOB. However, as will be described in the analysis, segmentation is caused by several non-price factors including ethnicity of the owners and perceptions of depositors.

An in depth look into the banking sector in Kenya reveals that trust in banks by depositors is based on different factors for different segments of the sector. This in turn has a strong impact on competition.

FOBs are viewed as strong and safe as they have the backing of their foreign partner. A staff of a LPOB commented that he still kept his personal account with Barclays Bank even though the service was terrible because at least he could sleep soundly knowing that he would not lose his money.

Similarly GOBs are viewed as safe as they could be bailed out by the government. In fact the GOBs stated that they had no constraints in raising deposits.

Private owned banks in particular the SPOBs face several economic problems when raising deposits including the high cost of opening new branches and the high cost of introducing technology such as ATMs. LPOB are also not able to match the very small margins that FOB can give to their best clients. For example Shell in Kenya can borrow at LIBOR from Barclays Bank but a LPOB can not offer this rate.

However, trust in private owned banks is based largely on non-price and social factors in particular the ethnicity of the owners as there is no implicit large backer as in the case of FOB or GOB.

The majority of private banks in Kenya are owned by 2 communities – the Asian-Africans and the Kikuyu. In the past, these banks relied on their community networks to raise deposits and also monitor borrowers. In some cases there was also a reliance on government deposits if the owners were politically connected. Depositors also felt comfortable with the owners of the banks as they often shared a long history of doing business with owners.

However over time the close community links have broken down and both depositors and banks have had to form new strategies. The closure of 4 Asian-African banks in 1998 led to a flight to safety by depositors to FOB and GOB. Interestingly Bank of Baroda and Bank of India which are subsidiaries of banks owned by the Government of India have been the main beneficiaries of this flight to safety from Asian-African banks.

Similarly as the competitive environment changes, banks are beginning to feel restricted in their community. SPOB, Asian-African banks complain of being 'held to ransom' by their traditional client base which is very cost conscious. This has led banks to move away from relying on a few large depositors and attempt to get several medium sized or smaller depositors.

However LPOB and SPOB face several obstacles to their image based which is based on ethnicity of the owners. Quotes from semi-structured interviews emphasise this:

"We are also limited by our image as we are seen as a community bank. The average African feels an affinity to banks like Equity and Co-op" (Bank 6, SPOB)

"It is our reputation as an ethnic bank which makes it difficult to raise funds from the wider public" (Bank 7, SPOB)

Not only do banks view ethnicity as a barrier to their reputation, actions and strategies they are employing reflect how important a constraint it is. Bank 6, SPOB and Bank 7, SPOB both owned by Asian-Africans have recently hired British and African CEOs respectively to change the 'face' of the bank. Bank 5, LPOB also hired a British manager for their non-Asian branch.

"Our Karen branch which is in a non-Asian area is now our best performing branch. We hired relationship managers who knew the market in that area – the NGOs, churches and offered products that matched the customer profile in that area" (Bank 5, LPOB).

Furthermore, some of the LPOB that had a broader ownership base (Bank 3, LPOB and Bank 4, LPOB) did not express ethnicity as a constraint when raising deposits. Bank 4, LPOB and Bank 5, LPOB have also adopted a strategy of getting long term borrowing from multilateral donor agencies.

From this interview data, it can be argued that:-

- 1) The segmented nature of the banking sector implies that S-C-P performance and aggregate statistical analysis can reveal little about nature of the banking sector in Kenya.
- 2) The client base of each bank is highly differentiated. In some cases the bank do not consider their client base as their niche as they are trying to move away from this base but having difficulties doing so.

- 3) Economic factors influencing competition such as price can explain only part of competition taking place between banks.
- 4) Non-price factors such as trust and ethnicity imply that banks are not competing solely on price factors.
- 5) Barriers to entry in a segmented market can not be viewed narrowly in terms of minimum capital requirements of ability of foreign banks to enter the market but include perceptions of private owned banks.

1.13 Conclusions

This paper has argued that the majority of the work done on the formal financial sector in SSA and in particular work done by African economists is from the mainstream school. A critical analysis of the papers is provided with a focus on methodology. The usefulness of qualitative data to understand the sources of segmentation and fragility in the financial market has been demonstrated.

Appendix 1 : Major Bank Failures in Africa 1980 - 1997

Country	Period
Benin	1988-90
Burkina Faso	late 1980s
Cameroon	1987-1997
Central African Republic	1980s and 1994
Chad	1980s and 1990s
Congo	1980s and 1991
Cote d'Ivoire	1988-91
Ghana	1982-89
Guinea	1985, 1993-94
Kenya	1985-89, 1992, 1993-95, 1998-2003
Madagascar	1988
Mauritania	1983-93
Mozambique	1987 – 1997
Nigeria	1990s
Senegal	1988-91
South Africa	1977
Tanzania	1987, 1995
Togo	1993 - 1997
Uganda	1994
Zaire	1991-92
Zambia	1995

Source: Caprio and Klingebiel (1997)

Appendix 2 : Failures of Banks and NBFIs in Kenya 1984 – 2003

Period	Institution
1984-9	<ul style="list-style-type: none"> • Rural Urban Credit Finance • Continental Bank, Continental Finance • Union Bank, Jimba Credit Corporation • Estate Finance, Estate Building Society • Nationwide Finance • Kenya Savings and Mortgages • Home Savings and Mortgages • Citizens Building Society • Business Finance
1993-4	<ul style="list-style-type: none"> • International Finance Company • Trade Bank, Trade Finance, Diners Finance • Pan African Bank, Pan African Credit Finance • Exchange Bank • Post Bank Credit • Thabiti Finance • Export Bank • United Trustee Finance • Inter-African Credit Finance • Middle Africa Finance • Nairobi Finance Corporation • Central Finance Kenya • United Bank • Heritage Bank • Allied Credit
1995	<ul style="list-style-type: none"> • Meridien BIAO Kenya

1998	<ul style="list-style-type: none"> • Bullion Bank, Fortune Finance • Trust Bank • City Finance 	<ul style="list-style-type: none"> • Reliance Bank • Prudential Bank
2000	<ul style="list-style-type: none"> • Glad-Ak Finance 	
2002	<ul style="list-style-type: none"> • Delphis Bank 	
2003	<ul style="list-style-type: none"> • Euro Bank • Daima Bank • Prudential Building Society 	

Source: Brownbridge and Harvey (1998) and CBK Bank Supervision Report (various)

Notes to **Error! Reference source not found.**:-

- 1) Includes banks and NBFIs and building societies placed under statutory management by the CBK.
- 2) Post Bank Credit was a public sector bank and Meridien BIAO was foreign-owned; all others were owned by local private sector banks.
- 3) Where more than one FI is shown on the same line, they share common ownership.
- 4) Glad-Ak Finance was not put under statutory management but undertook voluntary liquidation.

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