Macroeconomic Cause-Effect Analysis of Government Debt on Interest Rates in Malawi

Betchani H. M. Tchereni, University of Malawi, Malawi Email: betchereni@gmail.com
Edward Chilima, FDH Financial Holdings, Malawi
Jayi-Murima Mlaliki, NEDBANK Malawi Limited

Abstract
This paper analyzed macroeconomic factors that affect the level of interest rates in Malawi for the period 1970 to 2010. Particularly the study aimed at investigating whether the stock of domestic debt led to particular levels of interest rates. The study found a negative and statistically insignificant relationship between total domestic debt and interest rates. On the other hand, interest rates in Malawi seem to depend much on the level of the Bank Rate which is the rate at which financial institutions borrow from the central bank as a lender of last resort. According to the results, increasing the bank rate by 1% was associated with a more than 1% increase in interest rates. In terms of policy therefore, recommend that the Reserve Bank of Malawi should lower the level of the Bank Rate so that private lending institutions can also lower their lending rates. This is the only way that will make credit not only accessible but also affordable which will end up increasing investments and consumption expenditure, the engine of economic growth and development.
Key Words: Interest rates, government expenditure, deficit financing, borrowing.

1. Introduction and Background

Malawi adopted various economic policies since independence in 1964, to ensure among other things, price stability, economic growth and development (Reserve Bank of Malawi, 2000). Until 1987, Malawi experienced a high rate of financial repressions, associated with administered interest rates and credit ceilings by the central bank. Less attention was paid to underlying macroeconomic conditions, especially inflation as well as demand and supply of investment funds. The main preoccupation at that time was to keep interest rates low, in order to reduce government expenses on interest payment and also to promote private investment (Mwega 2002). In 1987, government liberalized the financial sector starting with lending rates (Chirwa 2001), followed by deregulation of deposit rates in 1988. In 1989, the Reserve Bank Act 1965 and the Banking Act 1965 were amended to enact the Reserve Bank Act 1989 and Banking Act 1989. According to the amended act, the Central Bank was now empowered to pursue monetary policy by using market-based instruments. By 1990, all interest rates became fully liberalized. Since that time, the Bank Rate, among other variables, played a major role in determination of interest rates, RBM (2000).

Economic theory predicts that the adjustment of the Bank Rate leads to adjustment of interest rates in the financial system. This has been the case in Malawi that every time the Monetary Policy Committee of the Reserve Bank announces an adjustment of the Bank Rate, nearly all commercial banks also announce an adjustment usually of the same margin. As time progressed, government emphasized fiscal discipline, including minimized government over-expenditure. By 2005, government reduced domestic debt to GDP ratio to 15.9%, and domestic interest bill down to 5%. By the end of 2006, local debt to GDP ratio declining to 12.6%, down from 22.6% in 2004. This led to cancellation of up to 90% of foreign debt. Consequently, government demand to borrow domestically declined significantly, with the larger part of the fresh domestic borrowing only meant to finance maturing local debt. By the end of 2009, domestic debt as percentage of GDP declined to 7.5%.

The period 1970 to 2010 covers two spectrums of running government affairs, and is also a period where interest rates reached record levels. During the period, interest rates ranged between 8% and 60%. Furthermore, the period under study was a period of several major economic developments. First of all, it is during the period under review that the economy was liberalized. Secondly, the period under review was associated with increased government domestic borrowing, especially towards 2004, due to freezing of donor aid by both bilateral and multilateral institutions, Chirwa (2001). It is during the same period that government domestic borrowing was quite high, and interest rates swayed within the above range. This study assesses whether fiscal activity was a significant variable in interest rates formulation in Malawi. The major objective of this study was to analyze the impact of government expenditure and borrowing on interest rates in Malawi for the period between 1970 and 2010.

2. Literature Review

Christeinsen (2004) observed that first, government deficit rises from a need by governments to finance deficit positions that are not fully foreign financed, and secondly from implementation of monetary policy. Munthali (2009)

stressed the justification for government domestic borrowing, and concluded that governments worldwide have many activities to finance which creates more expenses than the available resources. In such cases, the governments have two options: either to cut down on spending and spend within resources, or indeed borrow or a combination of both. If borrowing (debt) is the option, governments will have to repay at some point, with interest.

Harvey et al (2007) observed that most government expenditures are meant to finance services such as defense, internal security, social services (education, health), and economic policies (subsidies). Over the economic cycle, government expenditure and revenue ought to balance. Regular government revenue comes from taxation. Where taxes fall short of the required revenues, governments resort to borrowing which takes the form of (a) short term loans from the sale of Treasury Bills, (b) medium to long-term loans in form of government stocks, and (c) non-market savings such as National savings bonds. In Malawi, most government borrowing is in the short term because the medium and long term bond market remains underdeveloped.

Bildiric and Ersin (2007) in their study on relationship between inflation rate, interest rate and domestic debt for developing nations concluded that an increase in domestic debt drives both inflation and interest rates upwards. The World Bank (2001) concluded that extensive domestic borrowing by most African countries led to massive crowding-out effect, where most investors opted to invest in government securities as a result of their lucrative rates as opposed to other forms of investment. Hamilton and Vickrey (1996) observed that government debt, if it is not excessive, is a national blessing. Vickrey (1996) stated that government debt provided the financial market with assets into which individuals can put whatever accumulated savings they attempt to put aside in excess of what can be invested in the privately owned real estates.

Some authors observe that financing through borrowing exerts pressure on domestic interest rates, thereby increasing cost of investment and crowding-out of the private sector. Durawall and Erlandison (2005) stated that despite the change from one party state to multiparty system in May, 1994, fiscal discipline in Malawi did not improve. In fact, budget deficits continued to be high even in the absence of external shocks. According to Keynesian economics, there is nothing like balanced budget because governments will either run deficits in times of recessions, or surplus in times of expansions, (Lipsey, 2010). The Keynesian theory made sense at that time and was adopted by both policy makers and politicians. However, with time, the theory became abused. Deficit financing as a conscious attempt to stimulate the economy by lowering tax rates or by increasing government expenditures has its own merits. It stimulates economic activity by virtue of government increasing purchases of goods and services, creating income, and encouragement of consumer spending. If spent on infrastructure, research, health, and education, Deficit financing has long-run potential benefits.

However, this may only be the case if the deficit financing is not as a result of government system inefficiencies, such as widespread tax evasions, wasteful spending or poor debt management strategies. As for Malawi, according to Durawall and Erlandson (2005), the major source of domestic financing of government deficits was through issuance of Treasury bills (Tbills). The period of maturity varies, from short term (usually below 1 year) to periods extending beyond 1 year. For Malawi, Treasury bills are issued to the general public in tenors of 91, 182 and 273 days through an auction process. Durawall and Erlandson (2005) observed that public deficits in the short run can have a negative effect on economic growth through Crowding-out of the private sector. Evident to Malawi, private sector investment for Malawi declined to 0.6% of GDP in 2003, the year when return on Treasury Bills peaked, Durawall and Erlandson (2005). During this period, government was borrowing at interest rates above 30%, a development that compelled the private sector to prefer investing in Treasury Bills as opposed to investing in fixed capital formation.

Domestic borrowing (debt) happens when a government borrows in its own currency from residents of its own country. Presbitero et el (2006) define domestic market as markets for government securities including stocks, Treasury bills, bonds, and local registered stocks. They observed that beginning early 1990's, domestic markets for government securities increased, reflecting the increased demand for domestic borrowing by governments, given the decline in foreign aid.

The additional drawback of domestic borrowing, according to Christeinsen (2004) is its short-term nature and its tendency to heat the market, leading to high interest rates. However, overall Presbitero et al (2006) indicated that comparatively, domestic borrowing has advantages over foreign borrowing in terms of fewer financial costs. Abbas (2005) challenged that in fact, domestic borrowing was far cheaper than external debt, based on his finding that default on domestic debt on most African poor countries was lower than default on external debt. In his Tanzania case study, he stated that once considered the inflation and the real depreciation rate, the cost of domestic financing could be smaller that the 'concessional terms' granted by external donors, and that governments could obtain funding at a lower rate on the domestic market as compared to the overall cost of external funding.

Notwithstanding the above arguments, theory has it that excessive domestic borrowing can also become a burden on the national budget partly due to high interest payments, and can also squeeze out private investment- crowding out effect Presbitero et al (2006). What is common to both methods of government borrowing is the component of interest rate repayment on all outstanding debt. As borrowing increases, so does interest payments. For both methods of borrowing to be fruitful, they must be channeled towards increasing the productive capacity. Patnaik and Vasudevan (2004) in their study of determinants of interest rates in India, domestic interest was likened to the 364 day TBill or Call Money Rate or secondary market Commercial Paper rate. In this paper, we will generally refer to interest rates as the average of all short term government securities, referred to us All Type TB Rate. This assumption is in agreement with Durawall and Erlindisson (2005), who ascertained that TB rates are generally the relevant interest rates in Malawi, given that all other rates rarely reflect market developments given the underdevelopment of the Malawi financial sector.

3. Research Design And Methods

The study relied on time series macroeconomic data obtained from the Reserve Bank of Malawi (RBM). Specifically data on Treasury bill rates, Bank Rate, Inflation rate, Domestic debt as ratio of GDP, GDP and Balance of payments was collected. Following Chirwa and Mlachira (2004) the following model was estimated:

$$I_t = f(DDGDP_t, GDP_t, BR_t, BD_t, BOP_t) \tag{1}$$

In equation number 1, I = Interest rate (All type TB yield) at time t and it is the dependent variable. DDGDP is domestic debt as percentage of GDP at time t. It was expected that an inverse relationship between I and DDGDP existed in the period following theory. INFLA is inflation rate. When inflation is high, nominal interest rates are expected to rise. GDP is Gross Domestic Product on which the expected sign was ambiguous because a higher GDP can be a source of increased demand for loanable funds which would increase the pressure on supply against demand. As a result interest rate which is the price of loans would be expected to rise.

BR is the Bank Rate, thus the interest rate which commercial banks and other financial institutions borrow from the Reserve Bank as it acts as a lender of last resort. BOP is Balance of Payments measured by the difference between total exports and total imports. When the Trade Balance is not favourable, meaning there are more imports than exports, interest rates are expected to rise because generally government borrows money from both domestic and foreign market to finance the deficit. As this will then have a pressure on demand and supply, interest rates will be rising. BD is Budget Deficit which is the difference between government revenues and government expenditures. This is the main reason government borrows money anywhere, it is because there is a deficit and government still wants to implement certain programs. In this study the average of all short term government securities, referred to as All Type TB Rate in the financial literature for Malawi is used to proxy interest rate. This assumption is in agreement with Durawall and Erlindisson (2005) and Patnaik and Vasudevan (2004), who ascertained that Treasury Bill rates are generally the relevant interest rates in Malawi, given that all other rates rarely reflect market developments given the underdevelopment of the Malawi banking sector. Data on Bank Rate and Liquidity Reserve Requirement (LRR) was included in order to capture the effect of monetary policy on interest rate determination. Chirwa and Mlachira (2004) equated the LRR to a financial tax on commercial banks. The inclusion of exchange rate is to capture the impact of foreign market influences, considering that Malawi is an open economy. Domestic debt as percentage of GDP, as defined by Magalasi (2010) is an indicator of how much money government will be wasting in repaying Debt. The ratio indicates sustainability of the debt, where if the ratio is getting higher then will reach a point where government cannot manage to repay its debt because national income is lower. The Magnitude of the ratio is expected to somehow have an impact on domestic interest rates as well.

4. Findings and Discussion

Table 1 is a correlation matrix compiled to measure multicolinearity among the variables. As the table shows, there was a strong relationship between GDP and total domestic debt and ratio of Debt to DGP and Debt to Revenue.

Table 1 Correlation Matrix for Multicolinearity

	TBRATE	TDDEBT	INFLA	GDP	DDEBTREVENUE	DDEBTGDP	BANKRATE
TBRATE	1.00	-0.09	0.21	-0.04	0.19	0.08	0.70
TDDEBT	-0.09	1.00	-0.28	0.97	0.65	0.74	0.00
INFLA	0.21	-0.28	1.00	-0.25	-0.42	-0.41	0.40
GDP	-0.04	0.97	-0.25	1.00	0.58	0.66	0.07
DDEBTREVENUE	0.19	0.65	-0.42	0.58	1.00	0.95	0.12
DDEBTGDP	0.08	0.74	-0.41	0.66	0.95	1.00	0.02
BANKRATE	0.70	0.00	0.40	0.07	0.12	0.02	1.00

Results of the Ordinary Least Squares (OLS) Method

OLS results started first as presented in table 2 below.

Table 2 Results of OLS Regression Model

Variable	Estimate	T-Ratio	P-Value
C	2.757781	0.396675	0.6953
BANKRATE	0.513063	3.491345	0.0020***
INFLA	0.004193	0.031782	0.9749
GDP	3.08E-11	0.568680	0.5751
DDEBTGDP	-0.056569	-0.061365	0.9516
DDEBTREVENUE	0.138118	0.693435	0.4950
TDDEBT	-2.06	-0.882153	0.3868

*** Statistically significant at 1% level.

As can be seen from table 3.2, the levels of interest rates are determined largely by the level of Bank rates in Malawi. At the 1% level of significance, the data rejects the null hypotheses that there is no relationship between bank rate and interest rate. All the other variables are insignificant even at the 20% level of significance. What the results say is interesting and very much not in agreement with economic theory. In order to understand it better, the author calculated elasticity of Bank Rate and obtained 0.524753. That is to say that whenever the Bank Rate in Malawi increased by 1% , interest rates as proxied by the Treasury bill rate would increase by 0.52%. The positive sign was as expected was a key determinant of interest rate levels in Malawi compared to domestic debt.

There is a negative relationship between DDEBTGDP and TBRATE although even at the 20% level the relationship is insignificant. This implies that although statistically the relationship conforms to theory that the higher the domestic debt ratio the lower the interest rate as measured by the Treasury bill rate. However, the relationship is insignificant such that it may not be as much so as to influence any policy.

For Inflation as one of the macroeconomic variables used to estimate the interest rate model in this study, it was observed that the positive sign was as expected. However, even at the most unexpected level of significance of 50%, the relationship though positive as expected is not statistically significant. In other words, in Malawi over the period under review, inflation levels did not matter as much as to cause alarm that it would lead to corresponding higher interest rates. This is something of interest because during the period, levels of inflation were very high and there were many outcries from many quarters calling on the Reserve Bank to lower the levels of inflation to bring down interest rates among other reasons.

Table 3 Lagged Model for Interest Rate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.400656	5.516005	1.341669	0.1934
BANKRATE	0.509634	0.136547	3.732311	0.0012***
DDEBTREVENUE(-1)	0.067517	0.06532	1.033635	0.3125
GDP(-2)	1.26E-10	7.73E-11	1.634944	0.1163
INFLA	-0.04923	0.114184	-0.4311	0.6706
TDDEBT(-2)	-5.80E-10	2.79E-10	-2.07744	0.0496**
R-squared	0.602723	Mean dependent var		23.38036
Adjusted R-squared	0.512433	S.D. dependent var		11.52753
S.E. of regression	8.049212	Akaike info criterion		7.196435
Sum squared resid	1425.376	Schwarz criterion		7.481907
Log likelihood	-94.7501	F-statistic		6.675406
Durbin-Watson stat	1.530581	Prob(F-statistic)		0.000636***

Where***, **, and * means statistically significant at 1%, 5% and 10% level.

GDP is used as a measure of national income. Some have lamented that as interest rate increases, GDP should be decreasing because generally there will be a decrease in the level of investment and consumption, both of which are important elements of GDP. However others suggest that where there is a high GDP interest rates should be growing because generally there is a pressure for credit in financial institutions for both investment and consumption since the middle class is generally expanding. It is this expansion of the middle class that will eventually create competition for funding for projects such as SME's start ups, ground braking housing projects and government borrowing.

In this study, GDP was found to be positively related to interest rates although the relationship was statistically insignificant thereby rejecting the hypothesis that there was a high relationship between the two. Even at the 20% level of significance if one was to loosely depend on it, GDP was still insignificant. The ratio of debt to revenue was found to be firstly statistically insignificant even at the 60% confidence level and secondly with a positive sign indicating that when the total revenue government collects contains more debt in it, interest rates were expected to rise. This is in conformity to theory although not as significant as it should have been. In the period under review, therefore, it means that the there was a positive relationship between domestic debt and interest rates. As discussed above, generally, the higher the debt the higher should be the interest rate. Since the statistical results seem to suggest that there is no significant relationship between our major explanatory variable and interest rates in Malawi, a more rigorous analysis that identifies the direction of causality was conducted.

The R-Squared for the model was estimated to be 0.6 and the adjusted R-Squared was 0.51. This means that the model is able to explain at least 51% of the determinants of interest rates in Malawi. Using the F-Statistic the study found that even at 1% level of significance the model is a good fit. The F-Statistic was 6.7 and it is statistically greater than zero (0) meaning that there were not too many variances in the model.

5. Granger Causality Test

A Granger Causality Test according to Gujarati (2004) is used to establish the direction of causality between two variables. OLS regression stated and discussed above has a function of establishing relationship in a way of trend analysis. In regression analysis, interest is on rate of change or change of change. In other words, elasticity of demand and/or supply is the one of most importance where impacts are analyzed. On the other hand, by setting the right hypotheses, Granger Causality Test goes beyond regression analysis in the sense that variables which cause a change in another variable and in which direction are identified. The nature of the present study was to analyze the cause-effect nexus between interest rates and debt.

Bank Rate and Interest Rate

The results of the granger causality test are as shown in the table A-1 in the appendix. As can be seen in that table, the null hypothesis that Bank Rate does not granger-cause interest rate is rejected at the 5% level of significance but the null that TBRATE does not granger-cause bank rate is accepted. This seems to conform to theory that when the Reserve Bank of Malawi increases the Bank rate, interest rate increase in Malawi. For the period under study, the Granger Causality test has shown that one of the most important causes on high interest rates were the high levels of the interest rate at which financial institutions borrow from the provider of last resort.

Table 4 Results of the Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Probability
TDDEBT does not Granger Cause TBRATE	28	1.73973	0.19789
TBRATE does not Granger Cause TDDEBT		0.39773	0.67638
GDP does not Granger Cause TBRATE	28	4.4473	0.02329**
TBRATE does not Granger Cause GDP		1.50745	0.24256
INFLA does not Granger Cause TBRATE	28	1.35718	0.27724
TBRATE does not Granger Cause INFLA		0.91086	0.4162
BANKRATE does not Granger Cause TBRATE	28	3.58636	0.04409**
TBRATE does not Granger Cause BANKRATE		0.7141	0.50017
DDEBTGDP does not Granger Cause TBRATE	28	2.32654	0.12018
TBRATE does not Granger Cause DDEBTGDP		1.98323	0.16047
DDEBTREVENUE does not Granger Cause TBRATE	28	1.00736	0.38073
TBRATE does not Granger Cause DDEBTREVENUE		2.23966	0.12921

Where***, **, and * means statistically significant at 1%, 5% and 10% level.

The null hypothesis that total domestic debt does not granger cause interest rate is accepted even at the 15% level of significant. This is an interesting result which is in tandem with the impact analysis above. This means that the much held idea that in Malawi interest rates are driven by the amount of domestic debt government has is not right. In other words, there are other factors which are more important such as the Bank Rate and GDP holding other things constant. The results of the Granger Causality test reveal and confirm that not only is there a relationship between GDP and the Treasury bill rate but also that the level of interest rates as proxied by the TBRATE depends on the level of GDP. The OLS estimation in 3.3.5 above revealed a positive relationship between the two variables and thus giving the direction of causality. In other words, as GDP increases, real interest rates also increase. At the 5% level of significance, the null hypothesis that GDP does not grander-cause interest rate is rejected thereby accepting the alternative hypothesis that GDP does granger-cause interest rate. This is a very important result for the case of Malawi because what it means is that interest rates were rising during the period under review because the Gross National Product was also increasing.

The OLS estimation found that there was a positive relationship between inflation and interest rate. The Granger Causality test accepts the hypothesis that Inflation does not granger-cause interest rate even at the 20% level of significance. This means that yes there is a positive relationship between the two variables but it is only a relationship. There is no Causality associated. In other words, the strongly held idea that inflation causes interest rates to increase was not entirely true for the period under review. What was true was that interest rates were rising together with inflation; simply put, the two variables were moving in the same direction.

The null hypothesis that total debt-to-revenue ratio does not granger-cause interest rate is rejected at the 13% level of significance. The OLS analysis found that there is a statistically significant positive relationship between the two variables. This significant cause-effect result simply conforms to the OLS result. In other words, during this period, interest rate levels depended on the levels of total debt that was in total revenue. It can be said conclusively therefore that in Malawi when there is more debt in total revenue government collects, interest rates are expected to rise. This is in line to the widely held view that government should spend within its means. It should not spend what it has not collected as this has the tendency to increase levels of interest rates. In other words, the crowding-out effect takes place in Malawi where those who have money's priority is to lend it to government than the general public to be used in consumption and investment. As a result, the supply of funds was lower and failed to match the high demand for the same leading to the high price which in this case is the interest rate.

6. Conclusion

The main objective of this paper was to analyze macroeconomic factors that affect the level of interest rates as proxied by Treasury bill rate. The researcher collected secondary time series from the Reserve Bank of Malawi, IMF and National Statistical Office. The data were analyzed using regression analysis to establish the impacts of changes in the variables on interest rates. Correlation matrix was also computed to know the direction of the impacts whether statistically significant or not. Finally a Granger Causality Test was carried out in order to assess the cause-effect of the variables. Particularly the study aimed at investigating whether the stock of domestic debt leads to particular levels of interest rates in Malawi.

The findings were interesting and totally different to the much adhered to belief that the higher the level of domestic debt the higher the level of interest rates also. In fact the study found a negative and statistically insignificant relationship between total domestic debt and interest rates. On the other hand, interest rates in Malawi seems to depend much on the level of the Bank Rate which is the rate at which financial institutions borrow from the central bank as a lender of last resort. According to the results, increasing the bank rate by 1% will lead to a more than 1% increase in interest rates in Malawi. In terms of policy therefore, this study recommends that the Reserve Bank of Malawi should lower the level of the Bank Rate to as low as 5 or even 1% so that private lending institutions can also lower their lending rates. This is the only way that will make credit not only accessible but also affordable which will end up increasing investments and consumption expenditure, the engine of economic growth and development.

7. References

Abbas, S.M. (2005). Public Debt sustainability, and growth in Sub-saharan Africa (Post HIP): The role of domestic debt, Unpublished.

Beaugrand P, Loko, B and Mlachira, M (2002), The Choice between External and Domestic Debt in Financing Budget Deficits: The case of Central African Countries, *IMF Working Paper 02/79*.

Bhole, L. M, and Sebastian V.J (1996). Determinants of Interest rates in a deregulated open economy. *Indian Journal of Economics*, Vol 77, No. 305, October, 1996

Bildiric, M. and Ersin O (2007). Domestic Debt, Inflation and Economic Crises in Emerging and Developing Economies, Unpublished

Chipeta, C. and Mkandawire, M. (1991). The informal Financial Sector and Macxroeconomics Adjustment in Malawi, *AERC Research Paper Series*, **Research Paper Number 4** PP:1-58.

Chipeta, C and Mkandawire, M. (1992). The Links between the Informal and Formal/Semi-formal Financiaql Sectors in Malawi, *AERC Research Paper Series*, **Research Paper Number 14,** pp: 1-39.

Chirwa, E (2001) Market Structure, Liberalisation and performance in the Malawi Banking Industry, AERC, Kenya

Chirwa, E and Mlachira, M (2004): Financial Reform and Interest rate spread in commercial banks in Malawi, *IMF Staff papers*, Vol 51, No 1.

Christeinsen, J., 2004, Domestic Debt Markets in Sub-Saharan Africa, *IMF Working Paper,* released in March, 2004.

Durawall D, and Erlandisson M, 2005, Public Finance Management Reform in Malawi, a Country report done by the Department of Economics, Gotboy University, Sweden.

Edwards S and Khan M, (1985) Interest rate determinants in developing countries- a conceptual framework; IMF Staff Papers, Vol 32, 1985

IMF, Memorandum of Economic and Financial Policies (2004), IMF mission to Malawi, downloaded from www.imf.org on 28/11/06

International Monetary Fund (IMF), *Statement of the IMF Mission on Malawi,* released on 14 May, 2002.

Khamfula, Y, Mlachira M, and Chirwa, E, (2006) Donor Herding and Domestic Debt Crisis, *IMF Working Paper*, 2006

Magalasi, C (2010). Domestic debt calculation, Unpublished article, Reserve Bank of Malawi, Lilongwe.

Ministry of Economic Planning and Development (2003), A Growth Strategy for Malawi, unpublished, Malawi

Ministry of Economic Planning and Development (2005), Economic Report

Mwega, F.M., (2002). Financial Sector Reforms in Eastern and Southern Africa, downloaded from www.idrc.ca on 27/11/06

Ngalande, E (2000). Governor's statement to consultative workshop on Malawi's debt crisis, Lilongwe,

Patnaik, L and Vasudevan, D (2004). Interest rate determination in India: Error Correction Model; *Journal for National Council of Applied Economic Research*, India

Presbitero, A. F., and Arnone, M. (2006). External Debt Sustainability and Domestic Debt in Heavily Indebted Poor Countries, paper presented to IMF, unpublished

Reserve Bank of Malawi (2000). Exchange and Interest Rate Determination, published by the Research and Statistics department.

Reserve Bank of Malawi, *Governor's speech on Seminar for Financial Deepening Challenge Fund*, presented in Lilongwe, Malawi on 18 January, 2001.

Reserve Bank of Malawi Governor's statement (2000). Quartely statement on Economic developments, presented in Lilongwe, Malawi.

Roe A.R and Griggs J, 1990, *Internal Debt Management in Africa,* Initiative Publishers, Nairobi Kenya.

Vickley, William, 1996, *Public Economics,* University Press, Cambridge, UK

World Bank Report (1994), Liberalisation in Africa,

World Bank and International Monetary Fund, 2001, *Developing Government Bond Markets,* a Handbook; Washington: World Bank.