EXCESS LIQUIDITY IN THE BOTSWANA BANKING SYSTEM AND SHORT-TERM STRATEGIES FOR CONTROLLING IT

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1. Background Introduction

1.1 An Overview of the Financial Sector and Commercial Bank Credit in Botswana

The development of Botswana's financial system until a few years prior to independence was slow. Two commercial banks were in operation, both incorporated outside the country, and with only four branches between them. in addition, the South African Post Office Savings Bank had operated through the local post office system since 1911. The rapid development of the economy in the post independence period, however, led to a reasonably rapid expansion of the financial system. By 1975, the two commercial Banks operating (Barclays Bank of Botswana and Standard Chartered Bank Botswana) expanded to have twelve branches/sub-branches and thirty agencies. The Botswana Development Corporation (BDC) was later established to provide both loan and equity finance for development projects. Tswelelo, a small-business finance corporation was also established in 1984 as a subsidiary of BDC. National Development Bank (NDB) was also introduced with the mandate to lend mainly to agriculture. Botswana Co-operative Bank (BCB) was set up to accept deposits and make loans to cooperative societies, which owned the bank. The bank has since been liquidated. Botswana Building Society (BBS) is one recent addition to the system and it offers mortgage loans in housing. Money and capital market development in Botswana was significantly enhanced with the setting up of local stock brokerage company (Stock-brokers Botswana) in 1989. In recent years, pension, and life assurance funds have also become important sources of long-term funds.

Despite the array of financial institutions that has developed in Botswana, the Government has continued to play a dominant role in the financial sector. This role is regulatory as well as participatory. Through the Public Debt Service Fund (PDSF), the Revenue Stabilisation Fund (RSF) and the Development Fund (DF)[1] the Botswana Government is a major lender to the parastatal sector and some local government authorities. Active participation of Government in the financial sector through, *inter alia*, PDSF loans accounted for more than half of total credit throughout the period from 1986. This compares with the 34 percent share of commercial banks in total credit, at the end of 1993. While PDSF loans are long-term in nature (typically 25 years maturity), the commercial banks lend for much shorter period. Until recently, interest on PDSF loans were below market rates (and rates on loans to financial parastatal still are).

1. The Development Fund is included here, even though a proportion of its revenue comes from external sources (19 percent in 1992/93). Of the three funds, the PDSF is by far the largest, accounting for 81 percent of outstanding advances from the three facilities as at September 1993. For brevity the three funds will be referred to as "PDSF".

1.2 Excess Liquidity in the Commercial Banks of Botswana

There is a problem of excess liquidity in Botswana. For a long time, the commercial banks have been in a position where their actual liquid assets greatly exceeded their required assets. The required liquidity has averaged about 20 percent of total deposits in recent years. A comparison of the required liquid assets of commercial banks with the actual reveals wide and, more recently, growing divergence. Whereas excess liquid assets amounted to P24 million in 1976, it fluctuated widely up to the end of that decade peaking at P26 million in 1979. Starting with a reduction in the magnitude of excess liquid assets, the commercial banks increased their actual over required liquid assets progressively in the early 1980s such that by 1985, it stood at P114.8 million. With the exception of a small drop in 1986, the value of excess liquidity has been growing and currently stands at P467.7 million.

By 1988, liquid assets, represented almost half of the asset of the commercial banks while excess liquidity represented over 30 percent of total assets. In December 1991, total commercial bank deposits were P1,574 million and required liquid assets were P352 million. The commercial banks actually held P641 million in liquid assets, P289 million more than were required. By December 1992, with deposits of P1,751 million, required liquid assets were P357 million and the actual liquid assets were P678 million, some P321 million more than required. In December 1993, the commercial banks held P2,006 million in deposits, had required liquid assets of P389 million, they actually held P794 million of liquid assets, some P405 million above the amount required.

It therefore becomes imperative to study the incidence of excess liquidity and the strategies adopted for combatting it. The paper is organized as follows: the first section introduces background financial sector economy of Botswana. In this regard, an overview of the financial sector is discussed with the excess liquidity problem. The short-term strategies adopted for controlling excess liquidity are examined in the second section. The third section is essentially about research methodology and model specification. The results of our models are discussed in section four; whereas section five is the final section drawing together some salient conclusions from this study.

1.3 The Consequence of Commercial Banks' Excess Liquidity

Excess liquidity is the portion of commercial bank funds that is not on-lent, or used to maintain necessary reserves. It is in this sense that the funds are "excess", with respect to the commercial banks liquid asset requirement as stipulated in the Financial Institutions

Table 1: Commercial Banks Liquidity (P millions)

Year	Required Liquid Assets	Actual Liquid Assets	Excess
1976	8.0	32.0	24.0
1977	21.0	37.4	15.6
1978	20.0	31.2	11.2
1979	26.3	52.4	26.1
1980	26.8	47.5	20.7
1981	26.8	38.4	11.6
1982	38.8	86.5	47.7
1983	44.9	96.9	52.0
1984	52.2	138.7	86.5
1985	60.1	174.9	114.8
1986	86.7	172.6	85.9
1987	113.0	272.8	159.8
1988	158.1	410.8	252.7
1989	220.1	468.1	246.0
1990	264.8	495.4	230.6
1991	352.0	641.2	289.2
1992	356.7	677.5	320.8
1993	388.6	794.0	405.4
1994	435.3	903.0	467.7

Source: Bank of Botswana, Annual report 1993.

Act. The rapid growth in liquid assets translated to substantial growth in commercial banks' loans and advances. Loans and Advances totalled P141.0 million in 1981 rising to P273.4 million in 1985. They rose subsequently to P1,846 million in 1994(BOB, 1995). From late 1984 to late 1988 total credit had increased moderately, mostly at rates not substantially different from the inflation rate such that in real terms it had remained stagnant. Total outstanding advances of commercial banks grew rapidly from mid-1988 to late 1993. From the beginning of 1989 until August 1993 the year-on-year rate of growth was above 20 percent and briefly rose above 50 percent in mid-1991. The growth in lending by commercial banks has however decelerated since the beginning of the 1990s. Total lending in December 1991 was P1,041 million represented an increase of 41% over December 1990. By December 1992, commercial bank lending had increased a further 34% to P1,399 million; and by December 1993, the annual rate of growth in commercial bank lending had come down to 12% approximately zero in real terms.

The growth in loans and advances was however slower than that of deposits (which increased from P202 million in 1982 to P334 million in 1985. Commercial Banks' deposits increased from the 1985 level to P1,072 million in 1994 contributing to the progressive build-up of commercial banks liquidity, which was held mainly in the form of deposits with

Bank of Botswana. These increased from P76 million at the beginning of 1985 to P246 million at the end of 1990. That the volume of commercial banks' advances, loans and leasing activities did not increase in proportion to the volume of deposits is partly explained by the low absorptive capacity of the economy. This has also led to the growth in the commercial bank deposits with the Bank of Botswana.

In sectoral terms, the composition of commercial bank credit has changed significantly since 1980. The shares of agriculture and mining have shrunk dramatically mainly due to the high cost of agricultural loans administration and low yield coupled with availability of foreign financing for the very profitable mining sector. The share of the parastatal sector has also fallen, from 10 percent in 1989 to 5 percent in 1992. This is not surprising as steep increases in the commercial banks' prime rate outstripped increases in PDSF rates until 1993. There has however been an increase in the shares of the manufacturing to about 10 percent in the 1980s and of the business sector whose share in total credit grew from about 4 percent in the 1980s to about 14 percent in 1990.

The single biggest change has been the increasing share of the household sector in total credit. During the 1980s, households accounted for only a small part of total commercial bank loans and advances fo about 15 percent. The share remained below 20 percent until 1987, after which it rose steadily increasing to record levels in the last two years. By the end of 1993, credit to households accounted for nearly 39 percent of the total commercial banks credit, and to a large extent represents borrowing essentially for consumption purposes. Loans to households for the purchase of motor vehicles alone accounted for 17 percent of total credit. The rapid growth of commercial bank credit to households since 1988 is attributed to several factors. Initially, rising inflation, and the associated increase in inflationary expectations, together with negative real interest rates were the dominant factors. However, as real interest rates again became positive and inflation declined in 1993, net credit to the household sector did not change. This is probably due to the Government's motor vehicle and home loan schemes which offer the commercial banks risk free lending opportunities to central Government employees (about to 30% of those engaged in formal sector employment).

The existence of excess supply in any market would normally lead to a fall in price until demand equalled supply. Excess liquidity in the presence of exchange controls would imply falling interest rates such that it becomes less attractive to deposit funds with commercial banks and the demand for credit rises, until the excess commercial banks funds are eliminated.

Commercial banks' response to excess liquidity was to refuse accepting large interest

bearing deposits especially at a time when interest rates were being regulated by the Bank of Botswana. The following table demonstrates the growth in selected commercial bank deposits by type in Botswana. Whereas the number of current and savings accounts increased substantially since 1982, the average size of deposits has tended to favour current accounts. The average size of savings accounts remains quite low. Compared with the average value of current accounts, the average size of savings account has been consistently lower than 20 percent except during the 1991-1993 period. The situation may have also arisen partly due to the incidence of low and/or negative real interest rates prevailing in Botswana. Low real or negative interest rates similarly discourage holding deposits in interest generating forms, further contributing to the excess liquidity of the commercial banks.

Table 2: Selected Commercial Bank Deposits by type

Year	(1) Current Acc. Number(000)	(2) Average Size (P)	(3) Savings Acc Number(000)	(4) Average Size (P)	Accounts Ratio (4/2)
1977	15.1	1,393	54.0	264	0.19
1978	17.4	1,700	53.3	308	0.18
1979	19.0	3,309	56.0	348	0.11
1980	21.9	2,801	63.1	407	0.15
1981	25.0	2,893	69.9	455	0.16
1982	27.7	3,550	74.0	498	0.14
1983	32.5	3,297	79.7	551	0.16
1984	38.3	3,012	84.4	604	0.20
1985	41.7	3,355	90.3	659	0.20
1986	45.7	4,199	100.6	737	0.18
1987	49.7	5,102	115.9	811	0.16
1988	55.9	5,875	127.5	988	0.17
1989	63.5	6,385	143.3	1,116	0.17
1990	77.6	6,017	157.1	1,233	0.20
1991	99.9	4,890	129.8	1,800	0.36
1992	110.4	4,300	187.8	1,444	0.34
1993	77.5	6,507	198.8	1,697	0.26
1994	71.0	8,711	197.1	1,170	0.13

Source: Bank of Botswana Annual Report (1994)

There has always been a strong preference by the commercial banks in Botswana for loans with shorter maturities. This situation is gradually changing. Though, loans with short-term maturities still account for about half of lending, those with long-term maturities are fairing better. The share of loans of less than one year maturity was 54.2% in 1986 rising to 50.2% in 1990. This however fell to 46.4% in 1993 and about 50% in 1994. On

the other hand, the share of lending with a maturity of greater than five years was 6.3% in 1986, rose to 7.5% in 1990 and to 13.2% in 1993 and to 16.5% in 1994. This may reflect the awareness of the banks of the riskiness of long term lending. The following table gives an indication of the maturity of commercial bank loans and advances.

Table 3: Maturity of Commercial Bank Loans and Advances (percentages)

Year	Over-Drafts	<6 Months	6-12 Months	1-2 Years	2-3 Years	3-5 Years	5-7 Years	7-10 Years	>10 Yeras
1986	21.3	21.6	11.3	12.3	9.2	18.1	1.3	0.8	4.2
1987	20.4	22.2	11.3	14.2	10.7	14.4	2.2	2.6	2.0
1988	34.1	10.7	8.8	13.4	14.3	11.5	4.1	1.0	2.1
1989	34.0	8.6	12.6	10.4	9.2	16.3	4.5	2.1	2.2
1990	34.7	15.0	10.5	11.4	9.2	11.7	1.9	2.9	2.7
1991	32.5	12.9	10.8	14.0	11.7	8.6	3.9	2.8	2.9
1992	34.8	10.2	9.4	11.1	11.2	11.0	2.9	5.8	3.5
1993	33.1	9.8	12.5	11.2	10.8	9.5	4.4	4.3	4.5
1994	31.4	9.7	8.8	12.0	10.6	11.1	3.2	4.5	8.8

Source: Bank of Botswana (various years)

2. Short-Term Financial Instruments to Combat Excess Liquidity

The amount of funds identified as "excess" depends on the return from these funds, which is at present the yield of BoBCs. If the Bank of Botswana wishes to influences real interest rates in an upwards direction, this means (all else being equal) that the demand for credit will fall and the attractiveness of deposits will rise, therefore increasing "excess liquidity". the amount of surplus funds should therefore always be specified relative to a particular level of real interest rates. It is important that investments are subject to a real rate of interest which ensures that they are productive and viable. In order to achieve this, it is necessary tomop up excess liquidity to ensure that interest rates reflect the opportunity cost of funds.

Excess liquidity in the banking system associated with the huge mineral revenues and the limited absorptive capacity of the economy required the Bank of Botswana to play an unusual role as "deposit taker of last resort". Previously, Government had issued Treasury Bills but these became redundant in 1981 as Government had no need to raise funds from the domestic financial market. Issues of paper by other institutions have been limited because the largest borrowers in the economy, parastatals, have had their funding requirements largely met by PDSF loans or external borrowing. The only other money market instrument presently available besides BoBCs in the Transferable Certificates of

Deposit (TCD) launched by ULC[2] in mid 1993. These range between 6 and 36 months, offering a rate of return slightly below that of ULC's fixed deposits. Liquidity of the TCDs is ensured by an agreement with Debswana for their repurchase. However, to date there has been very little interest in them. This led the Bank to begin issuing its own paper since the discontinuation of Government Treasury Bills in 1981 and an issue by the Water Utilities Comporation in 1987.

Since the governmet of Botswana has not had to raise funds from the private sector, the money market outside commercial banks remained almost completely undeveloped until the introduction of Bank of Botswana Certificates (BoBCs) in May of 1991. The Certificates are short-term, ranging from 3 to 9 months in maturity. They are sold at periodic auctions, and are highly liquid. There has been little secondary market trading between primary counterparties.

The yield on BoBCs has become the effective opportunity cost of short-term funds in the Botswana economy. Anyone with P50 000 or more to invest can purchase a BoBC. Hence the commercial banks and other financial institutions find it necessary to pay large savers similar returns for similar maturities. BoBCs have also become the effective floor for interest rates on advances. Given the alternative of holding funds in BoBCs, a financial institution must charge an interest rate equal to the BoBC rate plus an allowance for risk and administrative costs.

The competitive return on BoBC's has made it difficult for financial institutions to compete for deposits directly with institutions with access to cheaper PDSF funding. The private sector's deposit rates have to compete with NoBC's while their competitors' cost of funds are at the subsidised PDSF rate. This has caught the private sector institutions in a squeeze between obtaining deposits in competition with BoBCs and offering credit at rates which have to compete with rates offered by financial parastatals. This probably accounts for the lack of interest in the ulc's Transferable Certificates of Deposit.

The total value of BoBCs has been growing in line with excess liquidity. By December 1993, total BoBCs outstanding amounted to P1,280 million, of which P361 million were held by commercial banks. The effective rate of interest on those Certificates issued in November 1993 was 13.9% slightly above the 13.1% rate of inflation registered in that month.

In many LDCs, the central bank has tended to place exorbitant reserve requirements on commercial banks. Available literature suggest that an effective low ceiling on real loan

2. ULC is the Botswana Lease and Home Purchase Company providing investment opportunity for large and small depositors.

rate accentuates risk aversion and liquidity preference in the commercial banking system. Consequently, financial intermediaries have little incentive to explore new lending opportunities. Commercial banks in the LDCs particularly in Africa, have a sound resource base but prefer to deploy excess liquid assets in treasury bills and government bonds, where risks are marginal. Few African LDCs have deliberately directed the lending pattern of the commercial banks to generating development. It is not unusual to observe in some countries that the banking system could actually be quite heavily under-lent.

2.1 Interest Rate Policy

The government has been regulatig interest rates as an important component of monetary policy. Due to excess liquidity which has hung-over the economy, it has tended to place a downward pressure on the interest rates for both deposits and lending for the period 1980-89 as regulated by the Bank of Botswana. During this period (1980-89), interest rates were lowered so as to increase credit availability in the economy and stimulate investment and subsequently expand national output. Despite this strategy, excess liquidity continued and the lowered interest rates led to negative real interest rate as inflation, which was mainly imported inflation from South-Africa, was on the increase. The lowered interest also encouraged households to increase their borrowing not for productive investment but for consumption.

The early 1990's saw an increase in the nominal interest rates as the monetary authorities feared the "hysteresis effect" of the negative real interest rates on the economy. The objective was to encourage a greater volume and a more diversified structure of financial savings, and to deepen and broaden the domestic financial system. The other objective was to reduce demand (consumption) in the economy and fight the soaring inflation. The Bank of Botswana reduced its bank rate from 14.25% to 13.5% in January 1994. Later in the month it was reduced further to 13%. Most of the commercial banks followed suit shortly thereafter, reducing their prime rate of interest 15% to 14%.

This study therefore seeks to analyze the short-term instruments used by the commercial banking sector to control excess liquidity with a view to determine their effectiveness.

Table 4: The Real Interest Rates in Botswana 1976-1994

Year	Interest Rate (Nominal)	Inflation Rate	Real Interest Rate
1976	3.5	13.5	-10.0
1977	3.5	13.2	-9.7
1978	3.5	9.1	-5.6
1979	3.5	11.7	-8.2
1980	3.5	12.5	-9.0
1981	7.5	16.3	-8.8
1982	14.5	12.7	1.6
1983	13.0	8.3	4.3
1984	11.5	6.5	4.7
1985	11.5	10.4	1.0
1986	10.0	10.8	-0.7
1987	10.0	8.1	1.8
1988	7.5	10.4	-2.6
1989	8.0	11.3	-3.0
1990	9.0	12.0	-2.7
1991	12.5	12.6	-0.1
1992	14.5	16.5	-1.7
1993	15.0	12.7	2.0
1994	14.0	10.4	3.3

Source: Bank of Botswana Annual Report, various issues

3. Data Sources and Research Methodologhy

Data were collected from various Bank of Botswana (BOB) publications supplemented with others from the Central Statistics Office (CSO) and World Bank publications. The period of study stretches from 1976 through 1994. The data set covering this period were subjected to various econometric techniques in order to determine the significance of variables included. The models presented are a selection among many, having been selected on the basis of Schwartz criterion -SC (1978) and the Akaike Information Criterion - AIC (1974). This led to the specification of six models in this study. The structural specification linearises the variables by expressing them in the natural logarithmic forms.

The first set of models seek to capture the factors contributing to excess liquidity. It is intended here to assess the short-term strategies that the commercial banks have adopted for their individual and collective ability to achieve a reduction in the magnitude of excess liquidity. The following variables are specified to explain excess liquidity in the banking system: Bills Purchased and Discounted (BIPD) i.e. bills that are either bought or sold to the commercial banks by Bank of Botswana (which are presumed to represent alternative investment opportunities compared to commercial bank lending), Required Liquid Assets

(included for effect on the level of lending that a commercial bank could extend), Balances with Bank of Botswana, Balances with other Banks, the Number and the size of Current Accounts (included to capture the consequence of commercial banks strategy of discouraging interest bearing accounts), the build-up of net foreign assets, real interest rate (which measures the opportunity cost of funds to commercial banks and which is expected to vary inversely with the excess liquidity volume) and the ratio of loans and advances to total bank assets. Four models are presented linking these variables to excess liquidity in the commercial banking sector. The second part of our study examines the influence of growth in these variables on growth in excess liquidity. Two models are hence presented here.

4. Results of the Study

The results of our study are presented in tables 5 and 6. The following is a discussion of the results.

4.1. Effectiveness of Short-term Strategies for Controlling Excess Liquidity

Table 5 presents the results of four models selected among many that seek to determine the influence of short-term strategies on excess liquidity in the commercial banking sector of Botswana. Model 1 differs mainly from model 2 in that it includes the number of current accounts whereas model includes average size of current accounts among the strategies under examination. Of these two models, the first model is preferred in that many more variables are significant in explaining excess liquidity incidence though they are mainly of the wrong sign. Bills purchased and discounted, the build-up of net foreign assets, the number of current account holdings are significant in explaining excess liquidity. Only the ratio of loans and advances to total commercial bank assets is significant and of the correct (negative) sign. Keeping balances with the Bank of Botswana has the expected sign but is not a significant variable in the model.

That real interest rate is of positive coefficient is due to the incidence of negative real interest rate throughout most of the period covered by the study. Negative real interest rates encourage keeping assets in the liquid form, preference for current consumption and limited savings for the future. This decreases banks ability to make long term lending. Commercial banks did encourage their customers to open up non-interest bearing facilities during the peak of excess liquidity and the current account was thought as a useful facility for combating the problem. Commercial banks are averse to holding huge deposits

in interest bearing forms under conditions of excess liquidity if opportunities are limited to invest such funds elsewhere in the economy. That there is a positve relationship between the number and size of current account deposits and excess liquidity is not surprising. The commercial banks utilize this strategy to confront excess liquidity because of the low absorptive capacity of the economy. It is hardly sufficient to mop up excess liquidity. As the number and/or size of current account deposits increase(s) the commercial banks' degree of freedom to engage in long-term lending becomes restricted, further contributing to the accumulation of liquid assets.

Models 3 and 4 also differ, mainly because model 3 incorporates the number whereas model 4 includes the average size of current accounts. Most of the other variables are excluded. Real interest rate, the ratio of loans and advances to total bank assets and the required liquid asset ratio are all highly significant in explaining excess liquidity incidence. Again, only the ratio of loans and advances as a proportion of total bank assets appears with the correct sign.

Overall, it appears to us that most of the strategies adopted by the commercial banks in Botswana are reactions to excess liquidity incidence and hence complementary to it. This might explain, in part, why most of the variables in the model are of the wrong sign. The result has its root in the peculiarity of the Botswana situation where the low absorptive capacity of the economy cooperates with a condition of excess liquidity. As such, rather than, being alternatives to commercial bank loans and advances, these variables are actually complementary. Confronted with so much money in liquid assets, commercial banks appear to be seeking as many avenues as possible for assets investment to mop up excess liquidity.

Only by increasing loans and advances as a proportion of total commercial bank assets will the banking system expect to reduce excess liquidity.

Table 5: Results of Our Models

Dependent Variable	Excess Liquidity			
	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Constant	9.2233 (2.109)	2.5661 (0.4463)	8.0927 (3.725)	9.8915 (2.615)
Balances with Bank of Botswana	-0.0712 (-0.411)	-0.01195 (-0.0693)		
Bills Purchased and Discounted	0.31331 (1.411)*	0.30906 (1.323)		
Net Foreign Assets	0.26644 (1.975)**	0.3945 (3.532)***		
Real Interest Rate	0.29091 (1.692)**	0.23872 (1.301)	0.4380 (3.513)***	0.46078 (4.041)***
Current Account Number	0.71503 (1.783)**		0.039144 (0.09613)	
Ratio of Loans & Advances to Total Banks Assets	-2.1754 (-2.127)**	-1.0581 (-1.009)	-1.9056 (-3.645)***	-2.0621 (-3.514)***
Required Liquid Asset Ratio	0.083279 (0.5909)		0.89597 (4.244)***	0.96534 (9.030)***
Average size of Current Account		0.50824 (1.573)*		-0.16063 (-0.5664)
R^2	0.9469	0.9441	0.9668	0.9676
F	51.522	48.868	124.884	127.953
DW	1.8516	1.8502	2.0084	2.0701
SC	0.16042	0.16882	0.08589	0.083881
AIC	0.11347	0.11941	0.06707	0.065502

*** significant at 1 percent level
** significant at 5 percent level
* significant at 10 percent level
Figures in parenthesis are the corresponding statistics

4.2 Growth of Excess Liquidity

Our results in table 6 show that growth in balances kept with the Bank of Botswana, and in the size or number of current accounts are complementary to growth in excess liquidity. Only in model 6 is growth in bills purchased and discounted helpful (at 10% level of significance) in reducing growth in excess liquidity. Bank of Botswana Certificates (BoBC) have only recently been introduced, though preferred by the commercial banks. Because these certificates are new, their influences has not been significant in reducing

growth in excess liquidity.

Table 6: Further Results of Our Models

Dependent Variable	Growth of Excess Liquidity	
Independent Variable	Model 5	Model 6
Constant	-0.81399 (-1.122)	-0.27412 (-0.2855)
Growth in Balances with Bank of Botswana	0.47234 (3.498)***	
Growth in purchase of Bank of Botswana certificate		0.01917 (0.2514)
Growth in Bills Purchased and Discounted	-0.13677 (-0.5517)	-0.44683 (-1.421)*
Growth in Net Foreign Assets	0.054770 (0.3960)	0.17655 (1.092)
Real Interest Rate	0.19625 (1.15)	0.29146 (1.371)*
Growth in Current Account Number	0.59572 (1.855)**	
Growth in Ratio of Loans & Advances to Total Banks Assets	-0.01884 (-1.361)*	-0.090418 (-0.5023)
Growth in Average size of Current Account		0.54747 (4.126)***
R^2	0.8347	0.7519
F	15.308	9.587
DW	2.3486	2.5484
SC	0.17973	0.26977
AIC	0.12713	0.19081

*** significant at 1 percent level
** significant at 5 percent level
* significant at 10 percent level
Figures in parenthesis are the corresponding t statistics

5. Concluding Remarks

Our study has sought to examine the efficacy of short term strategies that the commercial banking system in Botswana has adopted when faced with excess liquid assets. Secondary data set published by the Bank of Botswana have been used mainly, supplemented with orther data sets. Six models have been specified in the study. The data were subjected to the usual econometric techniques to determine the direction of influence

of the variables specified in the models.

There is a substantial amount of excess liquidity in the Botswana financial system stemming from the low absorptive capacity of the economy to take advantage of the substantial growth in domestic savings. The situation of excess liquidity has meant the commercial banks do not find other strategies as alternatives but complements to bank lending. As such, bills purchased and discounted, keeping net foreign assets and encouraging customers to maintain non-interest bearing accounts are correlated with excess liquidity.

Bills Purchased and Discounted became redundant in 1982 as government had no need for private sector funds; but they have continued to be used by the commercial banks as a way of investing the excess liquidity until 1991 when the BoBCs were introduced. Commercial banks prefer these as they offer a risk-limited option for investing funds. That growth in bills purchased and discounted could reduce growth in excess liquidity is a useful indication that the recently introduced Bank of Botswana Certificates (BoBC)may become a useful avenue for mopping up excess liquidity in future.

The average size or number of current account deposits is positively correlated with excess liquidity. That the two variables move in the same direction is confirmatory of the use by the commercial banks of current account deposits to combat excess liquidity. As more and more liquid assets are built up, increased encouragement is given to holding demand deposit accounts. It is safer for the banks to utilize this strategy as keeping large sums of money in interest bearing forms are disfavoured when the absorptive capacity of the economy is low, and there is limited investment opportunities within the economy.

When opportunities are limited for investing excess resources locally, it might be useful to explore the possible of making foreign investments and building up foreign assets. Our study shows that this strategy is complementary to excess liquidity incidence.

Excess liquidity has become a perennial problem in the Botswana banking system. Only by increasing the ratio of loans and advances to total bank assets could excess liquidity be significantly reduced. This could come about by increasing the level of investment in the economy. It will therefore appear that increased diversification of the economy will be a good instrument for improving the economy's absorptive capacity, presenting good investment opportunities and the supply of loanable funds. This will also go a long way in correcting the problem posed by excess liquidity in the banking system.

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Abstract

An attempt is made to explain the phenomenon of excess liquidity in the Commercial Banking system of Botswana and the short-term strategies undertaken to control it. A number of models are specified and subjected to econometric analysis. The models presented are a selection among many.

There is a substantial amount of excess liquidity in the Botswana financial system stemming from the low absorptive capacity of the economy. The situation has meant the commercial banks do not find other strategies as alternatives but complements to bank lending. As such, bills purchased and discounted, the build-up of foreign assets and encouraging maintaining non-interest bearing deposits appear complementary to excess liquidity. Only by increasing the ratio of loans and advances to total bank assets could excess liquidity be significantly reduced.