



**Interest Rate and Exchange Rate “Spreads” in PNG-A
Preliminary Study**

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August 2006

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Introduction

In February 2006 the Institute of National Affairs published a position paper, *Papua New Guinea Agriculture-Issues and Options*ⁱ. Prepared by the New Zealand Institute of Economic Research the report was introduced to the people of PNG by Dr Brent Layton and in doing so he suggested that one of the major problems facing industry in general and agriculture in particular was the spread between borrowing and lending rates in PNG’s commercial banking sector.

The Rural Industries Council and the Business Council of PNG determined to look at this claim and commissioned Mirel Ltd to do a small introductory study on the topic. The BCPNG also added the spread between buying and selling of exchange rates to the subject matter and the TOR is attached at Appendix 1.

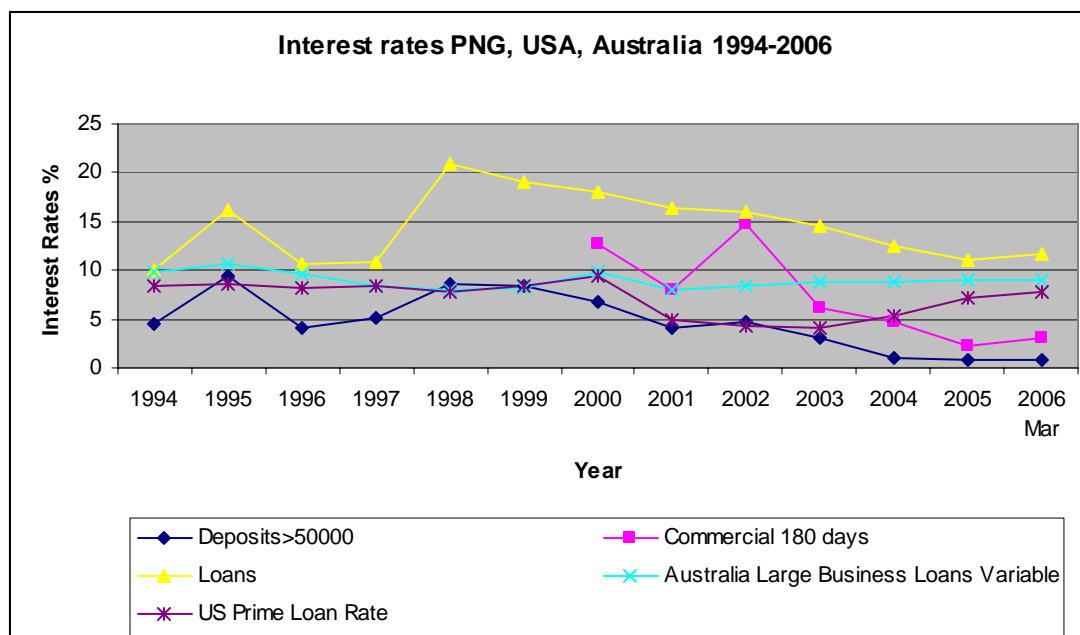
Interest Rates

In early classical economics interest was simply the return to capital and the rate of interest was arrived at by forces of supply and demand operating in the marketplace. If demand for capital was higher than supply the interest rate went up and if it was lower it went down. Interest also measures the future expectations of a community of the value of money or an investment. It represents the return that an investor (consumer) expects on his investment if the return (consumption) is in the future to compensate for not consuming the capital in the present.

Interest rates are also used by central banks to control the money supply and influence other macro economic indicators like exchange rates and economic growth. Central banks around the world and the Bank of Papua New Guinea have determined that their primary function is to control inflation and all economic management tools are used for this purpose. In PNG the Bank uses a number of such tools to manage monetary policy¹, they are: Treasury Bills, Bonds, Kina Facility, Overnight stand-by rates, statutory reserve deposits, Compulsory Reserve Ratio. The BPNG, along with most central banks reports quarterly to the publicⁱⁱ about its performance and is required by law to report twice a year on monetary policyⁱⁱⁱ.

Commercial banks make profit out of a variety of services that they sell loans, deposits, government securities, exchange rate dealing.

¹ Monetary policy is determined by central banks who use interest rates to control money supply, if there is too much money available and too few goods prices will rise and a period of inflation will begin. Fiscal policy which is the government’s revenue and expenditure also determines the level of inflation, if the government is stimulating demand by spending more than it receives it has to be financed by loans, if there is a high demand for money from the government the interest rate will rise.



Source: Bank of PNG, *Quarterly Economic Bulletin*; March 2006

Interest rates in PNG are considerably higher than Australia and the United States of America and small deposit rates are considerably lower than commercial deposit rates for 180 days. The average spread between 180 day deposits and lending rates at 3.7% is quite reasonable, however there appears to be a discrepancy in the spread in 2002 and if we ignore that result the average spread is 7.86%.

PNG Commercial Bank Interest Rates 1994-2006

Year	Weighted Average Deposit Rate	Weighted Average Performing Loans	Commercial Bank Deposit Rates 180 days	Spread between deposits and loans	Spread between Commercial 180 day deposits and loans
1994	4.5	10.1		5.6	
1995	9.4	16.2		6.8	
1996	4.0	10.7		6.7	
1997	5.1	10.8		5.7	
1998	8.7	21.0		12.3	
1999	8.5	19.1		10.6	
2000	6.7	18.0	12.76	11.3	5.24
2001	4.1	16.4	7.93	12.3	8.47
2002	4.7	16.0	14.85	11.3	1.15
2003	3.0	14.5	6.23	11.5	8.27
2004	1.1	12.5	4.68	11.4	7.82
2005	0.8	11.0	2.18	10.2	8.82
2006	0.8	11.6	3.03	10.8	8.57
Average				9.7	3.7

Source: Bank of PNG; *Quarterly Economic Bulletin*; March 2006, Tables S22 and S23

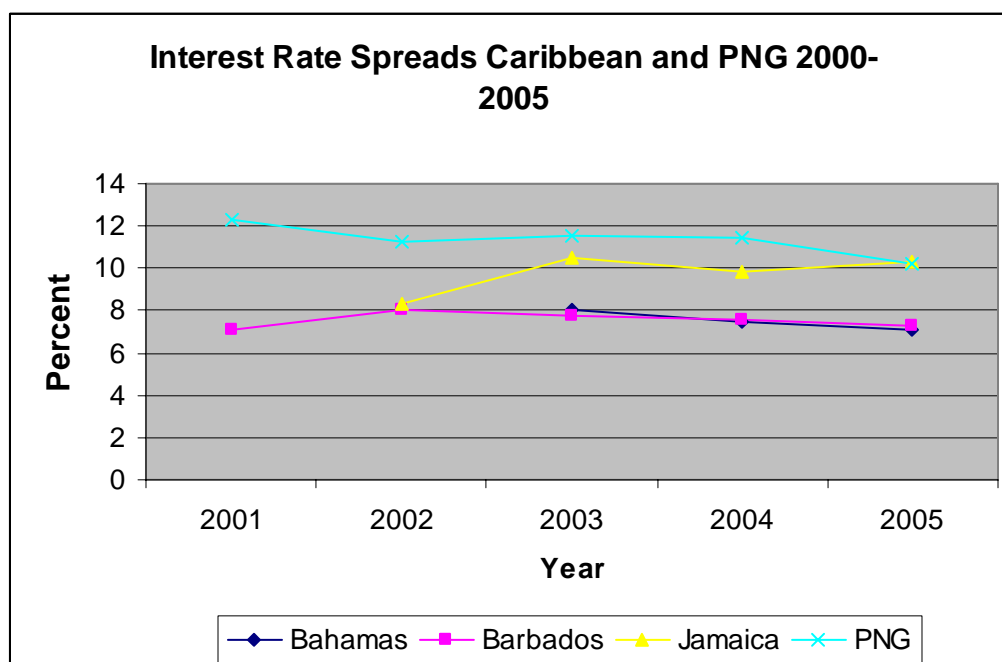
Comparisons with other Pacific Island countries shows that the PNG average level of interest spreads is the second highest in the region behind only the Solomon Islands and approximately twice the level of New Zealand.

Interest Rate Spreads-Pacific Islands

Year	New Zealand	PNG	Solomons	Samoa	Fiji	Vanuatu
2000	4.06	11.3			5.37	
2001	4.4	12.3			5.76	
2002	4.59	11.3	14.95		5.72	9.51
2003	4.39	11.5	13.47	6.5	5.69	9.55
2004	4.9	11.4	13.97	6.05	5.26	9.29
2005	5.46	10.2	13.46	6.2	6.66	9.12
2006						
Average	4.63	9.71	13.96	6.25	5.7	9.4

Source: Central Bank data

Comparing with the Caribbean countries PNG is consistently higher than the Bahamas and Barbados but is converging with Jamaica. Another study of six smaller Caribbean^{iv} countries from 1991-1996, showed that the average spread in 1996 was 7.3% which is much closer to the PNG average of 9.7%.



Source: Central Bank Data

Comparing with some other countries PNG is higher than all countries except Malawi which has averaged around 26% spread, whilst Bangladesh, a much poorer country than PNG has been able to maintain its spreads at an average of 6.26% compared with PNG's average of 9.71%. A study of 14 Latin America countries^v over the period 1999-2002 showed an average spread (interest margin) of 8.0% with Nicaragua, Peru and Venezuela significantly higher than PNG. It also calculated the reasons for the spreads.

Interest Rate Spreads-Selected Countries

Year	Mauritius	Malawi	Singapore	Hong Kong	Bangladesh	PNG
2000	4.31		3.76	2.1	6.67	11.3
2001	4.38		3.97	2.05	6.67	12.3
2002	4.57	27.5	4.3	2	6.6	11.3
2003	4.15	28.5	4.78	1.8	6.11	11.5
2004	4.46	27.5	4.78	1.61	5.27	11.4
2005	4.23	25.5	4.64	1.68		10.2
Average	4.35	27.25	4.37	1.87	6.26	9.71

Source: Central Bank Data

The conclusion is that spreads in PNG are generally higher than the countries that it has been compared with². However another study^{vi} shows that PNG compares well with Sub-Saharan Africa (11.5%), Low Income countries (12.4%) but poorly against OECD countries (4.1%).

Reasons for Spreads

Gelos has calculated some of the factors influencing the level of spreads in Latin America^{vii}:

Overhead % Total assets	6.1
Personnel Expenses % Total assets	2.6
Reserve Requirement % demand deposits	13.8
Legal Protection	4
Annual Inflation	8
Availability of Information	4

Other reasons for the high spreads in developing countries are^{viii}: lack of effective competition; high reserve ratios due lack of deposit insurance; removal of credit controls which increases the level of high risk loans and consequent failures which have to be compensated for by higher interest rates, there is also a correlation between spreads and doubtful debts; high non-financial costs especially physical capital costs, employment and wage levels; additional capital held by banks over and above reserve ratios to cushion themselves against expected and unexpected risks, especially in the absence of adequate rules and regulation of the financial system; macroeconomic stability and the policy environment.

Unsurprisingly competition and concentration of ownership^{ix} through takeovers by domestic or foreign competitors have often resulted in increases in spreads^x. Conversely foreign entry can lower spreads due to improved efficiencies, particularly lower administration costs and overheads which force other banks to improve their levels of efficiency and reduce costs.

The Commercial Bankers Association of PNG provided arguments why spreads are high in PNG^{xi}.

1. Bank income in PNG is derived from the following:

- Net interest Income;
- Fees from Lending and non-lending services;
- Earnings form Foreign Exchange Transactions;

² Note that comparisons may not be strictly accurate due to differences in data reporting by different central banks, however they do show orders of magnitude and are sufficient to draw conclusions from.

- Investments in interest earning financial assets e.g. Government Instruments.
- Other Income such as rental on fixed assets etc.

Interest Rates are set according to a number of internal and external factors:

- Supply and demand for funds;
- Capital Cost;
- Country risk;
- Operating risk;
- Liquidity risk
- Mismatches (maturity profiles);
- Market pressures (competition) etc
- Budget and performance requirements.
- Infrastructure

Supply and Demand for Funds

The supply and demand for funds is largely set by the Bank of Papua New Guinea according to its monetary policy. The BPNG's broad framework is:

OBJECTIVES OF THE CENTRAL BANK

The objective of monetary policy in PNG is to achieve and maintain price stability. This requires, amongst other things relative stability in the exchange rate. If achieved it will lead to:

- Confidence in the local currency and management of the economy;
- A foundation for stable fiscal operations of the Government;
- Certainty for private sector businesses to plan for long-term investment and development;
- A stable macroeconomic environment: and
- Conditions conducive to economic growth^{xii}.

In the latest Monetary Statement the governor has said that the Bank expects stability in macroeconomic conditions for the first half of 2006 and that the Bank will maintain a neutral stance^{xiii}. The Bank expects growth in broad money to be around 9.9% which it considers sufficient to support private sector growth without inflation.

The BPNG affects both the supply and demand of money through a variety of instruments but the most important is the interest rate and the Bank signals its monetary stance on a monthly basis through the Kina Facility Rate (KFR)³ which is announced at the beginning of each month. Whilst the KFR does not directly affect interest rates it signals to commercial banks the level that BPNG believes to be appropriate. There is some difference of opinion about the degree that commercial banks heed the KFR but it is gradually gaining influence.

³ Currently at 6% this has

The BPNG affects the money **supply** by other instruments such as the Statutory Reserve Deposit rate (SRD) and the Compulsory Reserve Requirement (CRR)⁴ through which it can soak up excess liquidity if it considers that there is a danger of upwards pressure on prices due to excess demand. The other way in which the BPNG and the Government affect the supply of money is through:

1. The issuance of Government Bonds and Treasury Bills which can be used to soak up funds or to finance government operations.
2. Open market operations where the commercial banks borrow discounted funds from the BPNG.
3. Other factors affecting supply of money are production levels of domestic and export goods within PNG and capital flows into and out of the country.

The **demand** for money depends on household income and consumption and investment plans as well as trade and capital flows. The BPNG will affect the demand for funds by use of interest and exchange rate policies. It should be noted that the BPNG has little to do with the **spreads** enjoyed by commercial banks.

Capital Cost is simply the rate that the commercial banks have to pay for their funds whether this is from the domestic market or, in the case of a large investment, foreign funds. The short term cost of funds is measured by the interest rate but longer term costs are affected by exchange rates for any off-shore funds. Banks have to make estimates about the future of the economy and the risks that exist when setting interest rates.

Country Risk measures the way that other countries and the multi-lateral lending agencies view the overall management of the economy by both the BPNG (monetary policy) and the Government (fiscal policy). It is generally recorded by professional credit assessors like Standard and Poors and Moodies.

Operational risk is influenced by the lending culture of the country⁵, additional costs of operating a bank in PNG such as security costs, infrastructure (transport, communications and power, building and maintenance costs), wage costs etc.

Liquidity risk depends on the future monetary policy of the BPNG and whether it is expansive or deflationary and how this might affect the ability of borrowers to repay their loans.

Risk margins are affected by:

1. An insurance premium to cover expected losses from defaults on loans ; and
2. A risk aversion premium in which shareholders expect an increased level of return to cover the increased level of risk^{xiv}.

The Commercial Bankers Association regards risk in PNG as being “higher than Australia or New Zealand..... (resulting in) default rates for all types of lending.....higher than that of Australia and certain other Pacific countries”^{xv}

⁴ Currently 3% but has been as high as 5% of all deposits, this attracts no interest and is therefore a cost that banks pass on to their customers.

⁵ The record of PNG borrowers to repay loans

Mismatches which result from directional interest rate changes (parallel changes in rates) and yield curves risk (changes in the shape of the yield curve).

Market pressures are about the level of competition between commercial banks and other financial institutions. PNG has four Commercial Banks⁶, the Government owned Rural Development Bank and a number of smaller financial institutions competing for funds and for lending markets. The smaller institutions include micro finance institutions, savings and loans societies, finance companies and micro-credit schemes.

The government opened up the commercial banking system some years ago resulting in the entry of three new banks⁷ of which only one remains and it is reportedly in negotiation with potential buyers. The main reason for this is the relatively small size of the PNG market and the high cost of doing business which makes it hard for new entrants.

It is not likely that the micro finance sector will provide significant competition to the banks in the field of lending to the extent that they will affect lending or borrowing rates. 13 of a total of 14 savings and loan societies were requested to provide information on lending and savings rates, only 1, the East New Britain Savings and Loans Society responded.

The ENBSL has been charging only the Lending rate of 12% per year as indicated under the Savings & Loans Amended Act, thus we cannot go beyond that rate. This calculates to 1 % per month. This has been the loan interest charge in the last 10 years of operations.

The interest accrues daily and is charged at the end of the month to our members.

The 12 % interest is calculated on the average monthly balance, so if the member repays promptly the interest amount would be less. If the member does not repay promptly in six months, we then offset their Loans using their savings. This is allowed under the Society Act.

We charge account keeping fees per month to each member that has a loan with us outstanding and this is K2 per month per loan account. The Stamp Duty charged goes to the govt (IRC) as is the requirement under law.

The interest rate at this point in time is insufficient to complement operations of large societies thus we require having other investments to help us sustain the Society. There has been talk at the BPNG level that the Society Act will be amended to help Societies control their interest rates to ensure sustainability; however there has been none to date. We are currently costing our loan products and can supply some information on that later once we have completed the full costing.

The Savings Interest rates (credit interest) is determined annually by the Board. These are the rates for the last five years:

2002	5 % per year
2003	3 % per year
2004	1.5 % per year
2005	1.00 % per year.

⁶ Bank of South Pacific, Westpac, ANZ, Maybank

⁷ Indosuez, Lloyds and Maybank

It can be seen that this Savings and Loans society is not competing directly with the Banks in its lending and borrowing policies and rates.

Budget and performance requirements are set by bank management to meet the expectations of shareholders and whether or not they are realistic can only be judged by the market. If one bank was to unilaterally increase its interest rate too high because of these requirements it would soon lose market share.

Infrastructure

Infrastructure weaknesses cost the Banks millions of kina each year. These result in expensive air deliveries of funds, expensive IT and telecommunication solutions, power backup and increased security costs because of poor infrastructure. These are all added into the mix when determining interest rate policy.

Comment

All three commercial bank CEOs interviewed as well as the Commercial Bankers Association maintained that the interest rate spread had contracted significantly during the last 3 years by more than the official BPNG statistics would lead us to believe. Interestingly the BPNG weighted average lending rate for March 2006 was 11.6%^{xvi} yet the BSP Indicator Lending Rate (ILR) was 9.45% from December 2005 through June 2006^{xvii} so the spread was likely much smaller than reported above.

The BSP also reported that the Bank of New Zealand ILR in early June was 9.75% and the Bank New Zealand Australia (a division of the National Australia Bank Ltd) advertised an ILR for consumers at 10.25% and for corporates at 9.75%, both above the BSP ILR. The point being that PNG commercial banks are more competitive in the region than the official statistics would indicate. Other commercial banks ILR have generally been slightly higher than BSP since 2002 and all were the same on 17 the October 2005^{xviii}.

In August 2004 the BSP introduced a product called the Economy Enhancer Loan pitched at investment borrowers at a rate of 9.5% when their ILR was 12.25% and this rate was reduced to 8.95% in October of that year (ILR 11.75%) and the facility has been fully subscribed.

In addition the commercial banks reported that there was a variation in lending rates and some customers received better rates due to their credit history or the size of their business^{xix}. This is unlikely to help a small first loan applicant and the BSP Credit Bulletin contains some lending rates considerably higher than the ILR.

Interest rates also vary according to the assessment of the lending bank of the risk potential of the proposed borrower. Banks do not publicise the rates they give to particular clients.

Based on official weighted average rates PNG compares unfavourably with developed countries but quite favourably with African and Latin American countries. There is some evidence to suggest that spreads are smaller than reported by the BPNG and that ILR rates in PNG are competitive with some Australian Banks. The only way that PNG's commercial banks are likely to further reduce their spreads is through increased **competition** either from new entrants to the country or from different lending institutions like micro finance organisations.

Exchange rates

The exchange rate is the price (rate) at which one currency (kina) is exchanged for another currency (dollars), gold, Special Drawing Rights⁸ and European Currency Units. Transactions are carried on spot (current) markets and forward markets including hedge funds and other forward markets. The actual rate in any one day is determined by supply and demand conditions for a currency in the market. Supply and demand are in turn dependent on the Balance of Payments deficits or surpluses of the relevant currencies and the demands to meet obligations and expectations about future movements in the rate. In other words there is a market based on actual performance and one based on how traders foresee the market in the future.

% Difference Kina, NZ Dollar as at 31/12 TT Buying and Selling

	2001		2002		2003		2004		2005	
	PNGK	NZD	PNGK	NZD	PNGK	NZD	PNGK	NZD	PNGK	NZD
				-						
USD	7.4	-0.2	9.2	0.02	9.3	-0.1	8.7	-0.1	9	-0.1
AUD	4.9	3.6	9.2	2.8	9.3	1.7	8.7	2	9	2.1
Euro	4.9		9.2		8.1		8.8		9	
Yen	4.9	2.2	9.2	2.1	8.2	1.6	8.8	2	9	2

Source: Bank South Pacific

Data on exchange rate spreads have been difficult to obtain despite numerous requests and time spent on the web searching for information. For example the Australian spreads are all positive i.e. the selling rate is slightly higher than the buying rate (less than 0.1% on 7/8/06^{xx}) whereas the PNG selling rate is significantly less than the buying rate. To make a meaningful comparison rates for other Pacific countries and developing countries would have to be supplied. In the time available for this study that information has not been forthcoming despite many enquiries from commercial banks and other sources.

Exchange rate spreads in PNG are fundamentally determined by competition like any other market. However the BPNG does intervene to even out what it considers to be seasonal or abnormal movements which are prevalent in PNG because of the movement of large amounts of money on and off shore by traders and mining and petroleum houses. They need foreign exchange to buy large capital items like dump trucks and excavators and their receipts in foreign currency tend to be lumpy.

The BPNG is considering opening foreign exchange dealing to non-bank traders^{xxi} but is not optimistic about the results. It has recently issued a licence to a finance company but this was subsequently withdrawn. It also tried to encourage competition in the early 1990s which was more targeted at the secondary market but only issued one licence and the purchaser did not survive the competition. The Commercial Banks feel that the BPNG wants the exchange rate to remain roughly where it is now and it will aim to stabilise at current rates. Nevertheless if

⁸ From the International Monetary fund (IMF) and each country has an allocation of SDRs which it can draw on to help its currency if necessary.

the foreign reserve picture was to alter dramatically the BPNG would not intervene to prop up exchange rates.

Major currency traders tend to use the Westpac and ANZ banks rather than the BSP and all tend to set rates based on a daily Reuters report on currencies^{xxii}.

The Commercial Bankers Association reports that the margins are determined by:

- The liquid Foreign exchange market in PNG;
- Cost of delivery of Foreign exchange services;
- Cost of up-skilling staff to manage foreign exchange risk;
- Cost of capital; and
- Interest rate differentials.

Like interest rates there are different rates for different customers and depending on the demand and supply for funds. Large exporters and importers can bargain for quite considerably better rates than the small overseas traveller.

Profitability

There is no doubt that exchange rate income has increased in importance over the last few years. The BSP which considers itself as the smallest player in the Foreign Exchange market^{xxiii} earned 28% of its operating income from FOREX related activities in 2005 whilst the other two major banks earned in the vicinity of 60% of their operating income from FOREX^{xxiv}.

Foreign Exchange as % Total Income 2005 (K'000)

	BSP	Westpac	ANZ
Interest income	161804	35486	
Non Interest Income	142840	88624	
Operating Income	304580	123913	
Foreign Exchange % total income	28%	58%	60%

Source: Annual Reports

For the two banks that publish annual reports non-interest income which includes foreign exchange related income has increased dramatically over the last five years with the Westpac being substantially greater than the BSP. ANZ figures are only available for two years but they also show an increase and FOREX plays a substantial part in that. This reflects the decline in Treasury Bills, lending rates and other interest rates over the last few years and a switch in emphasis to other methods of earning income.

**Sources of Income, BSP, Westpac 2000-5
(K'000)**

	2001	2002	2003	2004	2005
BSP					
Interest income	34.4	116.4	148.1	159	161.8
Non-interest income	17	80	95	110	144
Non interest %	49%	69%	64%	69%	89%
Westpac					
Interest income	44.0	48.3	50.8	52.2	35.3
Non-interest income	34.3	35.1	55.2	74.7	88.6
	78%	73%	108%	143%	251%

Source: Annual Reports.

Commentary

All three banks make substantial income from FOREX related dealings. The spreads are larger than either New Zealand or Australia. However it is beyond the scope of this report to judge whether the spreads should be larger or smaller. Literature indicates that the only way that profit margins are reduced in a non-manipulative manner is for competition to be increased. Additional competition was encouraged by the BPNG in the past and did not last. The BPNG is considering issuing more licences for FOREX dealings and this may or may not have an effect depending on how those new entrants compete and whether they survive the test of time.

RECOMMENDATIONS

1. That the BPNG encourage greater competition in the financial sector.
2. That micro-finance institutions continue to be encouraged to expand and provide competition to the commercial banks and that they be encouraged to compete for deposits by offering better interest rates.
3. That non-bank FOREX dealers be encouraged to set up where there is a need and a market for them. This market will be greatly enhanced if the tourist market is enlarged because tourists provide demand for FOREX as seen in Fiji where there are many small dealers in Nadi and Suva.

DISCLAIMER:

While the Business Council of PNG did engage the services of Michael Manning of Mirel Limited to conduct the research into the Interest Rate and Exchange Rate 'Spreads' in Papua New Guinea (the Study), and has decided to post it in its website for its members information, and comments, no warranty as to the correctness of the information it contains and no liability is accepted for any statement or opinion expressed, nor for any error or omission, in this publication.

APPENDIX A

SPECIAL PROJECT

JUNE 2006

TERMS OF REFERENCE

1. To examine the spread between deposits and lending interest rates and buying and selling exchange rates by Commercial Banks.
2. To compare the above with other countries that are similar to PNG
3. To consult with Commercial Banks to obtain a rationale for the spreads on offer to the general public and to business houses.
4. To examine the impact of larger than normal spreads on investment and lending policies in developing countries
5. Other matters as directed by the Business Council of PNG Executive Committee

ORGANIZATIONS TO BE CONSULTED:

1. Central Bank
2. Commercial Banking Institutions: Westpac/ANZ/BSP.
3. Others: International Monetary Fund
Rural Industries Council
World Bank
Website

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- ⁱ NZIER 2006
- ⁱⁱ BPNG QEB, March 2006
- ⁱⁱⁱ Governors' Statement on Monetary Policy.
- ^{iv} R. Randall; *Interest Rate Spreads in the Eastern Caribbean*; IMF Working Paper 1998
- ^v R. Gaston Gelos; *Banking Spreads in Latin America*; IMF Working Paper 2006
- ^{vi} Cihak, M & Podpiera, R; *Bank Behaviour in Developing Countries: Evidence from East Africa*; IMF Working Paper 2005
- ^{vii} Gelos, Ibid
- ^{viii} Chirwa, E & Mlachila, M; *Financial Reforms and Interest rate Spreads in the Commercial Banking System in Malawi*; IMF Working Paper 2004
- ^{ix} Okeahalam, CC; *Concentration in the Banking sector of the Common Monetary Area of southern Africa*; World Bank, undated
- ^x Peria, MSM & Mody, A; *How foreign Participation and Market Concentration Impact Bank Spreads: Evidence from Latin America*; IMF Working paper undated.
- ^{xi} Commercial Bankers' Association of PNG; *Paper on Interest Rates and Margins*; June 2006
- ^{xii} Bank of PNG; *Semi Annual Monetary Statement*; January 2006
- ^{xiii} Bank of PNG ibid
- ^{xiv} Commercial Bankers Association, ibid
- ^{xv} ibid p4
- ^{xvi} BPNG QEB, March 2006
- ^{xvii} BSP, Credit Bulletin, June 2006, www.bsp.com.pg/resources/interest_rates
- ^{xviii} BSP summary of comparative ILRs 2002-2005, June 2006
- ^{xix} Commercial Bankers' Association ibid p4
- ^{xx} Sydney Morning Herald 7/08/06
- ^{xxi} Pers. comm. 22/06/06
- ^{xxii} Pers. Comm. BSP.
- ^{xxiii} Garth McIlwain, pers. Comm..
- ^{xxiv} Annual Reports of three major banks. The ANZ Annual report is not a public document and therefore actual figures cannot be disclosed.