HARVARD | BUSINESS | SCHOOL

N9-209-053

SEPTEMBER 12, 2008

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Samoa Tala

Greg Casagrande, founder and president of the South Pacific Development Foundation (SPBD), a non-profit microfinance institution (MFI) that provides financial services to women in Samoa, was worried about the additional variability in SPBD's cash flows due to unexpected currency fluctuations. SPBD borrows in major currencies like US Dollar and New Zealand Dollar for making microfinance loans in Samoa and faces exchange rate uncertainty when the loans are repaid in Samoan Tala, the currency of Samoa.

Though SPBD had not yet suffered large losses, Greg recognized the risk of leaving the exposure unhedged. The value of the Samoa Tala had moved significantly in the past few years, from a low of US$0.27 per Tala, to a high of US$0.40 per Tala. It had exhibited yearly movements ranging from -14% to +16% in one year. Greg was wondering if it were advisable to hedge the currency risk and wanted to explore potential strategies to do so.

Background

Microfinance is a financial system to provide poor families with very small loans (usually less than $200) to individuals, usually women, to establish or expand a small, self-sustaining business. For example, a woman might borrow $50 to buy chickens for her small egg-selling business. Such initiatives can help pull her and her family out of poverty as it is a cost-efficient alternative to paying excessive interest rates charged by unofficial moneylenders in developing countries.

Microfinance has proved to be a powerful strategy to fight poverty. In many ways, it has helped support the Millennium Development Goals campaign of the United Nations to help halve the number of poor people. There has been a rapid growth of microfinance institutions in recent years, particularly after the United Nations launched the International Year of Microcredit in 2005 and the pioneer of microcredit for women, Mohammad Yunus, founder of the Grameen Bank, was awarded a Nobel Prize in 2006.

Professors Bhagwan Chowdhry and Joshua Coval and Research Associate Konark Saxena prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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Today, microfinance is becoming an emerging business with significant profit potential. According to a Deutsche Bank research report1, microfinance attracts private investors mainly for two reasons:

1. The most advanced MFIs ('self sustainable' MFIs) exhibit an attractive financial return. In a sample of around 704 MFIs, the leading 176 MFIs exhibited a return on equity of 17.2%, an RoE that in some countries is even higher than that of conventional banks. It needs pointing out, though, that RoEs as high as the ones mentioned are realized by the largest and most advanced MFIs only, whereas the RoE for a broader, more representative sample of MFIs is around 4% only. Furthermore, default rates of MFI loan portfolios in the sample are lower than those of commercial banks in domestic countries with MFIs exhibiting an average loan write-off ratio of only 1.1%. For investors, strong credit quality of micro-borrowers is attractive as it also strengthens the financial position of a whole MFI.

2. Microfinance investments appear to be conducive to an efficient diversification of portfolios. The returns of leading MFIs were largely stable over economic cycles and exhibited modest correlation with the returns of traditional asset classes.

Inspired by the success of Grameen Bank and having realized the potential of microfinance to improve the quality of life of poor families, Greg established SPBD in Samoa. SPBD's vision was to become a leading MFI in the South Pacific. It aimed to become a financially self-sustaining organization (i.e. revenues covering all costs) resulting in the realization of an organization permanently dedicated to serving the financial needs of the poor of Samoa and South Pacific.2

SPBD is a Grameen Bank style MFI serving those living in poverty in the Pacific Islands. Its first target market was the island nation of Samoa, where it targeted the population that the UNDP has declared as being food deficient -- estimated to be around 48% of the families of Samoa according to the UNDP study. Traditional banks were of little help to these families since they demand collateral or proof of a steady and sizable income in order to secure a loan. Unsecured lending was generally not available. Pawn shops preyed on the poor and charge rates well in excess of 500% per annum. As a result, most poor had no access to affordable credit and little opportunity to reach their potential.

Since inception, SPBD had disbursed approximately 18 million Tala to Samoan families. The write-offs on the disbursements had been approximately 2.6% of this total. In 2007, SPBD disbursed 4.7 million Tala worth of loans. It raised around 2.5 million Tala, amounting to a total of 6.2 million Tala in soft-loans/quasi-equity.3 Greg was optimistic about the growth of SPBD in Samoa. He considered 10,000 clients in Samoa within the next five years to be a worthwhile target. He expected the revenues to grow by 20% year on year, while the costs to increase only by 15% per annum.

Financial Management at SPBD

The goal of SPBD's financial policy was to raise debt financing at minimum cost. As a not-for-profit they could not raise equity. Though they got modest amounts of donations, they did not look at it as a long term source of funds.

Greg generally found it easier and cheaper to raise funds in hard currencies such as the US dollar and the New Zealand dollar as opposed to the Samoan Tala. However borrowing in these currencies

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[1] Deutsche Bank Research, "Microfinance: An emerging investment opportunity."

[2] http://www.spbd.ws/insidespbd.htm.

[3] South Pacific Business Development Foundation—Financial Statements, December 31, 2007.

introduced currency risk—though Greg had reliable estimates of the amount of Tala expected to be received in the future, the volatility of exchange rates made it difficult for him to forecast the exact amount of US dollars or New Zealand dollars that will be available to meet his currency debt obligations in the future. If the exchange rate of the Samoa Tala had been fixed to any one currency like the US dollar, then this uncertainty would not be there and he could always calculate the amount of Tala required to pay off a US dollar loan. However the exchange rate regime of Samoa fixed the Samoa Tala to a basket of currencies as opposed to just one currency and thus this was not possible. An alternative was to simply hedge the currency risk using forwards or futures on the Samoa Tala. Unfortunately, because of the modest size of the Samoan economy, there was no market for forwards, futures, swaps, or options on the Tala.

An additional challenge was the fact that the actual weights of the Samoan Tala were somewhat of a closely guarded secret of the Central Bank of Samoa. First, no specific information about the weights of the currencies had been made public and second, there is a big difference between de facto exchange rate regimes, that is, the regimes that countries follow in practice, and de jure exchange rate regimes, that is, the regimes that national governments officially claim to be following. The Central Bank of Samoa currently claimed to be employing a basket comprised of the New Zealand dollar, US dollar, Australian dollar, Fiji dollar, the Japanese Yen, and the Euro. But bankers in Samoa that Greg has spoken with mentioned that, based on their observations of Talan exchange rate behavior, the Yen and Fiji dollar seemed to be a very small component (if at all) of the mix. They also pointed out that movements in the New Zealand dollar and Australian dollar were highly correlated and so only one of them was really required to construct the basket. This meant that SPBD could easily borrow in any of the basket's three major constituents as it already had bank accounts in the US dollar, the Euro, and the New Zealand dollar.

In view of these considerations, Greg wondered whether borrowing in several of the currencies would increase or reduce his currency risk relative to borrowing in just one of the currencies in the basket. Intuitively, it seemed to him that borrowing in more currencies would improve his diversification. But even if he knew the precise weights, how much risk reduction could he really expect to achieve? Should he borrow equally across all currencies in the basket or more in some than others?

Appendix A

Products for Hedging Currency Risk

Foreign exchange risk can be measured by the difference between the expected exchange rate of a currency in the future and the actual realized exchange rate of the same currency at the same time in the future. Organizations exposed to foreign exchange risk normally have the option of "hedging" against their exposure using financial instruments which protect against adverse movements of foreign exchange rates. For many currencies, the following instruments exist to hedge this risk:

Forward Contracts In currency forward contracts, the contract holders are obligated to buy or sell a certain quantity of the currency at a specified price and on a specified future date. Thus, the forward contract in the forex market effectively locks in the price at which an entity can buy or sell a currency on a future date, regardless of the market value that this currency may have at the time of the contract's maturity. A forward contract is settled on delivery date by exchange of currencies.

Futures Contracts Currency futures contracts are standardized contracts that are traded on organized exchanges. Like forward contracts, futures contracts also obligate the holder to buy or sell a certain quantity of the currency at a specified price and on a specified future date. However, the contract size and delivery dates are predetermined by the exchange. E.g. the Chicago Mercantile Exchange specifies the trading unit for CME Euro FX Futures as 125,000 Euro, the delivery date as the third Wednesday of the contract month, and the last day of trading as the second business day before the third Wednesday.[4] The futures contract can be settled either by exchanging the currencies on the delivery date, or by settling the contract through a reverse trade on any day.

Swaps Agreements to simultaneously exchange (or sell) an amount of foreign currency now and resell (or repurchase) that currency in the future.

Options Instruments that provide the option, but not the obligation, to buy (a "call" option) or sell (a "put" option) foreign currency in the future once the value of that currency reaches a certain, previously agreed, "strike" price.

These four are the more conventional products available to hedge foreign currency risk. In addition some of the strategies used by MFIs to hedge foreign exchange risk are:

Back to Back Lending In this strategy, the foreign currency that is borrowed is deposited as a collateral with a local bank in return for a domestic currency denominated loan. The foreign currency deposit provides full collateral for the domestic bank. Once the MFI repays the domestic loan, the local bank releases the foreign currency deposit, which is then used to repay the foreign currency denominated loan.

The disadvantage of Back to Back Lending is that it leaves the MFI exposed to the risk of an increase in debt-servicing costs. Also, the organization loses the opportunity to take advantage of lower interest rates in foreign currency loans. Nevertheless this strategy does cover the organization against capital loss and enable the organization to access capital, which may not be available locally, or which may have more generous and flexible terms than domestic capital.

Letters of Credit In this structure, the MFI borrows from a foreign lender and deposits the amount with a foreign bank. The foreign bank then issues a letter of credit to a local bank, which in turn agrees to extend a local currency loan to the MFI to finance its lending activities. Unlike the Back to Back Lending structure, this structure is not exposed to transfer risk (The risk of restrictions on cross-border capital flows). However the letter of credit imposes an additional cost which may outweigh this benefit.

[4] http://rulebook.cme.com/Rulebook/Chapters/pdffiles/261.pdf.

Appendix B

The Determination of Exchange Rates

The movement of foreign exchange rates can be better modeled if the behavior of various transacting parties in the market is understood. The central bank of a country is an important transacting entity in the foreign exchange market – it intervenes in the market as per the exchange rate policy of the country.

There are two major systems of exchange rate determination. These systems classify exchange rate regimes on the basis of the flexibility that monetary authorities show towards allowable fluctuations in exchange rates:

Floating Exchange Rate Regime A regime in which authorities let the supply and demand of currencies dictate the price of the currency

Pegged Exchange Rate Regime In pegged exchange rates the market-determined price is constrained to remain within a scheduled band of fluctuations by central bank intervention.

1. Pegged with Horizontal Bands: The exchange rate is allowed to fluctuate in a fixed band (e.g. +/- 1%) around a central rate.

2. Crawling Peg: Under this system, the central rate is frequently adjusted in small magnitudes. This allows the exchange rate to slowly adjust to reach the equilibrium exchange rate, which is determined on the basis of the supply and demand of the currency

In the case of a pegged exchange rate, the central bank intervenes in the market whenever the market determined exchange rate reaches a pre-determined ceiling or floor exchange rate. Suppose the Tala was fixed to the Dollar at the exchange rate of 0.5 Dollars per Tala, with a +/- 1 percent horizontal band. The ceiling would be 0.55 Dollars per Tala and the floor would be 0.45 Dollars per Tala. If the Tala appreciates to 0.55 Dollars per Tala, the central bank of Samoa would intervene to sell Tala and purchase Dollars in the market, to ensure an infinite supply of Tala at the exchange rate of 0.55. Similarly, if the Tala depreciates to 0.45 Dollars per Tala, the central bank will intervene to buy Tala from the market using its Dollar reserves.

An exchange rate peg can be determined in two ways:

Single Currency Peg A country could choose to stabilize its currency against a single currency. E.g. a currency board can commit to exchange domestic currency for a specified foreign currency at a fixed exchange rate, allowing a very narrow band of exchange rate fluctuation. Whenever the exchange rate reaches the ceiling or floor, the central bank will intervene to buy or sell the foreign currency to keep the exchange rate within the band.

Basket Peg The benefits of pegging to a single currency might be overshadowed by the costs of exchange rate fluctuations against other major currencies. Consequently, some countries peg the currency against a basket of key trading partners' currencies.

Though the domestic currency is pegged against a basket of currencies, the central bank often intervenes in only one currency to manage the basket peg. *Triangular arbitrage* ensure that intervention in one currency determines the exchange rate of the domestic currency against all other currencies. If this is not the case then an arbitrage opportunity will exist.

Fixed Currency Composition Under this widely used valuation scheme for the basket peg, the domestic currency is expressed as the sum of fixed amounts of each currency in the basket. For example, if the basket peg of the Renminbi contained USD 0.04 and EURO 0.06, then 1 Renminbi can be obtained using the following basket of currencies:

$$1 \text{ RMB} = 0.04 * x^{RMB/\$} + 0.06 * x^{RMB/€}$$

Where:

$x^{RMB/\$}$ = Amount of Renminbi that can be exchanged for 1 US Dollar

$x^{RMB/€}$ = Amount of Renminbi that can be exchanged for 1 Euro

The central bank will try to ensure that the supply and demand of Renminbi in the market is such that the above relationship between the exchange rates is obtained. It can intervene to buy and sell US dollars in exchange for Renminbi, such that the above weighted average remains fixed. It does not need to intervene in multiple currencies since intervening in US dollars not only influences the $x^{RMB/\$}$ rate, but also the $x^{RMB/€}$ rate.

To understand how this works, the above equation can be transformed by multiplying it by $x^{\$/RMB}$. Using Triangular arbitrage we can simplify the equation to the following:

$$x^{\$/RMB} = 0.04 + 0.06 x^{\$/€}$$

This will give the Dollar-Renminbi exchange rate as a function of the Dollar-Euro exchange rate. If the Dollar-Euro exchange rate is 1.5, then the central bank intervention will ensure that the $x^{\$/RMB}$ rate is at 0.13. The Euro-Renminibi can then be easily calculated using Triangular Arbitrage as 0.13/1.5 = 0.087. If $x^{\$/€}$ moves to 2, then the central bank intervention will move the $x^{\$/RMB}$ rate to 0.16 and the $x^{€/RMB}$ to 0.08. Hence a 33% change in the US Dollar-Euro exchange rate, leads to a change of just around 23% in the US Dollar-Renminbi exchange rate and an 8% change in the Euro-Renminbi exchange rate.

Appendix C

Uncovering Currency Weights using Regression

Assuming that the Samoan Tala is effectively pegged to a basket consisting of fixed quantities of the US Dollar, the New Zealand Dollar, and the Euro, 1 Tala is equal to the following weighted-average of the three exchange rates:

$$1\ Tala = \beta^{\$}x^{T/\$} + \beta^{N}x^{T/N} + \beta^{€}x^{T/€} \qquad \text{(Equation 1)}$$

where:

$\beta^{\$}$ = Amount of US Dollars in the basket

β^{N} = Amount of New Zealand Dollars in the basket

$\beta^{€}$ = Amount of Euro in the basket

$x^{T/\$}$ = Amount of Tala that can be exchanged for 1 US Dollar

$x^{T/N}$ = Amount of Tala that can be exchanged for 1 New Zealand dollar

$x^{T/€}$ = Amount of Tala that can be exchanged for 1 Euro

Using Triangular Arbitrage, this relationship can be equivalently written as:

$$x^{\$/T} = \beta^{\$} + \beta^{N}x^{\$/N} + \beta^{€}x^{\$/€} \qquad \text{(Equation 2)}$$

where:

$x^{\$/T}$ = Amount of US dollars that can be exchanged for 1 Tala

$x^{\$/N}$ = Amount of US dollars that can be exchanged for 1 New Zealand dollar

$x^{\$/€}$ = Amount of US dollars that can be exchanged for 1 Euro

This suggests that a regression with $x^{\$/T}$ as the dependent variable, and $x^{\$/N}$, and $x^{\$/€}$ as the independent variables can be conducted to determine the composition of the basket. It is well known that exchange rates follow a Random Walk (See Appendix D). Moreover, regressions on time series data that follow a Random Walk can often produce spurious results. On the other hand, *changes* in exchange rates tend to be fairly stable (i.e. zero-mean and relatively stable volatility), suggesting that basket weights could be recovered by rewriting Equation 2 in terms of *changes* in the Tala exchange rate and running the regression accordingly:

$$\Delta x^{\$/T} = \beta^{N}\Delta x^{\$/N} + \beta^{€}\Delta x^{\$/€} \qquad \text{(Equation 3)}$$

where:

$\Delta x^{\$/T}$ = Change in the amount of US dollars that can be exchanged for 1 Tala

$\Delta x^{\$/N}$ = Change in the amount of US dollars that can be exchanged for 1 New Zealand dollar

$\Delta x^{\$/€}$ = Change in the amount of US dollars that can be exchanged for 1 Euro

By estimating Equation 3 using regression, we can estimate the effective weights on the New Zealand dollar (β^{N}) and the Euro ($\beta^{€}$). These estimates, in conjunction with current observed exchange rates and Equation 2, gives us the weight on the US dollar ($\beta^{\$}$).

Appendix D

Random Walk

A weakly stationary time series is one whose statistical properties such as mean, variance, and autocorrelation are defined and remain constant over time. On the other hand, the variance and/or mean of a non-stationary time series are not defined or do not remain constant over time. Examples of non-stationary process include financial data such as stock prices and exchange rates. These often follow a *Random Walk,* which is a non stationary process in which the current price depends only on the price in the last period and an error term. The following equation can be used to model a random walk process:

$$P(t) = P(t-1) + \text{error}$$

Dickey-Fuller statistics are used to test whether a series is non-stationary. This test checks whether a unit root exists in the following equation:

$$P(t) = m \times P(t-1) + \text{error}$$

Where P(t) denotes the value of the time series P at period t

If m=1, we say that the process follows a Random Walk and is non-stationary.

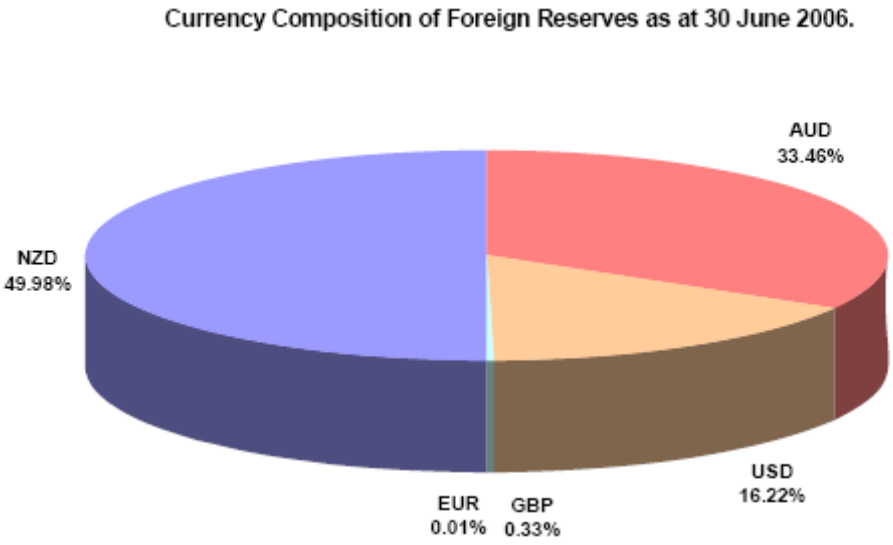
Most time series can be rendered approximately stationary through the use of mathematical transformations like taking the *first difference* of the series. The first difference of the series P at period t in the above equation is equal to P(t)-P(t-1).

Exhibit 1 Economic Indicators of Samoa

Fiscal year to end June	2003/04	2004/05	2005/06	2006/07 Forecast	
	(Percentage change over the previous year)				
Real sector					
Nominal GDP	8.8	10.1	6.7	4.6	
Real GDP	3.3	5.4	4.6	3.1	
Prices					
Headline Consumer Price Index (annual average)	7.9	7.8	3.2	3.6	
Underlying Consumer Price Index (annual average)			2.2	2.2	
Implicit GDP Deflator (annual average)	5.4	4.4	2.4	1.4	
Monetary aggregates					
Net foreign assets (annual average)	7.1	12.5	-2.3	-8.5	
Government's net monetary position (end of period)	-17.8	22.9	-10.9	-1.9	
Bank credit to private sector					
Annual average	10.5	12.1	21.3	12.4	
End period	17.1	6.8	28.2	2.1	
Money Supply, M2					
Annual average	11.4	10.8	14.0	6.6	
End period	12.7	15.0	13.0	5.6	
Exchange rate					
Nominal Exchange Rate	1.12	0.49	0.11	na	
Real Exchange Rate	4.87	5.74	-1.51	na	
International reserves					
Gross International Official Reserves (Tala million)	191.74	228.27	179.08	186.89	
Gross International Official Reserves (Months of imports)	5.9	5.9	3.9	4.1	
Weighted average interest rates	(End of period, percent p.a.)				
CBS 14 days Securities	2.22	2.22	-	-	
CBS 28 days Securities	3.21	3.20	-	5.25	(1)
CBS 56 days Securities	4.30	4.23	-	6.00	(1)
CBS 91 days Securities	4.90	4.92	-	-	
CBS 182 days Securities	-	-	-	-	
CBS 365 days Securities	-	-	-		
CBS Securities overall weighted average yield (annual average)	4.0	3.5	1.9	2.1	(1)
Commercial bank deposits	4.4	4.3	4.8	4.8	(1)
Commercial bank credit	11.0	11.0	11.5	11.5	(1)
Commercial bank interest rate spread	6.6	6.7	6.7	6.7	(1)

Source: Central Bank of Samoa
(1) Interest rate as at end July 2006

Exhibit 2 Foreign Reserves and Balance of Payments of Samoa



Balance of Payments (Amounts in Tala millions)

During the period	2004/05	2005/06	2006/07 Forecast
A. Current Account Balance	-82.5	-80.1	-67.9
Merchandise Trade Balance	-429.8	-519.9	-517.8
Exports	35.2	29.6	30.4
Imports	-465.0	-549.5	-548.2
Services, net	100.3	162.8	171.3
Income, net	-22.1	-14.1	-14.4
Current Transfers, net	269.1	291.1	293.0
Private transfers	230.1	286.9	291.2
Official transfers	39.0	4.2	1.8
B. Capital Account Balance	148.0	79.4	133.8
Official Grants	143.6	71.8	93.5
Other	4.4	7.6	40.3
C. Financial Account Balance	-34.2	-48.4	-59.4
Direct Investment	4.1	-11.1	-0.7
Portfolio Investment	0.8	-0.3	-0.3
Other Investment	-39.2	-37.0	-58.4
D. Reserve Assets	-36.2	49.5	-6.5
E. Net Errors & omissions	4.9	-0.4	0.0

Source: Central Bank of Samoa

Exhibit 3 World Interest Rates

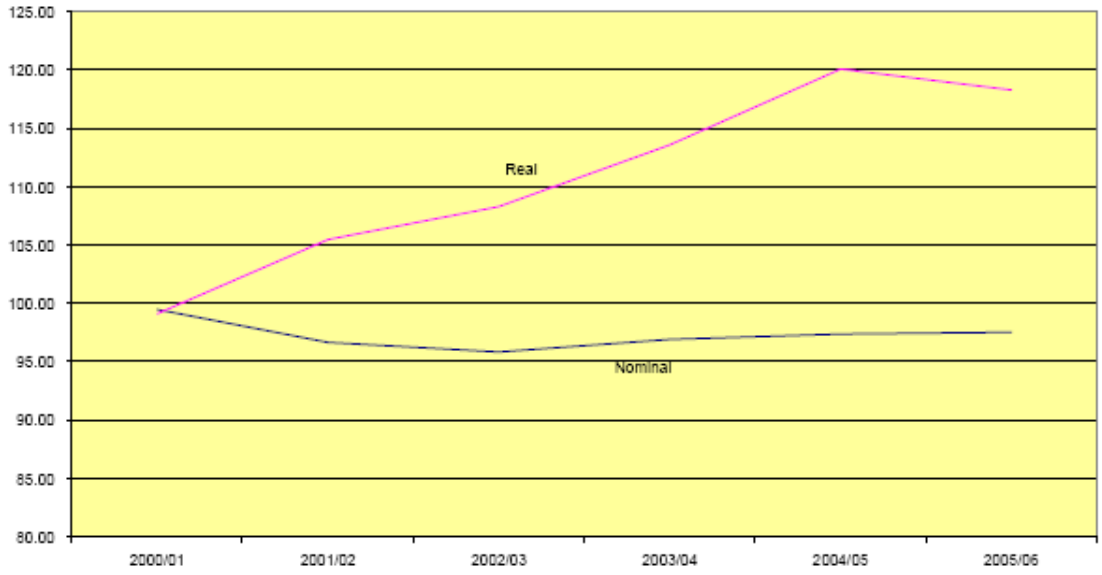
Fiscal year to end June	2003/04	2004/05	2005/06	2006/07 Forecast	
			(Percent)		
Real growth rate	4.3	4.7	4.9	4.8	
Inflation rate	1.8	1.9	2.3	2.0	
Official international interest rates,			(End of period, percent p.a.)		
US Federal Reserve	1.25	3.25	5.25	5.25	(1)
Reserve Bank of Australia	5.25	5.50	5.75	6.00	(2)
Reserve Bank of New Zealand	5.75	6.75	7.25	7.25	(3)
Bank of Japan	0.10	0.10	0.10	0.25	(4)
Bank of England	4.50	4.75	4.50	4.75	(5)
European Central Bank	2.00	2.00	2.75	3.00	(5)
Reserve Bank of Fiji Notes, 91 days	1.75	1.75	2.25	4.25	(6)

Source: IMF and reserve banks' publications and information releases.
(1) Interest rate as at 08th August 2006
(2) Interest rate as at 02nd August 2006
(3) Interest rate as at 27th July 2006
(4) Interest rate as at 14th July 2006
(5) Interest rate as at 03rd August 2006
(6) Interest rate as at 28th July 2006

Exhibit 4 Samoan Exchange Rate Indices

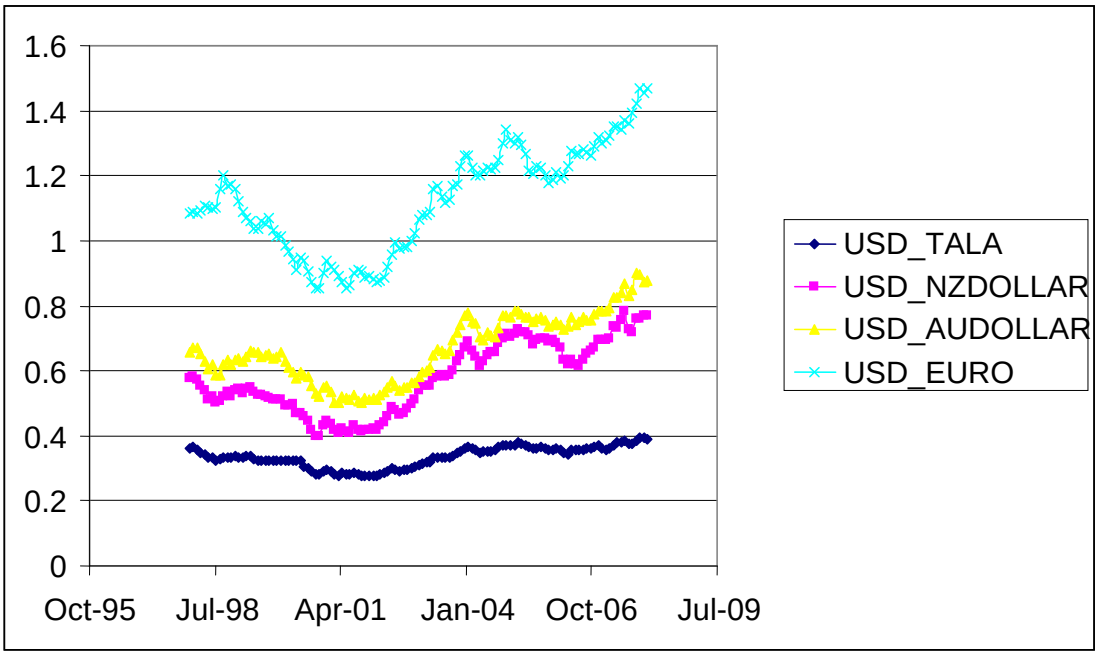
The following chart shows the movements of the Tala in terms of its Nominal Effective Exchange Rate Index (NEER) and its Real Effective Exchange Rate Index (REER) which is adjusted for changes in prices. In the fiscal year 2005/06, the nominal exchange rate of the Tala appreciated by 0.11 per cent on an annual average basis against the currencies in the basket. On the other hand, it depreciated by 1.51 percent in real terms reflecting the lower inflation rate in Samoa compared to those of Samoa's major trading partners.

Trade-Weighted Exchange Rate Index



Source: Central Bank of Samoa, Annual Report for the financial year July 2005-June 2006.

Exhibit 5 Foreign Exchange Rate Movements of Related Currencies



Source: Created by the case writer using data from "Global Financial Data."

Exhibit 6 Exchange Rate Dataa

Forex Data					
month_year	USD_TALA	USD_NZD	USD_EURO	AUD_USD	JPY_USD
Feb-98	0.37	0.58	1.09	0.66	0.77
Mar-98	0.36	0.57	1.09	0.67	0.80
Apr-98	0.35	0.55	1.09	0.67	0.78
May-98	0.34	0.54	1.11	0.65	0.76
Jun-98	0.33	0.51	1.10	0.63	0.74
Jul-98	0.33	0.52	1.10	0.60	0.71
Aug-98	0.32	0.50	1.10	0.62	0.71
Sep-98	0.33	0.50	1.16	0.59	0.69
Oct-98	0.33	0.52	1.20	0.59	0.74
Nov-98	0.33	0.53	1.17	0.62	0.83
Dec-98	0.33	0.52	1.18	0.63	0.83
Jan-99	0.34	0.54	1.16	0.62	0.85
Feb-99	0.33	0.54	1.12	0.63	0.88
Mar-99	0.34	0.53	1.09	0.64	0.86
Apr-99	0.34	0.54	1.07	0.63	0.84
May-99	0.34	0.55	1.06	0.64	0.84
Jun-99	0.33	0.53	1.04	0.66	0.82
Jul-99	0.32	0.53	1.04	0.66	0.83
Aug-99	0.32	0.53	1.06	0.66	0.84
Sep-99	0.33	0.52	1.05	0.64	0.88
Oct-99	0.32	0.51	1.07	0.65	0.93
Nov-99	0.32	0.51	1.03	0.65	0.94
Dec-99	0.32	0.51	1.01	0.64	0.96
Jan-00	0.32	0.51	1.01	0.64	0.97
Feb-00	0.32	0.49	0.98	0.66	0.95
Mar-00	0.32	0.49	0.96	0.63	0.91
Apr-00	0.32	0.50	0.95	0.61	0.94
May-00	0.32	0.47	0.91	0.60	0.95
Jun-00	0.32	0.47	0.95	0.58	0.92
Jul-00	0.31	0.46	0.94	0.59	0.94
Aug-00	0.30	0.45	0.90	0.59	0.93
Sep-00	0.29	0.42	0.87	0.58	0.93
Oct-00	0.28	0.40	0.85	0.55	0.94
Nov-00	0.28	0.40	0.86	0.53	0.92
Dec-00	0.29	0.43	0.90	0.52	0.92
Jan-01	0.29	0.44	0.94	0.55	0.89
Feb-01	0.29	0.43	0.92	0.56	0.86
Mar-01	0.28	0.42	0.91	0.53	0.86
Apr-01	0.28	0.41	0.89	0.50	0.82
May-01	0.28	0.42	0.87	0.50	0.81
Jun-01	0.28	0.41	0.85	0.52	0.82
Jul-01	0.28	0.41	0.86	0.52	0.82
Aug-01	0.29	0.43	0.90	0.51	0.80
Sep-01	0.28	0.42	0.91	0.53	0.82
Oct-01	0.28	0.41	0.91	0.51	0.84
Nov-01	0.28	0.42	0.89	0.50	0.82
Dec-01	0.28	0.42	0.89	0.52	0.82
Jan-02	0.28	0.42	0.88	0.51	0.78
Feb-02	0.28	0.42	0.87	0.52	0.75
Mar-02	0.28	0.43	0.88	0.51	0.75
Apr-02	0.28	0.44	0.89	0.53	0.76
May-02	0.29	0.46	0.92	0.54	0.76
Jun-02	0.30	0.49	0.96	0.55	0.79
Jul-02	0.30	0.48	0.99	0.57	0.81
Aug-02	0.29	0.46	0.98	0.55	0.85
Sep-02	0.29	0.47	0.98	0.54	0.84
Oct-02	0.30	0.48	0.98	0.55	0.83
Nov-02	0.30	0.50	1.00	0.55	0.81
Dec-02	0.30	0.51	1.02	0.56	0.82

Forex Data					
month_year	USD_TALA	USD_NZD	USD_EURO	AUD_USD	JPY_USD
Jan-03	0.31	0.54	1.06	0.56	0.82
Feb-03	0.32	0.55	1.08	0.58	0.84
Mar-03	0.32	0.55	1.08	0.60	0.84
Apr-03	0.32	0.55	1.09	0.60	0.84
May-03	0.33	0.58	1.16	0.61	0.83
Jun-03	0.34	0.58	1.17	0.65	0.85
Jul-03	0.33	0.59	1.14	0.66	0.84
Aug-03	0.33	0.58	1.12	0.66	0.84
Sep-03	0.33	0.58	1.13	0.65	0.84
Oct-03	0.34	0.60	1.17	0.66	0.87
Nov-03	0.35	0.63	1.17	0.69	0.91
Dec-03	0.35	0.65	1.23	0.72	0.92
Jan-04	0.36	0.67	1.26	0.74	0.93
Feb-04	0.37	0.69	1.26	0.77	0.94
Mar-04	0.36	0.66	1.23	0.78	0.94
Apr-04	0.36	0.64	1.20	0.75	0.92
May-04	0.35	0.62	1.20	0.74	0.93
Jun-04	0.35	0.63	1.21	0.70	0.89
Jul-04	0.35	0.65	1.23	0.69	0.91
Aug-04	0.35	0.65	1.22	0.72	0.91
Sep-04	0.36	0.66	1.22	0.71	0.91
Oct-04	0.36	0.68	1.25	0.70	0.91
Nov-04	0.37	0.70	1.30	0.73	0.92
Dec-04	0.37	0.71	1.34	0.77	0.96
Jan-05	0.37	0.70	1.31	0.77	0.96
Feb-05	0.37	0.71	1.30	0.77	0.97
Mar-05	0.38	0.73	1.32	0.78	0.95
Apr-05	0.37	0.72	1.29	0.78	0.95
May-05	0.37	0.72	1.27	0.77	0.93
Jun-05	0.37	0.71	1.22	0.77	0.94
Jul-05	0.36	0.68	1.20	0.77	0.92
Aug-05	0.36	0.70	1.23	0.75	0.89
Sep-05	0.37	0.70	1.22	0.76	0.90
Oct-05	0.36	0.70	1.20	0.77	0.90
Nov-05	0.36	0.69	1.18	0.75	0.87
Dec-05	0.36	0.69	1.19	0.74	0.84
Jan-06	0.36	0.69	1.21	0.74	0.84
Feb-06	0.36	0.67	1.19	0.75	0.87
Mar-06	0.35	0.63	1.20	0.74	0.85
Apr-06	0.34	0.62	1.23	0.73	0.85
May-06	0.36	0.63	1.28	0.74	0.85
Jun-06	0.36	0.62	1.27	0.76	0.89
Jul-06	0.35	0.62	1.27	0.74	0.87
Aug-06	0.36	0.63	1.28	0.75	0.86
Sep-06	0.36	0.65	1.27	0.76	0.86
Oct-06	0.36	0.66	1.26	0.76	0.85
Nov-06	0.36	0.67	1.29	0.75	0.84
Dec-06	0.37	0.69	1.32	0.77	0.85
Jan-07	0.36	0.69	1.30	0.79	0.85
Feb-07	0.36	0.69	1.31	0.78	0.83
Mar-07	0.36	0.70	1.32	0.78	0.83
Apr-07	0.37	0.73	1.35	0.79	0.85
May-07	0.38	0.73	1.35	0.83	0.84
Jun-07	0.38	0.76	1.34	0.82	0.83
Jul-07	0.38	0.78	1.37	0.84	0.82
Aug-07	0.38	0.73	1.36	0.87	0.82
Sep-07	0.37	0.72	1.39	0.83	0.86
Oct-07	0.39	0.76	1.42	0.85	0.87
Nov-07	0.39	0.76	1.47	0.90	0.86
Dec-07	0.39	0.77	1.45	0.90	0.90
Jan-08	0.39	0.77	1.47	0.87	0.89

aSource: Global Financial Data. January 1999 is a good start date for the data analysis as it corresponded to the removal of a one percent Government levy on the purchase of foreign exchange by Samoa and leaves a sufficient time gap after the commencement of the deregulation of the financial system of Samoa in January 1998.

Exhibit 7 South Pacific Business Development Foundation—Balance Sheet as at 31 December 2007

ACCUMULATED FUNDS	WST ($) 31-Dec-07	WST ($) 31-Dec-06
Net Loss from Operations:		
1999		
2000	(637,094)	(637,094)
2001	(480,278)	(480,278)
2002	(296,541)	(296,541)
2003	(402,864)	(402,864)
2004	(66,573)	(66,573)
2005	(97,681)	(97,681)
2006	(58,398)	(58,398)
2007	318,844	
FX PROVISION ***	(648,615)	(648,615)
	(2,369,200)	**(2,688,044)**
Represented by:		
CURRENT ASSETS		
Cash on Hand and at Bank	1,480,984	724,683
Loans Receivable	2,296,218	1,765,048
Other Receivables	74,045	68,087
	3,851,247	2,557,818
CURRENT LIABILITIES		
Other Creditors and Accruals	33,669	47,337
Member Saving Deposits	283,839	65,479
	317,508	112,816
WORKING CAPITAL	3,533,739	2,445,002
FIXED ASSETS	251,882	220,586
TERM LIABILITIES/QUASI EQUITY		
Soft Loans/Quasi Equity	6,155,204	4,572,233
Commercial Loans	(383)	781,399
	(2,369,200)	**(2,688,044)**

*** **FX Provision represents the foreign exchange loss for previous financial year 2000 to 2005**
The amount shown reflects a total exchange loss carried from the Fiscal Year 2000 to FY 2005 while the NZI was used to express the previous Audited Financial Statements as per the requirements. SPBD made a dec SPBD will use Samoan Tala as its home currency, and the first Audited Financial Statement for the year then ended 31 December 2007 will be expressed in Samoan Tala.

Source: Public financial statements from the South Pacific Business Development Foundation.

Exhibit 8 South Pacific Business Development Foundation—Statement of Revenues and Expenditures for the Year Ending 31 December 2007

REVENUE	WST ($) 2007	WST ($) 2006
Interest from Loans	1,080,954	641,360
Insurance on Loans	120,268	89,683
Loan Recoveries	7,596	10,599
Savings Fees	4,461	3,452
Operating Revenues Sub-Total	**1,213,279**	**745,093**
Grants	64,912	56,693
Interest on Bank Accounts and Term Deposits	21,780	19,654
Miscellaneous income	2,765	4,918
Donations - Womens Award 2007	9,500	-
Gain on disposal	42,250	11,641
Non-Operating Revenues Sub-Total	**141,207**	**92,906**
Total Revenues	**1,354,485**	**837,999**
EXPENDITURES		
Accident Compensation Board	3,105	3,919
Annual Events - Womens Award	12,232	-
Bank Charges	12,321	20,617
Collection Fees - Delinquent Loans	(3,055)	40,963
Communications	20,736	16,542
Depreciation	103,987	83,570
Insurance	17,528	16,086
Loss on sale of fixed assets	-	931
National Provident Fund	14,282	13,549
Office Expense	1,849	2,359
Other Expenses	14,018	29,034
Printing and Stationeries	42,937	23,280
Professional Services	5,875	5,306
Public Relations	3,241	5,736
Rental Expenses	51,888	40,035
Repairs and Maintenance	36,243	47,479
Salaries and Wages	470,918	290,436
Savaii Launching	17,856	-
Taxes and Fees	510	950
Transportation	52,315	69,771
Travel	19,641	23,481
Operating Expenditures Sub-Total	**898,428**	**734,044**
Interest Expenses	110,138	92,758
Interest on Overdraft Facilities	12,305	45,951
Loan loss provision	10,014	16,439
Insurance loss provision	4,995	3,621
Foreign Exchange (Gain)/Loss	(238)	3,584
Total Expenditures	**1,035,641**	**896,397**
Net Income/Loss	318,844	(58,398)
Transfer to Accumulated Funds	**318,844**	**(58,398)**

Source: Public financial statements from the South Pacific Business Development Foundation.

Exhibit 9 South Pacific Business Development Foundation

QUASI EQUITY (0-1% interest debt)	2007	2006
Gregory F. Casagrande	2,514,614	2,791,798
SPBD-USA	204,139	302,281
Scott Gilmore	19,320	19,478
Kiva Micro funds	1,535,266	14,359
	4,273,340	3,127,916

Gregory F. Casagrande

This is a long term, 0% interest loan from Gregory F. Casagrande, SPBD's Founder, Chairman and President. The loan has been used to finance the start-up and growth of SPBD. The loan balance as of 31 December 2007 is NZD $1,259,812 (WST $2,514,614). The loan with Mr. Casagrande is governed by a Master Loan. Agreement, the major provisions of which include a 0% interest rate, and a quarterly repayment schedule going through to 31 December 2011. SPBD has made quarterly principal repayments in 2007 totalling to NZD $120,000 and USD $20,000

SPBD-USA (now known as MicroDreams)

SPBD-USA has provided SPBD a total loan of $165,000 from 2001 to 2005 at an interest rate of 1% per annum. SPBD has repaid back USD $75,000 from 2004 to December 2007, reducing an outstanding balance by the end of 2007 to USD $ 80,000. There were no additional loans acquired from SPBD-USA in 2007. SPBD has continously made quarterly repayments to SPBD USA as per the loan agreement. The outstanding loan balance as at 31 December 2007 is USD $80,000 (WST $204,139). Final repayment will be made in the year 2008.

Scott Gilmore

SPBD received two loans from Mr. Gilmore (NZD $2,000 in 2001 and NZD $8,000 in 2002) totalling NZD $10,000 at 0% p.a. interest rate. The full amount will be repaid back in February 2008. Outstanding loan balance as of year end 2007 was NZD $10,000 (WST $19,320.)

Kiva Micro Funds

Kiva MicroFunds is a non-profit organisation based in California which established a website to pool lending funds as zero percent interest rate from individuals and channel the pooled funds to field partners. SPBD is one of the field partners of Kiva thereby entitling it to be included in the fund raising activities of Kiva Microfunds. The Kiva Micro funds was able to raise USD $1,002,875 in pooled loan in behalf of SPBD. This pooled loan is payable in 12 monthly amortization starting 31 January 2007. SPBD has made a total repayment of USD $410,278 in 2007, and the outstanding balance at 31 December 2007 is USD $592,597 (WST $1,535,266). Funds raised by Kiva on a monthly basis in behalf of SPBD already nets out the monthly amortization due to SPBD.

SOFT LOANS (> 1% interest debt)	2007	2006
Donald Hollander	3,000	3,000
Deutsche Bank	-	316,021
Rabobank	120,983	137,817
CRESUD	155,651	252,456
OikoCredit	602,230	735,024
Jasmine Charitable Trust (Sam Morgan)	1,000,000	-
	1,881,865	1,444,318

Donald Hollander

SPBD received $3,000 Samoan Tala loan from Donald Hollander of New Zealand in 2003. The interest rate is set at 5% p.a., and the repayment of principal and interest will take place-once-at the end of four years, but no later than December 31, 2007. The outstanding loan balance as at 31 December 2007 is WST $3,000

Source: Public financial statements from the South Pacific Business Development Foundation.

Exhibit 10 South Pacific Business Development Foundation

SOFT LOANS (cont'd)

Deutsche Bank

Deutsche Bank, through the Deutsche Bank Microcredit Development Fund, has increased its exposure from USD $90,000 to USD $115,000 to SPBD in 2006 with an interest rate maintained at 2% per annum. This loan was specifically approved to provide collateral to Westpac and ANZ Bank based on 2:1 leverage funding structure whereby proceeds of this loan held on deposit with ANZ and Westpac and ANZ bank secured by way of letter of charge securing local currency loan facilities equivalent to 2:1 (refer to note 8). This loan has been extended until May 2007, in order to facilitate the renewal of existing credit facilities with Westpac and ANZ Banks. The loans with DB has been repaid back in full in 2007, hence no outstanding balance at 31 December 2007

	% rate p.a	Maturity date	Beginning Balance	Availment Balance	Repayments	Ending Balance	Amount in WST
Original loan USD	2%	31-Dec-06	90,000	-	90,000.00	-	
Renewed loan USD	2%	1-May-07	90,000	25,000	115,000.00	-	-

RABOBANK FOUNDATION

SPBD received a EURO $50,000 loan from Rabobank Foundation in March 2005 with an interest rate of 5% per annum. One Principal payment of EURO $6,250, were made bringing the total outstanding balance as of 31 December 2007 to EURO $31,250 (WST $120,983).

	Currency	% rate p.a	Maturity date	Beginning Balance	Availment Balance	Repayments	Ending Balance	Amount in WST
Loan	EURO	5%	31-Dec-09	37,500	-	6,250	31,250	120,983

Cresud

Cresud S.p.A provided a loan of USD $50,000 in 2005 with the interest rate of 9.5% per annum. SPBD made two principal repayment in 2006 totalling to USD $25,000 which has then reduced the outstanding balance as of 31 December 2006 to USD $25,000. Final repayment to be done in the year 2007. CRESUD S.p.A further provided a loan of EURO $50,000 in 2006 with the interest rate of 8.5% per annum. The first repayment of EURO $10,000 has been made by December 2007, and the final repayment to be made on 31 December 2008. Outstanding loan balance as of 31 December 2007 is WST $155,651.

	Currency	% rate p.a	Maturity date	Beginning Balance	Availment Balance	Repayments	Ending Balance	Amount in WST
1st Loan	USD	9.50%	31-Dec-07	25,000	-	25,000	-	-
2nd Loan	EURO	8.50%	31-Dec-08	-	50,000	10000	40,000	155,651
Total				25,000	50,000	35,000	40,000	155,651

Oikocredit

SPBD received a loan of EURO $200,000 in two tranches of EURO $100,000 each in 2006 from Oikocredit. The loan bears an interest rate of 10% per annum based on the loans declining balance. The loan shall be paid back in nine (9) equal semi-annual installements starting May 2007. Loan maturity date is in May 2011. Outstanding loan balance as of 31 December 2007 was EURO $155,556 (WST $602,230).

	Currency	% rate p.a	Maturity date	Beginning Balance	Availment Balance	Repayments	Ending Balance	Amount in WST
1st tranche	EURO	10.00%	31-May-11	100,000	-	44,444	55,556	
2nd Loan	EURO	10.00%	31-May-11	100,000.00	-	-	100,000	
Total					-	44,444.00	155,556	602,230

Jasmine Charitable Trust (Sam Morgan)

SPBD received two tranches from Sam Morgan through Jasmine Charitable Trust in New Zealand totalling to SAT$1,000,000, with the interest of 7% per annum. Interest payment must be made quarterly beginning 30 June 2007. Principal repayments will be started on October 1, 2008, and the final to be made on January 1, 2011. The outstanding balance as at 31 December 2007 is SAT$1,000,000

	% rate p.a	Maturity date	Beginning Balance	Availment Balance	Repayments	Ending Balance	Amount in WST
1st tranche	7.00%	1-Jan-11	-	500,000	-	500,000	
2nd tranche	7.00%	1-Jan-11		500,000		500,000	
Total				1,000,000	-	1,000,000	1,000,000

COMMERCIAL LOANS

	Loan	OD	31-Dec-07 $	31-Dec-06 $
Westpac Bank	-	(383)	(383)	413,662
ANZ Bank			-	367,737
Total	-	(383)	(383)	781,399

Source: Public financial statements from the South Pacific Business Development Foundation.