MONETARY POLICY TRANSMISSION MECHANISM IN SAMOA

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Abstract

In recent years, Samoa has emerged to be the most successful economy amongst all Pacific island countries. Its achievements of low inflation and high growth rates were due to sustained fiscal adjustment and appropriate monetary policy measures. This paper undertakes an empirical study of transmission mechanism of monetary policy by adopting a VAR approach and using quarterly data over a 17-year period (1990-2006). The study findings are that money and exchange rate channels are important channels in transmitting monetary impulses to Samoa's real sector, followed by credit and interest rate channels.

Key Words: Monetary Policy, Transmission Mechanism, Monetary aggregate, Bank Lending, South Pacific, Samoa

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1. Introduction

Samoa, a small open Pacific island country (PIC) recorded notable success in stabilising the economy in recent years, after years of high inflation and low growth since the early 1970s until the late 1990s. While some of the newly independent PICs during this period progressed with sound demand management policies, Samoa had then continued to present a contrasting picture. Weak fiscal management and poorly performing state owned enterprises (SOEs) contributed to a continuing decline in the Samoan economy, which was unexpectedly further battered by two cyclones of 1991 and 1992, destroying the country's physical infrastructure. Table 1 presents selected key indicators.

Fiscal adjustment measures including downsizing the public sector and closure of non-viable SOEs along with financial sector reforms, which began in the late 1990s, brought about the much needed economic transformation. It enabled Samoa to outperform other Pacific island countries during the next five years (2000-2005), with solid economic growth as well as improvements in public finances, fall in inflation and reduction in debt levels (KVAConsult Ltd. 2007, Leigh 2006). The financial sector reforms consisted of dismantling of all quantitative credit controls and removal of ceilings on interest rates charged by the commercial banks, and encouragement of competition in the banking sector by granting licenses for new banks to enter. Further, the country's monetary authority, the Central Bank of Samoa (CBS) embarked upon new policy initiatives. Effective January 1998, CBS commenced weekly open market type operations in its own 91-day and 182-day central bank bills through public auction mode, which not only helped liquidity management, but also has now become became the primary monetary policy instrument for influencing the short term interest rates in the market. Over the last nine years, CBS strived with notable success in making the conduct of its monetary policy more transparent with issue of public information notices and publication of annual monetary policy statements and statistics (KVAConsult Ltd 2007).

Since there are no studies undertaken on Samoa's monetary policy transmission mechanism, the present study has accordingly been motivated to fill the gap. The paper is organised on the following lines: section 2 presents a brief literature survey of channels of transmission of monetary policy; section 3 outlines the methodology adopted for the study; section 4 reports the results of the study; and section 5 offers a summary of the findings.

Table 1: Samoa: Selected Key Indicators	
Land Area (Sq.km.'000)	2..8
Population (2004: '000)	184
Per Capita GDP (US$) Current prices : 2004	1,840
Aid Per Capita in US$ (2004)	167
Aid as percentage of GDP (2004)	8.2
Human Development Ranking (2004)	75
Annual Average Growth Rate in percent (2001-2005)	4.2
Annual Average Inflation in percent (2001-2005)	5.3
Overall Budget Balance as percent of GDP (2000-2005)	-1.3
Current Account Balance as percent of GDP (2000-2005)	-0.2

Source: ADB (2006), UNESCAP (2007)

2. Monetary Policy Transmission: A Brief Literature Survey

The process through which monetary policy decisions affect aggregate demand, gross domestic product (GDP) in real terms, and price level is described as monetary transmission (Meltzer 1995). The impact of monetary policy decision on the country's GDP domestic product is through its influences on consumption and investment decisions of households, business and financial intermediaries. There are at least six channels through which monetary policy impacts economic activities: (i) interest rate channel; (ii) money supply channel; (iii) credit channel; (iv) the balance sheet channel; (v) asset price channel; (vi) exchange rate channel; and (vii) expectations channel. One should however recognise these channels of transmission have varying lags in their functioning (Mishkin 2006, 2001, 1996, 1995).

Interest Rate Channel

The traditional view is that a fall in nominal interest rate, following a rise in nominal money stock, given the unchanged price level in the short run due to market rigidities, would cause rise in investment spending, thereby increasing aggregate demand and rise in output. The key here is that it is the real rather than nominal rate that influences investment. Taylor (1995) in his survey on empirical research studies on interest rate channel concluded that there is strong empirical evidence for substantial effects on consumer spending on semi-durables and investment spending, making the interest rate monetary transmission mechanism a strong one.

Money Supply Channel

The money supply view is that an expansionary monetary policy increases bank reserves and relaxes the constraints to banks' ability to create more loans and as a result short-term interest rate falls (King 1986, Ramey 1993, Romer and Romer 1990, Thronton 1994). Here, money supply would mean either

M1, narrow money (comprising currency outside the banks and demand deposits) or M2, broad (consisting of narrow money and savings and time deposits).

Credit Channel

Increase in money supply through rise in bank reserves enhances the ability of banks to expand lending. Banks would make available loans to new borrowers as well, most of whom are dependent bank loans. This will encourage further consumption spending in terms of purchases of semi-durables and business investment. These would lead to increases in GDP. The bank credit channel has assumed greater importance in recent years, not only in advanced but also in developing economies as documented in studies by Bernanke (1986), Bernanke and Blinder (1988), Kashyap *et al*. (1993) and Kashyap and Stein (1994).

Balance Sheet Channel

The balance sheet channel view lays emphasis on the role of collateral in reducing moral hazards. An expansionary monetary policy causes increases in financial and physical asset prices, thereby raising the market net worth of firms and the value of collateral, company cash flow and ultimately the firms' credit worthiness. Further, a rise in asset prices increases the ratio of liquid financial assets to household debt, thereby reducing the probability of financial distress and therefore increases consumption and housing investment (Mishkin 2001).

Asset Price Channel

This particular transmission channel rests on Tobin's *q* theory, which is applied to business investment (Mishkin 1995, 2001, 2006). An expansionary monetary policy raises price level of equities. Increase in its stock prices enables the firm to raise additional equity capital by issuing less number of stocks. Transmission mechanism through asset price increases is further strengthened by Modigliani's life cycle model, according to which increases in financial wealth raises consumption by households (Mishkin 1995, 2001, 2006).

Exchange Rate Channel

Monetary policy influences the exchange rate through interest rates. An expansionary monetary policy would increase money supply, leading to a fall in interest rate. Under conditions of perfect capital mobility and perfect substitutability of financial assets, capital would flow out and domestic currency would depreciate. Depreciation would make the country's exports more attractive to foreigners; an increase in net exports would result in greater aggregate demand leading to rise in output (Mishkin 2006).

Expectations Channel

Monetary policy decisions have an impact on the economy through their influence on the expectations of economic agents about the future outlook of the economy. In particular, expectation effects may improve monetary policy transmission channels by shortening reaction lags (Mayes 2004). The expectation channel is likely to be more effective, if the central bank has already acquired a high degree of credibility through its past performance.

3. Modeling Methodology AND DATA

Limitations in the island economies

In small, open island economies including Samoa, there are severe constraints limiting the efficiency of transmission mechanisms acting through various channels. In the absence of a well-developed and deep financial sector with large number of participants to absorb debt instruments and equities, accompanied by a vibrant secondary market in which financial assets could be traded with considerable ease and speed, interest rate channel does not effectively operate (Worrell 2000, Fairbairn and Worrell 1996**)**.

The balance sheet approach presupposes that financial assets are important constituents of firms'/consumers' portfolios and assumes the existence of convertibility between illiquid (consumer durables) and liquid (financial) assets. Empirical studies have shown that markets for assets in island economies in the Caribbean region have not attained such sophistication to function as an efficient conduit for monetary policy (Baksh and Craigwell 1997). A recent study (Dabla-Norris and Floerkemeir 2006) notes that the inability of banks in developing countries to properly assess credit risk, due to both weak risk management expertise and opaque corporate accounting practices, increases banking spreads and reduces the effectiveness of balance sheet channel.

With reference to asset price channel mechanism and its variants of Tobin's *q* theory (valuation of equities) and Modigliani's wealth and consumption model, an important pre-condition, namely the presence of financial assets constituting a key component of borrowers' and wealth holders' portfolios, does not exist in small, island economies. Further, in small economies including Samoa, commercial banks dominate the financial sector, since the non-bank financial sector institutions (stock, debt securities and mortgage market, insurance industry) are still in their infancy. Thus, market financing does not matter, which largely precludes the asset price channel's working through wealth and income effects (Dabla-Norris and Floerkemeir 2006).

The exchange rate channel transmission mechanism for its full efficiency presupposes a floating system, which adjusts to capital flows. Since Samoa has adopted a fixed exchange rate regime, this particular channel may not

operate. Further more, the scope for exchange rate channel is further limited in Samoa, owing to continued existence of controls on capital movements and its limited financial assets not being considered by overseas investors as perfect and desirable substitutes for other international assets.

In view of the limitations discussed above, it is more likely that in small island economies with undeveloped money markets, monetary pulses are transmitted to the real sector through money channel rather than through interest rate channel. Since CBS conducts weekly OMO in its own papers towards liquidity management, such sale/purchase of short term bills impacts commercial banks' reserves, raising their ability to create money through more lending and eventually money supply. As changes in money supply bring about changes in commercial banks' balance sheets, banks in their turn resort to effecting changes in asset transformation. The effects are felt on changes in bank credit to private sector and further impulses are transmitted to interest rate and exchange rate, which eventually impact output and prices.

Methodology

For exploring how monetary shocks affect the economy, we employ the VAR methodology, which has been increasingly adopted in recent years (Dabla-Norris and Floerkemeir 2006, Ramlogan 2004, Ahmed 2002, Morsink and Bayoumi 2001). The chief advantage of using standard VAR is that only minimal restrictions need to be imposed. Following Bernanke and Blinder (1992) and Sims (1992), a VAR with *k* endogenous variables and *n* lags can be expressed as:

$$\prod_0 y_t = \prod_1 y_{t-1} + \prod_2 y_{t-2} + \ldots \prod_n y_{t-n} + \varepsilon_t \qquad (1)$$

where, y_t is a *k* times 1 vector of endogenous variables, $\prod$ is *k* times *k* matrix of standard parameters of the endogenous variables and ε_t is *k* times 1 vectors structural disturbances.

The model uses a recursive, contemporaneous system, whereby it is assumed that the structural shocks ε_t is orthogonal and that $\prod$ is lower triangular. If there is no contemporaneous feedback from the non-policy variable to policy variable, it is theoretically sound to place the policy variable first in the recursively ordered system. If the contemporaneous correlation among the shocks in the reduced–form VAR is high (Ahmed 2003, Ramlogan 2004), ordering becomes a matter of concern.

Data Sources

The study covers a 17-year period (1990-2006) and data are drawn from published sources. Table 2 presents selected economic indicators of annual

growth rate and related monetary statistics. We employ the quarterly data for all variables except real output (GDP). Since there are no quarterly estimates of real GDP, we resort to cubic-spline procedure to split annual data series for generating quarterly times series. The monetary variables employed in the study are narrow money (M1), and bank credit (CRE), representing loans to private sector. In the absence of a consistent time series covering a 17-year period relating to short-term interest rate, we were constrained to use the average lending rate charged by commercial banks (BR) to represent interest rate representing monetary policy stance.

Table 2: Samoa: Growth Rates and Monetary Statistics: 1985-2006

	GR	M1 (Mill Tala)	M2 (Mill Tala)	CRE (Mill Tala)	CPI (Index)	E (Tala/US$)	Average Lending Rate (%)
1985-89 (Ave)	2.4	26.7	76.9	32.8	55.5	2.2	18.0
1990-94 (Ave)	-1.1	43.8	123.7	69.9	77.7	2.5	13.0
1995-99 (Ave)	3.8	68.6	205.8	142.7	94.1	2.7	11.8
2000	6.1	93.3	289.9	233.0	100.0	3.3	11.0
2001	7.0	86.8	307.6	266.6	103.8	3.5	9.93
2002	1.0	95.6	339.0	294.7	112.2	3.4	9.75
2003	3.5	118.2	386.4	318.5	112.3	3.0	9.75
2004	3.7	124.9	418.5	358.7	130.7	2.8	9.75
2005	5.1	160.7	484.0	440.1	133.1	2.7	9.75
2006	3.5	170.1	550.6	538.5	138.1	2.8	9.75

Source: UNESCAP (2007); IMF (2007)

Besides the monetary variables, we use price level and exchange rate as variables in the study. The price variable employed is the consumer price index (P). The exchange rate (E) refers to the domestic currency (*tala)* units per unit of foreign currency (US dollar). The reason for using the nominal exchange rate is that we can isolate changes in the nominal exchange rate on real economic activity separately from changes in prices, since the real exchange rate is already adjusted for changes in prices and using this variable would make it difficult to isolate price changes (inflation) from exchange rate changes (Dabla-Norris 2006). The data source for monetary variables, price

index and exchange rate is *International Financial Statistics CD Rom, July 2007,* (IMF 2007), whereas the data source for annual real GDP data series is *the Key Indicators of Developing Asian and Pacific Countries 2007* (ADB 2007).

The six variables are duly transformed into logarithmic form, and entered into VAR equation in the following order: narrow money (M1), bank credit to private sector (CRE), interest rate (BR), nominal exchange rate (E), consumer price index (P) and output (RGDP).

4. Empirical Results

The empirical study begins with an investigation into the time series properties of each variable employed in the study. The results of the Augmented Dickey Fuller (ADF) tests show that all variables in log levels contain unit root (Table 3). The test statistics, however, reject the null of a unit root in their first difference, indicating that these variables are of I(1) processes. To test for the existence of a long-run equilibrium cointegration relationship between the economic variables, we employ the system-based method developed by Johansen (1988) and extended by Johansen and Juselius (1990). This is done to check the number of cointegration vectors. The estimated eigenvalues and eigenvectors are given in Table 4. The likelihood ratio test statistics, λ_{trace} are calculated and compared to the 95 percent quartiles of the appropriate distribution. The null hypothesis of no cointegration ($r = 0$) was rejected in favour of alternative ($r = 1$) suggesting that there is at least one cointegrating vector using trace statistics. This indicated the presence of a long run relationship. All the variables were entered in the VAR in log levels, giving the system the appearance of an unrestricted vector error correction mechanism (Dale and Haldane, 1995).

Variance Decomposition of log RGDP

Next, we proceed to examine the relative strengths of various channels through which monetary pulses are transmitted to the real sector, particularly output and prices. This can be done by examining the variance decomposition of log RGDP and log P, which would indicate the percentage of the forecast error variance in one variable that is due to errors in forecasting itself and each of the other variables. The objective is to determine the size of the fluctuations in a given variable that are caused by different shocks.

We calculate the variance decomposition at forecast horizons of 4 through 24 quarters. VAR for each variable was estimated, which included 4 lags. The results are reported in Panel I and II of Table 5. The entries in each panel are the percentages of variance of the variable forecast as attributable to each variable at a 24-quarter horizon. The results show six time horizons, in which four quarters ahead are the short term. Eight, and 12 quarters ahead represent medium term while 16, 20 and 24 quarters ahead denote long terms. The column, standard error (SE) is the forecast error of the variable to be forecast

at different quarters. Variables are ordered in the same way they appear in the table.

Table 3. Unit Root Test Log Level and Log First Difference

	Log Level				*Log First Difference*			
	Model 1		*Model 2*		*Model 1*		*Model 2*	
Log Level	lag	t_{α^*}	lag	$t_{\alpha^{\sim}}$	lag	t_{α^*}	Lag	$t_{\alpha^{\sim}}$
M1	3	1.445	4	-3.462	2	-9.237*	2	-9.002*
CRE	2	0.957	1	-2.831	1	-6.078*	1	-6.156*
BR	1	-2.553	1	-2.632	1	-4.788*	1	-4.848*
E	1	-1.252	1	-2.491	1	-5.892*	1	-5.921*
P	1	-0.337	1	3.154	1	-7.260*	1	-7.191*
RGDP	3	0.729	3	-3.421	2	-4.087*	2	-4.171*

Note: * Significant at 5% level.
The optimal lag length for each of autoregressive process of ADF test is determined by Schwarz BayesianCriterion (SBC).

Table 4. Johansen Maximum Likelihood Test of the cointegration rank

Lag length: 4
Deterministic series: constant restricted to cointegration space
log M1, log CRE, log BR, log E,logP, log RGDP

$\lambda_{trace} = -T\sum \ln(1-\lambda_i)$

H_a	*Eigenvalues:* $\hat{\lambda}_i$	H_0	λ_{trace} *test*	λ_{trace} *(0.95)*
λ_1	0.541	$R \leq 0$	123.220**	103.679
λ_2	0.388	$R \leq 1$	76.509	76.813
λ_3	0.299	$R \leq 2$	47.029	53.945
λ_4	0.190	$R \leq 3$	25.737	35.070
λ_5	0.154	$R \leq 4$	13.068	20.164
λ_6	0.049	$R \leq 5$	3.017	9.142

Note: The cointegration model is based on the vector autoregressive model (VAR) with four lags using the likelihood ratio (LR) test. Ljung-Box and Lagrange Multiplier tests are performed on the residuals for autocorrelation. No autocorrelation in the residuals are found. The critical values for λ-Trace and λ-Max statistics are tabulated in Table 1 of Osterwald-Lenum (1992). The asterisks ,** , denotes rejection at the 5% significance level.

Panel I and Panel 2 of Table 5 present the variance decomposition for log RGDP and for log P respectively. Panel I of the Table 5 shows clearly that the money channel is the most important amongst the four channels in the short, medium and long terms, Next in importance are exchange rate, credit and interest channels. In the short run, shocks in money account for 22 percent of the variance in output and 45 percent in the long run.

The role of exchange rate shocks in explaining the variability in output is about 4 percent. In the 8th quarter, we find shocks in exchange rate account for about 8 percent of variability in output, thus the size of influence rising over time. Over the medium term, however, the magnitude of the role steadily decreases and in the long run it reaches 6 percent. The credit channel is relatively weak in the short run, as it accounted for less than one percent of variability in output. Although its importance steadily gained over the medium and long terms, shocks in credit did not account for more than 3 percent of variance in output. The interest rate channel's role amongst all the channels is the least important, as it accounted for less than one percent of variance in output throughout the time horizon.

Table 5. Decomposition of Variance

Panel 1: Variance Decomposition of log RGDP

Quarters ahead	Standard error	Log M1	Log CRE	log BR	Log E	log P	log RGDP
4	0.011882	22.579	0.311	0.104	4.185	5.756	67.065
8	0.022092	45.475	1.339	0.131	10.687	11.052	31.317
12	0.024699	42.783	2.717	0.539	9.610	15.661	28.691
16	0.026618	41.247	3.149	0.658	8.290	21.159	25.497
20	0.028881	43.321	3.391	0.595	7.060	23.759	21.874
24	0.031165	45.441	3.392	0.876	6.079	25.356	18.855

Panel 2: Variance Decomposition of log P

Quarters ahead	Standard error	Log M1	Log CRE	log BR	Log E	log P	Log RGDP
4	0.030670	15.470	3.100	3.942	2.461	66.683	8.343
8	0.036684	22.108	3.762	7.555	3.927	53.800	8.849
12	0.044653	33.957	2.916	7.904	5.664	42.347	7.214
16	0.048645	34.584	2.460	7.042	6.421	40.475	9.018
20	0.050794	34.216	2.267	6.484	6.416	42.173	8.445
24	0.052520	34.438	2.202	6.119	6.103	43.181	7.957

Variance Decomposition of log P

The Panel II of Table 5 shows the variance decomposition of log P. The results indicate that money channel is the dominant one amongst all the channels throughout the entire time horizon. Shocks in monetary aggregate in the short run account for 15 percent of variability in prices. Its importance grows over the medium term to 22 percent in three years and remains steady around 34 percent in the long run. Next to money channel, shocks in interest rate play an important part. Shocks in the interest rate explain the price variability to the extent of 3 percent. Over the medium term, influence of interest rate grows but decreases in the long term.

Innovations in exchange rate are equally important over the time horizon. Initially, shocks in exchange rate account for 2 percent of variability in prices. However, over the medium term, the influence of exchange rate increases to reach about 6 percent and thereafter remains steady in the long run. Shocks in credit, account for 3 percent of variability in prices in the short run. After a rise in its influence in the medium term, it declines in the long run.

Innovations in credit in the long run, account for 2 percent of variability in prices. Among all the channels, credit channel emerges to be the least important as innovations in credit, account for a very low percentage of variability in prices.

Table 6. Correlation Matrix for the Reduced Form VAR residuals

	log M1	Log CRE	log BR	log E	Log P	log RGDP
Log M1	1.000	0.0721	-0.277	-0.132	0.001	0.155
Log CRE		1.000	-0.029	-0.131	-0.131	0.092
Log BR			1.000	0.266	-0.122	-0.035
Log E				1.000	0.110	-0.002
Log P					1.000	0.004
Log RGDP						1.000

With view to testing the robustness of the VAR results which vary, based on different orderings of the variables, we resorted to testing the correlation of reduced-form VAR residuals. Table 6 shows the correlation matrix of the reduced-form VAR residuals based on the ordering we employed. The elements of the correlation matrix between the policy variable and the rest of the system are very low, which indicates that contemporaneous feedback is not a problem. These correlations suggest that the ordering of the variables in a Choleski decomposition is not a major concern.

Impulse Response Analysis

Impulse response function, reported for a horizon of six years (Table 7, and Figures 1 and 2) enables us to trace out the response of output and price to a shock in policy variables. The shock is represented by one standard deviation of the error term in the underlying structural model for the variable. Since all variables are measured in logs, the impulse response functions trace out a growth rate relative to the base period when the shock occurred. The first graph in Figure 1 shows the response of output to shock in monetary policy represented by one standard deviation of monetary aggregate. A one-standard deviation shock to the money has a positive effect on the output. The peak occurs in the sixth quarter. However, the effect remains substantial and stabilizes after about the three years or twelfth quarter. Most of the fluctuations are evident during the first four years.

The shock to credit (CRE) has positive impact on real GDP. The positive effect takes place only after the forth quarter. The effect remains significant and stabilizes after the

Table 7. Impulse Response Functions

Panel A: Response of LRGDP to One S.D Innovations in:

Steps Ahead	LogM1	LogCRE	LogBR	LogE	LogP	LogRGDP
4	0.0063	0.0000	-0.0010	-0.0022	0.0034	0.0072
8	0.0075	0.0027	-0.0013	-0.0010	0.0055	0.0014
12	0.0019	0.0027	0.0015	0.0029	0.0034	0.0012
16	0.0057	0.0021	0.0002	0.0016	0.0047	0.0041
20	0.0058	0.0026	-0.0007	0.0022	0.0049	0.0016
24	0.0047	0.0024	-0.0006	0.0027	0.0043	0.0021

Panel B: Response of Log P to One S.D Innovations in:

Steps Ahead	LogM1	LogCRE	LogBR	LogE	LogP	LogRGDP
4	0.0053	-0.0001	-0.0068	0.0056	0.0069	-0.0059
8	0.0083	-0.0005	-0.0076	-0.0002	0.0060	0.0039
12	0.0098	0.0027	-0.0074	-0.0020	0.0066	-0.0003
16	0.0030	0.0035	-0.0016	0.0015	0.0038	-0.0001
20	0.0056	0.0031	-0.0002	0.0009	0.0048	0.0038
24	0.0058	0.0035	0.0000	0.0022	0.0052	0.0020

second year. A shock to bank rate (BR) has an initial negative impact on real GDP. The fluctuations occur during the first four year after which the response stabilizes around zero. Similarly, a shock to exchange rate (E) also produces negative impact on real GDP initially during the first two years or eight quarters. Then the effect starts to increase and becomes positive. The effect gradually stabilizes after twelfth quarter. It is clear from the graphs of Figure 1 and Panel A of Table 7) that shocks to money, amongst all the policy variables, have the largest impact on output followed by shocks to credit and exchange rate.

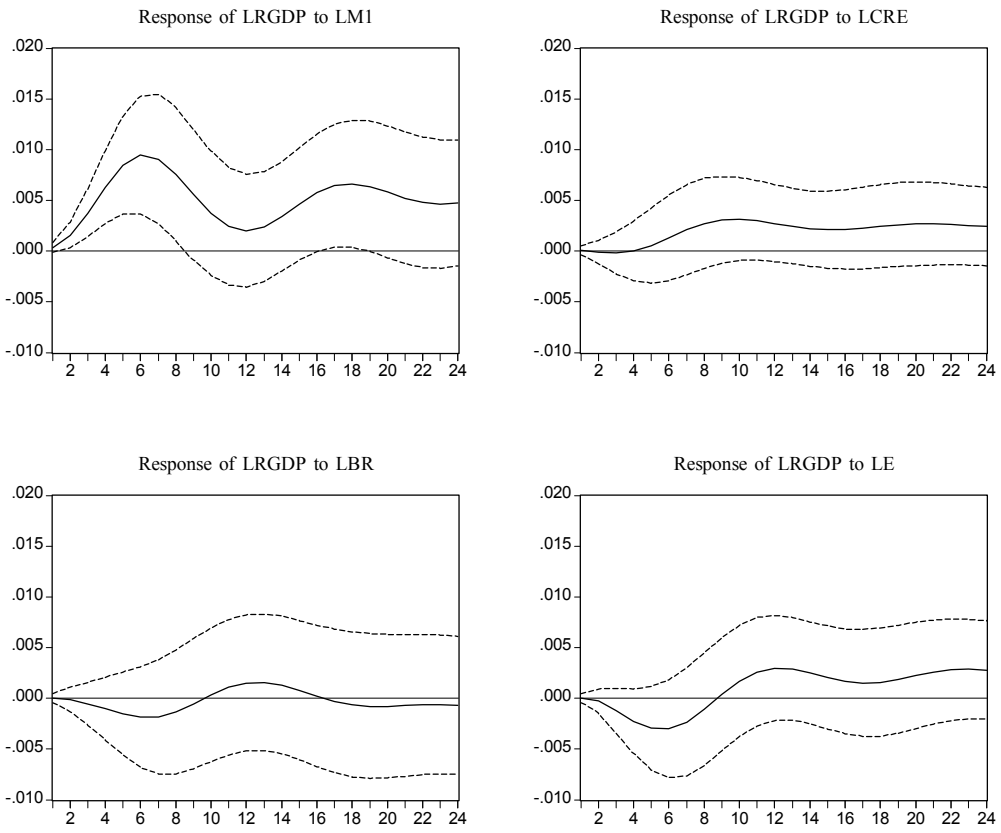

Figure 1. Response of Output (LRGDP)
(Response to One S.D. Innovations ± 2 S.E.)

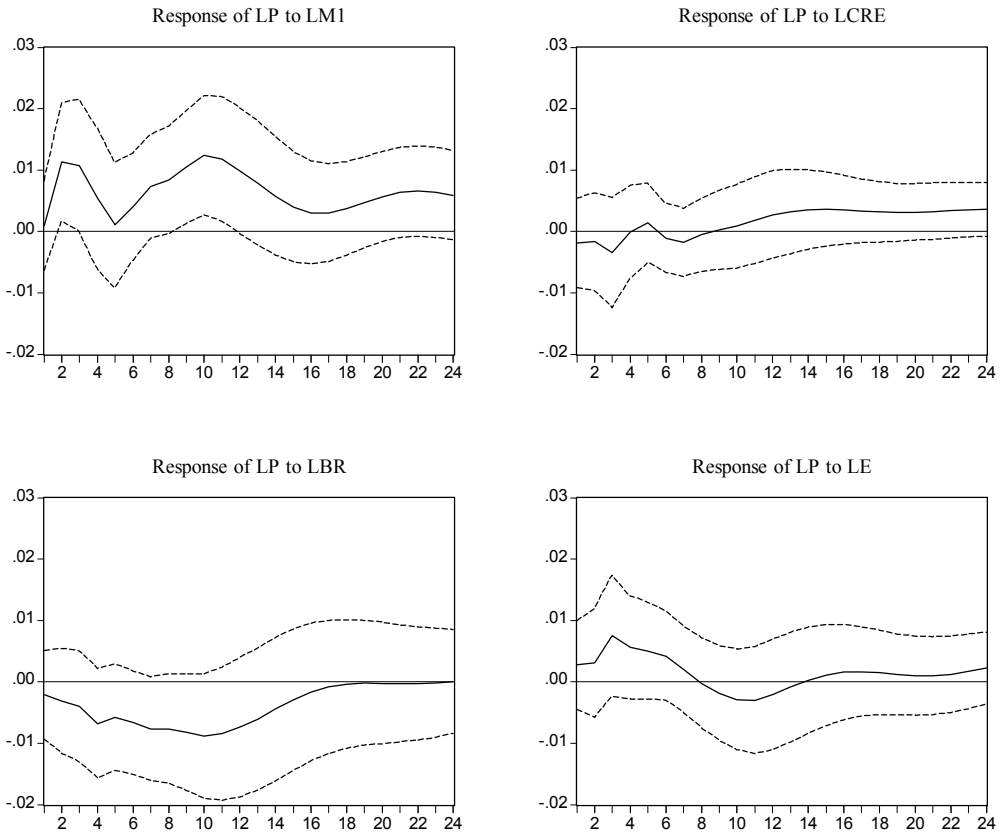

Figure 2. Response of Prices (LP)
(Response to One S.D. Innovations ± 2 S.E.)

In regard to price (Panel B of Table 7 and Fig 2), one-standard deviation shock to the money has a positive effect on the price. The effect gradually increases and reaches the peak in the twelfth quarter. After which it shows a decreasing trend but begins to stabilize after four years. However, the effect remains substantial throughout 24 quarters or six years. This indicates that shocks to monetary aggregate have a relatively long-run impact on prices. Over a period of two years, impact of shock to credit on prices remains negative. After some fluctuations in the next few quarters, the impact becomes positive, and stabilizes afterward in the long run. A shock to interest rate (BR) has negative impact on prices, which however, stabilizes around zero after 16^{th} quarter. A shock to exchange rate (E) on the other hand, produces a positive effect on prices initially. Then the effect gradually diminishes and stabilizes after two years.

5. Summary and Conclusions

After a sustained period of implementation of reforms in public finances and fiscal adjustment measures, Samoa has emerged in recent years to be the best economic performer amongst all Pacific islands. Although there is a growing body of literature on Samoa dealing with its fiscal performance, there has been no study on monetary policy transmission in Samoa. This paper is an attempt to fill the gap. Accordingly, this paper undertook an empirical investigation of monetary policy transmission mechanism in Samoa. The study, which used quarterly data, covered a period of 17 years (1990-2006) and adopted a VAR approach and decomposition procedure to evaluate the relative strengths of different instruments and intermediate target variables, which include interest rate, monetary aggregate, credit and exchange rate.

The results of the VAR analysis show that in Samoa, the money and exchange rate channels are important channels in transmitting monetary impulses to the real sector. Next in importance is the credit channel, followed by interest rate. In regard to impact on prices, money channel emerges as the most dominant influence. Unlike in the output case, interest rate does plays a role in influencing the price level, closely followed by exchange rate and credit channels.

However, interest rate channel has yet to become a principal conduit of monetary policy shocks, whereas money channel is the leading channel of transmission mechanism. These results are not surprising. As in other developing countries with underdeveloped financial sectors, savers and investors in Samoa have a limited portfolio choice and hence dependence on the banking system is substantial.

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