# The Role of The Bank of Lao PDR in Controllong Money and Forex Market

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## **ABSTRACT**

Lao PDR is an underdeveloped nation of Asia. The Bank of Lao PDR (BOL) is the central bank of Laos which was initially named as Lao National Bank. The Bank of the Lao PDR discharges duties suitable for the Lao economy with the intention of achieving the predetermined objectives of the Lao National Social-Economic Plan for different time periods. This paper examines the role of the Bank of Lao PDR in controlling financial activities to improve the standard of living of the individuals of the nation. This paper also evaluates the impact of macro-economic factors on total deposits of the Bank and tries to find out the profitability position and price predictability of the foreign exchange dealers in parallel market and organized market in respect of US \$\mathcal{S}\$ and Thai Bath.

Keywords: Central Bank, Monetary Policy, Forex Market, Money Market, Multiple Regressions.

#### Introduction

The Central Bank of any country plays a crucial role in obtaining the economic stability in terms of improving the financial status of the particular country and supporting the economic growth which is beneficial to the standard of life of the population. It acts as a banker to the government and commercial banks and maintains sound banking conditions to ensure the continuation of essential banking services. Monetary policy can be seen as actions taken by the central bank to influence the amount of money and credit in the economy. This study highlights the activity of the Bank of Lao PDR (BOL), central bank of Lao PDR, in controlling economic stabilization and other specific objectives suitable for the Lao nation.

## Objectives of the study

Identification of objectives is important for any research study and the following prominent objectives have been identified for the study:

- ? To study the role of the Bank of Lao PDR and tools used by the Bank of Lao PDR in controlling liquidity position of the economy
- ? To ascertain the impact of macro-economic factors like inflation rate, growth rate of GDP, interest rate on total deposits of Bank of the Lao PDR

- ? To find out the profitability position of the foreign exchange dealers in parallel market and organized market in respect of US \$ and Thai Bath
- ? To study the risk profile of the foreign exchange dealers in parallel market and organized market
- ? To study the price predictability in the foreign exchange market

## Methodology

This study is basically both theoretical and empirical in nature. The methodology which has been followed in this study can be systematically presented under the following major heads:

- ? Sources of data: Secondary data have been collected to assess the role of Bank of the Lao PDR in controlling money and FOREX market
- ? *Research design*: To get clarity of the problem statements, exploratory study was carried out.
- ? Data collection period. last eight years data were collected to analyze the performance of the bank of Lao PDR.
- ? Tools and techniques used: For analyzing data, multiple regressions, ANOVA, mean, S.D., Skewness and Kurtosis were administered. These tests were conducted using SPSS 10.

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? *Place of Study.* This study was carried out on Lao PDR.

The Role of the Bank of Lao PDR over the Controlling of Liquidity Position

The Bank of Lao PDR is a state management organization at the central level within the government apparatus. It is the financial institution of the state and the Central bank of the Republic, having the status of an independent legal entity. Its head office is in Vientiane.

The role of the Bank of the Lao PDR over the controlling of liquidity position is very crucial for supporting of the Lao economy which can lead the ease of money inflow from resources injected in the economy or bring the money out of the economy. In order to achieve the optimum level of the liquidity against the Lao economy, the bank of the Lao PDR has implemented various monetary policies' tools such as Bank rate (BOL Rate), exchange rate, Cash Reserve Requirement, Open Market Operation and other monetary tools which created by the Bank of the Lao PDR itself to obtain the appropriate level of liquidity position which lead the absolute advantage to the Lao economy and resulting the prosperity and growth in the economy of Lao and as well as the society.

The Monetary Strategy of the Bank of Lao PDR for the Year of 2009 in Controlling Economic Activity of the Country

Exchange Rate Policy. BOL has constantly conducted a managed floating exchange rate regime based on market-force in order to maintain the national monetary stability by keeping a close watch on domestic and international foreign exchange markets, aiming at using it as a basis for setting a daily reference rate for commercial banks and exchange bureaus. In addition, BOL also encouraged commercial banks to promote an active inter-bank market as well as carried out intervention in order to balance the supply and demand for foreign currencies in the foreign exchange market whenever necessary in accordance with the role of acting as a lender of last resort, aiming to provide sufficient supply foreign exchange to meet the basic demand of the markets. Subject to the implementation of the above-mentioned measures,

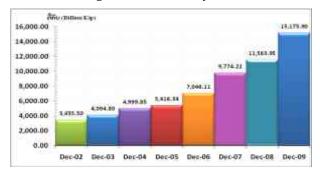
Kip (currency of Lao PDR) appreciated against the US dollar by 2.71 percent and Thai Baht by 5.04 percent in 2009 compared to 2008. The appreciation has increasingly raised public confidence in the Kip and economy as a whole. The spread of exchange rate between commercial banks and the parallel market has become narrow at 0.09 percent for Kip per US dollar and 0.01 percent for Kip per Thai Baht.

Monetary Policy: In the wake of the global and regional economic environment has not been fully recovered from the global financial crisis, BOL has continually implemented a monetary policy with an aim to maintain the national monetary stability and to support the socio-economic development to meet the targeted growth rate. BOL pursued an accommodative monetary policy with the main instruments as follows: reduced BOL's short-term interest rate for Kip from 7.0 percent to 4.0 percent; kept the reserve requirement ratio unchanged at 5.0 percent for Kip deposits and 10.0 percent for foreign currencies deposits; continued to promote Open-Market Operation (OMOs); issued BOL bonds to mobilize fund for infrastructure development projects as being the government priority. Policy measures were to minimize the adverse impact on money supply and to seek for potential source of financing.

Money Supply: As the end of 2009, money supply (M2) amounted to 15,175.9 billion Kip, up by 31.2 percent and equal to 32.43 percent of GDP as compared to the same period of 2008. The main factors driving the rise in M2 were credit to economy up by 90.1 percent, in which credit provided to state-owned enterprises and to private sector covered 22.9 percent and 77.1 percent of total credit respectively. Most of credits were provided to agriculture, commerce-service, industry-handicraft and construction sectors.

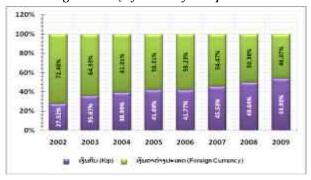
The components of narrow money (M1) included (i) currency in circulation amounting to 3,083.5 billion Kip, rose by 38.7 percent; (ii) deposits in Kip amounted to 5,101.2 billion Kip, rising by 45.1 percent and covered 33.6 percent of M2 and deposits in foreign currency equivalent to Kip amounted to 6,992.2 billion Kip, up by 20.1 percent and covered 46.1 percent of M2.

Figure 1: Broad Money (M<sub>2</sub>)



Source: Statistics Department Ministry of Planning and Investment

Figure 2: M, by Currency Components



Source: Statistics Department Ministry of Planning and Investment

Money Base: At the end of 2009, money base amounted to 6,427.6 billion Kip, up by 34.6 percent compared to 2008. The components of monetary base (i) cash in circulation amounting to 3,577.2 billion Kip, up by 42.6 percent; and (ii) deposits of commercial banks held at BOL amounting to 2,849.8 billion Kip, rose by 25.7 percent.

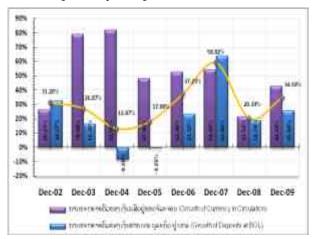


Figure 3: Foreign Currency Management and the Campaign to Promote the Use of

BOL continued to reinforce the measures associated with foreign currency management and the promotion of the use of Kip with a goal to contribute to the national monetary stability, the stable exchange rate and more public confidence in the use of Kip. BOL has improved the related regulatory framework issued regulation on foreign exchange, and regulation to cancel the fund transfer of commercial banks at BOL, a circular abolishing the payment regulation for wood export, implemented appropriate and wise rules and policies, allow commercial banks to bring foreign currency in and out of Laos with more smooth manner and, monitored the exchange bureaus and the precious metals import and export companies to comply with the existing rules. For the promotion the use of Kip, BOL conducted a field visit to monitor the price quotation of goods and services in the markets. business units and the trade fairs or exhibitions. Besides that, BOL reinforced means of advertising or promotion via mass media nationwide improved the quality and types of banknote denomination from time to time and encouraged payment through banking system increasingly.

Deposits: As of December 2009, total deposits of commercial banks amounted to 12,087.19 billion Kip, rising from 10,073.43 billion Kip in 2008 or up by 19.99 percent compared to the end of 2008, currently accounted for 25.82 percent of GDP. Kip deposits accounted for 4,217.58 billion Kip, up by 17.00 percent and covered 34.89 percent of total deposits; foreign currency deposits equivalent to Kip accounted for 7,869.61 billion Kip, up by 21.66 percent and covered 65.11 percent of total deposits.

Components of deposits include demand deposits amounting to 3,377.36 billion Kip, up by 6.64 percent; saving deposit amounting to 4,401.37 billion Kip, up by 26.17 percent; time deposit amounts to 4,312.95 billion Kip, up by 60.94 percent; other deposits amounting to 1,271.64 billion Kip and up by 73.59 percent.

*Credit:* As of December 2009, the total of loan provided by the entire banking sector to the economy was 8,740.42 billion Kip, up by 40.65 percent or equal to 18.68 percent of GDP. Of which, credit provided to agricultural sector was up by 54.17 percent,

accounting for 13.50 percent of total loans; transportation sector up by 50.35 percent, covered 2.80 percent of total loans; construction up by 48.65 percent and covered 4 percent of total loans; commerce up by 33.95 percent, accounted for 23.50 percent of total loans; industry and handicraft rose by 42.32 percent, covered 18.50 percent of total loans; other sector up by 44.49 percent, accounted to 21.72 percent of total loans.

In 2009, the interest rates on the deposit of commercial banks had adjusted in line with the domestic and global economic conditions. On average, interest rates on 12 months deposit for Kip dropped from 10.28 percent in 2008 to 9.53 percent; while US dollar and Baht accounts rose from 2.52 percent to 2.99 percent and from 2.04 percent to 2.82 percent respectively. Similarly, interest rates on loans had adjusted in line with the domestic condition and demand for loans of the economy. In 2009, the 12 months interest rates of loans for Kip, US dollar and Baht, on average, were down from 17.55 percent in 2008 to 15.25 percent, from 9.89 percent to 8.99 percent and from 11.34 percent to 9.55 percent respectively.

Impact of Macro-economic Factors on Total Deposits of the Bank of Lao PDR

Here an attempt has been made to determine empirically the impact of different selected parameters like Interest Rate, Rate of Inflation and Growth rate of GDP on Total Deposits.

In this analysis, Total Deposits has been taken as the dependent variable and Interest Rate, Rate of Inflation and Growth rate of GDP have been used as the independent variables.

Table 1: Selected Key Economic Indicators of the Lao PDR

Year	Interest	Rate of	Growth	Total
	Rate	inflation	Rate of	Deposits
			GDP	(Billion Kip)
2002	15.43	10.63	5.91	3,300.60
2003	15.37	15.49	5.79	4,302.88
2004	12.24	10.46	6.88	5,096.58
2005	12.04	7.16	7.29	5,316.76
2006	10.79	6.81	8.6	6492.15
2007	10.69	4.51	6.8	8,801.84
2008	10.28	7.63	7.5	10,073.43
2009	9.53	0.03	7.6	12,087.19

The multiple regression model has been fitted in this study, is given below:

Total Deposits = + 1.Interest Rate + 2.Rate of Inflation + 3.Growth rate of GDP

**Table 2: Model Summary** 

Model	R	R Square	Adjusted	Std. Error
			R Square	of the
				Estimate
1	.924	.854	.745	1554.0851

Predictors: (Constant), Growth rate of GDP, Rate of Inflation, Interest Rate

Table 3: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	56550688.494	3	18850229.498	7.805	.038
Residual	9660722.543	4	2415180.636		
Total	66211411.037	7			

Predictors: (Constant), Growth rate of GDP, Rate of Inflation, Interest Rate Dependent Variable: Total Deposits

Table 4: Coefficients

Model	Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	(Constant) Interest Rate Rate of Inflation	B 38348.552 -1539.737 -121.378	Std. Error 14014.895 684.256 248.590	Beta -1.126 181	2.736 -2.250 488	.052 .088 .651
	Growth rate of GDP	-1690.965	1135.047	507	-1.490	.211

Dependent Variable: Total Deposits Therefore, from above analysis we can write: Total Deposits = 38,348.552 - 1539.737.  $_1$ -121.378.  $_2$ -1690.965.  $_3$  (14014.895) (684.256) (684.256) (1135.047)

From the analysis, it is evident that independent variables are not found statistically significant at 5% level of significance. The multiple correlation coefficient between dependent variable (Total Deposits) and independent variables (Interest Rate, Rate of Inflation and Growth rate of GDP) is 0.924. The above equation indicates that the Total Deposits is highly negatively influenced by Interest Rate, Rate of Inflation and Growth rate of GDP. It is also evident from the coefficient of determination (R²) that 85.40% of the variation in Total Deposits was accounted for by joint variation in Interest Rate, Rate of Inflation and Growth rate of GDP.

Price Predictability in the Foreign Exchange Market

From Table 5, it is seen that the difference between bid price and ask price, in parallel market and organized markets are positive which show profitability for the exchange market dealers in respect of US \$. Mean spread (Table 6) in parallel market is 46.40 and it is 39.86 in commercial bank. So average return of parallel market is greater than that of commercial bank (organized market). Standard deviation, a measure of dispersion, in parallel market is 11.59 which is lower than that of organized market which is 20.80. It shows risk profile of both markets. From kurtosis which measures degree of flatness in the region about mode of a frequency curve, it is clear that parallel market is mesokurtic as the value is about 3 whereas, organized market is leptokurtic as the value is greater than 3. It indicates that parallel market follows normal distribution but organized market does not follow normal distribution. So movement of exchange rate is random in parallel market which does not help one to speculate exchange rate. In organized market exchange rate is not moving randomly and it helps one to speculate exchange rate which, in turn, helps to earn super natural profit. Skewness shows both markets are positively skewed. It shows degree of asymmetry against mean. Table 6 reflects that the degree of asymmetry against mean is higher in organized market than that in parallel market.

Table 5: Monthly Exchange Rate in respect of US\$

	Kip/US\$									
Month/Year	Par	allel Market Rate	es	Comm	Commercial Bank Rates					
	Buy	Sell	Spread	Buy	Sell	Spread				
1-Jan	9,700.86	9,787.52	86.66	9,671.19	9,764.60	93.41				
Feb-07	9,668.41	9,741.41	73.00	9,654.45	9,720.69	66.24				
Mar-07	9,600.00	9,673.05	73.05	9.622.35	9.676.30	53.95				
1-Apr	9,596.80	9,658.02	61.22	9,606.61	9,645.97	39.36				
May-07	9,573.96	9,621.70	47.74	9,571.70	9,626.76	55.06				
Jun-07	9,585.00	9,625.57	40.57	9,569.95	9,625.41	55.46				
1-Jul	9,542.94	9,600.36	57.42	9,542.30	9,592.19	49.89				
Aug-07	9,588.63	9,634.97	46.34	9,556.34	9,601.33	44.99				
Sep-07	9,611.22	9,652.84	41.62	9,605.74	9,636.16	30.42				
1-Oct	9,606.40	9,647.38	40.98	9,601.46	9,630.95	29.49				
Nov-07	9,544.27	9,580.18	35.91	9,527.22	9,555.63	28.41				
Dec-07	9,423.33	9,466.99	43.66	9,382.13	9,411.33	29.20				
1-Jan	9,276.10	9,327.75	51.65	9,259.11	9,287.64	28.53				
Feb-08	9,129.13	9,184.67	55.54	9,122.63	9,141.35	18.72				
Mar-08	8,773.42	8,828.31	54.89	8,770.68	8,800.55	29.87				
1-Apr	8,708.86	8,752.72	43.86	8,716.96	8,798.04	81.08				

Table 5: Monthly Exchange Rate in respect of US\$

(Contd.)

_	Kip/US\$									
Month/Year	Par	allel Market Rate	<b>Commercial Bank Rates</b>							
	Buy	Sell	Spread	Buy	Sell	Spread				
May-08	8,711.52	8,759.77	48.25	8,715.00	8,742.14	27.14				
Jun-08	8,703.70	8,750.82	47.12	8,691.18	8,720.60	29.42				
1-Jul	8,632.85	8,675.10	42.25	8,627.09	8,654.34	27.25				
Aug-08	8,624.51	8,663.63	39.12	8,619.36	8,658.90	39.54				
1-Sep	8,618.63	8,661.76	43.13	8,618.82	8,650.04	31.22				
Oct-08	8,546.95	8,598.41	51.46	8,546.27	8,584.57	38.30				
Nov-08	8,545.31	8,595.17	49.86	8,545.34	8,582.77	37.43				
1-Dec	8,501.03	8,549.51	48.48	8,499.65	8,536.55	36.90				
Jan-09	8,476.97	8,529.30	52.33	8,478.36	8,505.70	27.34				
Feb-09	8,499.59	8,543.43	43.84	8,490.80	8,525.24	34.44				
1-Mar	8,555.49	8,602.65	47.16	8,548.37	8,581.38	33.01				
1-Apr	8,547.18	8,586.92	39.74	8,542.98	8,577.11	34.13				
May-09	8,525.51	8,563.17	37.66	8,523.42	8,557.97	34.55				
Jun-09	8,513.97	8,552.67	38.70	8,509.17	8,541.30	32.13				
1-Jul	8,509.51	8,544.12	34.61	8,504.05	8,533.42	29.37				
Aug-09	8,505.87	8,533.53	27.66	8,499.17	8,526.99	27.82				
1-Sep	8,496.00	8,528.92	32.92	8,495.16	8,521.36	26.20				
Oct-09	8,546.59	8,598.41	51.82	8,479.05	8,505.39	26.34				
Nov-09	8,545.31	8,595.17	49.86	8,469.28	8,496.03	26.75				
1-Dec	8,501.03	8,549.51	48.48	8,473.08	8,499.56	26.48				
Jan-10	8,470.93	8,502.94	32.01	8,472.53	8,497.42	24.89				
1-Feb	8,477.30	8,509.80	32.50	8,473.74	8,599.54	125.80				
Mar-10	8,459.14	8,493.47	34.33	8,458.22	8,487.40	29.18				
Apr-10	8,341.44	8,378.76	37.32	8,337.26	8,406.54	69.28				
1-May	8,271.10	8,312.16	41.06	8,272.94	8,307.45	34.51				
Jun-10	8,256.43	8,299.63	43.20	8,253.41	8,283.94	30.53				

**Table 6: Descriptive Statistics** 

Variables	N	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Deviation Statistic	Statistic	Std. Error	Statistic	Std. Error
Spread(Parallel Market )	42	46.4043	11.5914	1.431	.365	3.061	.717
Spread(Commercial Bank)	42	39.8579	20.7981	2.476	.365	6.980	.717
Valid N (listwise)	42						

Table 7 reflects that spreads in parallel market and organized markets are positive which indicates profitability for the exchange market dealers in respect of Thai Bath. Mean spread (Table 8) in parallel market is 1.31 which is 1.34 in case of organized market. So average earning of organized market is greater than parallel market. Standard deviation, in parallel market is 0.1974 which is also lesser than that of organized market which is 0.4615 (which means that risk profile is low in parallel market). From kurtosis, it is evident that parallel market is platykurtic as the value is less than 3 and organized market is mesokurtic as the value is about

3. It indicates that parallel market does not follow normal distribution and organized market follows normal distribution. So exchange rate is not moving randomly in parallel market and so this market is predictable which helps one to earn super normal profit. On the other hand, scope of speculation is absent in organized market as market is predictable. It helps none to speculate exchange rate which, in turn, does not help to earn abnormal profit. Skewness shows both markets are positively skewed. It shows degree of asymmetry against mean. Table 8 indicates that the degree of asymmetry against mean is higher in organized market than that of parallel market.

Table 7: Monthly Exchange Rate in respect of Thai Bath

	Kip/Thai Bath								
Month/Year	Pa	rallel Market Rat	Commercial Bank Rates						
	Buy	Sell	Spread	Buy	Sell	Spread			
1-Jan	271.53	273.16	1.63	270.67	273.52	2.85			
Feb-07	271.82	273.22	1.40	270.25	272.86	2.61			
Mar-07	274.89	276.46	1.57	273.64	275.91	2.27			
1-Apr	275.01	276.81	1.80	273.41	275.76	2.35			
May-07	277.30	278.70	1.40	276.64	278.63	1.99			
Jun-07	278.31	279.56	1.25	277.26	279.26	2.00			
1-Jul	283.49	285.32	1.83	281.36	283.33	1.97			
Aug-07	282.37	283.91	1.54	280.41	281.66	1.25			
Sep-07	281.79	282.90	1.11	281.29	282.45	1.16			
1-Oct	281.86	282.96	1.10	281.76	282.88	1.12			
Nov-07	282.24	283.47	1.23	281.79	282.86	1.07			
Dec-07	280.94	282.32	1.38	280.33	281.30	0.97			
1-Jan	280.21	281.65	1.44	279.09	280.45	1.36			
Feb-08	280.54	281.91	1.37	279.18	280.51	1.33			
Mar-08	280.65	181.81	1.16	279.21	280.43	1.22			
1-Apr	277.69	279.01	1.32	276.73	277.83	1.10			
May-08	273.47	274.81	1.34	272.66	273.81	1.15			
Jun-08	264.08	265.40	1.32	263.15	264.22	1.07			
1-Jul	258.39	259.79	1.40	257.90	259.31	1.41			
Aug-08	256.07	257.41	1.34	255.23	256.55	1.32			

Table 7: Monthly Exchange Rate in respect of Thai Bath (Contd.)

	Kip/Thai Bath									
Month/Year	Pa	rallel Market Rat	Commercial Bank Rates							
	Buy	Sell	Spread	Buy	Sell	Spread				
1-Sep	252.36	253.63	1.27	251.67	252.87	1.20				
Oct-08	249.62	250.90	1.28	249.08	250.26	1.18				
Nov-08	244.48	245.87	1.39	253.36	254.41	1.05				
1-Dec	243.19	244.50	1.31	243.35	244.45	1.10				
Jan-09	243.10	244.57	1.47	243.12	244.17	1.05				
Feb-09	241.78	243.20	1.42	241.57	242.55	0.98				
1-Mar	239.87	241.25	1.38	240.05	241.10	1.05				
1-Apr	241.46	242.77	1.31	241.31	242.37	1.06				
May-09	246.43	247.73	1.30	246.26	247.40	1.14				
Jun-09	249.87	251.05	1.18	249.49	250.65	1.16				
1-Jul	250.74	251.73	0.99	250.02	251.18	1.16				
Aug-09	250.70	251.57	0.87	250.16	251.18	1.02				
1-Sep	251.58	252.66	1.08	251.17	252.14	0.97				
Oct-09	254.51	255.66	1.15	253.84	254.77	0.93				
Nov-09	255.13	256.20	1.07	254.51	255.84	1.33				
1-Dec	255.52	256.61	1.09	255.26	256.47	1.21				
Jan-10	256.73	257.85	1.12	256.55	257.75	1.20				
1-Feb	256.15	257.22	1.07	255.70	256.90	1.20				
Mar-10	258.92	260.34	1.42	258.02	259.42	1.40				
Apr-10	258.11	259.49	1.38	257.52	258.69	1.17				
1-May	255.93	257.11	1.18	255.62	256.85	1.23				
Jun-10	255.15	256.32	1.17	254.69	255.83	1.14				

**Table 8: Descriptive Statistics** 

Variables	N	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Deviation Statistic	Statistic	Std. Error	Statistic	Std. Error
Spread(Parallel Market )	42	1.3055	0.1974	0.491	0.365	0.851	.717
Spread(Commercial Bank)	42	1.3452	0.4615	1.958	0.365	3.057	.717
Valid N (listwise)	42						

## **Remarks**

It is seen that, the Bank of Lao PDR has been playing very crucial role over the Lao economy as a whole, because it has responsibilities on contributing and maintaining the economic stabilization as well as the prosperity to Laos and mobilizing the Lao economy in the positive manner and effective ways. Furthermore, the Bank of Lao PDR is not only still getting involved in the Lao national development plans by offering the financial efforts and proper monetary policies but also remaining both the domestically and internationally disciplinary banking systems in Lao PRD. In the absence of proper functioning of the Bank of Lao PDR, the Lao economy will face various serious problems internally and globally.

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