

Table 2. Variance Inflation Factor Value

Model	Collinearity Statistics	
	Tolerance	VIF
X ₁	0.121	8.248
X ₂	0.002	419.722
X ₃	0.070	14.224
X ₄	0.003	369.514

According to Table 2 above can be seen the independent variables X₁, X₂ and X₃ have VIF ≥ 10 values which means that there are multicollinearity problems between independent variables.

3.2 Analysis of Indonesian Foreign Exchange Deposit Data with LASSO Method

Calculation of LASSO method for data is done using R Studio software. So that the LASSO coefficient estimator can be seen in Table 3 below:

Table 3. LASSO Parameters

$\hat{\beta}_{LASSO}$				
i	$\hat{\beta}_1$	$\hat{\beta}_2$	$\hat{\beta}_3$	$\hat{\beta}_4$
1	0	0	0	0
2	0	2.436433394	0	0
3	0	4.083652931	0	1.647219537
4	0	0	1.026443672	5.404790046
5	0	0	1.949173288	6.327519662
6	-1.807590278	0	1.332465393	8.620270647
7	-3.725070268	-25.33779207	5.07550663	32.39543664

Based on Table 3 it can be seen in the iteration of i = 4 variable X₂ shrinks to 0 because it violates the LARS algorithm limiter on LASSO. The $\hat{\beta}_{LASSO}$ value used transformed data, the value of $\hat{\beta}_{LASSO}$ is returned to the actual data with equation (12). The value of $\hat{\beta}_{LASSO}^*$ in Table 4 is as follows:

Table 4. Real LASSO Parameters

$\hat{\beta}_{LASSO}^*$				
i	$\hat{\beta}_1^*$	$\hat{\beta}_2^*$	$\hat{\beta}_3^*$	$\hat{\beta}_4^*$
1	0	0	0	0
2	0	0.013498285	0	0
3	0	0.022624182	0	0.000674437
4	0	0	0.021035528	0.002212935
5	0	0	0.039945581	0.002590737
6	-0.037538261	0	0.027307015	0.00352948
7	-0.077358603	-0.14037599	0.104015412	0.013263973

Table 4 is the coefficient value of the LASS parameter using the RStudio program. Next is choosing the best model using the Mallows's C_p statistic in equation (6) presented in Table 5 as follows:

Table 5. Mallow's C_p Value

i	C_p
1	372.7238179
2	192.6608913
3	49.84910785
4	33.56544442
5	13.16500572
6	11.32731788
7	5

Based on Table 5 the model that will be used is a model with the smallest Mallow's C_p value that is found in the iteration to $i = 7$.

3.3 Model Regresi dari Metode LASSO Regression

Based on Table 4 and Table 5 can be obtained the model of LASSO method as follows:

$$\hat{Y} = -0.077358603X_1 - 0.14037599X_2 + 0.104015412X_3 + 0.013263973X_4$$

The meaning of the model above is if net foreign assets increase by one trillion, the value of Indonesia's foreign exchange deposits will decrease by 0.077358603 or 7.7358603%. As with net domestic assets, if there is an increase of one trillion, the value of Indonesia's foreign exchange deposits will decrease by 0.14037599 or 1.4037599%. Different from the net bill to the central government, if it experiences an increase of one trillion, the value of Indonesia's foreign exchange deposit will increase by 0.104015412 or 1.04015412%. While bills to other sectors, if there is an increase of one trillion, the value of Indonesia's foreign exchange deposits will increase by 0.013263973 or 1.3263973%.

4. Conclusions

In this paper we have analyzed the LASSO method parameter can be specified with LARS algorithm which calculates correlation vector, the largest absolute correlation value, equiangular vector, inner product vector, and determines the LARS algorithm limiter for LASSO. The model of LASSO method as follows:

$$\hat{Y} = -0.077358603X_1 - 0.14037599X_2 + 0.104015412X_3 + 0.013263973X_4$$

Base on model if net foreign assets increase by one trillion, the value of Indonesia's foreign exchange deposits will decrease by 0.077358603 or 7.7358603%. As with net domestic assets, if there is an increase of one trillion, the value of Indonesia's foreign exchange deposits will decrease by 0.14037599 or 1.4037599%. Different from the net bill to the central government, if it experiences an increase of one trillion, the value of Indonesia's foreign exchange deposit will increase by 0.104015412 or 1.04015412%. While bills to other sectors, if there is an increase of one trillion, the value of Indonesia's foreign exchange deposits will increase by 0.013263973 or 1.3263973%.

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