

**Huu Nghi Phan<sup>1</sup>, Le Hung Son<sup>2</sup>, Bui Do Van<sup>1</sup>, Thanh Dung Dang<sup>1</sup>, Tung Nguyen Duy<sup>1</sup>**

<sup>1</sup>National Economics University, Vietnam;

<sup>2</sup>Vietnam State Treasury.

E-mail: nghip@neu.edu.vn, lhsonkbnn@gmail.com, vanbd1201@gmail.com,  
d2t274@gmail.com, ndtung130998@gmail.com

## **WARNING OF VIETNAM'S FOREIGN DEBT CRISIS**

**Abstract.** Every country needs domestic and foreign investment capitals. Each capital source has its advantages and disadvantages associated with different policies, mechanisms and management that are associated with the characteristics of each country's economy and culture. Developing countries like Vietnam, foreign loans for economic development are very important, creating a driving force to promote domestic investment and improve the efficiency of public investment in general if this capital is managed effectively and monitored. The rapid increase in the size and proportion of foreign loans in our country is concerned by many organizations and individuals with mixed opinions that: Foreign debts are under control, not worrying but meaningful. The idea is that it is necessary to warn the foreign debt crisis.

The main purpose of the study is to analyze the current situation of Vietnam's foreign debt in the period of 1986-2018 to see the management and situation of foreign loans of our country today, build a debt crisis warning model based on Vietnam's macro data to calculate the probability of a crisis so that it can adjust Vietnam's debt management and debt management strategy, and as well as supplement foreign debt assessment and management tools.

The article uses a research method which is a quantitative research method through the construction of a binary Probit model to determine the probability of a foreign debt crisis with two aggregate variables, namely Macroeconomic indicators and financial index variables.

Through analyzing the situation of foreign borrowing and repayment in Vietnam during 1986-2018, the study thereby points out the limitations and causes of ineffective use of foreign debt in Vietnam. Besides, the results of the warning model show that the external debt crisis can be predicted through two explanatory variables, namely macroeconomic index and financial index variables.

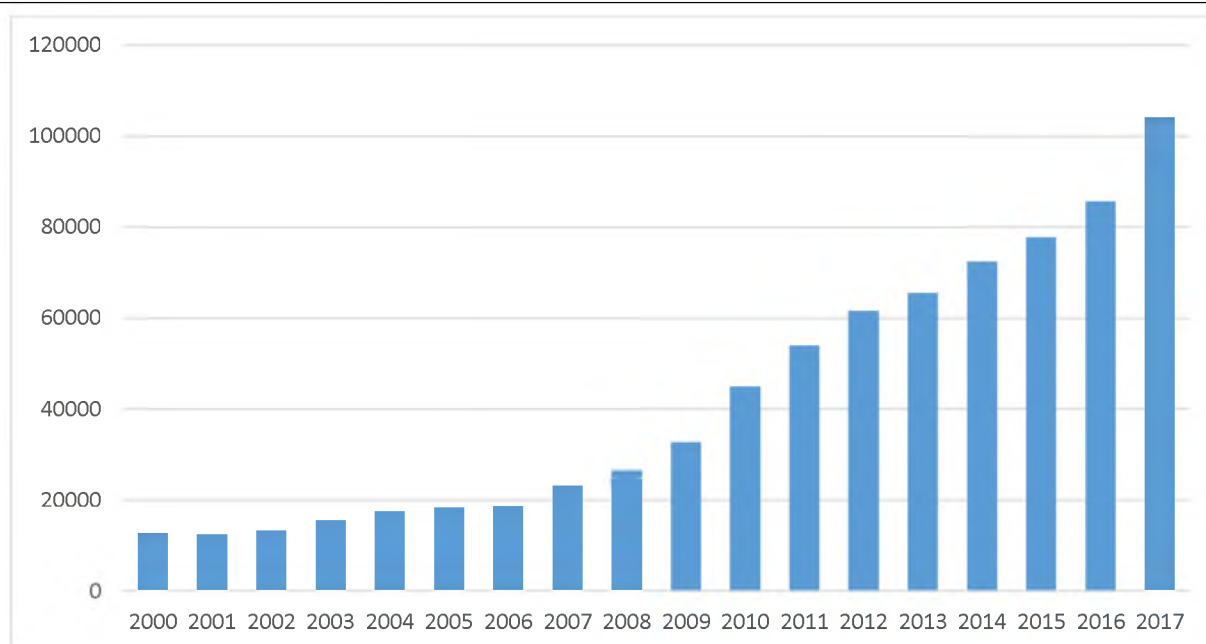
**Keywords:** Foreign debt, foreign debt crisis, Vietnam.

**Introduction.** In recent years, the world economy has suffered great consequences due to the impact of the global economic crisis. The economic crisis is a broad problem composed of many different aspects and the debt crisis is one of the many components that make up it. As a member of the global economy, Vietnam will be affected by economic crises, including debt crisis. Therefore, the debt crisis warning is becoming the concern of every country, both the borrower and the lender.

Therefore, the paper focuses on analyzing the situation of foreign debt in Vietnam in the period of 2000-2018, thereby giving a general picture of foreign debt, showing the limitations and causes. In addition, based on data provided by the World Bank and the IMF, the authors propose a model for warning of foreign debt crisis in Vietnam to make recommendations on the management of foreign debt as well as supplement public evaluation tool [1-3].

According to the Government's regulations on foreign borrowing and repayment management, public debt management law can be generalized: “National foreign debt is the balance of all current debt obligations (excluding obligations (contingent debt) on principal and interest repayment at a time of Vietnam's foreign loans. National external debt includes public sector external debt and private sector external debt”.

Scale of foreign debt:



Vietnam's total foreign debt 2000-2017. Unit: Billion USD. Source: World bank

It can be seen from the chart, foreign debt tends to increase sharply in the period after 2009, in 2017 reached over 104 billion USD. This is the period when Vietnam focused on investment in socio-economic development, in which the average mobilization of public debt accounted for about 44% of the total development investment capital of the whole society; The average annual growth rate is at 16.7% / year. Foreign debt in the total public debt also increased rapidly, sometimes accounting for over 60% of the total public debt. In addition, according to the Ministry of Finance's report, by the end of 2017, public debt is about 62.6% of GDP (public debt ceiling is 65% / GDP), Government debt is about 51.8% of GDP (Government debt ceiling is 54% of GDP). The nation's foreign debt (including debt, government guarantee and economic sectors borrowing in the form of self-borrowing) is equivalent to 45.2% of GDP (the ceiling of foreign debt is 50% of GDP). Although the ratio of foreign debt of the country / GDP has not exceeded the permitted level, it is likely to increase gradually and close to the ceiling; it is expected that this ratio will be 49.9% in 2019. The main reason for the increase in the nation's foreign debt is the rapid increase in the size of its foreign borrowing by self-repayment. In 2017, the growth rate of outstanding loans of medium and long-term loans was 22.56%, of short-term loans was 73% compared to 2016. Notably, the target of the country's foreign debt repayment in 2017 increased by 6.3% compared to 2016, at 36%, while the ceiling was 25%, mainly due to capital withdrawal and principal repayments. Short-term foreign loans of enterprises and credit institutions in 2017 increased sharply. In fact, the increase in short-term foreign borrowing of credit institutions is aimed at supporting short-term credit capital, regulating foreign currency liquidity in the system.

Over the past time, the economy has achieved positive results such as a positive growth rate (GDP of 2018 increased 7.08%, the highest increase since 2008, according to the President. Statistics) and control inflation at a low level (<4% in 2018), and to maintain such growth, the demand for investment capital is very large. But if relying only on accumulated capital, domestic mobilized capital is absolutely not enough, but foreign investment is required, especially ODA capital plays an important role in addition to investment capital. such as helping socio-economic development in many fields, reducing poverty, adjusting economic structure and creating a modern socio-economic infrastructure system. However, there are some limitations such as:

- The scale of foreign debt is getting bigger, the ratio of foreign debt to GDP is getting closer to the ceiling of foreign debt. In the public debt structure of Vietnam, foreign debt now accounts for about two-thirds, so when the increase in external debt, the total public debt increases. The ratio of short-term debt tended to increase rapidly, indicating that the pressure of debt repayment in the short-term of Vietnam also increased significantly, if not used effectively to bring profits and appropriate foreign currency revenue, it will create very heavy burden.

- Low disbursement rate of ODA fell from 23.1% in 2014 to 11.2% in 2018, much lower than the global average of the group of 6 banks that are the main donors of ODA to Vietnam, in which The global disbursement ratios of ADB and WB in 2018 were 21% and 20.2% respectively. The cause of the slow disbursement is due to complicated and overlapping regulations on procedures; the project's readiness is low, and the procedure's "difference" between Vietnam and the donors[4].

- Lending conditions of partners are getting stricter. Many partners have switched from lending to Vietnam to ODA with less incentives, since Vietnam became a middle-income country. Besides, the national debt reputation is affected by a number of macroeconomic instability and Vinashin events.

- Data on foreign debt is not reliable. Currently in Vietnam, foreign debt assessment is done through different debt indices but only assesses the level of debt at a given time, has not been evaluated in the long term. In addition, data on debt situation is limited and unreliable. The data that Vietnam publishes often have deviations from the figures of international organizations such as WB, IMF, Moody's, S&P, etc. This makes it difficult for policy making as well as making out. the appropriate recommendations[5-7].

- Foreign borrowing contains many risks such as exchange rate risk, interest rate risk, refinancing risk, liquidity risk, credit risk, etc. These risks may cause an increase in foreign debt or make it difficult to repay or use ineffective foreign loans leading to increased debt burden, negatively affecting the economy.

The reasons of above limitations are:

- The mechanism of foreign debt management is not effective

Firstly, the overlap in regulations on foreign debt management. This is reflected in the parallel existence of regulations on official development assistance (ODA) management and general public and foreign debt management.

Second, there has been no agreement on foreign debt management. The coordination among ministries, sectors, between the Central Government, localities and donors is not really smooth, especially in fields with the participation of many donors or multi-program projects. industry, multi-level and multi-goals. This shows that the mobilization, repayment and use channels are still not in agreement. This is an inadequate advantage for the effective implementation of foreign debt management functions.

Thirdly, the lack of specialized officials. The capacity and qualifications of staffs involved in project management are limited, especially in localities. Project management personnel are often unstable, in many cases working on a part-time basis. The project management training has not been conducted regularly, systematically and methodically. Currently, our country has not specialized training foreign debt management. Short-term training courses and workshops, mainly provided by ODA projects, are not sufficient to form a team of experts to ensure accurate information gathering, analysis and forecasting [8-10].

- The inefficiency of using foreign loans

The plan of using foreign loans does not match the loan term and project investment period, leading to the use of short-term loans to finance long-term projects. When the payment is due and the return on investment has not been achieved, if there is not enough repayment source, it may cause insolvency leading to debt crisis. In addition, the foreign loans of the Government of Vietnam are used to re-lend domestically.

- Inefficient public investment using foreign loans

At present, there are many public investment projects using foreign loans but due to the donor's conditions for these loans, it has led to inconsistencies in the management and assurance of investment efficiency. conflict of interest between parties. In addition, the integration of government programs and projects in the province with ODA programs and projects, sometimes overlapping, has close contents such as poverty reduction, rural transport, rural clean water, etc. which still limit the efficiency of capital.

- The system of connecting and updating information is not flexible

Information on foreign debt in Vietnam so far is still poor, incomplete and continuous, and the quality of information on unreliable debt. In addition, the non-disclosure of information among ministries and agencies has led to the phenomenon of silencing information that has bad consequences for debt management. In addition, the application of information technology in managing related data on foreign debts is weak because foreign debt management software currently in use at the Ministry of Finance and the State Bank has not been fully supported. Application in data storage and processing. In addition, the time for summarizing, analyzing and processing information before publicizing is quite long, slowing down the evaluation of the performance of projects and programs using foreign capital as well as the topic. export solutions to adjust.

- Warning and risk management are limited

Currently, Vietnam has not had an early warning model of debt risks for the economy. There are just only relies on the evaluation criteria according to the standards of the World Bank, IMF or Moody's, and S&P to assess the situation of foreign debt compared to the permitted safety threshold or against the targets in the foreign debt management strategy of government through periods. But the limitation of data makes these indicators not really reflect the true situation of foreign debt, leading to a relatively relative evaluation, sometimes deviating from the assessment of international financial institutions [11-13].

In the face of the enormous consequences that the external debt crisis caused to many countries in the world in the previous period, researchers and international organizations have made many studies on this issue and made contributions important for both theory and practice. These studies focus on three main research directions, specifically:

*Researching the debt crisis early warning model*

Some authors such as Fioramanti (2006), Manasse et al. (2003), Manasse&Roubini (2005), Jedidi (2013), Ciarlone&Trebeschi (2006), Fuertes &Kalotychou (2005), Fuertes&Kalotychou (2007) proposed for research models such as binary tree, Logit, Probit, neural network, etc. These models provide multi-dimensional views of early warning models based on the results of analyzing the effects of Economic indicators of each country.

Manasse et al. (2003) developed a model for early warning of debt crises. A country is defined as in a debt crisis if it is classified as in the Standard & Poor's default, or if it receives support from the IMF in excess of 100% of the quota. By analyzing the binary tree (CART), the authors determine the likelihood of a country's debt crisis based on the country's past data. The independent variables used are divided into 03 categories: Group of external debt variables (short-term external debt / reserves; Interest on external debt (% of GDP); Services of the external debt / reserves; Total external debt (% of GDP), group of macroeconomic variables (US treasury Bills; Real GDP Growth; FDI (% of GDP); Trade openness; Volatility of inflation) and other variables (Current Account Balance).

Ciarlone&Trebeschi (2006) built a debt crisis warning model with three states (quiet, pre-crisis and adjustment) based on the conceptualization of debt crisis. However, this model used a large number of variables (such as Interest on external debt / international reserves; Total External Debt / GDP; GDP Growth; short-term debt / total external debt; Total Private capital flows / GDP; Annual inflation; International reserves / total external debt, etc.) made the calculation more complex, which can cause model defects. In current Vietnam conditions, the data for variables are incomplete, which makes forecasting in this way difficult [14].

Jedidi (2013) built a table logit model with many macroeconomic and financial indicators, thereby developing an early warning system for 60 emerging and developing countries during 1973-2010. By identifying the relationship between the above indicators by implementing the main component analysis (PCA), the author built two general macroeconomic and financial indicators to predict the appearance of debt crisis. Macroeconomic indicators include variables such as Total gross central government debt / GDP; total gross external debt / GDP; FDI; gross saving; GDP growth; trade openness; imports / GDP; exports / GDP; general government expenditure (% of GDP). Financial indicators include variables such as M2 / total reserves, Foreign exchange reservers, stock of total assets; central bank assets / GDP; financial openness; domestic credit provided by banking sector / GDP. This model is simple because only the explanatory variables are used as the two aggregate indicators, but not mentioning the latency of these variables when affecting the economy. Besides, this is a warning model with data sets of many countries, so its scope is very wide, to apply to a specific country needs appropriate adjustment.

Although the models in these studies are different, the variables in the model are similar to GDP growth, total external debt, short-term debt, import-export, money base, foreign exchange reserves, etc. These terminals are meaningful and reflect the research purpose. Currently, the system of indicators to assess the status of foreign debt in Vietnam only allows to assess the level of debt in certain times, not evaluated in a period. Therefore, it is imperative to build a debt crisis warning model. Within the scope of this study, the authors focus on the third research direction that proposes an early warning model for Vietnam's external debt crisis[10].

Thus, each study focuses on a specific aspect of the external debt crisis with macroeconomic and institutional indicators. In the framework of this paper, the authors approach the debt crisis through the concept proposed by Ciarlone&Trebeschi (2006) as follows:

A debt crisis occurs when at least one of the following conditions occurs:

- A country has officially announced the suspension of payment of public or foreign debt or has entered into an agreement to restructure the debt or extend it with creditors.

- A country has not paid foreign creditors and / or principals to creditors an amount greater than 5% of the percentage of foreign debt paid out during the year.
- A country has accrued interest and / or principal of foreign debt an amount greater than 5% of the total outstanding foreign debt of the year.
- A country receives large support from the IMF when such support exceeds 100% of the limit.

**Methods.** The study of the authors uses Vietnam's data in the period of 1986-2017. The data sources used in this study are from WDI (World Bank Development Indicators), IFS (International Financial Statistics).

*Dependent variable (DC)*

In the period 1987 - 2018, Vietnam had no debt crisis. Therefore, from the definition of debt crisis, the authors processed the data, identified the years that satisfied the debt crisis definition and assigned the dependent variable with the corresponding value equal to 1, and in the remaining years which were not satisfied, the value is set to zero.

First of all, the world economic theory has shown that money crisis and debt crisis are closely related. Based on the model recommendations of Eichengreen et al. (1995), the authors used the forex market pressure index (EMP) to determine a value of 0 or 1 for the dependent variable.

The formula for calculating the EMP is:

$$EMP_t = \alpha \cdot \left[ \frac{E_t - E_{t-1}}{E_{t-1}} \right] + \beta \cdot [r_t - r_{t-1}] + \gamma \cdot \left[ \frac{R_t - R_{t-1}}{R_{t-1}} \right]$$

In which:  $E_t$  is the average exchange rate of year  $t$ ;  $r_t$  is real interest rate of year  $t$ ;  $R_t$  là total reserves of year  $t$ ;  $\alpha, \beta, \gamma$  are inverse standard deviation of  $E, r, R$  comparatively.

Debt crisis is considered to occur when  $EMP_t > \mu_{EMP} + 1.5\sigma_{EMP}$

In addition, according to the definition of debt crisis combined with the analysis of the current situation of foreign debt in Vietnam in the past, the authors choose the years with debt restructuring or debt extension to assign DC value = 1.

Based on Vietnam's statistical sources, the research team processed the data, then calculated the indicators that affect the likelihood of debt crisis synthesized from the research results of Jedidi (2013) and sorted into 02 groups of macroeconomic indicators and financial indicators[15].

*Macroeconomic indicator variables (IMV)*

To build macroeconomic indicators, the authors choose the following macro indicators:

Table 1 – The IMV variable construction criteria are assumed as follows

Criteria	Symbol	Effects	Explanations
Total foreign debt/GDP	X1	+/-	An increase in foreign debt leads to an increased probability of a debt crisis. However, if the economic growth and export growth rate are high, ensuring that the foreign currency sources for debt repayment are unlikely to increase the possibility of a crisis.
Total savings/GNI	X2	-	Increasing total national savings reduces the likelihood of a debt crisis.
Growth of GDP	X3	-	The higher the GDP growth rate, the less likely the debt crisis is to occur.
Commercial openness	X4	+/-	The impact is not clear: To a certain extent the openness stimulates exports, increases foreign exchange earnings, thereby reducing the pressure to repay debts in foreign currencies. On the other hand, high trade openness makes the economy vulnerable to external shocks.
Import /GDP	X5	+	Increased imports cause more foreign currency to flow, which can cause a serious deficit of the trade balance, increasing foreign borrowing leading to the probability of an increasing debt crisis.
Export /GDP	X6	-	This ratio increases, increasing foreign currency sources to pay debts, and the probability of crisis happening.
Inflation	X7	+	The increase in inflation caused a reduction in domestic debt but an increase in foreign debt and thus the debt crisis impact.
<p><i>Source:</i> Jedidi (2013) and the author's synthesis.                      "+" Sign: Increasing the probability of a debt crisis;                      "-" Sign: Reducing probability of debt crisis.</p>			

Formula:  $IMV = \beta_1 X_1 - \beta_2 X_2 - \beta_3 X_3 - \beta_4 X_4 + \beta_5 X_5 - \beta_6 X_6 + \beta_7 X_7$   
 In which:  $\beta_i$ , with  $i = 1, \dots, 8$  is the inverse standard deviation of variable  $X_i$ .  
 Finance indicator variables (IFV)

To build finance indicator variables, the authors chose the following financial indicators:

Table 2 – IFV development criteria are assumed as follows

Criteria	Symbol	Effects	Explanations
M2/ Foreign exchange reserves	Y1	+	For countries with a dollarization level, this indicator aims to assess the central bank's ability to meet foreign exchange needs. This ratio is of importance in countries that are likely to lose domestic capital due to a weak banking system or a rigid fixed exchange rate management policy. The higher this ratio is, the probability of a debt crisis increases.
Foreign exchange reserves / GDP	Y2	-	The growth of foreign exchange reserves ensures the source of repayments in foreign currencies, leading to a reduced probability of a crisis.
Total assets of State bank/ GDP (center bank assets/ GDP)	Y3	+	Through the discount and open market operations, the assets of the central bank increased and the deposits of commercial banks at the central bank increased, increasing the monetary base, related to M2, and increasing the probability of debt crisis.
Financial openness	Y4	+/-	Not clear: this variable measures the level of access to foreign capital. When the financial openness is good, the country can easily access external capital in borrowing to pay debts, reducing the possibility of debt crisis. However, if the financial openness is too liberal and the flow of foreign indirect investment capital is not well managed, the sudden withdrawal can make the debt crisis more serious, so it bears a plus sign.
Domestic credit is provided by the financial sector /GDP	Y5	+	This ratio can be used as an indicator of the financial system's vulnerability. Central banks pump liquidity to banks during periods of the banking crisis to improve their financial situation.
GDP growth rate per capital	Y6	+/-	This is essentially an ICOR. If the icor is low (effective), it will attract more foreign direct investment, which reduces the pressure on foreign borrowing, leading to a reduction in the debt crisis. If icor is high, FDI into Vietnam will decrease due to low efficiency of capital use, leading to an increase in the demand for foreign loans and an increase in debt crisis.
<p>Source: Jedidi (2013) and the author's synthesis.                      "+" Sign: Increasing the probability of a debt crisis;                      "-": Reducing probability of debt crisis.</p>			

Formula:  $IFV = \alpha_1 Y_1 - \alpha_2 Y_2 + \alpha_3 Y_3 - \alpha_4 Y_4 + \alpha_5 Y_5 - \alpha_6 Y_6$   
 In which:  $\alpha_i$ , with  $i = 1, \dots, 6$  is the inverse of the standard deviation of  $Y_i$ .

**Results.** The model of warning of foreign debt crisis is built based on research results of international standard models. The variables used in the model all include a one-year delay to ensure there is a lag in its impact on the economy. Based on the research results of Jedidi (2013), the authors have built a warning model in both binary Logit and Binary Probit. However, when the authors used the Wald-Test test to test the suitability of the model, the results of the binary Probit model were better. Therefore, the authors used the binary Probit model for their research[16-18].

The binary Probit model has the form:

$$DC = 1 \text{ if } U > U^*$$

$$DC = 0 \text{ if } U < U^*$$

In which,  $U$  is the utility determined by the independent variables

$$U^* \text{ is a limit with the assumption: } U^* = U_t + u_t = \beta_0 + \beta_1 \times IMV_{t-1} + \beta_2 \times IFV_{t-1} + u_t.$$

$u_t$  is a random error with  $N(0, 1)$  distribution.

The formula for calculating the probability of  $DC = 1$  is:

$$p_t = P(DC=1/IMV_{t-1}, IFV_{t-1}) = P(U^* < U_t)$$

$$= F(U_t) = \int_{-\infty}^{\beta_0 + \beta_1 \times IMV_{t-1} + \beta_2 \times IFV_{t-1}} \frac{1}{(2\pi)^{1/2}} \exp\left(-\frac{t^2}{2}\right) dt$$

In practice, the authors use the approximate formula as follows:

$$p_t = 1 - \phi_0(-\beta_0 - \beta_1IMV_{t-1} - \beta_2IFV_{t-1}) = 1 - \phi_0(u)$$

For  $\phi_0(u)$  is taken from annex 2.

The authors used Eview software to run the model, taking the meaning level  $\alpha = 0.05$ .

Table 3 – Model results

Dependent Variable: DC				
Method: ML - Binary Probit (Quadratic hill climbing)				
Sample(adjusted): 1987 2019				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	5.679511	2.392015	2.374363	0.0176
IMV(-1)	0.600465	0.224263	2.677505	0.0074
IFV(-1)	-0.449156	0.236100	-1.902393	0.0571
Mean dependent var	0.181818	S.D. dependent var		0.391675
S.E. of regression	0.289850	Akaike info criterion		0.728051
Sum squared resid	2.520387	Schwarz criterion		0.864097
Log likelihood	-9.012839	Hannan-Quinn criter.		0.773826
Restr. log likelihood	-15.64660	Avg. log likelihood		-0.273116
LR statistic (2 df)	13.26752	Probability(LR stat)		0.001315

From the results table, we have an estimate of the utility:

$$U_t = 5.679511 + 0.600465*IMV_{t-1} - 0.449156*IFV_{t-1}$$

Tests

*The statistical significance of independent variable test:*

To test the statistical significance of the independent variables, the authors used the Wald-Test test.

Pair of hypotheses need to be tested:

$$\left\{ \begin{array}{l} H_0: \beta_1 = 0 \\ H_1: \beta_1 \neq 0 \end{array} \right. \quad \text{and} \quad \left\{ \begin{array}{l} H_0: \beta_2 = 0 \\ H_1: \beta_2 \neq 0 \end{array} \right.$$

We have the following results:

Table 4 – Test results of statistical significance of coefficient  $\beta_1$

Wald Test:			
Null Hypothesis:	$\beta_1=0$		
F-statistic	7.169032	Probability	0.011911
Chi-square	7.169032	Probability	0.007417

Table 5 – Test results of statistical significance of coefficient  $\beta_2$

Wald Test:			
Null Hypothesis:	$\beta_2=0$		
F-statistic	3.619098	Probability	0.066758
Chi-square	3.619098	Probability	0.057120

Thus, the Prob values are  $<0.07$  so the independent variables are statistically significant.

*The suitability of the model test*

For the Probit model, to test the suitability of the model, we use the test of the rational function ratio LR (Wooldridge, 2008). The rational function ratio is a statistic used to compare the suitability of the two models. The assumption of verification is:

$$H_0 : \beta_0 = \beta_1 = \beta_2 = 0$$

$$H_1 : \beta_0^2 + \beta_1^2 + \beta_2^2 > 0$$

From the table of results we see that the statistical ratio is reasonable  $R = 13.26752$ , P-value ( $R$ ) = 0.001315 < 0.05, so  $H_0$  is rejected, ie with 5% significance level, the coefficients of the model are not equal to 0, model matching[19].

*Hosmer-Lemeshow (H- L) suitability test*

The objective of H - L testing is to compare actual and estimated values, if the actual values and the estimated values are too different, the model is not suitable. This test uses the When square standard for testing. Pair of hypotheses to be tested:

$H_0$ : Model is suitable

$H_1$ : Model is not suitable.

Table 6 – Results of H-L testing

Andrews and Hosmer-Lemeshow Goodness-of-Fit Tests					
Grouping based upon predicted risk (randomize ties)					
H-L Statistic:	6.2336			Prob. Chi-Sq(8)	0.6211

We see Prob = 0.6211 > 0.05, there is no basis to reject  $H_0$ , the model is suitable with the data.

**Discussions.** The biggest contribution of the project is to propose a model for warning of foreign debt crisis in Vietnam based on international standards. This is the inheritance and creativity of the authors' group based on published research works. The results of the model show that the macroeconomic and financial indicators are closely related to each other and to the possibility of external debt crisis. The external debt crisis is not only caused by a cause and the impact and resonance of many factors in each country's economy. The model building has added a tool to warn foreign debt crisis, creating conditions to achieve the highest efficiency in the management and prevention of a debt crisis in Vietnam in the future[20-22].

Хыу Нги Фан<sup>1</sup>, Ле Хунг Шон<sup>2</sup>, Буй До Ван<sup>1</sup>, Тхань Дунг Зунг<sup>1</sup>, Тунг Нгуен Зуй<sup>1</sup>

<sup>1</sup>Ұлттық экономика университеті, Вьетнам;

<sup>2</sup>Вьетнам мемлекеттік қазынашылығы

### ВЬЕТНАМНЫҢ СЫРТҚЫ ҚАРЫЗ ДАҒДАРЫСЫ ТУРАЛЫ ЕСКЕРТУ

**Аннотация.** Әр елге ішкі және шетелдік инвестициялық капиталдар қажет. Әрбір капитал көзі әр елдің экономикасы мен мәдениетінің ерекшеліктерімен байланысты әртүрлі саясаттармен, механизмдермен және басқарумен байланысты өзіндік артықшылықтар мен кемшіліктерге ие. Вьетнам сияқты дамушы елдер, экономикалық дамуға арналған шетелдік қарыздар өте маңызды, бұл ішкі капиталды басқаруға қозғаушы күш және жалпы капиталды басқарған жағдайда, мемлекеттік инвестициялардың тиімділігін арттырады. Тиімді басқару және мониторинг. Біздің еліміздегі шетелдік қарыздардың мөлшері мен үлесінің тез артуына көптеген ұйымдар мен жеке адамдар тарапынан: «Шетелдік қарыздар бақылауда, алаңдатпайды, себепті», – деген пікірлер айтылады. Бұл жерде сыртқы борыш дағдарысы туралы ескерту керек деген ой бар.

Зерттеудің негізгі мақсаты – Вьетнамның 1986-2018 жылдардағы сыртқы қарызының ағымдағы жағдайын талдау, қазіргі кездегі еліміздің сыртқы қарыздарының басқарылуы мен жағдайын білу, Вьетнамның макро деректері негізінде қарыз дағдарысы туралы ескерту моделін құру дағдарыстың ықтималдығы, ол Вьетнамның қарызды басқару стратегиясын реттей алады, сонымен қатар сыртқы қарыздарды бағалау және басқару құралдарын толықтырады.

Мақалада екі агрегаттық айнымалысы бар сыртқы борыш дағдарысының ықтималдығын анықтау үшін екілік Пробит моделін құру арқылы сандық зерттеу әдісі болатын зерттеу әдісі қолданылады, атап айтқанда, макроэкономикалық көрсеткіштер мен қаржылық көрсеткіштер.



1986-2018 жж. Вьетнамдағы сыртқы қарыздар мен төлемдердің жағдайын талдау арқылы зерттеу Вьетнамдағы сыртқы қарызды тиімсіз пайдаланудың шектеулері мен себептерін көрсетеді. Сонымен қатар ескерту моделінің нәтижелері сыртқы борыш дағдарысын екі түсіндірме айнымалы арқылы болжауға болатынын көрсетеді, атап айтқанда, макроэкономикалық индекс және қаржы индексінің өзгермелі көрсеткіштері.

Қазіргі кезде Вьетнамда сыртқы қарыз дағдарысы жаңа тақырып болып қала береді. Авторлардың тақырыбы сыртқы қарыздардың жағдайын талдаумен ғана шектеліп қоймай, сонымен қатар Вьетнамдағы сыртқы борыш дағдарысы туралы макроэкономикалық көрсеткіштер мен қаржыға қатысты екі айнымалыға негізделген ескерту үлгісін жасады. Тиісті индикаторлардан басқа, индекстің осы екі ауыспалы құрамы сыртқы индикаторлардың сыртқы борыш дағдарысының туындау мүмкіндігіне әсерін арттырады. Сонымен қатар авторлар модельдік айнымалылардың әр елдің сыртқы қарыз дағдарысының туындау мүмкіндігіне әсер етуінің кідірісін де қарастырды. Бұл модельді неғұрлым қолайлы, дәл бағалауға және болжауға қабілетті етеді. Сондай-ақ мақала қарыздық дағдарыс пен ақша дағдарысы арасындағы тығыз байланысты талдауға ықпал етеді.

Бүгінгі халықаралық экономикалық интеграция жағдайында барлық елдер жоғары және тұрақты өсу мен дамуды көздейді. Бұған жету үшін барлық елдер дамудың инвестициялық көздеріне, оның ішінде ішкі және шетелдік капиталдарға сүйенуі керек. Ішкі капитал экономиканың ішкі ресурстарынан жұмылдырылады. Егер ішкі капитал жеткіліксіз болса, шетелдік капиталды әртүрлі тәсілдермен жұмылдыру қажет, мұнда қарыз алу танымал әдіс болып саналады. Шетелдік қарыздарға дамуға ресми көмек (ODA) түріндегі несиелер және нарықтық жағдайдағы коммерциялық несиелер жатады. Алайда сыртқы қарыздарды басқаруды жеңілдету, сондай-ақ тиімсіз пайдалану көптеген елдерді қарызға, борыш дағдарысына және экономикалық құлдырауға душар етті. Сондықтан сыртқы қарызды басқаруды күшейту – бүгінгі таңда әр елдің қаржы саясатындағы маңызды мақсаттарының бірі. Вьетнамда сыртқы қарыздарды басқару іс жүзінде тек 1993 жылдан басталды, сол кезден бері Вьетнамның сыртқы қарыздарды басқару жүйесі әлі аяқталу үстінде, сондықтан сыртқы қарыздарды бақылау және басқару өзекті болып отыр.

**Түйін сөздер:** сыртқы қарыз, сыртқы қарыз дағдарысы, Вьетнам.

**Хыу Нги Фан<sup>1</sup>, Ле Хунг Шон<sup>2</sup>, Буй До Ван<sup>1</sup>, Тхань Дунг Зунг<sup>1</sup>, Тунг Нгуен Зуй<sup>1</sup>**

<sup>1</sup>Национальный университет экономики, Вьетнам;

<sup>2</sup>Государственное казначейство Вьетнама

## **ПРЕДУПРЕЖДЕНИЕ КРИЗИСА ВНЕШНЕГО ДОЛГА ВЬЕТНАМА**

**Аннотация.** Каждая страна нуждается в капитале внутренних и иностранных инвестиций. Каждый источник капитала имеет свои преимущества и недостатки, связанные с различными политиками, механизмами и управлением, которые связаны с характеристиками экономики и культуры каждой страны. В развивающихся странах, таких как Вьетнам, иностранные кредиты для экономического развития очень важны, создавая движущую силу для поощрения внутренних инвестиций и повышения эффективности государственных инвестиций в целом, если этот капитал управляется эффективно и мониторинг. Быстрое увеличение размера и доли иностранных займов в нашей стране вызывает обеспокоенность у многих организаций и частных лиц со смешанным мнением о том, что: внешние долги находятся под контролем, не тревожные, но значимые. Идея заключается в том, что необходимо предупреждать кризис внешнего долга.

Основная цель исследования – проанализировать текущую ситуацию с внешним долгом Вьетнама в период 1986-2018 гг., чтобы увидеть управление и ситуацию с внешними кредитами нашей страны сегодня, построить модель предупреждения долгового кризиса на основе макроданных Вьетнама для расчета вероятности кризиса, чтобы он мог скорректировать стратегию управления долгом и управления долгом во Вьетнаме, а также дополнить инструменты оценки и управления внешним долгом.

В статье используется метод исследования, который представляет собой метод количественного исследования посредством построения бинарной модели Probit для определения вероятности кризиса внешнего долга с двумя агрегированными переменными, а именно макроэкономическими показателями и переменными финансового индекса.

Анализируя ситуацию с иностранными заимствованиями и погашениями во Вьетнаме в течение 1986-2018 гг., исследование тем самым указывает на ограничения и причины неэффективного использования

внешнего долга во Вьетнаме. Кроме того, результаты модели предупреждений показывают, что кризис внешнего долга можно прогнозировать с помощью двух объясняющих переменных, а именно переменных макроэкономического индекса и финансового индекса.

В настоящее время во Вьетнаме кризис внешней задолженности остается новой темой. Авторская тема не только остановилась на анализе ситуации с внешними долгами, но и создала модель для предупреждения кризиса внешней задолженности во Вьетнаме, основанную на двух переменных: макроэкономических показателях и финансах. В дополнение к соответствующим показателям эти две индексные переменные также включают в себя увеличивающееся или уменьшающееся влияние этих показателей на возможность кризиса внешней задолженности. Кроме того, авторы также рассмотрели латентность модельных переменных, влияющих на вероятность кризиса внешней задолженности каждой страны. Это делает модель более подходящей, способной более точно оценивать и прогнозировать. Кроме того, статья также способствует анализу тесной взаимосвязи между долговым кризисом и валютным кризисом.

В контексте международной экономической интеграции сегодня все страны стремятся к быстрому и устойчивому росту и развитию. Для достижения этого все страны должны полагаться на источники инвестиций в области развития, в том числе отечественный и иностранный капитал. Внутренний капитал мобилизуется за счет внутренних ресурсов экономики. Если внутреннего капитала недостаточно, необходимо мобилизовать иностранный капитал различными способами, в которых заимствование является популярным методом. Иностранные займы включают займы в форме официальной помощи в целях развития (ОПР) на льготных условиях и коммерческие займы в рыночных условиях. Однако ослабление управления внешним долгом, а также неэффективное использование привело к тому, что многие страны оказались в состоянии задолженности, долгового кризиса и экономического спада. Поэтому укрепление управления внешним долгом является сегодня одной из важных целей финансовой политики каждой страны. Во Вьетнаме управление внешними долгами действительно началось только с 1993 года, в то время как система управления внешним долгом Вьетнама все еще находится в процессе завершения, поэтому мониторинг и управление внешним долгом также становятся все более актуальными.

**Ключевые слова:** внешний долг, кризис внешнего долга, Вьетнам.

#### **Information about authors:**

Huu Nghi Phan, Doctor of Economics, Head of Public Finance Department, School of Banking and Finance. National Economics University, Vietnam; nghiph@neu.edu.vn; <https://orcid.org/0000-0001-6671-1348>

Le Hung Son, Associate Professor, Doctor of Economics, Director of Institute of Treasury Training Vietnam State Treasury; lhsonkbnn@gmail.com; <https://orcid.org/0000-0001-8174-7349>

Bui Do Van, Master in Economics of Banking and Finance, Lecturer in Public Finance, School of Banking and Finance. National Economics University, Vietnam; vanbd1201@gmail.com; <https://orcid.org/0000-0001-6930-8335>

Thanh Dung Dang, Master of Business Administration National Economics University, Vietnam; d2t274@gmail.com; <https://orcid.org/0000-0001-5060-7386>

Tung Nguyen Duy, Bachelor of Banking and Finance National Economics University, Vietnam; ndtung130998@gmail.com; <https://orcid.org/0000-0002-8987-7479>

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