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FOREIGN DEBT AND INTERNAL AND EXTERNAL EQUILIBRIUM IN CENTRAL AND EAST EUROPE

In the article we consider foreign debt of Central and Eastern European countries in dynamic and structural aspects and its influence on internal and external equilibrium. Econometric estimation of relation between external financing, current account and budget deficit and economic growth was done, using regional statistic data from 1991 till world financial crisis in 2008.

Key words: models of current account, foreign debt , internal equilibrium, external equilibrium, economic growth, Central and Eastern Europe, regression analysis

У даній статті ми розглядаємо зовнішній борг країн Центральної та Східної Європи в динамічному та структурному аспектах та його вплив на внутрішню і зовнішню рівновагу. Здійснено економетричні оцінки зв'язку між зовнішнім фінансуванням, рахунком поточних операцій і дефіцитом бюджету та економічного зростання, використовуючи регіональні статистичні дані з 1991 до світової фінансової кризи в 2008 році.

Ключові слова: моделі поточного рахунку, зовнішній борг, внутрішня рівноваги, зовнішня рівновага, економічне зростання, Центральна та Східна Європа

В данной статье мы рассматриваем внешний долг стран Центральной и Восточной Европы в динамическом и структурном аспектах и его влияние на внутреннюю и внешнюю равновесие. Осуществлено эконометрические оценки связи между внешним финансированием, счетом текущих операций и дефицитом бюджета и экономическим ростом, используя региональные статистические данные с 1991 до мирового финансового кризиса в 2008 году.

Ключевые слова: модели текущего счета, внешний долг, внутреннее равновесие, внешнее равновесие, экономический рост, Центральная и Восточная Европа

Foreign capital is an important source of economic growth, so to study its structure and its impact on the recipient country takes considerable relevance. Over the years, CEE tried all sorts of ways to attract foreign capital in the form of private and official loans to improve the economic situation and increasing living standards that is for the good of the country. Attracting foreign capital can both positively and negatively affect internal and external balance of the CEE countries. Very important is the simultaneous achievement of internal and external equilibrium.

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The research object is Central and East Europe (CEE) countries (Poland, Slovakia, Slovenia, Czech Republic Hungary, Romania, Bulgaria, Estonia, Latvia, Lithuania, Russia, Ukraine, Moldova, Belarus). The subject of study is to determine the foreign debt and especially its influence on the equilibrium in the CEE countries during transition process from plan to market economy.

Globalization processes in the financial services industry manifested in the form of the dynamic development of international financial integration and liberalization of financial markets, increasing international capital flows, widening the range of currency and financial transactions as well as international competition, cross-border nature of international banks [3, c. 12]. These processes have an impact on the development of national financial markets that are interdependent from the development of the international financial system, and thus experiencing positive and negative impacts. The term globalization has been put into practice relatively recently, about 20 years ago against the backdrop of scientific discussion at the expense of processes occurring in this period in the economy, society, technology development. Most definitely globalization is evident in financial markets. Investors form their portfolios of financial assets of not one but many countries and companies that conduct their operations in one country, can list their securities in other countries [8, c. 32]. The speed of the formation of international capital markets, currencies, securities a real pivotal driving force of globalization processes [2, c. 53].

Liberalization of financial sector increased regional integration. In particular, one of the points of economic summit communiqué of the Group of Seven in Halifax (1995) was a requirement of permanent members encourage the IMF and World Bank to eliminate restrictions on capital markets, the establishment of the free convertibility of currencies and the introduction of floating exchange rates.

Since 1990 the IMF increased the impact on member states to adopt the obligations under Article VIII of the IMF. Article prohibits impose restrictions on payments and transfers for current international transactions, engagement in discriminatory currency arrangements, practice of multiplicity of exchange rates. In 1996, the IMF has included the surveillance systems with which policy members can assess the role of capital movements. This provision is relevant to most developing countries and countries with economies in transition, which has recently embarked on the path of liberalization.

The main driving forces of financial globalization of the decade were: exchange control relaxation and expansion of financial deregulation in order to enhance the competitiveness of national financial institutions, the transition to floating exchange rates, which stimulated the development of the international market for financial derivatives, different yield on investment in different countries; volatility and instability of markets, especially in developing countries, increased role of institutional investors who tried to diversify risk through investments in a number of different countries, standardization of products, financial innovation, rapid development of communication technologies and information processing, reduced communication costs and other aspects economic globalization.

The main causes of external financing of transition economies are:

- structural changes with decreasing output and public and private savings;
- current account deficit due to huge demand for import consuming and investment goods and old debt obligations;
- liberalization of control of the capital mobility according to IMF membership.

Internal balance involves the government’s efforts to attain growth, full employment and price stability to avoid inflationary pressure, internal balance is achieved through the use of government spending, taxation, interest rates and money supply.

External balance involves achieving favorable balance of payment where a country aims at achieving high levels of exports; the balance of payment depends on the terms of trade where these terms of trade and also the exchange rates.

In this study we will focus on identifying links between savings, investment, current account balance, budget deficit, economic growth and external borrowing on the basis of theoretical hypotheses and empirical testing.

Basic model of open economy Keynesian type macroeconomic equilibrium situation described by such equations:

$$S_P + S_G = I + CA, \qquad (1)$$

or

$$CA = (S_P - I_P) + (S_G - I_G) = (S_P - I_P) - DEF, \qquad (2)$$

where SA - current account balance, S_P ,S_G - respectively, private and government savings, I_P , I_G - respectively, private and public investment, and - total investment, DEF - budget deficit.

American economists M. Obstfeld and K. Rogoff [6, c. 12] defines the current account balance for the period as the change in net foreign assets and formulated as follows:

$$CA_t = B_t{+}1 - B_t = Y_t + r_tB_t - C_t \qquad (3)$$

where $B_t{+}1$ - net foreign assets of the economy, end of period t, r_tB_t - interest income from the previous foreign assets CA_t - current account of the country for period t in the absence of capital accumulation and government spending, Y_t , C_t - respectively the total income and consumption in period t.

This model can be modified by adding investment and government spending:

$$I_t = K_t{+}1 - K_t, \qquad (4)$$

$S_t°$ as national saving can be written:

$$B_t{+}1 + K_t{+}1 - (B_t + K_t) = Y_t + r_tB_t - C_t - G_t = S_t°, \qquad (5)$$

where Gt - public spending in period t.

Under a positive current account balance can be written:

$$CA_t = B_t{+}1 - B_t = Y_t + r_tB_t - C_t - G_t - I_t = S_t - I_t \qquad (6)$$

Thus, in a simplified model, adding the time component we have shown a third generation model of country's current account. In our opinion, these models allow to analyze the internal and external shocks in countries with economies in transition in the context of macroeconomic equilibrium.

Capital inflows in CEE countries tended to increase since 1990. Need for inflow of foreign capital in these countries has been associated with large current account deficit.

Table 1.
Current Account in CEE countries, 1994-2008 pp., % GDP

Country	YEAR								
	1994	**1996**	**1998**	**2000**	**2002**	**2004**	**2006**	**2008**	**2010**
Albania	-14,3	-7,3	-6,7	-4,6	-9,5	-4,0	-5,6	-14,5	-10,1
Belarus	-9,1	-3,6	-6,7	-3,2	-2,2	-5,2	-3,9	-8,4	-15,5
Bulgaria	-0,3	1,7	-0,5	-5,6	-2,0	-6,8	-17,9	-25,2	-0,8
Estonia	-6,9	-8,6	-8,6	-5,3	-10,7	-11,8	-16,8	-9,4	3,6
Latvia	5,0	-4,9	-9,7	-4,7	-6,7	-12,8	-22,7	-12,9	3,6
Lithuania	-2,2	-8,8	-11,6	-5,9	-5,2	-7,6	-10,7	-11,9	1,8
Macedonia	-7,8	-7,7	-7,5	-1,9	-9,5	-8,4	-0,9	-12,7	-2,8
Moldova	-8,4	-11,1	-19,7	-7,6	-4,0	-2,2	-11,7	-16,7	-10,9
Poland	1,0	-2,1	-4,0	-6,0	-2,8	-4,0	-2,8	-5,5	-3,3
Russia	2,8	2,8	0,1	18,0	8,4	10,2	9,5	5,8	4,9
Romania	-1,4	-7,3	-6,9	-3,6	-3,4	-8,4	-11,8	-12,4	-4,2
Slovakia	4,3	-9,9	-9,2	-2,4	-5,5	-5,9	-6,2	-6,3	-3,4
Slovenia	6,3	0,3	-0,7	-3,2	1,1	-2,7	-2,6	-5,4	-1,1
Hungary	-9,4	-4,0	-7,2	-8,4	-7,0	-8,6	-7,5	-8,5	1,6
Ukraine	-3,2	-2,7	-3,1	4,7	7,5	10,5	-1,5	-7,2	-1,9
Croatia	4,7	-4,2	-5,8	-2,5	-7,5	-4,4	-6,9	-8,6	-1,9
Czech	-2,0	-6,7	-2,1	-4,7	-5,7	-5,2	-3,2	-2,9	-2,5

Source:Economic Outlook Database, IMF,2011

Unlike that in other regions (Asia and Latin America) the surge in capital flows in these countries has been associated with large current account deficits. Table 1 report the average deficits in relation to GDP in the years 1995-2008. Estonia and Latvia stand out with deficits exceeding eight percent of GDP, Lithuania and Hungary follow with deficits of 7 percent of GDP. While the Bulgaria's current account deficit has not been supported by high real GDP growth rates in recent years, it has been accompanied by a high investment rate. Only Slovenia, the first country in this group to join the Euro area, has kept its current account close to balance on average in recent years. Most new member states experienced sizeable real appreciations of their currencies in recent years. Thus, their large current account deficits are not an indication of weak currencies; instead, they reflect the large capital inflows these countries have attracted in recent years [5, c. 34].

Following their entry into the EU in 2004, the experience of these countries has been diverse. Those countries that followed hard exchange rate pegs, namely Bulgaria, Estonia, Latvia, and Lithuania, saw a widening of their current account deficits, while those adopting floats, namely the Czech Republic and Poland in particular, kept their current account deficits at smaller rates of GDP. Capital inflows rose in the former and fell in the latter. Slovenia, which adopted an intermediate peg, had the smallest capital inflows during that period.

Statistics show that the difference between savings and investment is very close values for the negative current account balance according to our model (6), which, in turn, associated with a high proportion of investment in GDP (28 - 32%) and high economic growth. This allows us to formulate the hypothesis that the technological reconstruction of the developed economies of Central Europe was financed by foreign savings.

We analyzed dynamics of savings and investment in different regional groups (Table 2) .During last five years in advanced economies and especially in the Central and Eastern Countries the difference between savings and investment become larger, because share of investment in GDP is higher than savings in these regional groups.

Table 2.
Savings and Investment in Regional Groups 1989- 2010

Regional groups Variables	Averages		
	1989-96	1997-2004	2005-2010
Advanced Economies			
Savings	21,9	20,8	19,2
Investment	22,5	21,2	21,9
Net Lending	-0,6	-0,4	-2,7
Central and Eastern Europe			
Savings	20,7	17,8	16,7
Investment	22,4	21,3	22,4
Net Lending	**-1,5**	**-3,5**	**-5,7**
Commonwealth of Independent States			
Savings	-	25,9	28
Investment	-	20,3	22,5
Net Lending	-	5,6	5,5

Source: Economic Outlook, IMF, April, 2011

We compared savings and investment in CEE countries and Asian New industrial countries (figures 1,2) and saw quite different picture in these groups of countries, where the later show the positive difference between savings and investment and therefore surplus in current account. So, Central and Eastern European countries need huge inflows of foreign capital to cover their deficit in current account [9, c. 24].

This is the main factor of increasing the amount of foreign debt in the last two decades. The accelerations in mounting of foreign debt last eight years also caused the decreasing international interest rate LIBOR.

The evolution of debt-creating inflows (net foreign borrowing excluding exceptional financing) in CEECs can be related to a few domestic fundamentals: fiscal balance to GDP ratio viewed as a proxy for the public sector's contribution to the imbalances between national savings and domestic investment; second, an index of the stock of foreign debt relative to the resources available for its service; and third, the growth rate of exports. The fiscal position has been interpreted as a proxy of the demand for external credit, while the other two variables approximate the incentive to lend to CEECs.

Accumulation of foreign debt in the short term is often associated with state deficit, growth of international currency reserves, deficit of current account balance, outflow of domestic capital abroad, little income and removal of foreign direct investment. In such countries as Poland, Hungary, Bulgaria problem of external financing is also growing because of the significant costs of foreign debt service, accumulated during the communist regime.

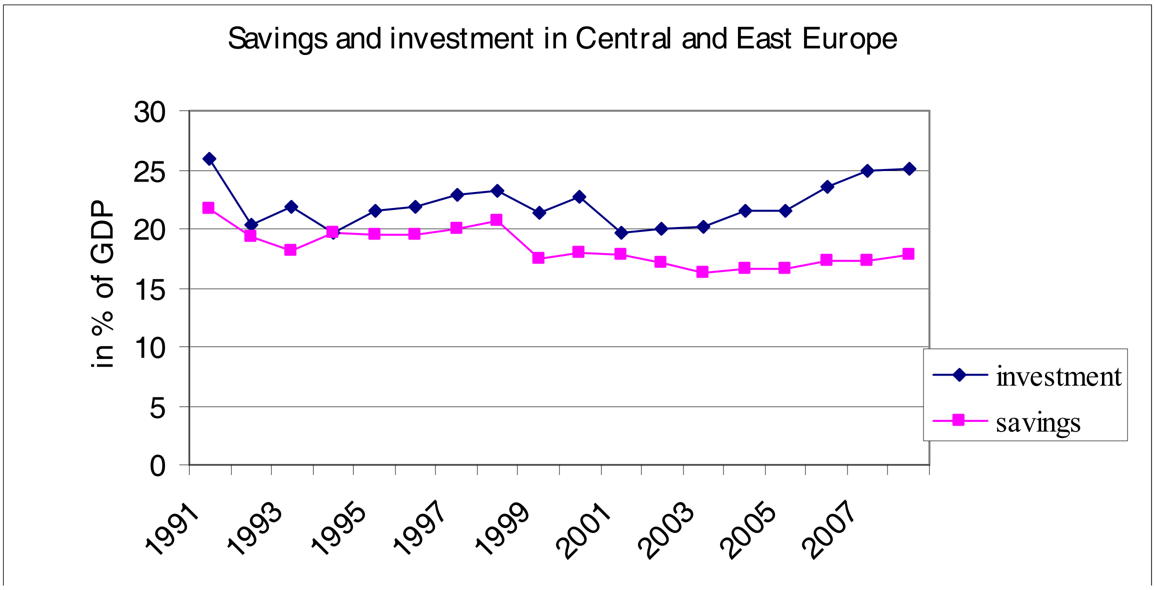

Figure 1 . Savings and Investment in CEE in 1991-2008.
Source: International Financial Statistics, IMF

One of the reasons of external debt growth for transition economies is enhanced cooperation with Bretton Woods's institutions. Potential sources of financing the budget deficit are external borrowing on international markets and foreign loans of official creditors. Moreover, savings of the state is a component of national savings and therefore the budget deficit leads to a reduction by an appropriate amount in national savings, that under certain economic conditions impels state and private actors to mobilize savings of non-residents. Government deficit becomes a factor of current account deficit extension, implementing a redistribution of income between present and future generations.

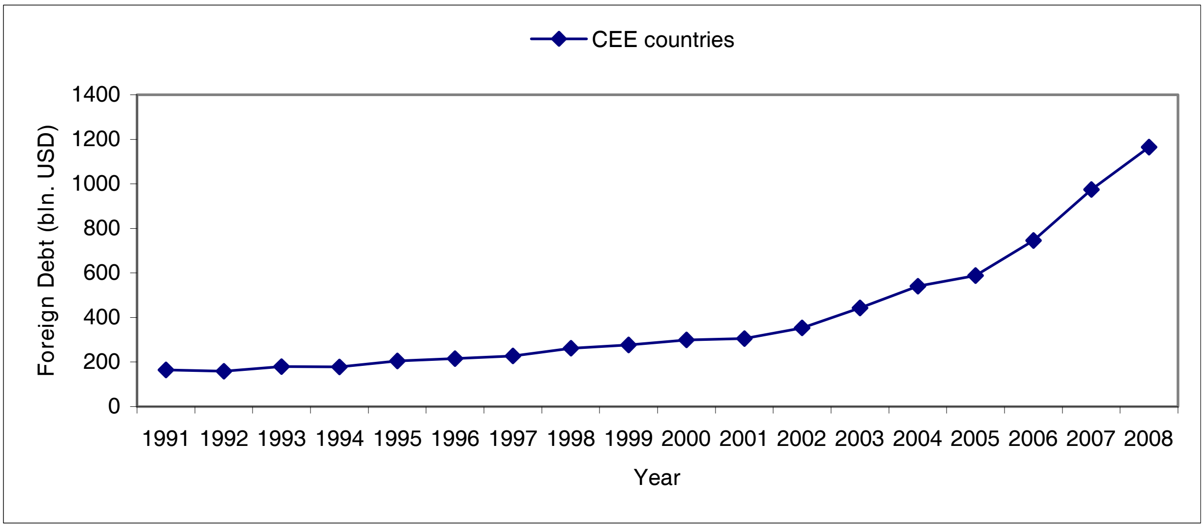

Figure 2. Foreign Debt in Central and Eastern Countries in 1991-2008
Source: estimation of author on the data from www.ebrd.org

Generally, it can be said about the growth rate of foreign debt in all countries of Central and Eastern Europe in recent years, especially after 2002. This trend can be seen on the graph below (figure 3). Average foreign debt in the countries of Central and Eastern Europe in 2008 was 1165,3 billion dollars, in comparison with approximately 400 billion dollars in 2003

Rapid growth in credit market to the private sector continues to be a major problem for most CEE countries. The fast pace of credit expansion is part of the so-called financial deepening. Credit expansion also stimulates the growth of expected revenues due to improved economic prospects, which is frequently associated with the prospects for EU accession.. All this, however, does not mean that the process is safe. In fact, the experience of other countries where excessive optimism about future earnings growth has led to the overvaluation of assets and capital flows [7, c. 127].

From the macroeconomic perspective, loan growth is mainly related to inflation and a worsening of the current account. From a financial standpoint, it is unknown whether bank credit risk rating system in the markets of the CEE countries will be able to cope with potential credit growth. In most CEE countries prudential indicators do not indicate a significant vulnerability of the banking system, but most of them are lagging, not leading indicators.

Impact of the credit boom can be compared between three different countries. In Bulgaria and Romania's rapid loan growth contributed to increasing trade deficit and current account. This assumption was tested and confirmed by regression, which also noted the important role of fiscal policy to neutralize the impact of rapid credit expansion. In Ukraine, concern the credit boom has largely been associated with vulnerability of the financial sector. However, analysis of macroeconomic indicators show that recently there was another problem associated with a deficit trade balance and inflation.

The response in these three countries was aimed at reducing identified risks, but there is obvious need for further action. Bulgaria and Romania may continue tight macroeconomic policy, but supervisors will be careful to preserve stability in the financial sector. In Ukraine, besides strengthening prudential and supervisory policies that have recently remained the main objective to reduce financial vulnerability, attention should be paid to measures aimed at improving the macroeconomic situation. In these countries, efforts at maintaining macroeconomic stability and financial sectors will be part of a broader system of prudent fiscal and monetary policies and structural reforms.

Macroeconomic and financial risks are closely interrelated. On the one hand, macroeconomic instability (inflation and external imbalances) may facilitate the emergence of financial instability - especially when banks and their borrowers are largely exposed to interest rate risk. On the other hand, financial instability (fragile financial system) may facilitate the emergence of macroeconomic imbalances, as markets in response to such signals. Thus, a set of necessary policy measures should include a combination of macroeconomic and prudential measures to manage the risks of both kinds.

For analyzing interrelations between external debt and indicators of internal and external indicators we estimate the correlation matrices for different country groups of CEE. In our research we used following indicators of internal balance: govbalan-deficit or surplus of state budget to GDP; cpi1- index of consumer prices; unemploy- level of unemployment in %; gdprate- real rate of GDP growth and indicators of external balance: cagdp –current account balance ratio to GDP; er1 – exchange rate.

For countries of CEE which are not members of EU we obtain that foreign debt worsen economic growth, unemployment and budget deficit and also do not compensate the deficit of current account and leads to appreciation of national currency (table 3).

Table 3.
Correlation table between foreign debt and indicators of internal and external equilibrium for nonEU countries of CEE

Variables	debtgdp	govbalan	cpi1	unemploy	cagdp	gdprate	er1
debtgdp	**1.0000**						
govbalan	**-0.1888**	1.0000					
cpi1	**0.0350**	0.0468	1.0000				
unemploy	**0.0283**	0.1360	-0.0429	1.0000			
cagdp	**0.4032**	0.3219	0.1295	-0.2172	1.0000		
gdprate	**-0.1862**	0.2659	-0.3826	0.2207	-0.6069	1.0000	
er1	**-0.1502**	0.0876	-0.0784	0.2730	-0.0165	0.1492	1.0000

In European Union members we see quite different situation, foreign debt support economic growth, reduce inflation and budget deficit and effectively compensate the deficit of current account but leads to revaluation of national currency. (table 4)

Table 4.
Correlation table between foreign debt and indicators of internal and external equilibrium for EU countries of CE

Variables	debtgdp	govbalan	cpi1	unemploy	cagdp	gdprate	er1
debtgdp	1.0000						
govbalan	**-0.1270**	1.0000					
cpi1	**-0.3560**	0.1578	1.0000				
unemploy	0.0314	-0.1443	-0.1193	1.0000			
cagdp	**-0.4586**	0.0813	0.4044	-0.1105	1.0000		
gdprate	**0.3006**	0.2073	-0.5784	0.1710	-0.4028	1.0000	
er1	**-0.3262**	-0.3408	0.1252	0.0985	0.1801	-0.3704	1.0000

In post-soviet countries such as Belarus, Ukraine and Russia we can see very negative influence of external debt on employment, no influence on the reduction of the budget deficit (table 5). Very small positive effect on economic growth and strong influence on the appreciation of national currency. So foreign debt has not positive impact on the internal balance in post-soviet countries.

We can conclude that foreign debt is positive for internal equilibrium only in transition countries entered European Union but slightly worsened external balance through exchange rate.

Table 5
Correlation table between foreign debt and indicators of internal and external equilibrium f or Belarus, Russia and Ukraine

Variables	debtgdp	govbalan	cpi1	unemploy	cagdp	gdprate	er1
debtgdp	1.0000						
govbalan	**0.0867**	1.0000					
cpi1	**-0.1137**	-0.2596	1.0000				
unemploy	**0.6930**	-0.0455	-0.3143	1.0000			
cagdp	**0.6088**	0.3588	-0.4908	0.6509	1.0000		
gdprate	**0.1416**	0.6691	-0.5982	0.1873	0.4230	1.0000	
er1	**0.3266**	0.1016	-0.2920	0.4392	0.4172	0.4470	1.0000

In summary we note that the problem of increased inflows of foreign capital in the economy of post-Soviet countries is extremely important especially in the context of increased competition in capital markets. Foreign debt in long run period will lead to huge devaluation of national currency and external disequilibrium .The use of foreign capital is ambiguous in its consequences for the recipient country. While considerable imbalances exist in CEE, our study makes the general conclusion that external financing has a positive impact on the achievement of external and internal balance in countries that are more advanced in economic reforms, but has higher growth potential while encouraging only foreign direct investment and portfolio investment restrictions, lower budget deficit and stimulation of domestic savings and investment.

Having analyzed the dynamics of indicators of internal and external equilibrium in the CEE countries, we have found patterns of distribution of foreign capital between the CEE countries that experience significant changes and vary from year to year depending on the internal situation of the country and financial situation in the world. The key factor of structural change of exports in the CEE countries was foreign capital inflows, contributing to economic restructuring and more efficient use of resources. Overall it contributes to the economic growth in CEE, but its involvement must be within certain limits, since excessive inflow of capital over time can lead to undesirable consequences, such as inflation, which in turn will lead to instability is the economic situation in the country.

We concluded that all CEE countries that join the EU and the countries that due to non different criteria could not join the EU, are still trying to stabilize its balance sheet, trying to reduce inflation, stabilize exchange rate, and reduce the budget deficit and so on. After 2004 the situation is has become somewhat out of control, especially have not improved in recent years in connection with the global crisis. Further strategic importance for each country is to attract foreign capital to the economy and focus on providing its national interests. Under these conditions, foreign investment will enhance the living standards of the country and will provide additional impetus for economic growth.

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