

Fiscal Policy Stance in the Euro Area

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Abstract. *The budgetary position in the euro area and the EU improved significantly in 2007 compared to the previous year. The headline deficit declined to 1.6 % of GDP in 2006 and 1.1 % of GDP in 2007, down from 2.5% of GDP in 2005. The structural budget deficit diminished from 2% of GDP in 2005 to 0.8% in 2007, reflecting a restrictive fiscal policy in euro area. The fiscal policy became pro-cyclically because the economy of euro area is characterized by a slightly negative output-gap (estimated at 0.2% of potential GDP in 2007).*

Key words: euro area; Growth and Stability Pact; output-gap; structural budgetary balance; budgetary elasticity.

JEL Classification: E62, F36.

Fiscal policies in the euro area are national ones, but they have to respect the rules of Stability and Growth Pact, which represents an instrument of fiscal coordination. Its objective is the consolidation of the public finances in the euro area, by which to support the objective of price stability undertaken by the European Central Bank. By the reform of 2005, the Pact has a correction component (reduction of the budget deficit under 3% of GDP) and a preventive one that regards the membership states to assume a medium term objective (MTO) in connection with fixing the settlement of the public finances. In 2006, only two of the member states of euro area registered a deficit over 3% (Italy and Portugal), in comparison with five economies in the previous year. For 2007 year, The European Commission estimated that only Portugal will have an excessive deficit budget, of 3.1% from GDP, and in 2008 no economy will have a deficit over 3%.

The explanations of this favorable evolution of public finances in euro area are the follows:

- the output gap is slightly negative and reduced at beginning of 2006 year; in some economies such Germany and Austria, there is a positive output-gap;
- the labour market situation has improved rapidly. Two million new jobs were created in the euro area

in 2006 and the euro area unemployment rate reached its lowest level in more than a decade. The fall in the unemployment rate is largely attributable to reducing of the unemployment gap. The Commission expects the situation on the labour market to continue to improve in 2008;

- Government revenues have increased much faster than nominal GDP in the last two years. This reflects the effect of favorable growth composition, as GDP has been supported by the dynamism of tax-rich components (domestic demand).

The prospects for continued economic growth are better than they have been for many years. This favorable outlook provides Member States with an opportunity to consolidate government finances and to progress towards sustainable budgetary positions.

The member states have registered progress with reference to the corrective of the Stability and Growth Pact, but not in the preventive arm, because the fiscal consolidation process is still slightly despite of a favorable economic context (*good times*). A possible explanation may be using of the budgetary revenues surplus to finance the budgetary spending increase. In the euro area the

indirect taxes were increased and the corporate tax rate and the tax on the higher salaries were reduced. The social contribution registered a decline followed by the cutting down in the spending of the social assistance. In order to sustain the economic growth process, the budgetary spending for research-development activities, infrastructure and education have increased.

According to the Stability and Growth Pact reform, the increase of structural budgetary balance should be higher than the benchmark of 0.5% of GDP. This variable represents cyclically-adjusted budget balance (CAB), derived as the difference between the nominal balance and the cyclical component of the budget.

It is used for defining the fiscal policy stance, because the budget balance is influenced by cyclical and structural factors. The cyclical factors are related to variations caused by cyclical developments in GDP, while structural component it refers to change of the budget balance, if the economy would produce at potential GDP. Identification of the two components is essential to establish the orientation of fiscal policy makers in the coming years. The cyclical component of the actual budget balance is determined by the sensitivity of the budget balance to the economic cycle, because tax revenues are dependent on the level of national income. In the euro area, approximately 90% of budget revenues are from fiscal taxes, such as tax revenues are automatically lower when reduced economic activity and increase when there is an economic expansion. In terms of public spending, only those on unemployment benefits are sensitive to the evolution of GDP and their share is only 5%. Most public spending such as investments, acquisitions and wages do not depend on the evolution of economic activity, being discretionary ones. It results that the cyclical variation of the budget balance is explained in the highest proportion by the budget revenues change.

The identification of the structural budget balance requires:

- measuring the nature and intensity of an economy's business cycle, as the difference between actual GDP and potential GDP (ie the output gap);
- finding budget balance sensitivity depending on the cyclical evolution of the economy (the change in percentage points of the budget by one percentage point change of the output gap).

In this study, I pointed out the graphic and the analytic way in which the budgetary balance is cyclically adjusted. According to this, I established the nature of the fiscal policy promoted in the euro area between 1999 and 2008.

Understanding the structural budgetary balance

The output-gap is calculated as the difference between actual GDP (Y_a) and potential GDP (Y_p):

$$\Delta Y = Y_a - Y_p \Rightarrow Y_a = Y_p + \Delta Y$$

Actual output includes two components – the potential and the cyclic ones. According to this relation, the decomposition of the actual budget balance can be done, like this:

$$ABB = SBB + CBB,$$

where:

ABB – actual budgetary balance;

SBB (or CAB) – structural budgetary balance (corresponding of potential GDP);

CBB – the cyclical component of the budgetary balance (corresponding of output-gap).

Actual budgetary balance is calculated as the difference between the budgetary revenues (from T - taxes) and the budgetary spending (including transfers), thus:

$$ABB = T - (G+TR)$$

The function of taxes includes an independent component (autonomous taxes – n) and a dependent component ($t \times Y$, where t represents the marginal taxation rate in the economy).

$$ABB = (t \times Y_a - (G + TR - n));$$

$$SBB = (t \times Y_p - (G + TR - n)).$$

In order to explain the decomposition of the actual budgetary balance, I built two graphics, one of them reflecting the situation of budgetary deficit and the other showing a budgetary surplus (both for the economic recession situation).

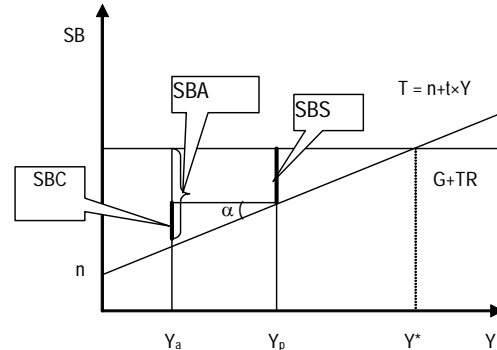


Figure 1. The budgetary deficit

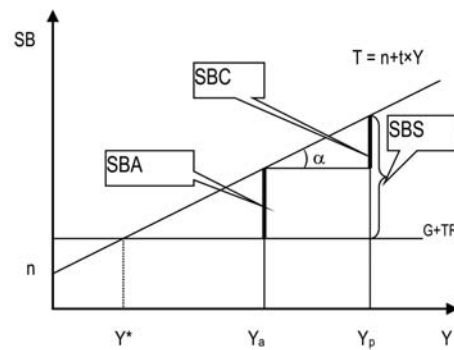


Figure 2. The budgetary surplus

In the following table, I showed the relations between actual and structural budgetary balance, as they result from the figures above.

Actual budgetary balance and structural budgetary balance

Table 1

Budgetary balance (BB)	Budgetary deficit	Budgetary surplus
ΔY		
$\Delta Y < 0$ (economic recession)	Actual budgetary deficit (ABD) is higher than structural budgetary deficit (SBD). The economy is in recession and the budgetary revenues reduce. Thus, the cyclical component of the budget has a deficit.	Actual budgetary surplus (ABS) is less than structural budgetary surplus (SBS). The budgetary revenues corresponding to actual GDP (Y_a) decrease and the cyclical component of the budget has a deficit.
$\Delta Y > 0$ (economic expansion)	Actual budgetary deficit (ABD) is less than structural budgetary deficit (SBD). The economy is in expansion and the budgetary revenues increase. Thus, the cyclical component of the budget has a surplus.	Actual budgetary surplus (ABS) is higher than structural budgetary surplus (SBS). The budgetary revenues increase and the cyclical component of the budget has a surplus.
$\Delta Y > 0$ $\Delta Y < 0$ Restrictive fiscal policy	ABD decrease; SBD decrease; $\Delta SBB > 0$	ABS increase; SBS increase; $\Delta SBB > 0$
$\Delta Y > 0$ $\Delta Y < 0$ Expansive fiscal policy	ABD increase; SBD increase; $\Delta SBB < 0$	ABS decrease; SBS decrease; $\Delta SBB < 0$

The expansive/restrictive character of a fiscal policy results from the estimation of the structural budgetary balance. If a government adopts a restrictive fiscal policy (for example, the increase in taxation), then the structural budgetary balance will increase ($\Delta SBB > 0$). If this registers a decrease, then the stance of the fiscal policy was expansive. The Stability and Growth Pact recommends the adjustment of the economy only by the working of the automatic stabilisers, and so avoiding the promotion of active fiscal measures. In these circumstances, the fiscal policy is considered neutral and the variation of the budgetary balance to the adjustment of output-gap is not statistically significant. Cimadomo (2005) estimated that the fiscal policy is neutral for small variations of the structural budgetary balance (between -0.2 and 0.2 percentage points). The fiscal policy can be considered *pro-cyclical* if it is restrictive in the situation of negative output-gap of economy and *countercyclical* if it is expansive in the presence of positive output-gap.

Structural budget balance (or cyclically-adjusted budget balance) is calculated as difference between actual budgetary balance (ABB) and the cyclical component of the budget (CBB). This one is the α angle's opposed catheter in figure 1 and can be calculated as:

$$\text{tg}\alpha = \frac{\text{CBB}}{\Delta Y} \Rightarrow \text{CBB} = \text{tg}\alpha \times \Delta Y.$$

The tangent represents the budget sensitivity at GDP variation, noted ε . This parameter is given by the difference between the sensitivities of revenues (ε_R) and of expenditures (ε_G).

$$\begin{aligned} \text{SBS} &= \frac{\text{SBA}}{Y_a} - \varepsilon \times \Delta Y; \\ \Delta Y &= \frac{Y_a - Y_p}{Y_p} \Rightarrow \text{SBS} = \frac{\text{SBA}}{Y_a} - \varepsilon \times \frac{Y_a - Y_p}{Y_p} \end{aligned} \quad (1)$$

$$\varepsilon = \varepsilon_V - \varepsilon_G \Rightarrow \frac{\partial \text{SBA}}{\partial Y_a} = \frac{\partial V}{\partial Y_a} - \frac{\partial G}{\partial Y_a} \quad (2)$$

The budgetary sensitivity ε is derived from budgetary elasticities measuring the percentage change in budgetary items associated with a percentage change in GDP:

$$\varepsilon_R = \eta_R \times \frac{R}{Y}; \quad \varepsilon_G = \eta_G \times \frac{G}{Y};$$

where:

η_G, η_R denote, respectively, the elasticities of revenues (R) and expenditures (G) with respect to output produced; $R/Y, G/Y$ – shares of budgetary revenues and expenditures in current GDP.

$$\eta_G \Rightarrow \frac{\partial G}{\partial Y_a} \times \frac{Y_a}{G}; \quad \eta_R \Rightarrow \frac{\partial R}{\partial Y_a} \times \frac{Y_a}{R} \quad (3)$$

The unemployment related expenditures are cyclically-sensitive to output variation; thus, the expenditure elasticity η_G can be expressed as:

$$\eta_G = \eta_s \times \frac{G_s}{G} \quad (4)$$

where:

η_s is the elasticity of unemployment-related expenditures and the G_s/G is the share of unemployment related expenditure on total current expenditure.

The elasticity of budget revenues is influenced by the structure of the tax system and by tax share of each category in total budget revenues. For proportional taxes (such as indirect taxes) elasticity is equal to 1 for the upper unity is progressive and regressive for the lower than 1. Budgetary income elasticity is obtained as the aggregate sum of the four taxes categories elasticities (corporate tax, income tax, indirect taxes and social contributions), weighted by their share in total revenue (R_i/R) as in the relationship (5):

$$\eta_R = \sum_{i=1}^4 \eta_{R,i} \times \frac{R_i}{R} \quad (5)$$

The structural budgetary balance (SBB) has the following formula, using equations (1) – (5):

$$\begin{aligned} \text{SBS} &= \frac{\text{SBA}}{Y_a} - \varepsilon \times \frac{Y_a - Y_p}{Y_p} \\ &= \frac{\text{SBA}}{Y_a} - \left(\left(\sum_{i=1}^4 \eta_{v,i} \times \frac{V_i}{V} \right) \times \frac{V}{Y_a} - \eta_G \times \frac{G}{Y} \right) \times \frac{Y_a - Y_p}{Y_p} \end{aligned} \quad (6)$$

The elasticity of the budgetary revenues estimated in the 2005 year was 1.04, which is the weighted sum of the following tax elasticities: 1.48 for income tax rate, 1.43 for the corporate tax rate, 1.00 for indirect taxes and 0.74 in the case of social contributions. The elasticity of unemployment-related expenditures is negative (-0.15), because the decrease of production is accompanied by the increase of the unemployment and by the growth of these spending. The sensitivities of budgetary revenues and expenditures (ϵ_R, ϵ_G) were calculated taking into consideration their average shares in GDP between 1992 and 2004. The total sensitivity (ϵ) was 0.48 (calculated as the difference between 0.42 and -0.06). It results that the increase with 1 percentage point of GDP generated the improvement with 0.48 percentage points of the actual budgetary balance. The cyclical budgetary balance (CBB) is equal to the product between the precedent sensitivity (\hat{a}) and output-gap estimated at -1.2% of potential PIB, which means -0.6%. In 2005, the structural budgetary balance (SBB) of the euro area was -1.9% and the actual budgetary deficit was 2.5% of GDP. Starting with 2003, the cyclical component of the budgetary balance was negative, which is specific to a negative output-gap (table 1).

The fiscal policy framework in the euro area

In the euro area, the structural budgetary balance grew by 0.9 percentage points (p.p.) in 2006 year from 2005 year and only with 0.3 p.p. in 2007 from 2006 year. The positive evolution of this variable is a proof of restrictive

fiscal policy stance in the euro area. The output-gap of the euro area with 15 members (Malta and Cyprus adopting the euro from 1 January 2008), calculated on the bases of the production function, registered a decrease since 2005. This is maintained slightly negative, being estimated at 0.2% in 2007 and 0.1 of potential GDP in 2008. Under these circumstances, the fiscal policy of euro area, determined by the evolution of the structural budgetary balance, is a restrictive and procyclic one (under the circumstances of a negative output-gap).

In the next diagram I analyzed the fiscal policy stance of the euro area between 1999-2008 (for 2007 and 2008 the dates are estimated by European Commission), depending on the output-gap registered. The variable represented on the vertical axis is estimated as the variation of the structural budgetary balance (in percentage points from the preceding year). Its evolution represents a sign of the fiscal policy stance that was adopted in the euro area. Thus, the structural budgetary balance decreased in 2001 and 2002, which corresponds to an expansive fiscal policy. Starting from 2003, the character of the fiscal policy was a restrictive one, the structural budgetary balance increasing with 2 p.p. between 2003 and 2008. The fiscal policy stance promoted in the context of a negative output-gap (from 2003 year) was first neutral and after pro-cyclical. In 2001 and 2002 it had a pro-cyclical character because it was promoted an expansive fiscal policy in the context of economic expansion.

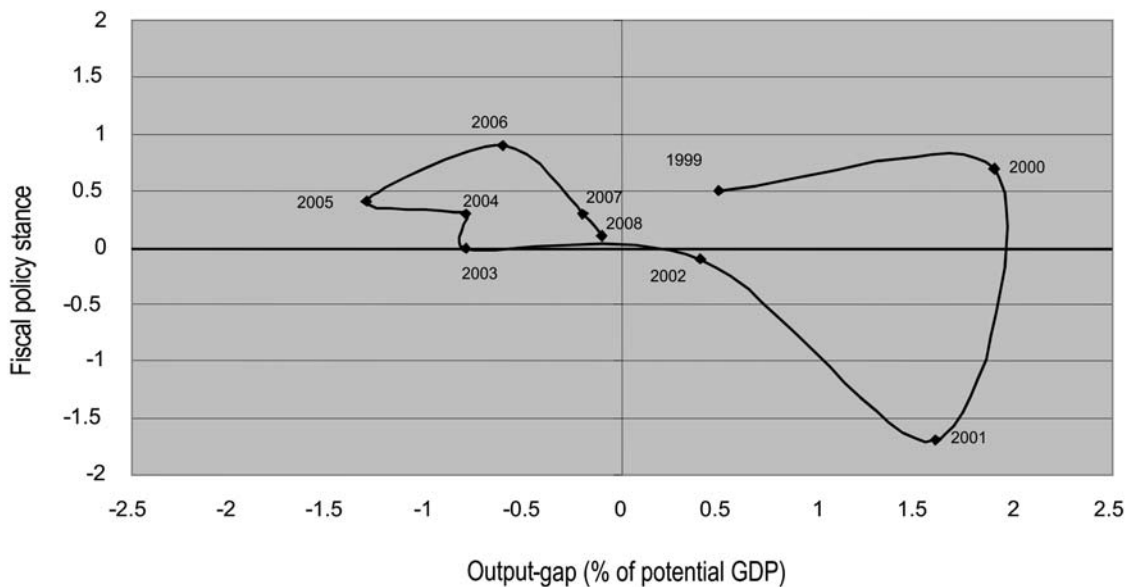


Figure 3. The fiscal policy stance in the euro area and the evolution of the output-gap

The restrictive and pro-cyclical stance of the fiscal policy is influenced by the application of the rules of Stability and Growth Pact. Thus, the most important economies of the euro area have promoted restrictive fiscal policies (the increase of taxes, the decrease of the social transfers) to eliminate the excessive budgetary deficit

(Germany between 2002 and 2005, France between 2002 and 2004, Italy between 2003 and 2006 registered budgetary deficits higher than 3%).

Cimadomo (2005) estimated the fiscal policy stance in the euro area and observed that Growth and Stability Pact seems to have strengthened the pro-cyclicality of the fiscal

policy. This tendency slightly increases in the euro area in periods characterized by recession (sensitivity of SBB with respect of output-gap decreases from -0.03 between 1981 and 2005 to -0.07 between 1999 and 2005) but it was not statistically significant. Thus, he labeled the fiscal policy as neutral. In the periods characterized by large expansions (with output-gaps higher than 3% of potential GDP), he found that the stance of euro area fiscal policy has still been neutral between 1981 and 2005 years but has turned clearly and significantly pro-cyclical after the 1999. In this interval, for each percentage point increase of output gap, the structural balance deteriorated by 0.26 percentage points in the euro area.

Analyzing the fiscal policies stance in the member states of the euro area (EMU-12), I found that the most of economies have promoted a restrictive and pro-cyclical fiscal policy between 2004 and 2006. All the countries, excepting Greece, have registered a negative output-gap in this period, which would have implied an expansive fiscal policy, for stimulating the internal demand, in the context of restrictive monetary policy of European Central Bank. For 2008, European Commission estimated that only Germany, Finland and Netherlands will have a pro-cyclical fiscal policy, the first two being characterized by a positive output-gap.

The fiscal policies stance in the member states of the euro area

Table 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Belgium	E. P.	N. (DI)	R.A.	E.P.	R.P.	E.A.	E.A.	R.P.	E.A.	N.(DI)
Germany	R. P.	R.A.	E.P.	N.(DR)	R.P.	R.P.	R.P.	R.P.	R.A.	E.P.
Ireland	E. P.	R.A.	E.P.	E.P.	R.A.	R.P.	N.(DR)	R.P.	E.P.	E.A.
Greece	R. P.	E.A.	E.P.	N.(DR)	E.P.	E.P.	R.A.	R.A.	E.A.	R.A.
Spain	R. A.	N. (DI)	R.A.	R.A.	R.A.	N.(DR)	R.P.	R.P.	N.(DR)	E.A.
France	R.A.	E.P.	N. (DI)	E.P.	E.A.	R.A.	R.P.	R.P.	N.(DR)	N.(DR)
Italy	R.A.	N. (DI)	E.P.	R.A.	N.(DR)	R.P.	N.(DR)	E.A.	R.P.	N.(DR)
Luxembourg	E. P.	R.A.	R.A.	E.P.	E.A.	E.A.	R.P.	N.(DR)	R.P.	N.(DR)
Netherlands	R.A.	R.A.	E.P.	E.A.	N.(DR)	R.P.	R.P.	R.P.	E.A.	R.P.
Austria	E. P.	R.A.	R.A.	N.(DR)	E.A.	N.(DR)	E.A.	E.A.	N.(DI)	N.(DI)
Portugal	N.(DI)	E.P.	E.P.	R.A.	R.P.	E.A.	E.A.	R.P.	R.P.	N.(DR)
Finland	N.(DI)	R.A.	E.P.	N.(DR)	E.A.	E.A.	R.P.	R.P.	R.A.	E.P.

Note:

E.P. – expansive and pro-cyclical fiscal policy;

E.C. – expansive and countercyclical fiscal policy;

R.P. – restrictive and pro-cyclical fiscal policy;

Database: European Commission, DG ECFIN, 2007.

R.C. – restrictive and countercyclical fiscal policy;

N.(E, R) – neutral fiscal policy in the context of economic expansion (E), respectively economic recession (R)

Even if starting with 2006 year the most of euro area member states have registered a favorable economic evolution still the progresses in reduction of structural budgetary deficits are more insignificantly. There is rather a bias for a neutral or expansive fiscal policy in the euro area. Thus, those economies will have difficulties in fulfilling the medium term objective (MTO) of fiscal policy, according to the structural budgetary balance level

(represented on the vertical axis of the figure 4 and expressed in percentage of GDP).

In particular, some Member States which have achieved their MTO seem to be pursuing pro-cyclical fiscal policies while others not yet at their MTO are not pursuing an annual structural adjustment of at least 0.5% of GDP. This runs counter to the spirit and the letter of the preventive part of the Pact.

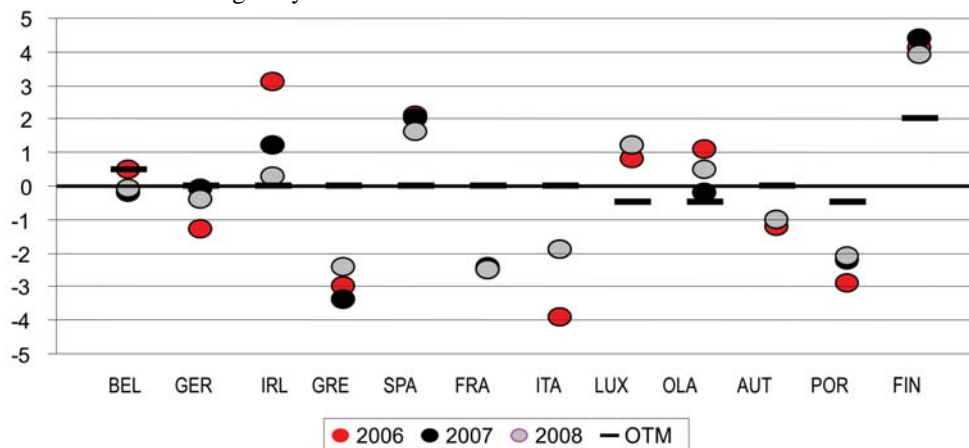


Figure 4. Structural budgetary balance and the MTO in the countries of EMU-12 (2006-2008)

The following classification of the euro area member states results from the figure 4:

a) the member states currently at their MTO are expected to loosen their fiscal stance in 2008 in comparison with 2006 (without Luxemburg). The fiscal stance will be expansionary what generate a worsening of CAB. It will diminish with 0.5 percentage points in Spain (ES), 0.6 p.p. in Netherlands (NL), with 2.9 p.p. in Ireland (IE) respectively;

b) the economies with their CAB less than MTO should adopt a restrictive fiscal policy. According to the European Commission, Italy and Germany registered a significant increase of CAB in 2007 (2 p.p., respectively 1.3 p.p), but for 2008 it forecast a finishing of this positive evolution. In France, in the absence of offsetting measures, the announced tax-reduction measures will generate a slightly reduction of the CAB (0.1 p.p. in 2008). Greece adopted a restrictive fiscal policy between 2005 and 2007 years, which determined reduction both the budgetary deficit

(under 3%) and the structurally deficit (3% in 2006 and 2.4% in 2008).

Conclusions

The budgetary position expected for 2008 year presents common features with the period of economic expansion between 1999 and 2002, because the medium-term budgetary objectives are established on the basis of optimistic expectations on the evolution of the economy, which is reflected in the increase of the future budgetary revenues. Promoting an expansionary fiscal policy, as in 2001 (table 2), it may generate a rapid deterioration of budget balances in the case of the reversals of economic developments trend. To not generate effects similar to those of the recent past, euro area governments should not adopt expansionary discretionary policy, but further fiscal consolidation (by increasing the structural budget balance), leading to greater strength of the economy in the bad times.

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