SYSTEM RISK IN CONTEMPORARY SOCIETY

Prof. Constantin Ciurlău Ph.D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania
Assoc. Prof. Ilie Murăriţa Ph.D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania
Assoc. Prof. George Ciobanu Ph.D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania

Abstract: Study of risk has become more and more lately, the whole general theory of management due to increasing complexity of structural relations of the whole economic and social system, plus the development of science and technology, which has led to important changes in approach theoretical and practical aspects of risk and uncertainty. Were imposed, first, the concepts „risk” and „uncertainty” in general. Grade of „risky” is, in everyday language, a rather negative connotation and indicates that the purpose of the action in question may be totally unfavourable of those who initiated it, the economy, however, this qualification is synonymous with „uncertain” - risky situation whose completion is partially escapes the control of its originator and, therefore, can reserve surprises. F.H.Knight¹ these two notions of significant nuanced. This study focuses specifically on the definition and sources of system risk and its association with financial crises.

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1. INTRODUCTION

Universe economic, social, political and natural living, acting and moving people is full of uncertainties. It is now growing recognition that a body that works to achieve future operating results by definition in a state of uncertainty, even if specific situations are characterized by varying degrees of risk and uncertainty or indeterminacy. Risk and uncertainty are not the subjects of choice, they are simply the human condition. Uncertainty is defined as the sum of all the potential dangers around us, whether perceived or not.

To say is that with the development of economic and social system, increasing its complexity, uncertainties multiply it contains and, therefore, becomes more vulnerable. In

¹ Knight F.H., Risk, Uncertainty and Profit, New York, Houghton Mifflin, 1921.
such circumstances, the action acquires a special significance against uncertainties in the
sense that control the various degrees and levels of uncertainty is, in a certain way and to a
growing extent, a real challenge now, this is essentially, to reduce, not eliminate,
uncertainties, and in the reduction of indeterminacy.

Uncertainties are sources of risk. In our opinion, the risk is the context in which an
event occurs with a certain probability or the magnitude of the event follows a probability
distribution. Human life and action environment contains a variety of risks, one can say
that life itself, by its nature, is intrinsically linked to risk, which is why the only option is to
accept this situation with some degree of awareness of its implications. Life constantly
creates uncertainty and risk. The absence of uncertainty and risk is an illusion, a utopia.
Therefore, the real problem is that in real life, normally cannot choose between risky
situations and among certain situations, but between different degrees of risk and different
outcomes. The alternative is to strengthen cultural society and individuals’ ability to face
risks.

Decisions and actions of human rationality means, in particular, their
consequences and risk control and reduce uncertainty and indeterminacy to acceptable
levels in a given situation, and not primarily to avoid risks and uncertainties removal. Man
always coexists with risks.

Individuals differ, in situations of uncertainty, by their propensity to risk.
Theoretically, there are three possible attitud es, as follows: risk seeking, risk avoidance
and risk indifference. In the first case, the risk is perceived as an opportunity to quickly
achieve significant gains (is widespread perception that the most profitable actions are
those containing the highest dose of risk). In the second case, the risk is perceived as a
source of potential losses. In the third case, uncertainty is not associated nor chance, nor
pleasure.

Attitude to risk depends on the individual’s psychological structure over which it
assumes and likely outcomes. Given the negative consequences that may induce risk
aversion is justified it and trying to prevent his accepting attitude conceived as an
increased risk only if compensated by an additional gain. For the issue of value judgments
on risk objectives, several indicators are calculated or estimated statistics, including
probability, probability distribution, expected value and variance.

SYSTEM

A. Financial markets and the risk of system. The risk is normally associated
with competitive market. The unitary system of interdependent financial markets but the
detach, but not because it has the monopoly of uncertainty, which characterizes, as we
said, all markets, but that one of their main functions is to facilitate the exchange of „units
risk” among participants, namely to allow some of them to cover the risks, and others to
take speculative positions. The risk is therefore a fundamental component of financial
markets and analysis in this context is highly developed. The risk of direct mail system is
the financial markets – theatre of the worst imbalances of contemporary national and
global levels.

As a result, a major concern for central banks is the security of financial systems
and risk prevention system. Vulnerability to risk is a function of system evolution of
financial structures. Analysis of contemporary crises in both developed and emerging
countries, draw conclusions which can be advanced based on a general definition of
system risk. But financial stability is a common good cannot be ensured only through

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adjustments in financial markets. Financial globalization means extending specific area to be defined the common good.

It should be noted that financial liberalization renewed prudential organization, without understanding the obsolescence of the collective action of public authorities, which have consolidated field extending parallel methods of action. The objective of prudential supervision is to prevent behaviours that can lead to crises and managing them when they burst. Employing monetary authorities and organizing approach prudential control between different institutions, however, is the object of controversy and debate.

Study the economic reality of historical perspective reveals a certain kind of ambiguity that can generate different views on whether the financial crisis in the sense that they could be considered genuine financial imbalances, if force is considering their propagation, or pseudo-crisis, which remain stationed on-site. Under this aspect can be disseminated two streams: one represented by monetarists, which makes a very restrictive definition - in the sense that one can speak of the financial crisis only as long as the banking panic occurs, and another represented by economic historians - who tend have a broad vision on the problem, but unfortunately not too rigorous theory underlying the phenomenon. It is estimated in the literature that views on this issue have academic consistency, since the expansion condition and how to share the responsibility of the authorities about the risk of system. How the intervention dilemma, namely formulating its conditions according to a doctrine clearly explicit or acting individually, thereby perpetuating an ambiguity that may be considered non-constructive.

B. Definition of system risk. Appropriate definition of risk must be based system that it is more than a simple juxtaposition of independent individual risks, although of interest to all economic agents (group of stakeholders is therefore quite large). This is a special relationship between the components of microeconomic and macroeconomic states resulting from the interaction of these components. In this context, the risk of system is defined as the likelihood of economic conditions in the context of rational reactions of economic agents which risk perception by the general uncertainty increases, that is outside the scope of sub-optimal distribution of risk through diversification.

This formulation is considered coatings for different assumptions and implications, in addition, stresses that financial structures affect all possible macroeconomic balance, that is not neutral. It is inferred from this that the risk of system is present in all states macroeconomic qualified as abnormal. The statement has a reliable support, as follows: a) serious dysfunction in resource allocation, which resulted in economic inefficiency states that pronounced; b) states that are, according to economic logic, the result of individual behaviours involuntary risk management, according information from market - forced to the conclusion that the risk of system errors is generated by coordination of markets, not the lack of rationality of economic agents, and c) the perpetuation of spontaneous abnormal situations - economic agents due to poor coordination, lack the capacity to perceive the effect of their actions on others, even if obvious decrease in prosperity at all.

levels, however, it is natural for them to avoid the adoption of behaviours that would result in such abnormal return to equilibrium.

C. Sources of system risk. Risk characteristics of the system resulting from the fact that risks affecting businesses are endogenous, namely depends on the mutual perception of their actions. Failure of separation of risk is therefore a strong threat to the principle of private insurance through their diversification. For this reason, it is imperative public action, intended to provide society as a whole, a collective insurance against risks of the system.

Microeconomic argument for unification of all the phenomena grouped under the generic name is asymmetric risk information system⁶, because it enhances the analysis of coordination problems arising in the case of financial relations.

A relationship with financial connotation, by its nature, is subject to asymmetric information is credited. It is characterized by the fact that the transaction is a promise, not a real value available, so that a relationship between the two parts of the other features knows enough to take the best decisions. Information asymmetry is reflected in the failure of coordination in the market, both before and after the transaction.

In the stage preceding the transaction is about selecting those seeking to borrow (potential borrowers) by those who are able to give the loan (potential creditors) - are difficult distinctions between potential borrowers due to incorrect risk assessment. The price of the average quality of credit expressed a category of potential borrowers because lenders do not have all the information to reflect the whole structure of price risk claims. Potential borrowers are thus discouraged quality because they have to pay too expensive to conditions that could prove actual solvency. Situation but it favours creditors.

After the transaction is carried out the room for manoeuvre of the borrower (debtor), derived from moral hazard (alea moral) regarding use of proceeds. It is possible for the debtor to engage in profitable operations of but bad creditor. Once the loan is fixed, after all, and conditions in which the creditor is paid when the loan is performing. Benefit due to good performance lies in full the debtor (namely when the action in which the yield is higher credit interest on invested it). Targeting high yield but increases the risk of action and therefore the loan.

Impossibility of creditors to oversee the effective use of loans allow borrowers to adopt behaviours that lead to increased share of nonperforming loans.

Coordination of the deficiencies, which generates the risk of system failure is reflected in the financial systems, which induce acute exacerbation of information asymmetries and externalities causing financial fragility as a result of ante-selection, namely those selected to receive loans of dubious quality and are also are tempted that after receiving the money, to take additional risks. Financial liberalization enhances the increased risk of system, which is explained to some extent by increased competition that may reduce economic efficiency, not increase it, as would be expected.

It is therefore necessary that those who provide loans to obtain those who request it, an additional key information to reduce coordination failures. In this case, is mandatory for creditors to obtain personal information about prospective borrowers and strict monitoring of the use of sums already paid. Obtaining additional information requires, of course, and high costs, which sometimes competition does not support them, and, moreover, and perpetuation of a special relationship, perhaps exclusive, between debtor

and creditor. Competition, especially among the creditors, not easily accept such a special relationship, seeking to alter them. Formula may thus conclude that increased competition among lenders leads to underestimation of credit risk and the volume gets priority at the expense of quality. Giving creditors in order to obtain private information of the risks is called „intrinsic myopia”. Such behaviour draws increasing vulnerability of financial institutions and, ultimately, an increase in uncertainty7.

In a phase of expansion, customized by increasing asset prices and optimistic business climate, competition is credit expansion, associated, however, the deterioration of its quality and collective undervaluation of risk. So-called myopia inherent in speculative manner, there was still clearly 50 years ago, that the conditions of third world debt in the late 60’s and deteriorating housing market in the late 80’s. Are representative, however, recent or current crises or recessions. Banks have realized that those markets are profitable when the competition has taken over large parts of them. Exacerbation of competition led to lower sensitivity to the risk of all banks seeking loans. Information asymmetry in the microeconomic foundations of credit, together with increased competition by financial liberalization have led to financial fragility endogenous development.

Intrinsic causes of system does not reduce risk, of course, the information asymmetry. We note that securities markets are in crisis and shortage of liquidity valuation occur even despite intervention factors have the same information. Value crises targeting the market price of the securities within the meaning of its violent variations, large and without anticipated. All agencies that occupy important positions in markets characterized by sudden decrease pressures for the purpose of selling, namely the same direction. Market in crisis is threatening to disappear when feedback is absent due to total lack of liquidity, because you cannot know how strong the market will decrease. It may, however, and that intermediaries turn to other markets to remain not discover, disseminating such shock wave of the sale. Such a spill occurs, as is known, especially among derivatives markets as a result of agreements voluntarily, and from the underlying securities.

Cause financial disorder conditions such developments is the lack of coordination of those who expected future price level, because the feeling of uncertainty and liquidity constraints exerted, no information asymmetry. Modification factor for the market price is a speculative value, resulting from self-reporting of each invoice strategic interaction of actors, not coordinating expectations when uncertainty is significant. This is an area of multiple equilibrium and indeterminacy a priori market equilibrium price is high level of which following conventions. Value crises are caused by permanent weakening of these conventions because of their uncertainty and possible fractures.

3. CONCLUSIONS

Knowledge of content sources and risk characteristics of the system is not an end in itself but aims to identify opportunities to prevent its intrinsically linked, in our view, the diversity of financial structures, the device prudential and lender of last resort.

Financial structures have different degrees of vulnerability to the risk of system. Dilemma-problem is related to macroeconomic stability and microeconomic efficiency. Propagation of local financial imbalances can be reduced by operation of boundaries between markets, institutions focusing or by regulating interest rates. But there are

situations such as obstacles in the competition, which promotes growth, unjustified, in view of many, the cost of capital by preferential distribution of occasional income.

**A. Financial implications of diversity on the risk of system structures.**

Financial structures can be characterized by three main criteria as follows: the first criterion refers to the importance of financial markets for non-financial agents - has been shown that the specific risk of market liquidity may be a factor in spreading crisis, the second criterion is the degree of separation of banking intermediation activity funds market - this criterion expresses the institutional position of banks in the financial system (at one extreme are universal bank - German style, which grants licenses to practice all the activities of commercial banks specific financial area and the other extreme is the institution with powers strictly limited - American style, according to Glass-Steagall Act of 1939, prohibiting banks conduct market the whole spectrum of specific activities), the third criterion is the degree of concentration in the banking sector - according to him size of banks is considered decisive in winning the confidence of depositors, because of their belief that feeling or important bank is protected by the intervention of bankruptcy, because the collapse of such banks would entail the complete disruption of the financial system (it is too large to be dropped).

Disparity in financial structures of various countries is highlighted by several examples. In Germany, for example, participating in financial markets in a very low to finance the economy, while French and British economies are equally open to financial markets and banking systems equipped with a significant degree of concentration. Most likely area of systemic risk is characterized by impressive share of the financial markets by focusing weak banks and by the absence of separation between banking and the specific activities of specific financial markets. This was the position occupied by the U.S. financial system, which, during the Great Depression, brought together all the factors that enhances fragility. The area is situated opposite the lowest microeconomic efficiency, characterized by low share of financial markets, the strong separation between the activities of banks and financial environment and the strong concentration of banks. Appropriate financial structures highly regulated in France, Italy and Japan in the 60’s and 70’s. Bank failures were unknown here. Discussions on financial delimitation costs since France began in 1967, but until the 80’s was not initiated any meaningful reform. Those countries have launched parallel banking law and installed the principle of universal Bank in 1984, and a series of promotional activities for the markets.

Lately one can observe a certain convergence of financial structures as a result of globalization, especially in terms of achieving compromise between microeconomic efficiency and macroeconomic stability. Developments in France, Britain and Japan, including the reorganization of the financial crisis of the early 90’s, are facing the same direction. It’s about structures that combine active financial markets with a strong focus of institutional investors and banks with no separation between the activities of banks and financial field.

To remove the risk of system, in this case for combining efficiency-stability dichotomy should intervene in the financial crisis challenge. It is the objective of prudential policy. The device is built as a set prudential regulations and supervision, in order to prevent behaviours that present a risk, reduce information asymmetries and avoid local propagation of financial imbalances. Lender of last resort is the very tool in that it is used to avoid the risk of prudential system only when the device fails to absorb it. The legitimacy of such a role is not contested, usually, but its terms are ambiguous conduct.
Debates on lender actions were ultimately re-launched, but after reactivation risk and enhance its current system.

B. Prudential device mechanism and its role in risk prevention system. Studies have shown that financial crises, especially in the last quarter of last century, have been addressed more effectively in Europe than in the U.S. Unit of guardianship and regulation in Europe was the responsible authorities opposite pronounced dispersion in the U.S. and proved essential to control the risks found. Secondary banking crisis of the 70’s English and the savings banks in the U.S. in the 80’s have been deepened by the lack of such unit. In fact, following the banking crisis in Britain there was an attempt to unify the various financial tutelage as a coordination body farms in the power manager (lead regulator).

The correct application of effective prudential devices is an evolutionary process requiring a period of training. Each crisis is a unique experience, with implications for institutional and regulatory areas, such as the repercussions of the same type can be as small circumscribed framework. However, very intense financial innovation in areas disturb us, little known, where risk assessment is quite weak. The regulatory and supervisory elements designed to achieve adaptation to finance.

Appeared in Europe, so the deposit guarantee systems which sometimes, paradoxically, have favoured crises. Examples in this regard are the United Kingdom (1982) as the secondary banking crisis and Italy after the Bank Ambrosiano affair (1987). Moreover, many other states have used special mechanisms for solving the serious problems in banking. Such mechanisms are designed to limit moral hazard by penalizing officers and initiation of movements in shareholders institutions that do not need to declare a state of bankruptcy, and prudential authorities have decided to reorganize. A good example is Germany, which has created a body to guarantee (Bank Consortium for liquidity), the central Bank (Bundesbank) holds 30% shares and 70% commercial banks so as to avoid triggering liquidity crisis due to banking fragility. France also may consider is a means of mobilizing financial liabilities to the Paris solidarity (through banking law enacted in 1884, article 52). Bank of France Governor may call the shareholders a credit for saving the bank. Generally speaking, the Bank of France can arrange support for all existing credit institutions, in order to ensure optimal operation of saving the banking system and the specific reputation of Paris.

In connection with the principles of prudential supervision can be said that there are two complementary aspects: on the one hand, there are certain regulations that aim, with greater or less success, to prevent risk-generating behaviour, and on the other hand, there are regulations, benefiting from support supervision, completes the operation of markets in the sense that they obtain a greater capacity to prevent the spread of risk.

Elements are crucial to the functioning of banks liquidity and solvency. If a bank’s capitalization level is low, it may suffer losses far greater than available capital. Therefore, the ability to cover losses is below the limit of liability of shareholders. Losses can be covered only by uninsured depositors or by the whole society (state budget) for that insured deposits are guaranteed. The regulation also may prevent transfers of wealth by forcing banks to control more severe risk they are exposed. At the same time, however, this can lead to distortion effects of pursued, meaning that banks can take a variety of risks.

In relation to solvency, it should be noted that the central banks of developed countries (so-called G10) have required commercial banks to international business (1988) a uniform capitalization ratio (called “Cooke ratio”). This should be avoided because on

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8 Bisignano J., La réglementation prudentielle, Revue d’Economie Financière, nr.27, 1993.
the one hand, disparities distort competition by national regulations on credit risk, on the other hand, overheating, because some regulations do not become extremely low, which would be urged to remove any restrictions (what happened in certain situations).

Basel Agreement of 1988 has a standard procedure for classifying structured credit risk categories and to establish their equivalence. Bank balance sheet assets and off balance sheet commitments have been declared by their equivalent in risk sized, valued and aggregated. To adjusted total assets, thus depending on risk. Was determined by calculating the capital was established with the purpose mentioned equivalence. Capitalization ratio was defined as the ratio between capital and assets weighted sum of risk-sized and it was agreed that the minimum mandatory to 8%. The agreement was put in terms of prudential regulations. During its application appeared some problems but because of the difficulties of building a financial safety filter to work effectively in the international financial integration.

Summing the weighted risk but does not show exactly when the overall risk level may have an asset portfolio with correlated risks. Ignorance of these elements involves statistical methods call objectives. Compliance with minimum standards for capitalization does not provide, by itself, the solvency of banks. A viable solution would be intervention by the authorities on banks to make them take as reliable systems for controlling risks. Is likely to improve both asset size and capital. If capital is about incorporating provision for risk, which balances the expected loss and capital gains latent in the assets market price fluctuations dependent on them. Provisions of the first category but cannot cover unanticipated shocks, which create the risk of system, because on the one hand, there is no statistical basis for this type of shock, and, on the other hand, most likely behaviour of this is as defined by the phrase „intrinsic myopia”. Provisions of second class should become imperceptible when their perception because often financial crises at home decline in asset prices.

Another reaction to the constraints of prudential bank is taking a wide range of risks. Example can be taken largely hypothetical, where there is an optimal level of risk for banks. Increasing the share of capital reduces the likelihood of bankruptcy by maintaining a portfolio of fixed structures, and net profitability by reducing leverage on equity. Banks can change their asset structure by providing a more profitable loans, but more risky to return to the optimal level of risk and to avoid lowering their profitability. Bank balance may be distorted until the marginal gain from increasing the risk equals the marginal cost of maximum probability of bankruptcy due to this increase9.

Incitement arising in connection with the settlement process is characterized by certain ambiguities, which must need supervision to resolve insolvency in order to obtain information on the problems faced by banks that do not affect the market and their motivation to act disciplined. The purpose of supervision is the detection of cases of insolvency, before net institutions threatened by this phenomenon to become negative. Supervising authority should have power to impose reorganization, to take over temporary management of institutions to benefit from the support of major shareholders and financial partners, to minimize the social cost of bankruptcy.

Deposits insurance annihilates agents trend to liquidate, triggering panic prevent bank and represents an obstacle to the emergence of a highly virulent form of bank risk. Efficiency approach is demonstrated. However, banking crises in recent years have shown

that when the insurance premium is a lump sum of deposits banks have a broad coverage, the cost to the community may be high. Deposit insurance lead to a moral hazard to the difference between the amount of guarantee funds for banks and insurance. The U.S. debate has been launched to resize an entire deposit insurance so that, for banks to increase and (or) to decrease the amount of guarantee funds. Modification involves increasing the cost of insurance premiums on risks taken by banks when they are evaluated by a process analogous to the specific ratio Cooke. Redefining the cover to take into account the identity of depositors. He expressed the view that it would be appropriate to ensure risks of agents not only means to assess banks, and to require compensation for risks assumed top of the deposits. The same should be provided directly deposits representing the means of payment support, because they may cause serious disturbances in the system. Such risk, however, question the lender of last resort, acting according to the evolution of financial structures - stability of banks is close interdependence with the stability of markets, even if their participation is limited to the financing of those who support them.

C. **Lender of last resort.** Ultimately the loan is excessive relative to the market rules approach, but also needed to support the interests of the market economy. It is a strong market aggression because the suspension for an indefinite period, the penalties related to contractual commitments outstanding and unreported but persistence and conservation due to other commitments on market healthy, but cannot be honoured due to external repercussions commitments bankrupt. Mortgage loan under a substitute for adequate liquidity to debt devalued. Therefore, the action the lender of last resort is the quintessential currency ambivalence: on the one hand, its central bank creates the possibility to know the systemic risk, something unique in comparison with other agents, and on the other hand, such intervention can only encourage excessive risk-taking gradually induce a moral hazard in the financial system. Such a dilemma generated a doctrinal debate on the appropriateness and optimal methods of action for lenders of last resort, there is debate for two centuries. Bases have been the work of a banker\textsuperscript{10}, considered more writer than an economist, who has made behavioural markers of a lender who had pledged and echo in Britain before The World War I, when, in the absence of supervision of banks, increased frequency financial crisis. For the ultimate lender interest overall stability of the financial system, not the various financial institutions. Therefore, loans should be given unlimited those who have problems, but lack of liquidity due to general distrust of creditors because of panic. Insolvent institutions should be sold to new owners recapitalised. The problem was a necessary distinction between genuine insolvency and bankruptcy threat, resulting in lack of liquidity, the financial crisis occurred consecutively. The solution proposed by Bagehot, that guarantees quality, did not lead to expected results.

Minimal theory lender was ultimately reminded of financial globalization and macroeconomic shocks of the late 70’s, but we cannot ignore nor promoted restructuring the financial system in the post-war period, especially as a result of the lessons of the Great Depression, have provided a role of supervision and deposit insurance. The conclusion that emerged is that prudential policy is a coherent line of defence, where regulation, supervision and lender pledged are complementary elements\textsuperscript{11}. Functioning system was, however, unsatisfactory.

\textsuperscript{10} Bagehot W., Lombard Street, R.D.Irving, reedites, 1962.
In Europe, prudential supervision is greatly complicated by the creation of Monetary Union, which strongly enhances the integration of financial markets - are becoming more similar characteristics to those of U.S. markets. It is the fact that the development crisis in Europe creates difficult problems for retraining for banks, not just the fact that they can be tested by acute liquidity crisis. Financial markets have been involved in a process of concentration to form universal banks or financial conglomerates. It shows risks are spreading much faster power markets in the euro area. It is known that the Maastricht Treaty stipulated strict severance of the prudent monetary policy. European directives on financial institutions supervisory responsibilities assigned to the authorities of the host country headquarters of financial groups. It is recognized that disorders associated with payment systems to be solved by the central banks of countries which have occurred, which involves collaboration in international payments. It nevertheless maintains a certain silence about the financial crises of emerging markets debt and derivatives. Prudential supervision in Europe is therefore a mixture of common rules with a high degree of generality, that does not touch the essential issues such as uniformity of deposit insurance systems, methods of supervision of financial innovation delay and national prerogatives sometimes defended with great accuracy on behalf of the subsidiary principle. All this leads to rupture of the device segmented institutional and financial interrelationships which dominates the European Monetary Union. Naturally, under these conditions, as lender of last resort function cannot be defined clearly. However, recent events clearly shows that financial stability has become a macroeconomic problem. As a result, financial institutions supervision, supervision of market liquidity and monetary policy must be addressed systemically interconnected.

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