

CONTROVERSIES IN USING DERIVATIVES IN THE CONTEXT OF THE FINANCIAL CRISIS

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Abstract

As a phenomenon, risk is specific for any human activity. Following this logic, we can say that this concept is a constituent element in the definition given to the financial sector, investments and market competition. The questions that the whole range of operators (governments, regulation bodies, financial institutions, companies and shareholders) must answer are:

Which type of risk should one assume within an economic entity and to what extent should that risk be taken?

If risk is materialized, to what extent will the financial consequences affect the involved parties?

By enforcing laws that might eliminate economic risk, regulation bodies attempt to create an ideal regime in which the concept of "bankruptcy" does not exist. Thus, financial institutions and companies which hold a key position in the different economic sectors are prevented from performing actions that might lead to their bankruptcy. The positive effects of the regulation are doubled by less appreciated effects, such as the limitation of the investment potential. Working in this environment, the financial and economic agents' behaviour has significantly modified, i.e. it has mitigated the degree of risk aversion.

The solution for this is establishing more flexible regulation lines that do not have as a main objective the elimination of failure, but rather the reduction of frequency with which such incidents occur and to manage the individual investors'/consumers' losses.

One must preserve a balance between the need for facilitating risk internalization and the efficient use of capital (a fundamental operation for maintaining competitiveness and innovation spirit), on the one hand, and maintaining a certain protection level for the investor/client, on the other hand.

For regulation bodies any of the two options will be a priority, since it is obviously in the commercial interest of any company (and, certainly, of the suppliers, customers and associates) to efficiently manage risks that derive from its activity and, for this purpose, to take into consideration the use of derivatives. Recent financial collapses have illustrated the consequences generated by the improper application of the basic risk management principles and of the efficient implementation strategies for derivatives.

Keywords: *risk internalization, derivatives, CDOS (Collateralised debt obligation), CDS (Credit default swap), financial transaction taxes, Paul Volker's financial theories, the Tobin tax.*

Introduction

The use of derivatives – an innovation of the second half of the XXth century – has imposed itself thanks to the **advantages** it offers:

1. Despite the controversies that exist as to the use of derivatives, they remain the best financial instruments for market risk/credit management, as well as for other forms of risk. Both on the stock market and OTC (non regulated market), derivatives have three highly appreciated characteristics: geographical area coverage (derivatives exist on most important financial markets in the world); diversity (derivatives cover the range of all monetary instruments); liquidity (usually, any position may be occupied, diversified or cancelled at low costs).

2. When derivatives are transacted on a stock exchange market, the company benefits of certain advantages:

a. on this completely regulated market, transactions are guaranteed by compensation houses, significantly mitigating credit/counterparty risk;

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b. due to the standardized form of contracts, positions may be closed without the least inconvenience. As to OTC, the advantages are: direct choice of counterparty and flexibility of the form of the contract.

3. By using these markets, debtors and creditors can fix the cost of money; importers and exporters may be protected from currency fluctuations; companies can avoid unexpected price rises for raw materials. The way insurance contracts are used by companies to protect their fixed assets is similar with the way derivatives are used for insuring liquid assets. In both cases a premium/its equivalent is paid for purchasing such a means of protection.

In spite of the "pro-derivatives" arguments, **doubt is cast upon derivatives** when managers conceive risk management strategy.

Literature Review

A. The role of derivatives in risk management and their speculative use.

Historical data concerning risk management strategy reveal cases of operators that have recorded significant losses. For a risk manager, giving up derivatives as an efficient means for covering risk is not a solution. The surest solution is to understand the causes that lie behind these wrong movements which lead to important losses. However, discovering these causes is not simple, for they are a constituent part of human behaviour which sometimes does not take into consideration econometric models and results of simulation software. Besides the role they play in risk management, **derivatives are also used in a speculative way**. This is not surprising at all. Companies and speculative operators share a different opinion on derivatives. Derivatives have inner characteristics that, in case of minimum investments, allow companies to manage a series of risks. However, speculators perceive derivatives as a potential source of substantial profits and, thus, speculators choose to adopt a position and wait for a market evolution that might bring profits.

Despite operations initiated by speculators who amplify the endogenous market risk, in reality: most treasury and investment funds departments use these instruments for successfully managing market and commercial risks. Consequently, managers cannot ignore the potential of derivatives in managing a significant number of risks to which companies are exposed, except for the case in which one chooses to internalize risk and potential losses.

If the few enumerated arguments have consolidated the decision to pay the necessary attention to derivatives when evaluating risk management for a company, then afterwards one must regulate procedures for managing risks that derive from the use of derivatives. We consider that the following directions are essential for efficiently implementing risk management by means of derivatives:

1. Strategy Compliance. Human Capital

Running financial and banking institutions must maintain compliance between risk management policy by means of derivatives and the company's strategy, economic objectives, financial situation and its attitude as regards risk. To accomplish this function, managers must identify those risks to which a company is exposed (e.g. market risk, credit risk, operational risk, legal risk), establish what is the role of transacting derivatives for the company (a potential profit source or simple hedging operations) and ensure efficiency for the internal control system of transaction operations. In this respect, the appointment of professionals with a proper level of knowledge as to derivatives transaction is absolutely necessary and compulsory.

2. Organizational structure. Internal Control

The manager should establish an organizational structure and an independent control frame for transacting derivatives. This structure should comply with the principles of efficiency and facilitate risk management. The functions of this structure are: identifying, measuring, managing, monitoring, mitigating and reporting present and provisioned risks. This frame should monitor report

transmission, usages for sent/received document, the proper accounting of sent/received documents, the competence of transaction department members, responsibility assignment and procedures provided for unpredictable situations.

3. Managing risks associated with derivatives transaction

The most important risk categories – which one must take into consideration when laying the foundation of the derivatives transaction department – are: market risk, credit/counterparty risk, operational and legal (regulatory) risk.

An efficient risk management associated with derivatives transactions implies efficient procedures and work techniques for every type of risk, namely:

- Market risk – may be generated by unpredictable prices for shares, securities, merchandise, currencies, other market indices, or by their volatility. Market risk policies refer to approval, execution, confirmation, as well as recording, measuring, monitoring and reporting transactions and they set forth procedures for establishing relationships with the authorities in the field, adopting limit positions and evaluating exposures.

- Credit/counterparty risk – we appreciate this risk can be reduced by a collateral guarantee of credits and by techniques that increase loan capacity. Besides the credit/counterparty risk, the risk manager must take into account: third party risk, country risk and risk regulation. The risk manager's functions must include: differentiation of risk profiles for the stock exchange and the OTC market, assessing the advantages and disadvantages of portfolio diversification, the proper use of collateral guarantees for mitigating credit risk and establishing an action plan in case unpredictable changes appear (a partner's position or the position of a broker who faces financial difficulties).

- Operational risk, including the technological one – may be managed by identifying the impact - generated by the new products, partners and clients, the modification of the transaction methods, of the IT services sources or any inconsistency that might occur in running the business - upon risk management.

- Legal (regulation) risk has certain important particularities. Compliance with the legal frame is absolutely necessary for the operational capacity to make transactional operations and the basic principles that set up its functioning. Documentation must refer to the relationship between trader, the own bank and brokers, and it must observe the legal principles according to which the market functions.

It is obvious that these general directions are neither an insurance policy for companies which adopt them, nor an immunization treatment to risks deriving from transacting derivatives; even if followed, these directions cannot cover the different circumstances in which individual operators might be placed. Anyway, the above mentioned directions are a landmark for identifying, managing, assessing and mitigating risks deriving from derivatives transactions. If carefully used and properly controlled, derivatives play and might play an important part in risk management strategies.

B. The origins of the present international financial crisis and directions for regulating the financial market.

Such a leitmotiv used for explaining the present international financial crisis refers to the complexity of the new financial products, the so-called "synthetic" products, which are issued by important banks by means of the "originate and distribute" process. In fact this leitmotiv is used as a self-justification and it avoids tackling the problem.

However, complexity can be defined differently; one can mention an inner not dangerous complexity if the cognitive limits do not generate fatal errors. And there is a human made complexity, which, for example, consists in risky individual actions and precarious control mechanisms.

There are opinions according to which the financial products occupying a central place in the present crisis (CDOS/Collateralized Debt Obligations, CDS/credit default swap) should not be criticized. In our opinion, the problem is that a part of the bank securization activity (titrization) – transformation of loans and more and more sophisticated securities – contains fundamental vices.

Let us explain what is perceived as a “congenital” flaw of the “originate and distribution” pattern. We admit that in the simple transaction involving the lender and the borrower risk is one and it is illustrated by the borrower’s reliability. This transactional (counterparty) risk can be checked by means of credit conditions on the market.

However, when loans are transformed into securities or other derivatives, the individual transactional risk starts to increase; the longer the chain of transactions is, the more complex is the securization (titrization) operation (by security “synthesis”); what appears to be more dispersed and smaller as an individual risk becomes more threatening for the system. This effect appears because markets are less and less transparent; some financial products are neither transacted on the effective markets nor do they benefit of credible evaluations (prices). At a certain moment, the cost of identifying risk is overwhelming and the market is blocked, a situation which in fact has already occurred.

The big rating agencies which used quantitative methods (patterns) have been caught in this chain of flaws. These agencies have major vices as to evaluating risk for the new securities.

For banks securization has appeared as a very profitable business to the extent to which they have managed to apparently eliminate risk. Banks used to sell securities to investors or to place them in special derivatives, taking them out of their own balance sheet. However, what appeared as a convenient dissemination of individual risk in the entire financial economic system led to increasing risk in the system. It is naive to state that banks (or at least the ones who were responsible for ensuring securization) did not understand the dangers of the pattern they used. In fact, all banks specialists realised that this was a dangerous attempt. Anyway, these specialists benefited of enormous amounts of money by means of compensation schemes that encouraged risk instead of a cautious attitude.

The collapse that the financial system has experienced in the economically advanced world – especially in the USA – obliges us to reconsider the existing financial markets regulations and surveillance mechanisms.

In the USA reforms are approached from two different positions. Both positions have common points, such as: imposing limits for leverage; more transparency; compulsory transactions of derivatives at specialized exchange offices; regulation of operations performed by all financial entities which generate systemic risk (including risk funds and hedge funds, as well as private equity funds); eliminating (as much as possible) interest conflicts; regulating rating agencies activities; modifications in paying bankers; consolidating surveillance mechanisms; paying more attention to systemic risks.

There are important differences between the position adopted by Paul Volcker (former FED Governor more than 20 years ago and at present counsellor of President Obama) and the position adopted by Lawrence Summers (former Treasurer and at present one of the main counsellors of President Obama). Volcker, together with other specialists in finance - Alexandre Lamfalussy in 2001, Paul Krugman in 1999, Nouriel Roubini in several deep studies, Warren Buffett in his studies on International Bank Regulations and the Bank of England etc. - have warned about the great dangers existing in the financial system and the financial derivative innovations used by important banks, as well as about the imminent financial collapse. In this context, Volcker considers that it would be wrong not to tackle the dimension of certain financial institutions which can hostage a system (see the collapse of the Lehman Brothers investment bank and the USA Government intervention to avoid the collapse of the AIG Insurance Company – which, ironically, acted as a gigantic risk fund).

Volcker and others who share his view suggest that commercial banks should no longer make “proprietary trading” operations, which are operations made in one’s own interest. In this way, risky operations are reduced for financial institutions which encourage and use deposits riskily.

The measures announced by President Obama in February 2010 – measures which follow Paul Volcker’s ideas – represent a new key step taken in building a new regulation system for supervising financial markets.

For example, let us consider the measure adopted for taxing financial transactions. Such a measure was proposed by the American economist James Tobin for discouraging speculative transactions on currency markets in order to mitigate their volatility. Today this idea is embraced by specialists in London, Paris, Berlin, in international financial institutions (FMI) with a view to reduce the volume of financial transactions and obtain incomes that might help states intervene in case of systemic risks. Actually, there are countries (Australia, Switzerland, Greece, Hong Kong, India etc.) which tax some security, shares and derivatives transactions. Recently, Brazil has imposed taxes on the entrance of speculative capital.

There are opinions according to which taxes on financial transactions should not be imposed with a view to collect fiscal incomes (i.e. Tobin tax, differently from Pigou taxes, which would attempt to collect negative externalities generated by market flaws). This reasoning is supported by envisaging financial mediation as an intermediary production (see P. Diamond’s and J. Mirrlees’ study), respectively the taxing of intermediary (not final) production would introduce dissensions in the production chain, reducing efficiency.

Conclusions

The conclusion is that the present financial crisis is basically generated not by the complexity of the new financial products, but by a financial innovation pattern and the characteristics of financial products (e.g. CDOs, CDS) which have disrupted the good functioning of markets: **transparency and trust**.

Besides proposals for fundamentally reconsidering the existing regulations and surveillance market mechanisms, imposing a tax on financial transactions is not senseless since: it is necessary to register fiscal incomes that would allow necessary interventions to be taken; this would mean imposing a tax on an activity which represents a bad allocation of resources.

Consequently, it is desirable that the financial system should lose a considerable part of its speculative nature. In the USA, in European countries (e.g. Great Britain), the financial system is now over dimensioned and if we take into account the volume of profits obtained in relationship to the total profits obtained (e.g. the USA received 40% of the total profits, though its GDP is a lot inferior to this percentage), one can appreciate that certain states obtain an incorrect revenue. In time this has led to a distorted allocation of resources and it has also generated unacceptable systemic risks.

References

- Anthony Belchambers, “Managing Derivatives Risk”, Futures and Options Associations, 2003
- Liliana Paraipan, Corina Stanciu, “Managementul Riscului Financiar”, Adevărul Publishing House, 2002
- Alexandru Olteanu, Mădălina Antoaneta (Rădoi) Olteanu, “Managementul Riscurilor Financiar-Bancare”, vol I+II, Dareco Publishing House, Bucharest, 2006
- Fong H.G., Vascek O., “A Risk Minimizing for Portfolio Immunization”, Journal of Finance, vol. 34, 1984
- Jarrow R.A., Turnbull S.M., Pricing Derivatives on Financial Securities Subject to Credit Risk, Journal of Finance, vol. 50, 1995
- Queruel M., “Memoire de DESS d’ingenierie matematique”, Université Claude Bernard, Lyon, 1991
- Lefebvre Francisc, “Nouveaux instruments financiers”, 1990
- Beaufils B., Py. G. Richard B., Thiry B., Guimbert I. P., “La banque et les nouveaux instruments financiers”, Revue Banque Ed., 1986
- Jaquillat B., Solnki B., “Marché Financiers”, Ed. Dunod, Paris, 1997
- P. Diamond, J. Mirrlees, Studiul: “Optimal Taxation and Public Production”, American Economic Review, 61, 1971.