Jean-Claude Trichet: (Under-)pricing of risks in the financial sector

Speech by Mr Jean-Claude Trichet, President of the European Central Bank, at the Coface Country Risk Conference 2009, Paris, 19 January 2009.

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I. Introduction

Ladies and Gentlemen,

The current juncture presents us with a particularly important moment to conduct a deep analysis of the pricing of risk – and the mis-pricing of risk – in the financial sector. It is no exaggeration to say that, for several decades, there has been no more relevant moment for this topic than today.

In my view, the appropriate identification, assessment and handling of risks in the financial sector are the key issue to be considered most carefully amid the current global financial turmoil. Looking back, the main factor that I would identify as underlying the turmoil is the broad-based under-appreciation of risk. This under-appreciation of risk has been observed across financial institutions, across markets and across economies. Looking ahead, the main lesson I believe we need to draw is therefore for the financial sector to establish a much more rigorous identification, assessment and handling of risk.

Against this background, I am very pleased to participate in this major conference on risk analysis today. It brings together specialists from France and abroad from the banking and corporate sectors as well as from academia. In my remarks, I would like to share with you some thoughts on three areas: the fundamental causes of the financial turmoil, the main avenues for financial sector reform and some of the broader lessons to conclude from the current episode.

II. Under-pricing of risk

Let me begin with the causes of the turmoil: in the four years to August 2007, macro-financial conditions were very favourable on the surface. Economic growth was exceptionally strong and stable, liquidity in capital markets was abundant and the financial sector was providing remarkable returns: profitability was high, many asset prices were rising, implied volatilities in equity markets, bond markets, credit markets and foreign exchange markets were all very low by historical standards, and finally: risk premia were extraordinarily small. At the same time, the world economy was growing vigorously, in an overall low inflation environment and stable macroeconomic environment as a whole. The only warning sign, which was brushed aside by many economists, consisted of the significant build-up of imbalances at various levels in the global economy and the global financial system.

Against this apparently favourable economic background, innovation was rapidly taking place in financial markets. This was perceived by most observers as a positive development, on balance, because it enabled a better and wider distribution of risk. In fact, the diversification of risk appeared to be beneficial not just for the financial sector's stability, but also for the real economy, since companies were able to more efficiently spread the risks they were bearing. This perception is likely to have encouraged risk-taking not only inside but also outside the financial sector. However, as the turmoil has since shown, there was a generalised tendency to overestimate the true degree of risk spreading and diversification, especially in credit markets.

Warnings by the authorities about the possibility of an abrupt correction in financial markets date back to 2006. Many warnings were made about the risks associated with what was essentially a "pricing for perfection" – which, put simply, meant that risk premia were not, or

hardly pricing in the possibility of anything going wrong. Given such pricing, even a small change in conditions had the capacity to severely disrupt financial markets. At the same time, a number of financial stability reports – including from the ECB, the Bank for International Settlements (BIS), the Financial Stability Forum (FSF) and other organisations – analysed vulnerabilities of the financial sector and warned of emerging weaknesses.[1] In particular, these reports often emphasised that the rapid pace of innovation in financial markets and products coupled with the low level of risk premia called for investors to take greater care in understanding and managing the risks they were exposed to. However, while it was perceived that a storm was brewing, it was not known exactly what would trigger it, but that it would be appropriate that the financial sector agents should prepare for it so that the correction would be as orderly as possible. Both the underpricing of the "unit of risk" and, even more importantly in my view, the underestimation of the "quantity of risk" turned out to be at the core of the crisis. Let me explain further how I see these two concepts.

Underpricing of the unit of risk

The underpricing of the unit of risk related mainly to inadequate assumptions made about the distribution of returns to highly complex, new financial securities. Let me mention a few examples. First, take the fact that, in calculating the probability of default of mortgages in a large economy, the possibility of a drop in real estate prices or the ongoing deterioration in lending standards, were not properly factored in, or even totally disregarded. A second example relates to the reliance on recent data to estimate parameters of probability distributions. Statistical models, generally using data based on the recent past, tended to produce over-optimistic estimates due to the apparently very favourable operating environment that preceded the eruption of the turmoil that I just described. The generalised "hunt-for-yield" in global financial markets was also likely to have contributed a great deal to the distortion of the price of the unit of risk. The compression of spreads and risk premia coupled with the search for higher returns tended to lead to a higher level of investors' appetite for risk. This, in turn, further inflated valuations based on very favourable expectations of future returns. Contributing to the underpricing of a unit of risk was also the opacity and complexity of structured financial products. Not even sophisticated investors were able to assess the risks embedded in these products properly.

Underestimation of the quantity of risk

But in my view, an even more astounding aspect was the generalised under-appreciation of the quantity of risk borne by market participants. In fact, as the turmoil unfolded, some large financial institutions revealed a massive concentration of risk, suggesting that risk management systems had failed to identify the quantity of risk that financial institutions were accumulating. A good example relates to the credit default swap (CDS) market. This market hardly existed in 2002 and grew at an incredible pace to reach a size of $58 billion in notional amounts in 2007. By buying protection on a particular bond, market participants believed themselves to be largely insulated against the risk of default of the issuer. However, this protection turned out to be defective when the first signs of financial market distress emerged. In fact, during its steady growth in the pre-turmoil phase, the performance of the

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[1] See, ECB Financial Stability Review issues of 2006 and 2007, for example and the speech given by J.-C. Trichet in Davos in January 2007 (see *Financial Times*, 29 January 2007 article entitled "Prepare for Asset Repricing, Warns Trichet "Excerpts: "Current conditions in global financial markets look potentially unstable, suggesting that investors need to prepare themselves for a significant repricing of some assets, Jean-Claude Trichet, president of the European Central Bank, warned at the weekend in Davos. The recent explosion of structured financial products and derivatives had made it more difficult for regulators and investors to judge the current risks in the financial system, Mr Trichet said. We are currently seeing elements in global financial markets which are not necessarily stable, he said, pointing to the low level of rates, spreads and risk premiums as factors that could trigger a repricing.")

CDS market under stress had not been tested before. This market also brought home the importance of counterparty risk – a crucial notion in risk assessment – which, it seems, was not always fully understood and accounted for in market participants' management of risks before the turmoil erupted.

Another example refers to the failure of the same risk management systems to assess the systemic consequences arising from the turmoil. Take, for example, the risks involved in relying excessively on short-term debt to finance long-term assets, both by financial intermediaries and the corporate sector. These risks were barely accounted for. In fact, the probability of a sudden closure of specific markets was assumed to be very close to, if not, zero. To put it in more general terms, cross-correlations across and between defaults on the one hand and the rest of the economy on the other hand were generally not properly factored in when calculating probabilities of default. The limited importance given to risks of a systemic nature was thus responsible, to a large extent, for the massive underestimation of the quantity of risks borne by market players, as shown by the unfolding of the crisis.

In general, the evaluation methodology of the quantity of risk and the price of a unit of risk has turned out highly inadequate in the light of the current experience. The dominant models rely on simplified hypotheses, consisting of laws of probabilities about future events. The periods of crisis bring to light the major shortcomings of the underlying mathematical models. In these periods the behaviour of markets and prices does not appear to follow any probabilistic model ex ante but rather reflects a more fundamental Knightian uncertainty in which even probabilities are unknown.

III. Three main factors to be addressed

After reflecting on the origins of the crisis and the initial lessons learnt over the past 18 months since the turmoil erupted, let me now turn to the future and the avenues for reform to be addressed in our response to the crisis. I would like to highlight three areas where, in my view, change is particularly needed.

First, there is the need to address short-termism, i.e. the excessive focus on short-term returns in the financial sector, part of what is often called the "bank-bonus culture". Short-termism may encourage excessive risk-taking, since less attention is paid to low-probability outcomes which might only crystallise over longer periods of time. More worrying is the fact that it can exacerbate the impact of conflicts of interest and perverse incentives at all levels within a financial institution.

Considerable thought is being devoted to compensation-related issues both by the official sector (e.g. the Financial Stability Forum) and market participants themselves. Sound and reasonable principles for compensation schemes at large financial institutions, including incentives for prudent long-term behaviour, and a real adjustment to risk are some important ways for reform.

A second factor to be addressed in our response to the crisis relates to the enhancement of transparency in financial markets. As the turmoil has shown, the availability of aggregate information regarding the main risks to the financial system is of the essence. Information on institutions, instruments and markets that are currently unregulated, but whose risks raise financial stability concerns on account of their potential systemic impact, proved to be crucial for effective financial stability monitoring and accurate risk assessment. One clear example of some first steps taken in the right direction relate to the initiative to establish a central counterparty clearing house for the CDS market, a move that I strongly welcome. This would be a first important contribution to increasing transparency in over-the-counter (OTC) derivatives markets. Increasing the number of standardised securities exchanged on regulated markets would also make it easier to price these financial instruments, based on relevant public information and on traded prices.

Finally, a third factor that, in my view, needs to be addressed is the excessive pro-cyclicality of the financial system in its entirety, i.e., the tendency of the financial system to accumulate too much risk and leverage in good times, and to shed risks hastily in a downturn. We should endeavour to systematically eliminate wherever possible the elements that reinforce or amplify the spontaneous cyclicality of the financial economy. In particular, but not exclusively, we have to reassess from this point of view capital requirements, valuation and leverage, provisioning regimes as well as banks' compensation schemes. In this field, I also welcome the work being carried out under the auspices of the Financial Stability Forum.

IV. First lessons drawn from the current situation

We are going through an exceptional period marked by a recent intensification of the financial turmoil since last September and by a major slowdown in the global economy. Virtually all economies – both industrialised as well as emerging – have been moving in the same direction since the end of 2008, which has contributed to the magnitude of the overall current downswing.

In conclusion, I would like to draw your attention to three points, which I consider as important:

First of all, the full-scale test to which the global financial system is subject reveals an excessive fragility that the prevailing mathematical models had not anticipated. This fragility is unacceptable. The global market economy, in all its elements, including and especially in its financial component, must considerably strengthen its resistance to shocks, i.e. its resilience. This calls for a set of ambitious reforms aiming to introduce, re-introduce and reinforce if need be counter-cyclical mechanisms and the shock-absorbers in the financial system. Financial and economic fluctuations are inevitable and necessary in a market economy. It is up to us to ensure that we don't amplify those shocks by our own making and our own rules, as is the case at the moment. Shocks, sometimes abrupt, are inevitable: they may come from technology and innovation, from structural transformations that characterise globalisation, from geostrategic risks and many other angles.

It is up to us to deal with them as smoothly as possible, not only at the level of the economies concerned but also at global level. The corresponding reforms must be systematic without giving the least privilege to any entity and without focusing attention either on a few scapegoats. As a matter of fact, everything can and must be substantially improved.

In second place, we should note the rapid reaction of the public authorities, central banks and governments in particular, in these exceptional circumstances. Of course, I am not referring to the decisions taken since the start of the turbulence on 9 August 2007: you may remember that the ECB's Executive Board decided to lend overnight at our refinancing rate €95 billion to the commercial banks in the euro area. What I want to talk about are the decisions of the European Central Bank and the other central banks after the crisis worsened in September concerning the organisation of what I would call a line of defence against a systemic threat of illiquidity: those decisions have led us to expand the collateral framework and to commit to ourselves to refinancing without limit a fixed interest rate, at one week, one month, three months and six months. The governments themselves have set up a second line of defence against the systemic solvency threat. They have done so by organising, whenever necessary, support to ailing institutions and by systematically supporting the banking sector by means of guarantees and recapitalisation. The difficulties are still there, and in these circumstances there is no room for whatever form of complacency. We have to remain permanently ready to act.

My third point concerns confidence. Confidence is the most precious ingredient today. It is also the ingredient that is lacking most in the real and financial sphere of the economy at present. Having underestimated considerably the true underlying risks that were lying ahead in 2008 and 2009, it would be an error of equal magnitude for the actors of the private sector

to now overestimate the risks that are lying ahead over the medium term, for 2010 and beyond. The year 2009 will be very difficult, as I mentioned last Thursday. The ECB's Governing Council considers that economic growth in the global economy and in Europe will be substantially lower than projected in early December. However, I see at least four reasons to have confidence in a recovery of the global economy and the industrialised economies over the medium term, after the trying year of 2009:

- The responsiveness of public authorities, central banks and governments, in a difficult situation makes out of the current episode a unique period in economic and financial history. I do not consider that the scope of the actions by public authorities has been sufficiently taken into account by the private actors.
- The growth potential of the large and emerging economies is considerable: the deceleration of their growth patterns currently observed will be temporary; for several of them the potential growth of domestic demand, which today is suppressed, is enormous.
- Technological progress is remarkable and even accelerating in the current period: it will be the source of an important part of tomorrow's economic growth.
- An important factor in the current slowdown has been the spike in oil and commodity prices. This spike was both inflationary and contractionary. The current sharp decline is, by consequence, both dis-inflationary and expansionary.

For all these reasons, which are not exhaustive, after an exceptionally difficult 2009, it seems to be a good working hypothesis to me to see 2010 as the year of rebound. The European Central Bank and the Eurosystem will for their part continue to provide a solid anchor of stability and confidence over the medium and long term, in the service of our 329 million citizens.