Good afternoon.

It is a great pleasure to participate as a panelist in this conference, sitting together with the winner of the 2009 Germán Bernácer Prize and the other distinguished panelists.

This occasion gives me a unique opportunity to share with a qualified audience that I had the privilege to teach Markus Brunnermeier in my days at the London School of Economics, when, back in 1996, I was a lecturer and he was a Ph D student in the Economics Department, and we were both members of the Financial Markets Group. Markus was at that time a salient student in the Capital Markets course in which I was responsible for the Corporate Finance part. I like to believe, probably not realistically, that Markus Brunnermeier learned some of his brilliant corporate finance ideas from working on my notes during that course.

The truth is that the London School of Economics in those days (with Nobu Kiyotaki and John Moore working on credit cycles, lots of complete versus incomplete contracts debates, seminars by Hyun Shin showing the first products of the global games literature, and a financial regulation seminar series run by Charles Goodhart that, somewhat, reminded everybody of the importance of a topic generally regarded as boring by most economists) was a good incubator for the ideas that about eleven years later allowed a bunch of academics (among whom Markus Brunnermeier is a paramount representative) to provide an early interpretation of the developments of the current financial crisis, guidelines for its management, and guidelines for the imminent re-regulatory process.

This brings me to the main topic of this session: the future of central banking. Central banks (CBs) have played a crucial role in the crisis (as well as in the attempts to bring policy makers and academics together to reach a diagnosis of the situation and establish possible remedies). Their main role has been in providing liquidity to markets and institutions that lost it during the crisis. Perhaps it is too early to judge whether interventions perceived as massive from the outside were actually as
expeditious, large and effective as they could have been to compensate for the consequences of the collapse in both money and longer-term capital markets. Possibly they were not.

But possibly there was no way in which, with the prevailing macroeconomic and microprudential tools (and with the existing understanding of the connections between the so-called “real economy,” monetary phenomena and, above all, finance and banking phenomena) the response could have been quicker or more positive.

The problems manifested in markets since the summer of 2007 were not easy to address using conventional measures. Even if the existence of liquidity problems were more or less clear since the beginning of the crisis, assessments based on a too “monetarily oriented,” narrow, and aggregate definition of “liquidity” (that required to comply with the reserve requirements set in the context of monetary policy implementation frameworks) led some central bankers to deny or doubt about the existence of problems till very late. Likewise, the liquidity support associated with the massive refinancing needs of the banking industry (broadly understood to include investment banks and the vehicles and parallel or shadow structures of all sorts of banks) exceeded the canonical definitions of “lending of last resort,” seemed to contradict some of the classical Bagehot principles, and generated resistance and criticism from inside and outside the central bank domain.

The truth is that the world economy was suffering a modern form of global bank panic (started in money markets and other wholesale and highly specialized markets rather than retail deposit markets) and took time to realize the severity of the situation. Some forms of support or assistance to the financial sector by CBs (in spite of the haircuts and other precautions) involved the undertaking of credit risk, sometimes in the form of firm purchases of securities.

Now the concern is about the way in which CBs will absorb, if needed, the potential future losses associated with their interventions (especially in the case in which non-conventional quantitative easing is involved). Will the required “exit strategies” (as they are periphrastically named) be a threat to the credibility of central banks in the development of their traditional price-stability mission? Are there (arguably catastrophic) scenarios in which even CBs’ long-to-achieve independence will be at risk? (for instance, because of the need to negotiate some form of explicit support from government budgets).
The dilemma between, on the one hand, “monetizing” some possible capital losses (and losing reputation in the flight against inflation) and, on the other hand, asking the government for a recapitalization (and losing independence in addition to possibly infuriating the public) is a very hard one. The existence of this dilemma shows that it has been needed to improvise solutions that, although consistent with CBs broad missions, were not regulated in detail, and the institutions/infrastructure required for it had to be created in an ad hoc, urgent way. Despite all, however, CBs’ response to the crisis can be judged to have been better than that of governments, at least until Lehman’s collapse.

Possibly for fundamental reasons (CBs irreplaceable role in the generation and ultimate provision of liquidity), perhaps for their larger reaction capacity (not independent from the quality and good training of their staff), CBs are likely to be assigned (and play) a major role in the new institutions in charge of caring for financial systemically-oriented stability (the ones that will explicitly receive “a macro-prudential mandate”).

In my opinion some of the major challenges for CB in the medium and longer term will be associated with their involvement in this new institutions and mandate, with the need to find diagnosis methods and, possibly, new policy instruments to execute the new mandate, and the need to properly combine it with the traditional price-stability mandate. In the context of the European Union, the process will be further complicated by the need to institutionally fit the new Systemic Risk Board (or macroprudential authority) in the existing framework of heterogeneous national central banks, regulators and supervisors.

These medium to long term challenges will be combined with the challenge posed by the already-mentioned need to find an adequate “exit strategy” from policies adopted (and the financial positions accumulated) during the current crisis… In a sense, all the major challenges that I see are tightly connected with the problems experienced in this crisis, strategies needed to prevent similar crises in the future, and the institutions needed to deal with similar crises if (however unlikely) they were to occur in the future.

Intellectually the task ahead is very demanding. It will require collaboration of macroeconomists, experts on banking (and corporate finance), on risk modeling and risk management, and on microprudential and microeconomic issues. The approaches of all of them so far (or, if you prefer, prior to the crisis) were limited in some dimension. Experts from these fields will require modesty and lots of collaboration with each other.
In the context of central banks, the need for collaboration may require some internal adjustments. I understand the short-term pressures experienced over the last two years and also the urgency today, in Spain, for instance, of the issues concerning the solvency and required restructuring of the banking sector. So we may think is it not the right time to modify the internal organization of central banks. Of course it is something to think carefully and needs not be done in a hurry. But it needs to be done. The macroprudential challenges definitely require a more fluent connection between those who look at the macroeconomy in the traditional sense (say, the research department) and those who look at the data from financial institutions (the supervision and, perhaps, the regulation departments).

I understand the confidentially concerns on this issue. Perhaps some legal reforms are necessary. It is not clear to me why after continuous claims in favor of transparency there should be so wide areas of financial institutions accounts that cannot be visible, not the public in general, but even to those who should provide a macroprudential assessment of the situation either at the national level or at the European level.

Before concluding, I would like to be more specific about some technical challenges concerning CBs’ new macroprudential role. Economists from central banks and, hopefully, academia should spend quite a bit of time developing methods to diagnose the state of the economy from macroprudential perspective and to assess the potential impact of policy on the variables (yet to be defined) which are relevant from a macroprudential perspective. Markus Brunnermeier’s presentation today described indicators that might be useful from this perspective.

The art of monetary policy had become very quantitatively oriented, very “mathematically formalized” in recent times. Some blame this approach for having been blind to the financial imbalances and asset price bubbles and so on that preceded the crisis. Yet I think that the quantitative approach has many advantages and can always be complemented with judgment and discretion. But then a big technical challenge is to incorporate systemic risk and macroprudential indicators in the battery of indicators, models and quantitative assessments (“outlooks”) that allow monetary authorities to define monetary policy.

After having done so, or perhaps in parallel, it will also be necessary to think about new tools. The standard instrument (short term interest rates) may have an impact but will not suffice. Following monetary and credit aggregates (quantities) may help, but I am not sure this provides an independent instrument. Prudential regulation (capital requirements and
other rules) may be thought of as an instrument, but I can see obstacles to its flexibility: it is not clear to me that can be effectively fine tuned in a discretionary manner, it is too complex, has many dimensions, and it might be open to legal disputes,…

If we are not fully confident on discretionary adjustments, it would be nice to rely as much as possible on automatic stabilizers. Capital requirements and accounting standards should be definitely amended to prevent them from adding procyclicality to the financial system.

Yet I think we may need additional policy instruments. Let me say on this respect that in a policy proposal with Enrico Perotti I have developed an idea that seems consistent with the views expressed by Markus Brunnermeier and his coauthors of the Geneva Report, Viral Acharya and his colleagues from New York University, Andrew Lo from MIT, and quite a few other economists. We should identify the contribution of financial institutions to systemic risk and impose a Pigovian tax on it. In the same sense as polluters pay for the pollution that they generate, financial institutions should pay for their contribution to financial pollution. Measures like those developed by Markus and his coauthor (CoVaR) or, perhaps, even simpler proxies of the contribution of banks to instability would be very useful for the implementation of the idea.

In this respect, Perotti and I propose a charge levied on short-term wholesale liabilities, which have played a clearly destabilizing role in the escalating phase of this financial crisis, as well as in the previous Asian crisis. We think that touching or fine-tuning this charge (or making it an increasing function of maturity mismatch, of the slope of the yield curve or some other indicator of the cycle, and even a function of an institution’s size in case too large institutions are judged as creators of extra trouble) would provide a useful instrument for the new macroprudential authorities. We think it will be much more effective than just relying on some early warning system and the extension of recommendations to national authorities.

We think that introducing these charges will have the additional advantage of reducing the political and media resistance to assist banks during a systemic crisis since it would be perceived that banks already paid in advance for the type of “liquidity insurance” received in systemic events. Also, an arrangement of this sort might serve to explicitly pre-arrange for the division of the burden from assistance operations between governments and CBs (something especially useful in the context of the multi-country arrangement that should be ideally be established to deal with the problems
referred to international megabanks). As a general principle it would be good to accept that, although governments delegate macroprudential management to CBs, it should be governments that would eventually pay for the non-prefunded cost of assisting the financial sector during a (hopefully unlikely) financial crisis.

To conclude, the challenges ahead are many and multifaceted, but all of them connected with CBs’ key role in macroprudential management and with making that role compatible with their traditional role in the control of inflation. There is the immediate challenge related to exit strategies, and the more mediate and multifaceted challenges related with preventing and managing future crises.

Thank you.