Concluding remarks

Jacob A. FRENKEL
Vice Chairman, American International Group, Inc. (AIG)
Chairman, Group of Thirty

This colloquium has been very rich in substance and highly stimulating. It has met the high standards that we have gotten used to expect from such events organised by the Bank of France. One could not have thought of a timelier or a more relevant subject matter than the one chosen by the organisers. In these brief summary remarks it is, of course, impossible to do full justice to the breadth and scope of the various presentations. I will make an effort, however, to highlight some of the key issues of the day.

The presentations started with an insightful introduction by our host, Governor Christian Noyer, who reminded us of the two major challenges that policymakers face today in the world economy: the challenge of rising inflation and the challenge of economic slowdown. Each one of these two challenges taken in isolation would have required a different policy response. The inflationary pressure requires a contracting policy whereas the economic slowdown pressure requires an expanding policy. The art of macroeconomic policy making is to design the appropriate set of policy measures that balances between these conflicting challenges. The unique characteristic of the current economic configuration is that the observed macroeconomic challenges have risen in the context in which the world economic system has undergone a dramatic process of globalisation. This globalisation has enhanced competition in the international markets for goods and services and has impacted on exchange rates and price trends. In addition, they were associated with large current account imbalances and have given rise to highly dangerous sentiments and political pressures for protectionism. Thus, under the current conditions, the conventional challenges to price stability and to stable economic growth are enhanced by challenges to globalisation that fuel protectionist sentiments.

The first session opened with an illuminating presentation of key stylised facts by Kenneth Rogoff. One of the issues covered in the paper is whether globalisation has made the task of central bankers easier or has it complicated their task. On the one hand, low cost imports (*e.g.* from China) to the rest of the world have helped to secure price stability. But on the other hand, the resulting low interest rates have stimulated more risky activities that have increased the fragility and vulnerability of financial markets. The external (imported) mechanism that mitigates inflationary pressures has raised the possibility that in the new globalised era central banks need to have a "new monetary framework". John Taylor has rightly disputed this proposition. He claims that while we need to recognise that globalisation fundamentally help central bankers in pursuing their policy objectives, globalisation also helps to provide an economic environment that is conducive to economic growth and, as such, it helps the central banks to solidify support for the policy that they pursue: the policies which are aimed at achieving price stability. Accordingly, while there is no need for a formal "new framework", there is a need to recognise that the traditional monetary framework now operates in a new globalised environment. As indicated by Janet Yellen, the openness of markets facilitates the beneficial effects of globalisation and the policies that have produced price stability have also reinforced the positive contributions stemming from the openness of the markets. This is an important perspective as it underscores the fact that there is no trade-off between open markets and price stability. The opposite holds –the openness of the markets contributes to an environment of competition and productivity growth and, thereby, helps price stability; at the same time price stability increases the support for and benefits from the openness of the markets.

Kenneth Rogoff reminds us, however, that "there is no free lunch". The rapid export-led growth in China that has helped to mitigate inflationary pressures in the rest of the world has produced new challenges. First, it has resulted in a significant rise in inequality in the distribution of income and wealth in China, which in turn may fuel a dangerous degree of social turmoil. Second, the overheating economy in China has induced inflationary pressures within China which have also aggravated the inequality in the distribution of income and wealth. At the same time, the high rate of Chinese saving and the low growth of domestic demand in China have resulted in a very large surplus in the Chinese balance of payments which is reflected in a very rapid accumulation of foreign exchange reserves. These developments, in turn,

have stimulated political pressures for protectionism in the US and in Europe that pose significant danger to the future of globalisation.

The dangers posed to globalisation by the protectionist pressures are very real and needs to be resisted. It is enough to recall that in recent years the engine of growth in the world economy has been the Developing Countries. Specifically, in the year 2007, about seventy percent of the growth of world output stemmed from the Developing Countries and just about thirty percent of the growth of world output stemmed from the Industrial Countries. It is essential, therefore, that the international markets stay open so that trade between the Industrial and the Developing Countries continues. Furthermore, at the present time the largest economy in the world (the United States) is undergoing a significant slowdown that is induced by the collapse of the residential housing market. Maintaining unimpeded international trade between the US and the rest of the world can offer an important mechanism for mitigating the recessionary effects of the housing induced slowdown and, thereby, preventing it from becoming a more serious recession. Indeed recent data suggest that the dramatic expansion of net exports from the United States has contributed materially to US economic growth. The improved balance of trade of the United States has contributed positively to US output growth, and the magnitude of this improvement has exceeded the magnitude of the negative contribution to growth induced by the contraction of residential construction. Thus, globalisation has provided an important cushion for the US economy and (at least thus far) has helped to prevent the emergence of an aggregate recession. Furthermore, the access that US financial companies have had to capital from the Developing Countries (in particular through Sovereign Wealth Funds), enabled them to rebuild their eroded capital base. Thus, globalisation of goods and financial markets has made a significant contribution to the world economy in general and to the United States in particular. Against this background it is entirely puzzling that there are still voices in the United States who advocate the adoption of protectionist measures.

John Lipsky has supplemented the analysis of Kenneth Rogoff by reminding us that in addition to the unique role played by the new giants of Asia (China and India) one also needs to recall the special role played by the economies of the former Soviet Union and Central Europe, in shaping the new era of globalisation. The large geographic and economic diversity of the new players in the global economic system provides according to Lipsky an important source of built-in stability. In this regard, Lipsky has also made reference to the recent IMF study showing that the evolution of commodity prices in emerging markets and the importation of such commodities by the rest of the world have exerted both inflationary as well as disinflationary pressures.

Another noteworthy contribution of Rogoff's analysis is that globalisation has profound impact on the time profile of costs and benefits of economic policies and outcomes. Accordingly, the entire calculus of policy making and the associated political economy considerations are impacted fundamentally by globalisation.

Richard Fisher made several important points. First, we operate in a world in which interconnectivity does not arise only from international trade in goods but primarily from the integration of capital markets. The latter form of interconnectivity is facilitated by the great progress made in the development of a highly sophisticated communication technology. The technological revolution and the associated information revolution have enabled a very rapid dissemination of knowledge and information. This rapidity is especially manifested in financial markets that are capable of responding to new information (and rumours) at great speed, and are capable of spreading this information around the globe. This expanded dimension of globalisation renders physical distances to be less relevant than in the past. In the new world, according to Fisher, (the rapidly moving) capital market transactions that are governed by current and expected rates of return, are gaining more prominence relative to (the slowly moving) goods market transactions. The world economic system is like a heavy tanker the speed of which has traditionally been influenced by the relative intensity of "head winds" and "tail winds". According to Fisher, in the new globalised world, more attention needs to be given to strength and intensity of the "side winds" which influence materially the stability of the world economic tanker. Fisher also made the additional pertinent point that the forces arising from the integrated world financial markets have intrinsic disciplinary effects both on market participants as well on policy makers. Capital Markets punish very rapidly policy errors and, by the same token, these markets also reward correct policy actions.

In this regard, capital markets conduct a continuous referendum on economic policies. The results of these referenda are swift, objective, and efficient. This is another benefit of globalisation.

At that stage, the discussion turned into an analysis of numbers and statistics. Philippe Martin reminded us that we need to look at the composition of trade between high and low mark-up goods as well as between extensive and intensive margins. He also introduced the controversial concept of the "sacrifice ratio". In the ensuing discussion, Christian Noyer pointed out that in determining the impact of price developments on inflationary expectations, we should go beyond the mechanistic reliance on the statistical shares that the various commodities have in the computed price index; rather we should note that some commodity prices are more visible than others and, therefore, the impact of changes in their prices on the overall inflationary expectations may be more pronounced than their statistical weight in the price index. The discussion on the properties of price indices and on the evolution of commodity prices has stimulated the contribution by Guillermo Ortiz who reminded us that "trees do not grow to the sky," and that one should be very careful in mechanically extrapolating past trends into the future. Specifically, Ortiz has warned of the error that might arise from the assumption that in the future, oil prices and other commodity prices will continue to rise just because they have risen in the past. Ortiz argued that consideration should be given to the possibility that the trends of oil and commodity prices may be reversed as a result of a reduced demand induced by a slowdown in the US economy.

Rogoff added that globalisation is not only the characteristic of *goods and capital markets* but can also be a characteristic of *economic policies*. Specifically, the decision of several monetary authorities to peg the exchange rate of their national currencies to the US dollar implies that the domain over which the policy decisions of the US monetary authority (the Federal Reserve) exert their influence extends beyond the national borders of the United States itself. The expanded impact of the decisions of the Federal Reserve does not arise only from the traditional international transmission mechanism arising from the globalisation of markets but also due to the pegged exchange rate regime. The very fact that a foreign monetary authority decides to peg its currency to the US dollar, implies that that monetary authority has decided implicitly to adopt the monetary policy decisions of the US Federal Reserve. Thus, with pegged exchange rates the effects of policy actions undertaken by the US Federal Reserve are amplified by similar actions undertaken by the other monetary authorities through their exchange rate pegging operations. Thus, if the US adopted an inflationary course of action, the same course would be adopted by the other countries who peg their currency to the US dollar, and the global inflationary consequences of the US measures would be stronger than they would have been if the other currencies were not pegged to the dollar. This is the added dimension of globalisation—the *globalisation of economic policies*.

This perspective is relevant for the analysis of the current situation in the global economy. The decision of several authorities in Asia to peg their currencies to the US dollar implies that the recent relatively easy stance of monetary policy in the United States is being "imported" by the monetary authorities of these Asian countries and, as a result, the inflationary consequences of the easy money policy of the Federal Reserve gets amplified and globalised. If China and other Asian countries were to allow their currencies to appreciate relative to the US dollar, the global inflationary consequences of the US easy monetary policy would have been lessened. At the same time the overall international burden of the depreciated dollar (which was necessary to correct the very large and growing deficit in the current account of the balance of payments of the United States), would have been shared more equitably among the key currency blocks. With a more equitable burden sharing, the pressures for appreciation of the Euro relative to the US dollar would have diminished as some of the burden would have been born by the Asian currencies that would also appreciate relative to the US dollar. Such an appreciation of the Asian currencies would help to reduce the large surpluses in the current accounts of these economies and would also help to reduce the re-emerging inflationary pressures.

The foregoing remarks indicated that the globalisation of economic *policies* adds a special dimension to the globalisation of *markets* and leads to the amplification and rapid dissemination of the consequences of such policies. This point was illustrated in the context of the pegged exchange rate regime. When one monetary authority pegs its currency to another, it finds itself (by default) mimicking the monetary policies of the other monetary authority and, thereby, importing

the inflationary consequences. This phenomenon in which one region mimics policies of other region is not confined only to the globalisation of *economic policies*; it can also be found in financial markets and can be referred to as the globalisation of *financial decisions*. We all recall the collapse of the giant hedge fund Long-Term Capital Management (LTCM) in 1998. In retrospect it has become evident that one of the factors that accounted for the extreme outcomes was the fact that other investors and hedge funds followed the investment decisions of (the very successful) LTCM and mimicked them in their own investment decisions. As a result the financial positions undertaken by one player in the market, got amplified significantly and became much more pronounced by the globalisation of financial decisions of other market participants.

Some time ago, in commenting on the challenges of globalisation, Liu Ming Kang, the current chief bank regulator in China, recalled a Chinese proverb stating that "the honey is sweet, but the bee stings". There is no question that globalisation is "sweet" in that its potential benefits are large. However, occasionally, along the way to getting the honey there are challenges, dislocations and hardships, there are bees that sting. It is important that we do not forgo the benefits from globalisation due to the challenges and obstacles along the way; we should obtain the sweet honey while, at the same time, design the mechanisms that would efficiently avoid the stinging bees. In this regard we should recall and apply the famous wise dictum of Sir Winston Churchill according to which "markets and parachutes share a very important property: both work best when they are open".

Bill White offered a comprehensive analysis of the factors which underlie the current economic performance in the world economy. He highlights four factors: effective monetary policy; domestic deregulation; the saving glut; and globalisation. In this regards I would note that while all of these factors have played an important role, their relative importance is not the same. Effective monetary policy is the central policy pillar for the attainment of price stability. Different degrees of deregulation, of saving glut and of globalisation can provide headwind or tailwind to the wings of monetary policy but these factors can never substitute for it. Monetary policy is the only tool that is designed to secure price stability and, thereby, provide the preconditions for the attainment of sustainable growth.

The implicit presumption underlying White's analysis was that the inflation performance has been satisfactory, and thus he posed the question: "Why has inflation stayed so low?" The question that I would pose is: has *true* inflation been indeed "so low"? In fact, "headline inflation" in the United States has clearly been relatively high, recently exceeding five percent. Of course, the trend rise in food and energy prices exceeded the headline rate and, therefore, the implied "core inflation" (which nets out food and energy components) was significantly lower. With the benefit of hindsight, and in view of the statistical properties of the (*ex post*) time series of food and energy inflation, it is relevant to ask how valid has it been to subtract the rapidly increasing food and energy components from the headline rate. If in retrospect the computed "core inflation" provided a downward bias of the "true" inflation rate, then the Central Bank policy rate of interest was set at a level which was too low relative to the level that would have been set had the true inflation rate been deemed to be higher. The full answer to this question is still unclear at the present stage but the possibility that interest rates in the US were set to be too low for too long can not be ruled out. If that was indeed the case, then the exceedingly low rates of interest may have fuelled future inflation in addition to having induced investors to seek higher yields and assume excessive risk. Finally, due to the globalisation of economic policies, the relatively easy monetary policy in the US was automatically adopted in other countries that have pegged their currency to the US dollar and, thereby, was spread globally.

In her intervention Janet Yallen argued convincingly that the key factor responsible for the good inflation performance of the United States has been the conduct of monetary policy. She acknowledged the fact that "head wind", "tale wind", and other external factors may impact on price developments but, the role of such factors should not be exaggerated. At the end of the day, it is the role of monetary policy to take all of these factors into account and act decisively to achieve the price stability objectives. Accordingly the good inflation performance of the United States resulted from the willingness of the monetary authority to use effectively the instruments at its disposal. The positive record of the Fed enhanced its credibility and reinforced the effectiveness of monetary policy. This view of the role of credibility is important in that it highlights the fact that the credibility of the monetary authority is an asset, it is a public good that needs

to be protected and cultivated. In this regards one recalls the saying that "credibility is never owned, it is just rented". A similar point is illustrated by the old American Indian saying: "credibility comes by foot and runs away on a horse"; or in its more modern version: "credibility comes in an escalator and leaves in an elevator". The key point is that when dealing with credibility one needs to recognise that there is a fundamental asymmetry and non linearity. Credibility is earned very slowly through hard work and consistent performance; it can be lost, however, very quickly.

Martin Redrado reminded us that, in contrast with the past in which financial disruptions stemmed typically from the Emerging Markets, the current disruptions to the global financial markets originated exclusively from the Industrial Countries (the United States). Redrado noted that in recent years the overall economic performance of several Emerging Economies has been more impressive than that of several Industrial Economies. He argues that the better economic performance exhibited by the Emerging Economies should not just be explained by reference to globalisation but, rather, by reference to the improved quality of economic policy in these countries. The fact that the economic performance of the Emerging Economies has improved so dramatically over the past decade demonstrates how quickly policy makers have learned from painful past policy mistakes. In this regard it is instructive to recall the alleged conversation between a young investor who asked a very successful investor for the secret of his success. The answer he got was: "the secret for my success is not making mistakes." The curious young investor went on asking: "and what is the secret for not making mistakes?" The answer that he got was "I have a lot of experience." The next question was: "and how did you gain so much experience?" And the answer was "I made a lot of mistakes." There is no doubt that over the years, policy makers in the Emerging Economies have made ample errors that resulted in poor economic performance, high inflation, great suffering by the population, and significant political cost. This costly experience provided policy makers with the incentives to adopt a more responsible course of policies and, at the same time, it generated the political climate that was conducive for providing the necessary popular support for the appropriate set of policy measures. This resulted in an improved economic performance.

An instructive analysis of the Chinese experiences was provided by Yi Gang who observed that not all countries have adopted the inflation targeting strategy as a guide for monetary policy. He noted that several Central Banks of some large economies, such as the Federal Reserve and the ECB, chose not to be guided by inflation targets. Based on this observation, he expressed some doubts on whether China should adopt inflation targets. My own view on this matter is that one needs to draw a sharp distinction between countries that have enjoyed a long period of reasonable price stability and other countries that have not had such a legacy. Those countries with a history of price stability can use their own history and credibility to anchor inflation expectations. For them, the benefits from the formal adoption of inflation targets may not be great. On the other hand, countries whose past inflation record is less satisfactory may not wish to anchor inflation expectations to their unsatisfactory past. These countries need to divorce the expectations of future inflation from the unsatisfactory record of past inflation. For such countries the adoption of formal inflation targets makes more sense as it provides a clear mechanism by which the monetary authority makes a commitment and signals to the markets its planned policy. With a poor past performance, vague general statement by the monetary authority (or by the government) indicating its general "to achieve price stability in the long run" will not be credible. In order to succeed in anchoring inflationary expectations, the policy strategy must be credible. If the past record does not produce the necessary degree of credibility, one needs to adopt an institutional mechanism that helps to improve credibility. In such cases the inflation targets strategy with explicit quantitative targets, offers such a mechanism. In this regard the record speaks for itself: quite a few Emerging Economies of varying size that suffered from high inflation in the past (*e.g.* Brazil, Israel, and Mexico), have had a great success in employing inflation targets during their disinflation efforts.

Yi Gang also reported on the Chinese government plan to increase domestic demand. Against this background it is relevant to note that the implementation of such a plan, especially if it is based on structural measures that lower domestic savings (by households and by corporations) rather than expanding the public sector budget deficit, would be highly beneficial for China and for the global economy. It would help to reduce the large surplus in the Chinese current account of

the balance of payments and, thereby, it will also mitigate the undesirable protectionist sentiments originating from the Industrial Countries in response to the large Chinese surplus. In this regard it would also be highly desirable for China to adopt measures that improve the functioning of its domestic capital markets including the secondary market for debt. This would encourage the development of pension plans and would provide households with more efficient ways to secure future income streams, and thereby reduce their need to have an excessively high saving rate. At the same time, the development of deeper capital and debt markets would encourage the Chinese corporations to reduce the excessively high proportion of their earnings that they keep as retained earnings. This would encourage corporations to distribute some of their profits as dividends to their shareholders, and thereby, reduce the abnormally high corporate saving rate.

The subject of financial globalisation and financial innovations was introduced by Alan Bollard who drew lessons from his own experience and from the experience of other countries. He reminded us again that maintaining an excessively low rate of interest for an excessively long period of time puts excessive pressures on private sector investors and asset holders to search for higher yielding alternatives. Typically, the search for higher yields results in investments that entail higher risks. Bollard observed that the higher risk was not always optimally priced as information was not complete and as transparency was lacking. He noted that our institutions are now facing an extreme challenge in the global market place: they will need to adjust so as to be able to cope with unprecedented sharp changes in the cost of borrowing as well as in the availability of funds.

Professor Arvind Krishnamurthy reminded us of the Philosopher/Economist Frank Knight's useful distinction between risk and uncertainty. He used this distinction in order to explain how financial markets have recently become very illiquid. This is a relevant observation since when financial markets are dysfunctional the distinction between a "liquidity problem" and a "solvency problem" becomes somewhat blurred. Under such circumstances an otherwise solvent but illiquid institution may fail to secure funds on short notice and, thereby it may become *de facto* insolvent. In this context Governor Reddy described the strategy that helped India to defend itself from the turmoil. The defensive strategy was based on preparatory actions undertaken ahead of time. These actions enabled India to cope successfully with the external disruptions. In this regard a special focus was given to mechanisms that monitored credit quality.

Martin Wolf presented us with a characteristically lucid and fascinating presentation of the key issues. He describes the current crisis as a gigantic wake-up call, of which we better wake up, take notice, and rise to the challenge before a bigger crisis occurs. We must recall that the international system has allowed for the emergence of huge external imbalances without doing much about them. This multi-year neglect has made the global financial and trading system highly vulnerable. In view of this experience it is necessary that when the dust on the current financial crisis settles, the lessons will be learned. It is hoped of course that the relevant lessons will be learned in time. There is an old story about a man who was condemned to die; when being led to the electric chair he allegedly was heard whispering to himself: "this will teach me a lesson". For him the lesson was learned too late.

In his lucid analysis of the implications of globalisation for the conduct of monetary policy, John Taylor recognises that globalisation affects the channels of transmission of policies. However, he does not believe that these changes require fundamental modification of the monetary policy framework. His analysis provides a useful historical perspective. One of the insights of his contribution relates to the objectives of inflation targeting. Since monetary policy in each country is conducted by its national monetary authorities it has been typical to define the price targeting objective in terms of the *national* price index. Taylor suggests that in a globalised economic system one may wish to pay attention also to the *global* price level. In order to pay due attention to the global price level, one needs to design a mechanism by which national central banks communicate and share information with each other. The existing fora in which central banks communicate with each other (such as within the BIS, ECB, IMF, etc.) may provide a good foundation for the institutional systemic setting necessary for the information sharing.

One of the elements that are relevant to the globalised open economy considerations is the relationship between exchange rates, prices, and monetary policy. In this regard, it is relevant to note that although changes in exchange rates impact on national price

levels and inflation rates (depending on the extent of the pass through), the inflation targeting approach should not be confused with an exchange rate pegging approach. Accordingly, under inflation targeting, monetary policy should not adjust interest rates in order to prevent exchange rate changes; rather it should change the rate of interest so as to ensure that the inflationary consequences of exchange rate changes are consistent with the inflation target. The discussion of this topic illuminated several important points. Eric Chaney reminded us that once inflation targets have been set, it would be wise for the authorities to make an effort to meet the target rather than be tempted to adjust the target depending on circumstances. Credibility is an asset that should be cultivated. Donald Kohn indicated that in order to deal properly with the challenges that globalisation pose to the conduct of monetary policy, it is important to recognise whether the origin of the various shocks is domestic or foreign. It is especially relevant in determining the proper policy response to oil price shocks. Finally, Jürgen Stark brought to the discussion the best tradition of the Bundesbank and reminded us that international policy coordination should not go beyond the sharing of information among the various national authorities. Economic policy is done "at home" and should be guided by domestic policy objectives. It is not wise to expect that democratically elected governments would set their policies by international coordination; rather, the responsibility of each government is to use its policy instruments for the attainment of its own objectives.

The final set of my comments relates to the current situation in financial markets. At the early phases of the current financial crisis, it was referred to as the "subprime crisis". Over time, it extended itself throughout the capital markets, primarily in the United States but also abroad, and by now it is fair to refer to it as a "global financial crisis". Today, capital markets are clearly dysfunctional. The system lacks transparency, nobody knows who holds the risk or, for that matter, what is the magnitude of the risk. Inter-bank markets got dry and counterparty confidence evaporated. The "originate-to-distribute model" was challenged and, as demonstrated convincingly by Hélène Rey, that business model has significant flaws. It is subject to the typical challenges which pose difficulties to the "principal-agent model" and it distorts the decisions concerning risk taking. It reduces the incentives for appropriate due diligence and, through a complex distribution of cocktails that underlie securitisation, it cast a shadow on the details that are critical for an appropriate assessment of risk and pricing of assets. Along the way a special role is given to rating agencies that operate in a non-competitive environment and that are compensated by the issuers of securities rather than by the investors. The compensation of bankers and investment advisors is not determined by their performance or by the profitability of the investment decisions; typically, the compensation system was completely unrelated to the fundamentals and to other conventional norms. Needless to say, the incentive system has been seriously flawed. With the lack of transparency and with the fear that tomorrow may be worse than today, potential investors stay on the sidelines and the dryness of the market is aggravated. To make matters worse, the accounting practices that are used for marking assets on balance sheets is introducing highly undesirable pro cyclical features. In this regard it is important to emphasize that there is a lot of logic in the "mark-to-market" principle. It clearly provides a more sensible valuation of assets than irrelevant "historical values". However, as indicated by Mark Carney, all this presumes that there is a functioning market in which prices are determined in an objective manner and, thus, that such prices can be applied to implement the "mark-to-market" principle. Unfortunately, the current conditions are such that very frequently the process of "price discovery" cannot be based on the market since, for all practical purposes, the latter just does not exist. The solution for the lack of market prices cannot be satisfactorily solved by replacing the "mark-to-market" principle by the "mark-to-model" principle since the latter lacks the objectivity of a market price and is, therefore, subject to the arbitrariness of the specific model that is being used. In the absence of market determined prices, the pro cyclical nature of the "mark-to-market" rules poses a significant challenge to the financial sector. Each markdown of assets erodes the capital base of the banking system which, in turn, must seek ways to reduce significantly its lending activities and/or raise capital by costly borrowing or by attracting new shareholders such as sovereign wealth funds. The curtailment of the lending operations aggravates the credit crunch which, in turn, reduces profitability and worsens the overall economic situation. Thus, what started as the consequence of an initial markdown is planting the seeds for the next markdown and is creating a very dangerous spiral.

At the heart of the process lies the situation in the housing market. The value of the mortgage based securities (and their derivatives), depends on the path of housing prices, and the situation will not stabilise until housing prices find their new equilibrium. There is no doubt that there has been a significant excess in the housing market in which prices kept on rising beyond the fundamentals. The list of the deplorable practices in mortgage origination is by now well known. It includes items such as no-documentation loans, unreasonable tempting "teaser" rates that are unrelated to the payment capacity of the borrower, mis-pricing of risk, "parking" risky assets in special vehicles off balance sheets, the production of complex derivatives that nobody understood, and the like. These have contributed to the housing bubble. Since "trees do not grow to the sky", the housing bubble had to burst and, thereby, initiating the inevitable domino effect.

The current crisis will inevitably stimulate a lot of reports that will attempt to understand its causes and recommend corrective measures so as to prevent the next round. It is of utmost importance that the lessons are not forgotten so that at the end of the day the financial system will be stronger, healthier and more robust. We must note, however, that the necessary corrective measures go beyond a mere improvement of the "plumbing" of the financial system and of its "nuts and bolts" (though there are a lot of those). The regulatory/supervisory systems need also to be re-examined including the long-standing question of whether the responsibilities for bank supervision should rest within the jurisdiction of the central bank or should it be assigned to another body (*e.g.* the FSA model). Since the effectiveness of monetary policy hinges critically on having a well functioning banking system, it is vital, therefore, that the Central Bank possesses timely information and intimate knowledge of all relevant developments within the banking system. In order to have such information and knowledge and be able to act upon it in a timely manner, my bias is that it would be best if the bank supervision function rested within the Central Bank. Of course, in view of the great interdependence among the various segments of the capital market (such as insurance, securities, banking, etc.) it would be important to ensure frequent communication among the various regulators.

Along side with the re-examination of the regulatory/supervisory framework, there will also need to be a fundamental re-thinking of the business models that are appropriate for the various segments of the financial industry. In this context it would be relevant to examine whether in the newly evolving financial system there is a room for, and economic viability of, investment banks that are independent, or will they need to merge with, or be transformed into, commercial banks. Looking ahead, it seems likely that the process of consolidation that has characterised the global financial industry in recent years will continue and will alter materially the size and operations of that sector. Emerging from this consolidation process will be a financial industry that is smaller, better regulated by a modern integrated regulatory system, and better aligned with the norms and performance of the rest of the economic system.

Even if all the necessary reforms are adopted and implemented so as to ensure adequate performance in the future, the "excess baggage" of the past must first be addressed. At the present time many financial institutions have balance sheets that are saddled by a huge quantity of "toxic assets" whose presence introduces a high degree of uncertainty which imposes a heavy burden. As long as this legacy from the past exists, the financial system might be prevented from having "a new beginning". A holistic solution to the problem of the financial system may need to include a mechanism for "cleaning up" the balance sheets from such "toxic assets". In order to implement such a "cleaning up" operation, policy makers will need to be creative and be willing to think "outside of the box". We are clearly in an unchartered territory, and, therefore, conventional solutions will not do. We may need to learn to live with the implications of "moral hazard", make all efforts to minimise them and, at the same time, remember that we are in the midst of an unprecedented challenging situation in which, from the public policy perspective, we may not have the luxury of waiting until the "best solution" is found. We should remember that too frequently the worse enemy of the "good" is the "very good".

While formulating the way forwards and agonising on the tough initial conditions that characterise the present, we may recall the famous story of the Gentleman who was on his way to Dublin and while driving through London he lost his way; he asked somebody for the best driving directions and was told: "I do not know the best way to Dublin but I would definitely not start from here". In order to conclude with an optimistic note it is enough to observe that this story was made famous by the residents of Dublin who greeted the Gentleman upon his arrival to town.