

Transition Issues--Discussant Comments on  
“Innovation in Credit Risk Transfer: Implications for Financial Stability”<sup>1</sup>

Mohamed A. El-Erian<sup>2</sup>

Introduction

It is a real pleasure and honor to be with you today. I would like to thank Malcolm Knight, Bill White, Claudio Borio and BIS colleagues for inviting me to this interesting conference.

I have been asked to comment on Professor Duffie’s well-written paper. The paper explores the “design, prevalence and effectiveness of credit risk transfer” with a view to assessing “the costs and benefits for the efficiency and stability of the financial system.” It elegantly and comprehensively documents the proliferation of credit risk transfer (CRT) technology, and analyzes potential implications for the operation of the financial system.

My objective in commenting briefly on the paper is twofold:

- First, to reinforce the view that the proliferation of CRT instruments represents the analytical equivalence of a major “technological shock” for the financial industry. This shock is consequential, permanent and likely to spread to balance sheets well beyond those of the banking system. Indeed, we are in the midst of a period of structural change, with far-reaching implications.
- Second, to extend Professor Duffie’s analysis to consider not only the evolving characteristics of the future “steady state” but also the manner in which we are likely to get there. In this context, and because this involves addressing markets

---

<sup>1</sup> Paper by Darrell Duffie presented at the Sixth BIS Annual Conference in June 2007 on “Financial System and Macroeconomics Resilience”, held on 18 – 19 June, in Brunnen, Switzerland.

<sup>2</sup> President and CEO of Harvard Management Company, and member of the faculty of the Harvard Business School.

that are not yet complete, my remarks will identify a series of analytical challenges for participants in international finance in general, and supervisors/regulators in particular.

### Points of Emphasis

I agree with Professor Duffie's robust characterization of the depth of the structural change associated with innovation in CRT technology. The phenomenon is particularly well documented through the insightful charts and analysis contained in the paper, particularly with respect to its magnitude and speed. Moreover, the paper highlights the degree to which CRT proliferation is still in its relative infancy. Its prevalence within the banking system is, as Professor Duffie shows, concentrated among a few large institutions. And, perhaps more importantly for the future, the underlying technology involving the unbundling and repackaging of risk components has potential (and likely) application to many more balance sheets. These balance sheets reside in *both* the private sector and in the public sector.

At the heart of the CRT phenomenon is its role in significantly reducing barriers to entry/exit for many markets. Existing participants experience a significant expansion in their ability to reposition portfolios; and new participants can enter a marketplace that was hitherto essentially closed to them. As a result, the eventual steady state destination is likely to prove welfare enhancing as it involves the completion of markets, the broadening of the tool kit of risk mitigating instruments, and the deepening of market liquidity.

Given these dynamics, the markets will inevitably experience what are viewed by some as unusual changes in valuations, liquidity, correlations, and the velocity of capital. And, as with the virtually all "technological shocks", part of this reaction will prove secular in nature and part will involve short-term overshoots with potentially disruptive elements.

Secular changes inevitably raise operational and systematic risk questions. The sorts of questions that arise in this particular case include, for example:

- Are the supporting functions and infrastructures able and willing to accommodate the new investor behaviors enabled by the technological shock?
- Will this shock take the form of a “disruptive technology” that also re-aligns the institutional set-up, with important implications for the “dominant players”?
- How well prepared is the regulatory/supervisory regime to support the potential welfare enhancing efficiency gains while mitigating the new configuration of systemic risks?

### The Transitional Dimension

The analysis of these important questions is complicated by a basic reality: The technological shock embodied in the proliferation of CRT technology is impacting markets that differ in initial conditions pertaining to such determining characteristics as market completeness, information imperfections and institutional robustness. There are also inevitable differences in the speed of adjustment in reaction functions for individual participants in international finance, and in the groups they form through their market interactions.

These transitional issues can be highlighted by the following the description of an illustrative set of risks that is being transferred off the balance sheets of banks and to those of new entrants.

As Professor Duffie demonstrates, by impacting the fundamentals of balance sheet management by dominant players, the proliferation of CRT technology involves efficiency gains for the pre-existing set of market activities. It also places enormous pressure on banks to evolve toward greater reliance on the “originate and distribute” model. As a result, the detailed evaluation and structuring of individual lending opportunities gradually gives way to the mass production of composite products. The related emphasis of risk assessment shifts from the individual credit characteristics of

individual lending opportunity to the extent of correlation within the composite products being originated, warehoused and distributed.

Professor Duffie's analysis captures the shift well. As he notes, "The picture emerges: banks often sell loans that are designed specifically for an intermediation profit rather than a long-run investment profit". This shift entails an interesting challenge for banks' hedging activities as they are inevitably forced away from the two extremes of the hedging spectrum -- no hedging and perfect hedging -- and towards the world of imperfect hedging with significant basis risk. The potential implications for periodic investor dislocations were illustrated in the nature of the market disruptions of March 2005, May–June 2006 and February–March 2007.

The shift is encouraged by the nature of the demand forces; and these forces are turbo-charged by an important market imperfection taking the form of investor segmentation. As the paper argues, an important part of the demand comes from participants that, hitherto, were not able to translate their notional demand into effective demand. Indeed, in noting the persistent "sold out" nature of "the super senior tranches of CDOs," Professor Duffie points to the clientele effect associated with "the demand by certain investors for debt instruments of a *given* credit quality" (my emphasis). Specifically, "If there is a pool of investor capital that is dedicated to relatively high-quality debt instruments, the supply of such instruments can lag demand, and in the meantime on issues of asset-backed securities can earn attractive returns."

Interestingly, these enthusiastic buyers do not come under the purview of the set of supervisors/regulators that, in both absolute and relative terms, possess the greatest technical sophistication to understand CRT instruments. Think of these buyers as consisting of state pension funds, insurance companies etc... It is not that they are not regulated; they are. But they are regulated by entities that have had little exposure to CRT technology.

This comment highlights a more general phenomenon. We are in the midst of a large-scale migration of risk out of the strongest regulatory/supervisory regimes and to areas that historically have lacked the required sophistication. The consequences for systemic risk are accentuated by the growing probability of some type of political backlash that could possibly result in an ad hoc regulatory response. Activities related to the sub-prime loan debacle are worth monitoring in this regard.

The growing involvement of new buyers also raise issues with respect to self regulation and the robustness of internal due diligence. Typically these buyers outsource the risk assessment functions through a heavy reliance on credit rating agencies. This comes at a time when the “agency problems” appear to be significant.

There is no doubt that credit rating agencies have adjusted their business models to respond to the significant pick up in demand for ratings on new products associated with market participants’ greater ability to tranch and bundle risk components. But, given their critical role in influencing the allocation of capital by the new players, the question is whether these agencies have made sufficient progress in understanding and modeling the dynamics of CRT instruments in different states of the world.

The key issue in this context is succinctly stated by Professor Duffie: “Currently the weakest link in the risk measurement and pricing of CDOs is the modeling of default correlation. There is relatively low emphasis in practice on data or analysis bearing on default risk.” Rating agency behavior during the US sub-prime loan debacle has done little to allay concerns in this area.

This specific discussion is indicative of a broader phenomenon that is impacting many firms in the financial industry as a whole. The general spread of derivative products is highlighting significant differences in the reaction functions of the front office on the one hand, and the middle and back offices on the other hand. And the tensions could lead to higher operational risks for the system as a whole.

The recent CDS initiative quarterbacked by the New York Federal Reserve speaks to this point. Using essentially the instrument of moral suasion, significant progress has been made in dealing with the large backlog of incomplete CDS confirms. This is a good indication of the type of steps needed to ensure that the “plumbing” of the financial system keeps up with market innovations. And the challenges involve such basic functions as risk modeling (including sensitivity and scenario analyses), valuation and accounting treatment

### Bottom line

So where does all this leave us? Professor Duffie’s paper documents well a major technological shock impacting the financial industry. Specifically, the paper’s analysis makes an important case for treating innovations in CRT technology as consequential, permanent, and likely to influence a rapidly growing set of balance sheets within the bank sector and outside it. Both existing and new market participants are impacted. The resulting completion of markets points to welfare enhancing characteristics in the steady state, though it may entail fatter tails at both ends of the risk distribution.

Professor Duffie’s paper also highlights the importance of complementing on-going research on the eventual steady state with greater coverage of transition issues. Specifically, there appears to be interesting systemic effects associated with the difference in old/new participants’ initial conditions, speeds of adjustment and access to contingent capital. A better understanding of these transitions issues would add to Professor Duffie’s interesting discussion of the cost and benefits of CRT for the efficiency and stability of the financial system.

Thank you.