

Session 4: Has technology changed the nature of risks in financial markets?

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Financial markets have undergone a remarkable transformation over the past two decades due to advances in technology. These advances include faster and cheaper computers, greater connectivity among market participants, big data analytics, more sophisticated trading algorithms and the emergence of digital “crypto” currencies. The benefits of such financial technology are clear: lower transaction costs, faster executions and greater volume of trade, ie more liquidity. However, like any other kind of technology, financial technology may have unintended consequences, such as “flash crashes”, where extreme price swings occur over the course of minutes and then prices inexplicably recover. These challenges are symptoms of a larger problem: human error in the face of increasing complexity. As technology becomes more varied and sophisticated, the potential for system-wide failure grows combinatorially. In his talk, Professor Lo will review some of these technological pitfalls and how they arise, and then describe new technologies – including regulatory technology – that can address these challenges.