Lujiazui Forum
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Transmission of Global Financial Risks

Focus of remarks

My remarks would be from a regulatory perspective seeing that I am the only regulator on this panel.

The theme of my remarks would be on:

- The changing financial landscape and how it has distributed financial risks far and wide – but may be not far or wide enough
- The lessons of the global market crisis.
- And finally "what next?" – how should the market, the authorities respond to this latest failure of the global banking system

The changing financial landscape

The financial system in developed economies has undergone a rapid transformation from a bank-dominated system to today's strongly capital market-oriented financial system.

Financial innovation has changed the nature of banking business and the nature of financial crisis – it seems every 10 years there is a new crisis, and each one is different. The 1980s Latin American Debt Crisis exposed sovereign borrowers of recycled petrodollars to a rise in US interest rates and the US dollar. The 1990s Asian Financial Crisis was due to the sharp reversal of short-term capital flows that poured into private sector Asia, aided by financial derivatives that enabled the unbundling and hedging of credit, interest and currency risks.

The current crisis is a crisis of the structured credit markets. A benign economic environment with ample liquidity supported the rapid growth of the credit risk transfer market. This innovation created a proliferation of interlinked complex financial derivatives with embedded leverage, and relationships between market players became increasingly intertwined.

Let me elaborate on how changes in the business model of banking have transmitted the shocks of the crisis that started in the subprime market to the interbank market and the credit crunch.

Securitisation in the 1980s was aimed at liquefying bank balance sheets – if capital was not required to match liabilities, then the capital could be profitably employed elsewhere - but in the 21st century, this phenomenon was taken to another level as banks increasingly moved away from the traditional "originate and hold" business model to "originate and distribute" as a way to compete with investment banks and to

earn fee income, while lowering regulatory capital requirement. This change followed the repeal of the Glass-Steagall Act in the US that had traditionally separated commercial from investment banking. Commercial banks also expanded into prime brokerage, asset management, including hedge funds, arranging and underwriting securitisations, as well as exchange traded and OTC derivatives.

Under the originate-and-distribute business model, banks are able to create loans and off-load the credit risk from their balance sheet and transfer it to investors through a spectrum of financial instruments. Compared to the traditional origination of a loan that is held to maturity on the books of the banks, the new model entails a series of distinct activities, and these activities are by and large carried out by separate entities. The entire process of creating a mortgage therefore involves a variety of players: a borrower, an originator, an arranger who bundles loans together into a structured product, a warehouse lender, credit rating agency, an asset manager and a mortgage loan servicer.

Securitisation and structured credit derivatives have propagated this phenomenon and dispersed risks across a wide range of market players through layers of intertwined financial instruments such as mortgage-backed securities, collateralised debt obligations, credit default swaps etc. Markets have welcomed this as a great financial innovation that has increased the risk-bearing capacity of markets at a lower cost.

However, all was not fine. Firstly, just as dispersion has diversified risks across financial markets, it also planted seeds of fragility that materialised at astonishing speed in waves of contagion as defaults in the subprime market triggered a confidence crisis as uncertainty mounted. Markets did not know where the myriad of risks ultimately resided, the impact on the intrinsic value on various classes of financial assets, and what would be the full extent of potential losses, as market liquidity in structured derivatives turned out to be a fiction.

In reality, there was almost no secondary trading in these instruments for price discovery to occur and the valuation of assets to be determined.

Secondly, the crisis revealed that the banks had retained significant exposure to subprime mortgages. The banks had invested in highly rated senior tranches of CDOs that invested in subprime mortgages. However, the risks were not dispersed at the end of the originate-and-distribute chain for three reasons. One, the banks had provided either contractual or reputational (implicit) liquidity backstops to off-balance sheet vehicles which were called upon during the liquidity squeeze, and the assets came back onto their balance sheets. Another reason was that the banks were stuck with unsold senior tranches of the CDOs as the risk appetite of investors waned. Finally, banks found their hedges with monoline insurers were potentially impaired as the latter were also heavily exposed to the subprime sector.

The effectiveness of monolines was compromised as they had moved away from their traditional business of guaranteeing municipal bonds to guaranteeing subprime mortgages, thus subjecting them to the same systemic risks.

Financial markets have come full circle: from bank intermediation, to securitisation and disintermediation of banks, and now back to bank intermediation. With this thought in mind, I will now draw some lessons from the current crisis.

Lessons of the global market crisis

Leverage

Securitisation and credit risk derivatives have moved the centre of finance from Main Street to Wall Street, from banks to the capital markets. It has truly globalised financial markets, transmitting rewards and risks across market segments, players and borders.

But at the heart of the phenomenal growth in the credit risk transfer market is leverage. The subprime default triggered a reappraisal of risk that led to massive deleveraging, and the evaporation of market liquidity and funding liquidity. As uncertainty deepened, distrust grew and the interbank market seized up.

Markets got a forceful and painful reminder that the banking system is the ultimate source of funding liquidity for the leverage that has supported the house of cards in the credit derivatives market. Although central banks have intervened to restore overall market liquidity, markets have not returned to full normal functioning, and it is this inability of markets to clear that would prolong the crisis and the total cost.

Just as “location, location, and location” is critical for successful property development, leverage is at the heart of financial stability. So, the first lesson is that the market lost track of the extent of leverage undertaken by a wide range of players, and the risks of disorderly unwinding. In addition, embedded leverage inherent in the credit transfer instruments magnifies the problem. A feature of credit transfer products is that their payoffs can be highly non-linear, providing steady income streams during normal times, but huge losses in stressful market conditions.

Liquidity

Liquidity and leverage are closely intertwined and they reinforce one another in a virtuous or vicious cycle. Under benign conditions with optimism, easy credit drives asset prices up. A shift in risk perception could lead to a spike in risk premia, triggering corporate defaults as credit conditions tighten, and the unwinding of corporate leverage could reduce market liquidity and amplify the fall in asset prices.

The feedback mechanism is particularly strong in the financial system, often times leading to overshooting. In the financial sector, an increase in the supply of funds or credit creates more demand for credit, by making financing terms more attractive (e.g. covenant-light loans, smaller spreads), boosting asset prices and hence aggregate demand. In other words, liquidity begets liquidity. Under these conditions, the tail risk is growing and creates an impression of stability that validates the strong asset prices and low risk premia. The feedback mechanism also works in reverse, as we have seen with the credit contraction, collapse in asset prices, and credit crunch.

The second lesson is the need to manage liquidity risks, given the reinforcing relationship between funding liquidity, leverage and asset prices.

Transfer of risks

With each round of financial innovation, markets believe that this time the game is different; it is safer as risks are borne by those most able to bear and manage the risks.

The originate and distribute model gave the impression that risks are truly transferred away, giving players comfort that created undue complacency and weakening of discipline and due diligence. When the crisis erupted and uncertainty mounted, the originate-and-distribute mechanism distributed fear to parties along the securitisation chain, finally ending up in the interbank market that froze up so suddenly and disrupted the orderly functioning of markets.

As mentioned earlier, risks were not fully dispersed away from the intermediaries into the market, due to retention of the exposures directly as a result of weakening demand; indirectly through explicit or implicit guarantees to the "shadow banking system"; and through the exposure of the intermediaries' guarantors to the same systemic risk.

There are also structural reasons. First, intermediaries and markets are operating less as alternative forms of providers of finance, and their operations have become increasingly complementary. In fact, there is a symbiotic relationship between them that has increased their interdependence. As we discussed earlier, the changing financial landscape has seen a bigger presence of banks in capital markets for new business opportunities and to hedge their operations. Markets in turn rely on intermediaries for market-making services and funding liquidity, without which markets would not be able to function properly.

The third lesson is the need for transparency in the distribution of risks in the system so that the risks can be properly managed.

Governance and risk management

Clearly, governance and risk management fell far behind financial innovations. The majority of market players did not fully understand the nature of the risks and the interlinkages between funding liquidity and market liquidity. Consequently, the market under-estimated the extent of leverage in the system and over-estimated the dispersion of risk.

Risk management systems have also been called to question, such as marking-to-model which is based on untested assumptions and historical data of benign and stable market conditions, and valuation of securities that are hardly traded.

The supervisory framework for capital and liquidity management also lagged behind market developments, and this is one of the priorities of regulators going forward.

The incentive structure was not conducive for market discipline and prudent behaviour. Remuneration and management compensation schemes that were front-

loaded gave the incentive to take on excessive risk to generate revenue and profits without due regard to the risks to the firm in the longer term.

Response to the crisis

The severity and contagion of this crisis is unprecedented. While there has already been warnings regarding the potential risks of the market innovations and developments on financial stability, the speed, the spread, and the disruptions created in the wake of the crisis as it unfolded took everyone by surprise.

Central banks and policy makers acted to restore market confidence and stability, showing great flexibility in adapting operational practices to achieve the desired outcomes.

The IMF, OECD, and the Financial Stability Forum (FSF) published their appraisal of what went wrong and recommendations to strengthen market and institutional resilience. The FSF made recommendations in five areas:

- strengthened prudential oversight of capital, liquidity and risk management
- enhancing transparency and valuation
- changes in the role and uses of credit ratings
- strengthening the authorities' responsiveness to risks
- robust arrangements for dealing with stress in the financial system

On the part of the private sector, the International Institute of Finance, an association of 375 financial services firms from around the world, issued an interim report on market best practices. The report recognised responsibility to restore market confidence, solve the problems that have arisen and ensure that they would not recur, and to raise standards and improve best practices in the financial services industry.

Clearly, there is consensus to strengthen the resilience of the financial system on all fronts. Regulators also recognise the benefits of financial innovation and are mindful of the need to maintain a judicious balance between financial innovation on one hand, and the need for regulation to close gaps and ensure that regulation remains relevant and effective. This balancing act is a perennial challenge to regulators the world over.

I think there is consensus among regulators that we do not wish to see the baby being thrown out with the bathwater. A knee jerk response to tighten regulation would not be appropriate. There is a need for collective engagement and dialogue to address the huge number of issues and challenges that needs to be resolved in order to ensure that the financial system would be much more robust and resilient.

In concluding, my view is that going forward, there is a need for the intermediaries, professionals and investors to act with greater self-discipline, and the market as a whole to exercise greater market discipline. Regulators and the authorities also have to strengthen supervisory oversight, enhance cooperation and information sharing, as well as strengthen operational frameworks to better deal with financial stress.

Thank you.