

Talk on
“The Banking System and The Financial Crisis:
An Economic and Risk-based Analysis”

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Since 1991, the global average income per head has continuously risen. The opening up of the Chinese market, trade liberalisation, and progress in technological and infrastructural development ushered in a period of steady global growth. Whilst these factors largely remained, the current economic crunch is making that period appear like a golden era of bygone days.

For the first time in 18 years, the global average income per head has fallen. Mega institutions have collapsed, credit is contracting, and swelling national budgets threaten governments with unsustainable debt. What perspective can decision makers get on this turmoil? What explains the turn of events, and what lessons may be gleaned? Mr Lam Chuan Leong, Ambassador-at-Large, Ministry of Foreign Affairs and Senior Fellow with the Centre of Governance and Leadership, addressed these issues in his lecture at the Civil Service College.

The Financial Sector

The lecture was prefaced by statistics illustrating the gigantic scale of the money market. Money, taking a life of its own, no longer functions only as a standard means of exchange for goods and services. In a single day, forex trade (at US\$32 trillion) is almost comparable to total world trade for an entire year (US\$27 trillion for merchandise and US\$12.7 trillion for services; 2007 figures). The estimated value of derivatives (US\$668 trillion) dwarfs the GDP of the United States several times over (US\$14.4 trillion).

Since central banks are typically the only legitimate printers of dollar notes, many assume that the creation of money supply is the sole prerogative of the government. Mr Lam corrected this view by explaining how private banking activity creates the bulk of money.

This is how it occurs: banks use of their customers' deposits to create loans. Every dollar deposited allows banks to create loans which are worth many times that figure (in Singapore, banks can loan up to 12 times the value of the deposits they hold). Banks only need to retain a marginal percentage of their deposits in cash, known as the marginal reserve requirement that is set by the central bank. Less noticed is how money seeps into the economy in the process: whenever a loan is made, it is credited under the bank's books as assets. Money, which never previously existed, is now in the economy as accounting assets. Four-fifths of money creation originates from this source.

The implication is that the more loans are extended, the more assets a bank gains and the more money it creates on its books. A bank which has lent as much as it can to prime (credit-worthy) borrowers can only grow further by extending loans to subprime (less credit worthy) borrowers. However, since the bank also takes on the risk of possible credit defaults, it is traditionally incentivised to ensure that its clients can honour their loans.

This traditional restraint has weakened with financial liberalisation and innovation. To provide loans for expensive purchases (like a house) can be risky. Even if the chances of defaulting are low, the loss is great if one happens to lend to a defaulting client. Banks redistribute this risk by pooling the liabilities of several loans together, repackaging them into a security¹, and selling them to other banks and financial institutions. These securities receive fairly safe credit ratings, but have on hindsight found to be grossly underestimated. Banks who buy these securities resell them as part of other structured investment products to their customers; most of these customers rarely have the time or resources to make a comprehensive evaluation about the product's quality. These developments have led to a rise in credit creation and subprime loans.

The problems become apparent when credit defaults become pervasive. Since many banks leverage heavily and keep minimal liquid assets, writing off these bad debts can leave them with little or almost no capital. If the unfavourable state of the bank becomes known, it could incite a bank run as depositors rush to withdraw their savings. Other banks would also refrain from extending interbank loans to them², and if the amount of capital becomes too low, regulators can, and do take over the bank. The fundamental fact remains that no bank is able to stay afloat if all their customers withdraw their savings. The system operates on a fragile premise of trust and confidence.

Complexity and the Financial Market

Mr Lam submitted that the principal takeaway of this crisis should be a deeper appreciation about the nature of the financial market. He held that the market operated as a complex system, making it resistant to prediction.

Banks and financial institutions have pursued relentless growth and pushed the envelope on financial innovation, driven by greed and the pressure to meet performance quotas. The result is a long and complex "supply chain" with increased fragmentation risk. This goes against the notion that a market which is free to innovate will produce the most efficient outcomes. Instead, information flow has become convoluted; analysts get caught in a spiral of listening to one another's opinion, convincing themselves and everyone else that they understand how the market works, and where it is headed. This stands at odds with numerous empirical studies which show the impossibility of predicting the market.

The behaviour of markets mirror complex developments in weather patterns. Outcomes emerge from the interaction of different adaptive components within the ecosystem. The dynamics are therefore non-linear and critical tipping points are difficult to isolate. They are subjected to butterfly effects, where micro events could trigger off dramatic and unexpected consequences.

Perception Bias

Prediction is inherently complicated by perception biases. In the words of William Amelia, CEO of Lenova, "you view things on the basis of everything you've learned up to that point of time." Studies show that the human mind is only aware of less than five percent of what it sees. More problematically, only things that are consistent with one's existing

¹ Also referred to as a Collateralised Debt Obligation

² Banks extend loans to one other to meet the call for cash by their customers and also to maintain the minimum reserve requirement

paradigm of the world are usually picked up. All information is parsed through a filter of prior experience and reinterpreted.

As a result, analysts are prone to discount low-probability but high-impact events. The inability to anticipate novel threats (or black swans according to the analogy by Nassim Taleb) is endemic.

The other obstacle is the tendency to anchor prices. A branded bag that previously retails at \$28,000 appears cheap if it is sold at \$26,000—regardless of its objective value. Likewise, the stock market is subject to the same bias because investors anchor prices and mistake expensive stocks as cheap deals.

Responding to Complexity

Mr Lam wrapped up his lecture by focusing on how decision makers could respond to the complexity of the market. He reiterated that modelling and reasoning cannot predict the future and decision makers should be conscious of fragmentation risks. Extreme events (black swans) can happen and are more common than is thought to be. Decision makers should therefore probe, observe, and adapt continuously. Decision makers should guard against becoming fixated or dogmatic towards any particular strategy, and be mindful of the validity of “expert” assessments. In a complex system, he commented that scenario planning becomes a sensible investment—not to assess the probability of events, but to help anticipate possible consequences. The cost of insuring against low probability-high impact events is likely to be lower than it ought to be, and should be therefore adequately appropriated.
