

*An Asian view of the Global Financial Crisis,*

*by Andrew Sheng*

Future historians will compare the 2008 Great Global Credit Crisis with the 1930s Great Depression, which set in motion the Second World War and changed the financial landscape for nearly 80 years. Similarly, the present crisis is likely to witness major changes in economic theory, philosophical outlook and in institutional structure. This essay explores the present crisis from the perspective of Asia.

History always goes full circle, although not in the same manner. An interesting comparison with the Great Depression is the failure of the current neo-classical economic theory, which in the 1920s advocated balanced budgets and minimal government intervention. Arising from this free market philosophy, the UK and several European countries went back to the Gold Standard that pushed them further into deflation. It was this failure of theory that gave the impetus for Keynesian economics, under which governments can use fiscal policy to stimulate growth when monetary policy could not revive confidence if interest rates were already near zero. Structurally, the bank failures that followed the Depression also gave rise to the Glass-Steagall Act, which separated banking from the securities business.

Just like the Roaring 1920s, it was the long period of prosperity in the early years of 2000 that gave rise to the excesses of 2007/2008. Western economists, led by Fed Chairman Ben Bernanke, blamed the Savings Glut in East Asia for the excessive low interest rates and high liquidity that provided conditions for the deterioration in credit quality. Those who look at the global situation more objectively would realize that there is a major demographic difference between the surplus and the deficit economies. The surplus economies have younger population, which are still building up their savings to prepare for old age and long-term social security. These emerging markets benefited from the spread of technology and better corporate and fiscal governance that raised corporate and government savings in addition to the higher household savings. On the other hand, the deficit economies in the West have aging populations already enjoying high standards of living, whilst their fiscal positions were deteriorating due to the continual pressure to cut taxes and increase social spending. Their higher corporate savings were not sufficient to compensate for the large deficits that gave rise to the Global Imbalance. In 2007, it was estimated that the US had to import about US\$1 trillion foreign capital annually to finance its deficits or roughly US\$4 billion per working day.

Clearly this deficit was unsustainable. But no one expected that over two years between June 2004 to June 2006, the 17 step increases in Fed Fund rates of 425 basis points by the Fed from the low of 1% to a peak of 5.25% would lead not only to a decline in property prices, but also a near

collapse of the US and European banking systems. In February 2007, when the subprime mortgage loan problems surfaced, everyone thought that since the outstanding amount was only US\$757 billion, of which losses were estimated at US\$150 billion or roughly 1% of US GDP, the matter was manageable. No one realized that it was the tip of the iceberg.

In the one month since the failure of Lehman Brothers on 15 September 2008, the world's banking system nearly collapsed like a domino, with stock markets seeing almost meltdown. Banks in the US and Europe were partly nationalized and investment banks disappeared as a separate unit in the US. An estimated US\$27 trillion or over 40% was wiped from global stock markets in the year to October 15. On October 10, the Dow Jones Index hit an intra-day low of 7,773.71, just under half of its peak a year ago. The Bank of England has estimated that the mark-to-market losses in bond and credit securities would be in the region of US\$2.8 trillion, double what the IMF predicted at US\$1.4 trillion. This was equivalent to 85% of global bank's tier 1 capital of US\$3.4 trillion. Furthermore, between April to October 2008, various central banks and governments had provided implicitly or explicitly US\$8 trillion of funding for their wholesale markets to prevent total seizure. At the same time, the Fed cut the Fed Fund rate by 100 basis points in 2007 and another 325 basis points back to 1% per annum by 29 October 2008.

There is a striking parallel between the present US interest rate policy and the way Bank of Japan dealt with the 1990 Japanese bubble crisis, except that the US arrived at almost zero interest rate policy much faster.

Although subprime problems originated in the US, their impact spread far wider, because European banks shared nearly half of the losses. The sharp retrenchment in interbank lending was however a global affair, spreading to emerging markets like a tsunami. The Mexican peso and Brazilian real had to be defended against sharp depreciation and Indonesia closed its stock market for 3 days. Hong Kong and Singapore faced investor protests against the default of Lehman mini-bonds. A number of countries had to fully guarantee their bank deposits. Oil prices collapsed back to just over US\$60 compared with US\$146 per barrel in July 2008. From an institution that six months ago faced almost no new lending, the IMF suddenly found itself once again lending to Iceland (US\$2.1 billion), Hungary (€12.5 billion), Ukraine (US\$16.5 billion) and credit negotiations with Belarus and Pakistan. As commodity prices collapsed around the world and various emerging markets got into payment problems, the IMF created a short-term lending facility amounting to US\$100 billion.

The complexity of the 2007/8 crisis is such that we need to examine the current credit crisis from at least three perspectives - that of history, macro and micro-economic conditions. Based on these perspectives, this essay looks at three possible scenarios (rather than predictions) where China and East Asia could position themselves in the next decade. In essence,

since success of economies hinges on governance, it is the quality of Chinese and Asian governance that will be severely tested in the coming years.

### *A Historical Inflexion Point*

From the perspective of history, 2007/2008 clearly marked an important turning point in the global market economy. We must pose three significant questions. First, does this mark the peak of global capitalism?

One thing at least is certain - the crisis put a question mark on the American dream - that every individual, through his own labour and creativity can have all that he wants. This could be true for individual Americans, who number less than 5% of world population, account for 25% of global GDP and is able to consume annually global resources equivalent to 6% of GDP. Unfortunately, the global resource environment cannot support that American dream for the average Chinese and Indians, who together number 37% of world population. The problem of global resources and the environment were not constraints to emerging markets during the Great Depression, but fast growing countries like China and India must address Global Warming and Environmental Sustainability not only for their own health, but for mankind as a whole.

The environmental issue could easily change the geopolitical landscape in the next decade and throw all current projections out of line.

The second macro-history trend is that if India and China are both growing at more than 8% per year, whilst G-3, US, Europe and Japan are growing at less than 2% per year, the relative power between the mature economies and the emerging markets will change dramatically. Angus Maddison<sup>1</sup> has projected that by 2018, China would overtake the USA as the largest economy in the world, with India as number 3. By 2030, he estimates that Asia (including Japan) would account for 53% of world GDP, whereas the US and Europe would only account for 33%. If this were the case, the global financial architecture would be significantly different from the present.

Already by 2007, Asia accounted for 66.8% of world official reserves, 55% of world population, 24.5% of world GDP, but only 16 percent of IMF quotas, equivalent to its voting power in the Bretton Wood institutions. My own crude calculations suggest that Asian financial markets will be the largest in the world within the next 10 years, assuming that financial deepening in Asia continues to improve and Asian currencies appreciate relative to the US dollar and Euro. This means that either one Asian currency or Asian currencies as a group will very likely play a role as a global reserve currency by that time.

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<sup>1</sup> Angus Maddison, *Contours of the World Economy, 1-2030AD*, Oxford University Press, 2007.

Is Asia ready to play that role? Not by far. In the past, emerging markets were dependent on the advanced economies for markets and financing. Asia's surplus role has been too recent for the fact to sink in.

Asia had to put its excess savings in the West precisely because its own financial system is not ready to intermediate such savings. Its regulatory structure is still evolving and Asian bureaucrats are neither internationally minded nor prepared psychologically to act in the international monetary order. In the last 10 years, the number of Asian bureaucrats in the Bretton Wood institutions has declined not just because of better career prospects at home, but also because they see little future for themselves in these institutions. There are hardly any think-tanks in Asia dedicated to thinking about the international financial order.

The third trend drawn from the present crisis reflects this parochialism. So far, national responses to the crisis have been faster than regional or global responses. A major defect of the current international financial architecture is that even within Europe, initial reaction to the crisis was at the national level, rather than the global level. Everyone cared for their own banks. There was also insufficient coordination between the US and Europe on the appropriate response on rescue efforts. This implies that we must strengthen domestic crisis management and response policies before we even begin to think about global policies.

Based on this, is there a future for the international financial architecture? The answers will have to be dissected at the macro and micro levels.

### *The Macro Question*

As I explained in my forthcoming book, "From Asian to Global Financial Crisis" to be published by Cambridge University Press, the more recent origins of the current crisis can be traced to four major mega-trends.

The first was the appearance in 1989 of 3 billion labour force into the market economies following the end of the Cold War that gave rise to a global flood of cheap goods and low inflation for nearly two decades.

The second was the monetary policy responses to the Japanese bubble/deflation since 1990, which gave rise to over two decades of almost interest free yen loans globally, creating the famous Yen carry trade. Recent estimates of the global carry trade, essentially the arbitraging of differences in national interest rates and exchange rates, amounted to US\$2 trillion, of which half is probably the Yen carry trade<sup>2</sup>. The supply of almost interest free funding was effectively to subsidize the rise of financial engineering, which were applied with great effect in the Asian crisis period. The success of such carry trades were then applied and magnified through

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<sup>2</sup> Tim Lee, The Currency Carry Trade and Emerging Markets – the Next Phase of the Global Crisis July-August 2008, [www.pieconomics.com](http://www.pieconomics.com)

leverage and derivatives, a hallmark of the new investment banking and hedge fund class. The increase and reversal of carry trades using low interest rate currencies added to volatility and volume of global financial trading and flows.

The third force therefore was the emergence of financial engineers, a trend that was already evident with the layoff of scientists and physicists at the end of the Cold War, who applied their technical and statistical skills to financial markets. They created the financial models to manage risks and staffed the business schools, investment banks and hedge funds that dominated financial markets globally. Underlying their sophisticated models was one fatal flaw, that the world of risk was a bell-shaped statistical curve that ignored the long-tailed black swan risk. It was the underestimation of once in 400 year risks that proved their undoing.

The fourth was the phase of global deregulation of markets, from the reduction of tariffs under WTO, the removal of capital controls under IMF and the philosophy that minimal intervention and letting markets determine prices and competition would create global efficiency. Such philosophy permeated both the basic textbooks and the international bureaucracy.

Essentially, these mega-trends were four arbitrages that created converging globalization - wage arbitrage, financial arbitrage, knowledge arbitrage and regulatory arbitrage.

At the policy level, the failure of state planning also saw the ebb-tide of Keynesian economics, which called for greater government intervention in the economy. The dominance of Friedmanite free market capitalism unfortunately over-emphasized the use of monetary policy tools and the importance of central banks. Fiscal policy was relegated back to minimizing fiscal deficits, whilst elegant monetary targeting theories were propounded based on consumer prices that ignored the crucial role of asset prices.

It was a grave intellectual blindspot that the endowment effect of cheap labour into the world economy deluded many Western central bankers that their monetary policy was working wonders on global inflation.

In hindsight, that intellectual blindspot was minor compared to the macro-economic policy mistake to ignore the bubble in real estate prices. The naive belief that widespread house-ownership was good for long-term social stability irrespective of affordability and supply constraints had the unintended consequence of creating social expectations that house prices would rise and never drop. The central importance of housing within household balance sheets is often taken for granted. However, real estate accounts for the bulk of assets of households and certainly the most important collateral asset of the banking system. In many countries, the desire for greater home ownership was not backed by sufficient supply side responses, so that larger and more lending for housing created upward price push that became self-fulfilling. In the US, house prices rose almost non-stop from 1991 to 2006, with total private sector real estate rising to 225%

of GDP. Between 2003 to 2007, real estate assets of the US households rose by US\$6 trillion, but household liabilities increased by US\$4.5 trillion, implying that households consumed a large part of the increase in house prices.

This was made possible because the financial system pushed loans to the consumer sector. Mortgage loan to value (LTV) ratios rose to 90% for housebuyers and credit evaluation deteriorated by lending to no-income, no job assets (NINJA) subprime borrowers. These subprime mortgages were then sliced and diced into packaged derivatives by the financial engineers without supervision of the regulators and sold to the financial markets that were hungry for yield during the low interest environment from 2003-2007.

By 2007, gross savings in the US had fallen to 14% of GDP, net savings to 1.7% of GDP and current account deficit (funded from abroad) had risen to US\$720 billion or 5.2% of GDP.

### *The Micro Origins*

The above macro-economic question is crucial to understanding the current world financial crisis, because it was the ability to finance external deficits that was the basis for the emergence of the current “originate to distribute” structure of the US banking system. In other words, the US and European banking system evolved from the traditional retail banking model (accept deposit and lend) to the new wholesale banking model, because they were no longer constrained by limited domestic savings, but could draw upon global savings through the securitization channel.

Unlike the 1997/98 Asian crisis, which was essentially a traditional retail banking crisis together with a currency crisis, the present crisis was truly a wholesale banking crisis with huge derivative amplification effects. Because the Asian crisis was still a crisis at the periphery, its network effect was limited. But the present crisis is a crisis at the center of global finance and its amplification effect that covered the two dominant powers of US and Europe was therefore significantly larger and deeper.

To understand how the micro fused with the macro environment to create the crisis, we need to understand what the financial engineers did with the derivatives, coupled with what the Western financial regulators allowed them to do. As indicated earlier, excessive loose monetary policy, low interest rates and carry trades made speculation and “search for yield” the driving motivation for financial innovation. Improvements in telecommunications and computing power had given dynamic trading using real-time information superior advantage over the conservative “buy and hold” retail investors and pension funds. Hedge funds and investment banks could trade at speed and arbitrage price differentials across markets and products. To satisfy the “search for yield”, new securitized products evolved to suit investor tastes.

Four elements of financial innovation and deregulation came together to create the toxic products that were at the root of the current crisis. The first was plain vanilla residential mortgages that were securitized into mortgage-backed papers by government mortgage institutions such as Fannie Mae and Freddie Mac. Securitization meant that assets could be moved off-balance sheet into unregulated special investment vehicles (SIVs) that did not require capital. The second was that accounting and regulatory standards permitted such potential liabilities to be moved off the balance sheet so that the banks benefited from “capital efficiency”, meaning that leverage could increase using the same level of capital. The third was the use of insurance companies and the newly evolved credit default swap (CDS) markets to enhance credit quality of the underlying paper. If the underlying assets looked weak, the purchase of credit default swaps sold by triple A insurers such as AIG enhanced their credit quality. The fourth sweetener was the willingness of the credit rating agencies to give these structured products AAA ratings, for a fee.

By slicing the traditional mortgages into different tranches of credit quality, collateralizing each tranche with various guarantees or assets, the financial engineers ‘structured’ collateralized debt obligations (CDOs) that felt and smelt like very safe AAA products with higher yields than boring government treasury bonds. What investors did not realize that these products carried embedded leverage that could unravel under certain circumstances. By taking origination fees up front, investment banks, rating agencies and mortgage originators made huge profits without anyone regulating the origination process. To assure investors who feared that these assets had no liquidity, the issuing banks gave liquidity “conduits” to these structured products that were contingent buy-back guarantees. All these were conveniently off-balance sheet commitments.

It looked too good to be true, even to the regulators, but they were assured when the market kept on growing. Time and again, Greenspan and others commented on the potential risks, but at the same time remarked that risks were being distributed outside the banking system.

This “black hole” in regulation was in practice the over-the-counter (OTC) market that originated from bilateral transactions between banks and their clients. The largest and most successful OTC market is the foreign exchange market. The advantage of the OTC market is that it is opaque to outsiders, including the regulators, but if the product is well understood, it can be a highly liquid market. Derivatives in foreign exchange and interest rate derivatives were supported by central banks because it was thought that their evolution would enhance their monetary policy instruments, as well as to enable the banks and their clients to hedge their market risks. That protection was so strong that even when Hong Kong, South Africa, Malaysia and others protested during the Asian financial crises that illiquid foreign exchange markets in emerging markets were often manipulated, these charges were dismissed. Too much vested interests were at stake. Emerging market supervisors were too weak to change this bastion of non-

regulation, because the winners of superior financial innovation were Western banks.

This “originate to distribute” banking model, plus the OTC market, formed what Bill Gross of fund manager Pimco called a “shadow banking” system. New York Fed President Tim Geithner estimated that this dynamic “shadow banking” system could be as large as US\$10.5 trillion, comprising US\$4 trillion assets of the large investment banks, US\$2.5 trillion in overnight repos, US\$2.2 trillion for SIVs and another US\$1.8 trillion in hedge fund assets. This compared with US\$10 trillion in assets with the conventional US banking system, which meant that system leverage was at least double what was reported.

Throughout the last decade, central bankers would marvel at the phenomenal growth of the financial derivative markets, which conservative fund manager Warren Buffett called “financial weapons of mass destruction”. By December 2007, BIS data showed that the notional value of derivative markets had reached US\$596 trillion. About two-thirds of this was relatively simple interest-rate derivatives, but nearly US\$58 trillion was the rapidly growing CDS market. The exchange traded derivatives were US\$95 trillion in size. Together, these financial derivatives were 14 times global GDP, whereas conventional financial assets, comprising bonds, equities and bank assets were only 4 times GDP. Market traders reassured everyone that the gross market value of such derivatives were actually much smaller, being US\$14.5 trillion for the OTC derivatives<sup>3</sup>.

What the traders did not tell you is that although there is some bilateral netting between market participants, the bulk of the transactions remain on a gross basis, since there was no central clearing house to monitor and clear on a net basis, like an equity clearing house. Gross derivatives clearing and settlement (except where bilateral netting apply) could only function if the wholesale market remained highly liquid.

Because these markets are mostly bilateral trades, the OTC market works on a sophisticated and complex system of margin or collateral management. For each derivative trade, the primary dealer calls for margin to protect itself from credit or market risks. In a rising market when risk spreads and volatility are narrowing, less and less margin is required, thus pro-cyclically increasing liquidity. In other words, liquidity begets liquidity, a classic network effect.

Unfortunately, it also works the other way pro-cyclically, so that if volatility increases, the need to call margin, sell assets to realize liquidity would immediately worsen liquidity, widen risk spreads and create solvency problems for the participants. This was experienced by LTCM in 1998, when it did not have enough liquid assets to meet margin calls. Any stop-loss selling of margin collateral at the highest point of volatility by its

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<sup>3</sup> Bank of England Financial Stability Report, October 2008, Box 2: Counterparty credit risks in OTC-derivative markets.

counterparties would immediately precipitate insolvency for LTCM. But this was not immediately transparent to other market players since no single player is fully aware of market positions in an OTC market. There is no single regulator or clearing house to monitor counterparty positions. The opacity of the OTC market is both its strength as well as Achilles' heel.

The network effects of highly dynamic markets are such that only large financial institutions with specialist skills and computer technology were the winners. The conglomeration of skills, size and liquidity were such that between 2001 and 2007, 15 of the world's largest banks and investment houses (called large complex financial institutions LCFI<sup>4</sup>) accounted for more than two-thirds of transactions in financial derivatives. Between 2001 and 2007, these 15 LCFIs tripled their balance sheets and increased their leverage markedly. The true scale of their trading was even more dominant if one considered that many hedge funds comprised former staff of these LCFIs, which also acted as their prime brokers. When there were occasional calls to regulate the hedge funds even by powerful regulators such as the French or Germans, the US and UK regulators were the first to point out that the hedge funds were best regulated by their prime brokers. This was acceptable as long as the prime brokers themselves were sound. As we have seen this was not always so.

What was also not widely known was that instead of widely distributing derivative risks outside the banking system, much of the risks were concentrated within the banking system. According to BIS statistics, only 19% of OTC trades were with non-financial customers. In the CDS market, 2006 British Bankers' Association data reported that the banks were 16% net buyers of CDS "protection", whereas the net protection sellers comprised insurance companies 11%, hedge funds 3%, and pension funds 2%. Since hedge funds were never risk holders, they would sell their risks back to the primary dealer at the first sign of trouble.

We now know that the shadow banking system grossly disguised the true level of leverage, grossly underestimated the liquidity required to support the market, grossly misunderstood the network interconnections in the global markets and enabled the key players to over-trade with grossly inadequate capital. For example, at the end of 2007, the five US investment banks had total assets of US\$4.3 trillion, but only equity of US\$200.3 billion or a leverage of 21.3 times. However, together they had notional off-balance liabilities of US\$17.8 trillion, implying further leverage to 88.8 times. But of course, they were allowed in 2004 by an SEC rule change to exempt their net capital caps of 15 times to value their derivatives according to their own sophisticated risk models, thereby opening up the leverage limit. In practice, perhaps only management fully understood their true leverage, because Bear Stearns had to be rescued despite the SEC Chairman protesting that it had capital adequacy even at the last minute.

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<sup>4</sup> According to Bank of England, the 15 are: 3 US banks, 4 US investment banks, 3 UK banks, 2 Swiss banks, 1 German, 1 French and 1 Belgium bank.

Over the years, network theory tells us that the hub is robust and efficient so long as the links (the members of the network) are continually feeding and benefiting from the hub. However, if there is any doubt about the counter-party risks of the hub, then the members of the network are likely to withdraw resources rapidly to protect their own interests. The failure of Lehmans destroyed the myth that any major market maker in global markets was too big to fail.

That failure will go down in history as the trigger that set off the systemic crisis worldwide. Although it had only US\$620 billion in assets, regulators grossly underestimated that at the time of failure, Lehmans had a total of US\$1.6 trillion worth of counterparty positions that became frozen. Since Lehman accounted for nearly 14% of trading in equities in the London Stock Exchange and 12% of fixed income in New York and it also managed client assets for hedge funds and investor clients, the liquidity of its counterparties were immediately impaired on default.

The default of Lehmans also triggered huge increases in CDS premia, which meant that those who sold protection had to offer immediately greater collateral. AIG, which had US\$441 billion of CDS positions, had to provide US\$14.5 billion to bring total collateral posted to US\$31 billion in a matter of days. If AIG had not been nationalized by an US\$85 billion loan in exchange for 79.9% of its equity by the Fed, its failure would have set off contagion failure beyond imagination.

The default on Lehman bonds also caused money market funds to fall below their US\$1 par value, so that there were immediate withdrawals from the US\$3.4 trillion money market fund sector. If that sector had collapsed, the liquidity crunch in the US would have been catastrophic.

The irony of the Lehmans failure was that it was an effort by the high priests of free market fundamentalism to demonstrate to everyone that they were acting against moral hazard, to demonstrate that no investment bank is too large to fail. The decision had an opposite effect - it triggered the panic that almost broke the markets. In demonstrating that those who practice bad behaviour can be allowed to fail, the effect was to tell the market that another and another may also be allowed to fail, so that the best strategy to protect oneself is to cut and run. Perhaps the middle of a crisis is not the appropriate time to prove a philosophical point. The correct anti-moral hazard action is during normal times, to be exercised dynamically in scale as financial risks escalate. With Lehmans, a massive deleveraging operation began and unfettered finance began to implode.

### *Lessons for China and Asia*

The speed at which the entire financial system in the US and Europe began to unwind showed how networked the financial systems have become as a result of two decades of deregulation.

There is every likelihood that global deleveraging will continue until the excesses are worked out. But the real sector adjustment has only just begun. At the heart of the adjustment is the US savings deficit, manifested in its current account deficit. If it were to adjust back to 3% of GDP, it would cut back exports to US to the order of roughly US\$320 billion annually or roughly 13.5% fall in imports. This will have its negative multiplier effects on Asia.

Whilst the amount of subprime related paper held by Asians is limited, the amount of financial paper denominated in US dollars and Euro by official reserves, banks and sovereign wealth funds remain substantial. Hence, Asians will not only be hurt by the global financial crisis through the trade channel, as well as through the wealth loss from either currency devaluation or fall in asset prices. In addition, those countries such as Korea and others that relied heavily on global inter-bank borrowing will be subject to tighter liquidity and higher borrowing costs.

There are many lessons to be learnt, but I feel six deserve highlighting because of their significance.

### *Back to Basics*

The first is that crisis is the natural outcome of human excesses. It is the most Darwinian of collective human action - it creatively destroys the irrational exuberance and brings everyone back to reality that there is no free lunch. Schumpeter was right to say that out of crisis comes rejuvenation. Crisis actually accelerates the exit of weak and fraudulent institutions that should have been the function of effective regulation over a normal period of time. Accordingly, we cannot forget that crisis is an event, whereas reform, restructuring and regulation are continuous processes.

Crisis only concentrates the mind on what we need to do to fix what is wrong with society and the economy and what we did not do or could not do because of vested interests. There is in fact only a short window of opportunity of reform before memory fades and vested interests again capture the need for reform. If we do not reform while the sun is shining, crisis like the next tsunami is an inevitable consequence.

The second is that derivatives carry leverage and therefore risks. Risks are transferred but do not disappear. Indeed not understanding the nature of derivatives is itself a major risk.

Basic finance theory will tell you that a derivative is a representation of an underlying asset that is essentially linked through leverage. The advantage of derivatives is that one can easily subdivide an indivisible underlying asset (such as a large piece of immovable land) and make the property right transferable at lower transaction costs. Real products require labour and real assets to make. Financial derivatives require imagination. There can be multiple derivation of the same underlying asset.

For example, equity stock is a derivative of the assets of a company. A stock option is the second order derivative of real assets and a swaption (swap on option) is the third order derivative and so on. The trouble is that the higher the level of derivation, the more complex (and more opaque) the relationship with the underlying and the greater the leverage, making the derivative pyramid dynamically profitable and risky at the same time. As we see from experience, if the underlying asset gets into trouble, the derivative pyramid can come crumbling down very rapidly.

The instability of the financial pyramid is precisely why finance should be fettered or regulated heavily. Left to pure market forces and no constraints, the financial derivative game can be exploited at great moral hazard - increase leverage and opacity for private gain at eventual social cost. At the purest conceptual level, there is therefore no principal difference between state planning and unfettered finance - both consume or waste at great social loss. The crux is the golden mean - how to utilize the efficiencies of market forces and yet regulate it to prevent excesses and instability. Herein lies the uncomfortable relationship between the government and the market. Too much government is bad and too much unfettered markets is also bad.

The third fundamental is that if finance is a derivative of the real economy, no financial structure is strong unless the real economy is strong. We cannot allow monetary theory to dazzle us from the common sense fact that finance must serve the real economy, rather than to drive it. If this is so, then it does not make sense that Wall Street should be paid more than Main Street. We must ensure that the incentive structure is even-handed - financial wizardry cannot be rewarded irrespective of performance. The corporate governance structure must be transformed so that there can be no golden parachutes and pay must be aligned with long-term performance.

Focusing on the real sector means that greater attention will have to be paid on the housing market as one of the key pillars of social stability, to ensure via appropriate government policy that there is adequate supply and that housing is affordable to the majority of the population on a sustainable and equitable basis. The mistake in Basel Accord was to exercise social policy through regulatory forbearance, by giving credit to housing a lower than appropriate capital weighting. We must have dynamic credit provisioning and better use of Loan-to-value ratios in preventing credit excesses to finance real estate bubbles.

For emerging markets, I draw two immediate conclusions from the current crisis. The first is that the universal banking model has serious problems for two fundamental reasons. One is that you cannot mix the culture of investment banking (where risk taking is key) and commercial banking (where prudence is vital) under one roof. Glass-Steagall was not fundamentally wrong. The other is that not every banking system can become totally wholesale - the bulk of the banking system must remain retail and therefore concentrate on what Main Street banking does or should do well - protect the interest of depositors and serve the bulk of the

corporate sector, especially small and medium-sized enterprises that provide mainstream employment in the real economy. It is no longer about quick money, but long-term returns on a safe and steady basis.

The fourth key lesson is that even though unregulated financial innovation was at the heart of the current crisis, we cannot conclude simply that all financial innovation is bad. The plain vanilla type of mortgages and mortgage-backed securities are performing relatively well in the US and markets such as Hong Kong and Malaysia. Asset securitization can become the backbone of a robust corporate bond market in Asia as well as means of reducing the maturity mismatch of the banking system when it finances home-ownership. Just as there is a national drug administration to vet and approve new drugs, there is no inherent reason why financial regulators should not examine, approve and exercise proper due diligence on new financial products. As long as such products do not have systemic implications, they can be traded on an over-the-counter basis. But once these products reach a certain level of scale, these should be moved onto net clearing arrangements with centralized counter-party arrangements to monitor counterparty risks and levels of leverage. Opacity is fine for private modesty, but where public health is concerned, transparency and regulation is necessary.

Fifthly, the whole philosophy of financial regulation and the way it functions within the financial stability policy function needs to be examined. The recent trend towards creation of financial super-regulators was due to the concentration and conglomeration of the financial industry itself. The present institutional basis of financial regulation created multiple regulators, making the coordination and enforcement of supervision complex, costly and less effective. One of the arguments for super-regulators was that costs to the industry were too high. The answer is now obvious. Higher costs of regulation to LCFIs were still cheaper than the costs of crisis to the public. Hence, it is not the cost of regulation to the industry that counts, but the total social costs (including prevention of innovation and crisis) that matters.

Note that even in countries with super-regulators, you cannot avoid tri-partite coordination between the super-regulator, the central bank and the ministry of finance. Hence, the fundamental problem of financial stability is that appropriate government policy must be coordinated and enforced in order to achieve stability. This cannot be the function of financial regulators alone. If this is complicated at the national level, this is even worse at the global level.

Financial regulators need to think strategically on how to regulate effectively over the whole economic cycle. The current Basle type approach has assumed peace-time conditions as normal, whereas financial regulators need to deal with and prepare for crisis conditions as bubbles emerge. Anti-cyclical mentality needs to be built into the work process, including the necessary budgetary resources. As Churchill used to say, in peace prepare for war, and in war, prepare for peace.

Finally, we cannot allow theory and wishful thinking to advance way ahead of practice and reality. The Europeans did not expect that the US subprime crisis would hit them so badly, until they realized that it was their less-sophisticated parts of the banking system that had purchased large amounts of toxic products and that some of them had become over-dependent on external and wholesale financing. For example, it was the weaker regional German banks and British building societies that had to be rescued from their follies. Clearly, even though there was massive restructuring of European financial oversight and regulation, the sectors that were local and not subject to clear oversight became the most vulnerable to external shocks.

In many emerging markets, the reality on the ground is that commercial banks are still struggling with their basic function of serving retail customers and credit to enterprises, let alone moving to wholesale banking. Emerging market regulators, central banks and ministries of finance are still focused on their daily domestic turf battles rather than understanding that the global game of finance is changing. Global interconnectivity is reality, but mindsets and social and financial institutions are still local.

The reality is therefore that it will take time to change mindsets and institutional structures to fit the new world of financial interconnectivity.

### *One World, Three Paths*

Now that the financial crisis phase is passing, the world has moved into the crisis management and resolution phase. The US and Europe will do whatever it takes to restore order. They will recapitalize banks, use fiscal policy to stimulate the economy, stop the foreclosure of mortgages, engage in regulatory reforms and then start talking about the global architecture. President Bush has called a global summit, comprising the Group of 20 on the financial crisis to be held on November 14-15, 2008 in Washington DC. The Group of 20 was established in 1999 as part of the response to the Asian crisis. It comprised central bank and ministries of finance leaders from the G-8 (US, UK, France, Germany, Canada, Italy, Japan, Russia), EU and China, India, Brazil, Argentina, Australia, Indonesia, Mexico, Saudi Arabia, South Africa, South Korea and Turkey). The goals of the summit are to identify the causes of the problem and their possible solutions. The US considers that the solutions would take the form of a list of principles that countries should adhere to, of which a primary goal is to avoid policies that undermine the policies of the other countries.

Since the US elections was held on November 4, it is unlikely that any decisions made at the summit would bind the new US President.

We come back to the structural issue of how we got to where we are - a financially interconnected world with no global monetary authority and

financial regulator that was not able to manage the risks of global imbalances. Where does China and Asia fit in? I see three potential paths.

### *Status quo*

Although there are signs that there is some willingness to change, I think there is every chance that the status quo in the international financial order will continue. The reason is very simple. The vested powers in the majority shareholders in G7 will not want to let go of power and the emerging markets are psychologically and institutionally not ready to share power. The 1944 Bretton Woods framework was essentially a tradeoff between the opening up of global trade in exchange for finance for development under Pax Americana. There is currently little to trade off between the Emerging Markets and G8, because the surplus countries do not have an alternative to put their excess savings, except with the advanced markets.

Under globalization, debt is the connectivity, but if power is unequal, the creditor is hostage to the debtor.

In other words, I see relatively little change within the next five years to the present international monetary order. The advanced countries will ask the surplus economies to place more savings with the Bretton Woods institutions that will remain under their control. The IMF and World Bank will continue to lend to help emerging markets in problems due to their excessive reliance on external financing. The dollar and Euro dominance will continue and the balance between the two will depend on their respective geo-political strengths.

### *The rise of regional markets*

The second scenario is that the global imbalance will shrink quite dramatically as the US adjusts, so that the surplus of the emerging markets will also shrink, possibly faster than conventional wisdom would suggest. There are several reasons for this. The first is that as real interest rates increase to reflect higher risks, world growth will slow down despite attempts to reflate growth. The second is that the current phase of deleveraging will continue as banks have to recapitalize and therefore the level of capital flows, market turnover and general volatility will decline in the medium term. The third is that the post-crisis shocks will lead to greater inward looking policies, a higher level of regulation and risk-aversion in terms of investments. All this suggests that the emerging markets will adjust back to basic balance more quickly than anticipated.

In this scenario, those emerging markets that take the opportunity to strengthen their domestic financial systems, improve domestic corporate governance, develop their social infrastructure and maintain social stability will be the major winners. Advanced country pension and mutual funds and surplus emerging markets will still have to park their savings in markets with high growth potential that offer stability in property rights.

But building strong domestic financial markets is easier said than done and it will take time. This is because emerging markets can no longer simply replicate the wholesale banking model that has proven to be fragile. One of the side effects of the current crisis is that it has forced a complete re-think of how emerging market financial structure should be deepened to build in high levels of efficiency, robustness and transparency, without incurring excessive levels of government intervention. In other words, it requires a complete overhaul of the current forms of domestic governance.

Here, strengthening of domestic markets is still key and pre-condition to stronger global markets. But national strengthening is really a building block to regional strengthening, as economic geography still counts. South-South dialogue between emerging markets will increase because of lack of willingness of the present powers to change the status quo. Within Asia, there will be greater monetary and financial cooperation, not ruling out a regional currency arrangement.

I see that one basis for development of regional financial cooperation is the creation of regional Financial Stability Forum (FSF) arrangements, whereby ministries of finance, central banks and financial regulators meet regularly within each region, so as to support deliberations of the FSF at the global level. These regional discussions will form the basis for future regional cooperation.

It is possible that the G-7 may concede to some power sharing in the Bretton Wood institutions in order to coordinate policies to address the global imbalance. This will certainly come in the form of greater pressure on exchange rate revaluation for the emerging markets, particularly China. My own personal view is that exchange rates matter less than real total factor productivity growth. As long as a country's total factor productivity is growing, changes in the nominal exchange rate should stably adjust to reflect such changes. For example, global imbalance will be adjusted partly through a gradual increase in Asian exchange rates as a bloc against the US dollar and the Euro.

This second scenario will take at least 10 years to unfold.

### *Romance of the Three Regions?*

If, as I personally expect, that regionalism will be the outcome of the current crisis, then within the next two decades, the global monetary and financial architecture will be radically different from today. By then, there will be at least three global reserve currencies contending for hegemony. Notice that I have not specified what the third reserve currency would be. Within Asia, it could be the Japanese Yen, the Renminbi, the Indian rupee or even an Asian currency that include large components of Korean, Middle East and ASEAN currencies. In Latin America, it could be the Brazilian real or Mexican peso that form the core of their regional currencies. Given the

complex politics in each region itself, it is not clear which and how these currency arrangements will emerge.

Nevertheless, since Asia remains a dynamic fast growing region, there is no doubt in my mind that for regional growth to be stable, some form of monetary cooperation and regional financial market is inevitable.

At that point of time, diversified global portfolios will comprise a more equal distribution of assets at the geographical level, so that the investor is not exposed excessively to only one or two major currencies, but at least three, if not four, global reserve currencies and related assets. The competition for resources in this more equal environment would offer better choice for investors globally.

### *Conclusion*

Having studied financial crises almost all my life, I come to the conclusion that crisis is ultimately political in nature. Even if it erupts as a financial crisis, its resolution would inevitably be political because the distribution of losses would be highly arbitrary and controversial. Ultimately, all financial crises are crisis of governance. Financial crises prove that financial engineering cannot create perpetual prosperity. It takes good governance, at the corporate, financial and social level, to generate long-run sustainable stability. All crises have to be solved by governments, and if not satisfactorily, by the next government.

In one sense, I am hopeful. The present financial crisis has creatively destroyed many myths and out-dated theories. Free-market fundamentalism has truly been marked-to-market.

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\*\* Courtesy of the writer



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Andrew was Chairman of the Securities and Futures Commission of Hong Kong from 1 October 1998 to 30 September 2005. Between October 1993 and September 1998, he was the Deputy Chief Executive responsible for the Reserves Management and External Affairs Departments at the Hong Kong Monetary Authority. Between 1989 and 1993, he was Senior Manager, Financial Sector Development Department at the World Bank. From 1976 to 1989, he held various positions with Bank Negara Malaysia, including Chief Economist and Assistant Governor in charge of Bank and Insurance Regulations.

Andrew chaired the Financial Stability Forum's Task Force on Implementation of Standards in 1999. From October 2003 to September 2005, he chaired the Technical Committee of the International Organisation of Securities Commissions (IOSCO). He currently chairs the annual OECD/ADB Roundtable on Capital Market Reform in Asia.

Andrew has an honorary doctorate from the University of Bristol and was awarded the title of "Datuk Seri Panglima" by the Yang di-Pertua Negeri Sabah in Sep. 05.

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