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TECHNOLOGY, MARKETS AND GOVERNANCE

By

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Abstract

- *Technology has driven globalisation and transformed traditional market structures. Companies can theoretically now access capital directly from the investor. This creates tremendous challenges for existing exchanges and for securities regulators. Traditional merit-based listing is shifting to a disclosure-based regulatory framework. The onus is now on corporate governance, the quality of information disclosed and investor education. Markets operate on trust. But how can the average investor evaluate the trustworthiness and ethics of new businesses built on concepts of technology that few are capable of evaluating? Will ethics, and existing corporate governance and regulatory structure suffice? The paper will explore the implications of these questions for domestic and global markets.*

Mr Chairman,
Distinguished Guests,
Ladies and Gentlemen,

I am extremely honoured to be invited to participate in such an important conference on governance, with so many distinguished academics and policy makers from the Asia Pacific region. I am particularly honoured by following Tunku Aziz, Vice Chairman of Transparency International, who spoke yesterday on “Reforming Political Governance: A Business Necessity”. Those of you who are interested in historical coincidences might be interested to know that not only did I follow Tunku in my career as a central banker in Bank Negara Malaysia; I had the privilege of being his student in Sabah College in what was then British North Borneo. Moreover, our paths crossed once again on his favourite theme of Transparency and Accountability, which was the subject of a Working Group convened by the Group of 22, co-chaired by Bank of England Deputy Governor Mervyn King and myself, to look into the international financial architecture post the Asian crisis.

I am sure that many of us would agree with Foreign Minister Surin that the Asian crisis was a crisis of governance at both the private and public level. This is a subject that I have been grappling with as a former central banker involved at the heart of negotiations over the international and regional financial architecture during the Asian crisis and now as a market regulator. The Asian crisis was a crisis of markets and of governance, probably aptly summarized as markets not trusting governments and governments not trusting markets. It may be useful to repeat my favourite quote from Adam Smith's *Wealth of Nations*:

“What is the species of domestic industry which his capital can employ, and of which the produce is likely to be of the greatest value, every individual, it is evident, can, in his local situation, judge much better than any statesman or lawgiver can do for him.”

In most cases, the invisible hand of markets is smarter than governments, but the qualifying phrase here is “in his local situation”. Local difficulties can today become overnight global crises. The individual behaves according to local information, but in aggregate or in herds, excesses occur, and such excesses are more often than not, classic fallacies of composition. Nevertheless, history has demonstrated time and again that market excesses require government intervention. The question of market governance is aptly the burning issue of the day. How has technology changed the rules of the game?

Technology and Markets

We live, as the cliché says, in a time of change, with technology as the defining element. Technology is rewriting the national and global balance sheet. The Asian crisis was a crisis of globalization cracking open local markets through capital flows. We need to recognize that financial markets are like networks. The global network is a patchwork of local networks that have not been designed to operate on global capital flows.

Like power grids, when large currents flow up and down the network, those weaker links are likely to blow a fuse. In other words, the Schumpeterian “creative destruction” by the combination of technology and entrepreneurship has re-written the old order, eroding old franchises and elites and creating new structures where the rules are as yet unclear. This paper is a preliminary attempt to think through where the rules of the game are broadly heading, using the securities markets as an example where technology has driven globalisation and transformed traditional market structures.

Technology is changing markets and society so fast that no one can claim any defining insights into the future. Drawing upon whatever information is available on a rapidly changing environment, there appears to be several important trends: -

1. Information, and hence knowledge, is a fundamental market requirement;
2. Technology is creating globalization, forcing convergence of standards;
3. Technology eliminates the traditional intermediary, and hence old franchises and elites;
4. By flattening structures, through empowerment of the consumer, worker, investor or manager, old hierarchical structures are being replaced by new entrepreneurial and market institutions that must operate in market space, not market place. In other words, time and geographical boundaries, including legal jurisdictions are fast eroding through the World Wide Web.

5. Since change is so rapid and complex, social or system stability will therefore depend upon the ethics or knowledge foundations of the individual. In other words, investor, consumer or mass education will ultimately be the key to market or social stability and sustainability¹.
6. But we still need proper due process to ensure that the rules of the game are obeyed in the market economy.

The above propositions can be demonstrated using the securities markets as an example how technology has changed the market structure.

Traditional securities markets have been the juncture where suppliers of capital (investors) met the capital needs of entrepreneurs. Because knowledge of the quality of enterprises and investors was scarce, intermediaries such as stockbrokers, analysts, credit rating agencies, media, etc converged at a single place to exchange information and property rights – the stock exchange. In network language, it was the economic benefits of centrality of hubs within networks. As mutually owned institutions, the exchanges evolved rules and regulations to protect the intermediaries/members and investors from excessive credit and payment risks and regulated behaviour against fraud and misconduct. But over time, these rules and regulations have become protective of vested interests at the expense of the investor and the enterprises, as costs of intermediation remain far higher than justified through alternative technology.

Global Internet users have grown from 13.9 million in 1995 to 68.7 million in 1997 and a forecast of 228 million by 2001². Online trading by retail investors have been attracted by the inexpensive commissions and faster trade execution. In the US, more than 11.2 million on-line accounts traded 135 million on-line transactions in 1999, double that the previous year and accounting for 25% of all NASDAQ turnover. In Korea, online trading today accounts for 50% of all securities transactions.

At the same time, technology has created alternative trading systems or electronic communication networks (ECNs) that can compete directly with traditional exchanges with lower costs, greater transparency and operating efficiency. ECNs offer after hours trading to small investors as well as links to online brokerages and other ECNs. There are as many ECNs today as existing stock and derivative exchanges in the US, with both ECNs and traditional exchanges seeking alliances in the race of create global liquidity.

As a result, we are seeing major changes in the structures of Exchanges with demutualisations and public listings (e.g. HKE, ASX, SGX), cross-border alliances with other Exchanges or groups of Exchanges (such as EUREX and CBOT, or SGX/MATIF & CME) to create regional or global exchanges or new boards for new enterprises, such as Tokyo MOTHERS, Hong Kong GEM or the latest Taiwan TIGERS.

What this means from the investor point of view is one of global choice. Borders that once protected the status quo are disappearing as electronic connectivity has placed securities and futures trading available not only to the specialist broker or exchange, but to an individual trading at home through his or her Web screen, mobile phone or PDA.

¹ In Chinese philosophical jargon, the conflict is between the Legalists elites who shape the masses, or the Confucian model where morality of the individual shapes the state.

² Source: International Data Corporation (IDC)

Technology and IPOs

But nowhere is the Web more creative than in the IPO process. Currently, the investment bankers' fees for a company seeking listing on an exchange varies from 2.5% in Hong Kong to 7% in New York, excluding accounting, legal and other costs.

There now exists new intermediaries, such as Direct IPO, Hambrecht and Quist and Direct IPO, and Direct Stock Market, which assume all responsibility for all details of its client company's direct public offering from consulting to managing the IPO process at lower costs. Some companies have tried direct fund raising approaches to investors through the Web.

These new channels provide the investors and fund-raiser an almost unlimited choice, new opportunities, and ease of entry and exit into markets hitherto almost impossible except to a small elite. Traditional exchanges feed off a merit-based IPO system, whereby companies have to prove that they have a good track record before they are allowed access to public investment funds. Currently, companies with no track records and only technology concepts can access markets almost immediately. If one market or jurisdiction will not accept them, they can access them in another market, jurisdiction or directly through the Web.

How can a regulator protect investors and provide a fair, transparent level playing field, especially where there are no physical boundaries?

From Merit-based Listing to Disclosure-based Regulatory Framework

Traditional listing is merit-based, with a listing committee holding out a "quality of assurance" for companies that wish to access public capital. However, as businesses and technology become more complex, the regime has shifted to a disclosure based regulatory framework, where the onus is "investor beware" or caveat emptor.

But is disclosure alone enough? The US market is a good example of a disclosure-based market. Investors can access publicly filed prospectuses, company information, news etc. from the SEC or via the Internet in various forms and sources. But, as a senior SEC regulator used to say, full disclosure of bad accounts is still bad transparency.

Accountability is not therefore just about transparency. If the quality and quantity of information disclosed is not up to international standard, such transparency may not be adequate for the investor. One therefore needs, as Mervyn King liked to say, to be transparent about transparency. In other words, providing data is not enough, one must be transparent about the meta-data, the basis and standards by which information is classified and disclosed.

Corporate Governance, Transparency and Market Trust

What I am trying to say is that technology has driven markets to their core logic. Fair, transparent and efficient markets require a strong corporate governance culture, where ethics, timely and accurate information disclosure and investor education play important roles in mutual reinforcement of trust in markets.

With a bewildering array of choices, investors will gravitate towards those markets and firms where there is trustworthiness, confidence and ethics. Those markets and firms who fail on

the job of ethical treatment of their customers, investors, consumers and workers will eventually not survive. They may not fail overnight, because many firms and markets are still protected by antiquated laws, rules and consumer inertia. But I am convinced that the regulatory framework will move towards the paramount logic of competitive markets.

Will ethics and the existing corporate governance and regulatory structure suffice?

Is the status quo an option? How can an investor distinguish between one hi tech concept or another if the IPO is done directly over the Web without some intermediary to provide some form of quality assurance? The cornerstone of any fair and efficient market is the availability of timely, true and accurate financial information to investors so that they can make a fair and informed decision. But how can an investor be sure that such information, superficially transparent, is accurate and reliable?

Thus, the fact that the managers and controlling shareholders are honest or fair is not enough. They must be seen to be fair and honest, and the market must have the assurance that this would be so. For example, there is less corporate abuse of minority rights in the US because of the litigious nature of class action suits, which empower the minority interests to protect their rights.

Thus, the regulatory and institutional structure – essentially the incentive structure - must be designed in such a way that trust is rewarded and fraudulent acts are punished. But no regulatory and disciplinary framework is crime-proof, nor can investors be protected from their own carelessness or greed. Inevitably, technology forces a major re-think of regulatory policy. As the old saying goes, we cannot legislate good behaviour. But a four-prong approach should be taken so that the average investor can evaluate for himself the trustworthiness and ethics of new business.

- a. *The quality of information provided must be timely, consistent, relevant and material. This implies that information must be disclosed according to uniform standards of accounting and transparency.*

Unfortunately, the quality of information disclosed by listed companies are all according to domestic accounting and legal requirements, which are not consistent internationally. Because the quality of audits is also uneven, there is little assurance that condition (a) can be fulfilled anytime soon.

Fortunately, this problem has been recognized, but the magnitude of the problem in implementation of standards, in accounting, legal and corporate behaviour, is very large. I commend to you the report of the Financial Stability Forum Task Force on Implementation of Standards, which I hope will soon be available on the BIS Website.

Disclosure is all about transparency, consistency, timeliness, and accessibility of both quantitative and qualitative information. The onus of data disclosure is on the provider, but to be fair to all, since there is a cost of such disclosure, the procedures of selection of content, processing, classification, analysis and release of information should be subject to a “due process” of consultation and legitimacy before such codes or rules are formalized. Society must be aware that because information is the lifeblood of markets, there is a cost to production of good quality information and that resources must be allocated to its production and quality control.

In sum, we need to improve not only the quality of information, but also the meta-data (the processes by which information is classified and analysed) and also the institutional structure of information (such as independent audits) before the standards of transparency are consistent on an international basis.

b. *The Corporate Governance and Regulatory Structure must be geared towards corporate citizenship, combining entrepreneurship with social responsibility*

Corporate Governance is a shared responsibility between management, shareholders, stakeholders, investors and the corporate regulators. The system by which companies are directed and controlled (involving ethics, codes of conduct, rules and laws), the rights of shareholders are preserved, equitable treatment of shareholders, proper disclosure and transparency are defined not simply by law, but by market practice, codes and ethical norms. Such norms are now converging on a global basis. Increasingly, global investors will not tolerate the paternalistic behaviour of large family shareholders of Asian companies who assume that they can afford to ignore the rights of minority interests. Global shareholders expect that it is the responsibility of the board to protect the interests of all its stakeholders fairly, and that the company will behave like any good corporate citizen, with ethical social responsibilities.

There is a tendency to place the onus of governance solely on the enterprise and its management. The Asian crisis did not occur just because Asian corporation decided to over-borrow. There was strong historical, taxation, legal and political reasons why Asian corporations borrowed to expand market share. And as former US Treasury Secretary correctly pointed out, for every bad borrower, there is a bad lender. We cannot depend on ethical foundations of the controlling shareholder, the top management and employees alone to develop ethical, stable and trustworthy corporate citizens. Checks and balances need to be put in place at private (internal controls and independent audits) and public levels (anti-trust laws) to reinforce corporate citizenship.

Technology has created the rise of the knowledge enterprise, where employees are on a life-long learning curve to produce knowledge-based products and services for the consumer. Increasingly, markets and new institutions, with the help of technology, will help to differentiate between companies that behave ethically and those that do not. The disclosure and 'trust' track record of buyers and sellers in eBay demonstrate the ability of markets to reinforce this trend. In the end, a combination of market and official incentives/sanctions will shape corporate behaviour better than ethics alone.

c. *The informed investors or consumers ultimately determine the efficiency of markets. They, rather than the regulatory authorities, are the true checks and balances of healthy markets. Investor or consumer education must be a high priority of the public sector.*

It is no coincidence that the markets that produce the highest quality goods and services have the most discerning consumers. Producers of goods and services go for quality because their consumers, investors and employees demand no less. Thus, in a world of competitive knowledge societies, the investment in the education of the consumer, the investor and employee pays the highest social returns.

The rise of hi tech ventures means that regulators by definition cannot evaluate the success or failure of such ventures – only the market can do so. But the market cannot do this efficiently, if there are low standards of investor education. Investors need to know where to go for information to allow them to make their investment decisions. They need education to understand the opportunities and the risks, and the capacity to understand what the company they are investing in does, its fundamentals and prospects.

Over time, I have learnt from personal experience that social growth is all about social goals and the strategy to achieve them. Similarly, the value of high growth enterprises is not only their strategy to achieve growth, but also their capacity and ability to do so. Regulators cannot pretend that they can extrapolate the future better than the market. Hence, we can play an important role in the education process, working with the key market participants and stakeholders, such as exchanges and market intermediaries. We all have a stake in improving:

- Investor education programs
- Working with education institutions such as investor interest groups and universities; and
- Working through the media or the Web

The discerning investor is trained at a young age, but currently, personal investing is a hit or miss affair that one learns only after one leaves school. There is now greater awareness that retirement saving should be planned earlier and investment choice should be within the control of the investor. Hence, we are beginning to think about introducing investment as part of school curriculum. The Hong Kong SFC has initiated an electronic Investor Resource Centre (eIRC) to provide through the Web the whole range of investor education material, self-training modules and hyperlinks to exchanges and professional institutes and regulatory material, so that investors can avail themselves of professional tools previously accessible only to the elite. Some of these will filter into the school curriculum.

d. The regulators must change the way they work and use technology to strengthen regulatory goals.

Regulators are as much in tech-shock as any other citizen. Increasingly, they have begun to recognise that the Internet is doing away with jurisdictional borders. The more they try to regulate the old-fashioned way, the more there will be regulatory arbitrage – flight beyond borders. The more we try to protect the status quo, the weaker our competitive edge. We are at the edge of a paradigm shift where the New Economy is gathering momentum. Those in the Old Economy that embrace change will survive – those that reject it will be displaced.

Remember when retail price maintenance (minimum prices) was thought to be in the interest of consumers? Today, regulators are more concerned about anti-trust behaviour and the ability of producers to be competitive, so that there can be better service and product quality and creation of new jobs. In recognition of a global market, regulators and governments when formulating their policies for the Internet and the networked technologies need to consider the harmonisation of regulatory standards. This would make mutual recognition of standards important and improve competition, reduction of costs, and increase the confidence of consumers.

In modern-speak, regulation is a derivative service – it is a service to the financial services sector, which is itself a derivative of social needs. As a derivative service, it thrives when the underlying financial sector or the economy is healthy. Technology has changed society and the economy itself. Hence, regulations and the regulatory approach must change through technology.

If we believe, as I do, that markets are the right way for society to evolve, then the regulations must be shaped in such a way as to facilitate innovation and growth, whilst preventing misconduct and crime that harms others. How we do this in a just, civil and vibrant society is an ongoing question that all of us are searching for the key. I welcome your comments and suggestions.

Thank you.