Feature section

Information technology in the Asia-Pacific: implications of the financial crisis
Learning from singularities: the example of the Asian Financial Crisis

The Asian Financial Crisis of 1997/98 has been an unprecedented event in the history of the information technology and telecommunications (IT&T) industries. In this sense it can be regarded as a singularity—a significant one-off event with substantial repercussions. We can readily think of other unique or unprecedented events such as the City of London’s ‘‘Big Bang’’ financial deregulation in 1986, the Year 2000 problem, the adoption of the Euro, the Auckland CBD’s power outage in 1998, and the Dow Jones 10 000 problem. Although, by their very nature, we do not expect singularities to repeat themselves, these examples share certain generic characteristics: they have serious economic implications; they involve multiple countries; they typically affect very many players; their impact varies substantially from player to player; and many players do not anticipate or plan for them adequately. One important result of these characteristics is that singularities represent both serious threats and attractive opportunities for business. This alone is a good reason for trying to learn from singularities.

We can expect careful study of singularities to teach us a variety of lessons. We note just two as examples. First, investigation of the differences between those who recognised a particular singularity as a risk at an early enough stage compared with those who recognised it late should provide us with lessons on environmental scanning and environmental risk assessment. Study of the different ways in which companies and countries coped with a given singularity should provide insights into the management issues involved. As we know, part of the difficulty with the Year 2000 problem has been the lack of established experts to guide companies and a complete lack of precedent by which companies can judge proposed solutions. Hence, how should we manage the unprecedented?

A second example of lessons we can learn from singularities relates to the opportunity they present to capitalise on the vulnerability of others. Singularities inevitably leave some players less able to cope. Is there a set of strategies by which stronger players can take advantage? Under what circumstances is merger and acquisition to be recommended? Under what circumstances might one firm offer its services commercially to help others cope with a singularity?

One of the difficulties in trying to learn from completely unanticipated events such as the Asian Crisis is that it is rarely possible to immediately launch a rigorously developed
research programme. In the first instance, we need exploratory studies and analyses to help us understand events as they are happening and deter us from jumping to conclusions. It is therefore necessary to be opportunistic, to undertake “quick-and-dirty” data collection efforts, to draw upon whatever existing knowledge bases have particular relevance to the events unfolding, and to refocus current research projects where possible. More rigorous studies, informed by exploratory analyses, can be developed in retrospect.

While it is unlikely that the Asian Financial Crisis will recur in anything like the same circumstances that obtained in 1997–1998, regional financial crises can be expected to continue to erupt unpredictably. If we are to learn from the current experience, there needs to be widespread understanding of what has actually occurred, and an effort to generate insights from the experience. In this specially commissioned section of this issue, the Journal of Strategic Information Systems offers a starting point for understanding the implications of the Crisis for IT&T in parts of the Asia-Pacific.

The Asian Financial Crisis has arisen from a series of financial shocks which struck specific countries including Japan, Thailand, Korea, Indonesia and Malaysia during 1997 and 1998. Several countries have experienced severe devaluation of their currencies, declines in stock market valuation and failures or near-failures of major financial houses. It has caused extraordinary economic and social dislocation and constitutes a challenge to all industries in the region. What might we expect such a set of events to mean for IT&T? A number of competing effects can be anticipated. At the macro-economic level, contracting economic activity in what had previously been the world’s fastest growing region could be expected to cause reduced IT&T expenditure within the region. One might predict this would be mitigated by export demand sustained by continued growth in IT&T expenditures in the USA and Europe and by greater price attractiveness as a result of devaluation. At the micro-economic level, we might expect that IT&T would be seen by some firms in these countries as a discretionary budget item and hence a candidate for cutbacks. By others, it might be viewed as a source of greater efficiencies and therefore as worth continued investment. By yet others, it might be seen as the basis for securing a strategic advantage over struggling competitors.

At the level of global and regional competition, the question arises as to the extent to which Asia’s sudden fragility opens it to competitive threats. Or to put it the other way around, what business opportunities does it present and for whom? For example, how much business may leave the region and never return? Can less affected countries challenge the weaker economies to become the preferred location within the region for multinational corporations?

The articles that follow, though unable to answer all these questions in full, provide a number of useful insights. The authors were given a broad brief to write about the Financial Crisis and IT&T from any perspective they chose with a view to achieving publication while the Crisis remains current. What follows therefore are three very different articles covering specific views from three countries based on diverse data sources.

Jiro Kokuryo offers a macro-level analysis of IT&T in Japan. He places his description of changes in the Japanese IT&T industry in a longer historical perspective. He makes several points. First, the Japanese economy has been struggling since the early 1990s. It is undergoing wrenching changes as previously unassailable articles of faith such as lifelong employment are discarded. Industries are rethinking their supply chains and divesting
themselves of non-core business. Second, the adoption of open architecture has exposed the Japanese IT&T industry to much greater competition and has resulted in the industry undertaking significant structural change. Partly as a result, outsourcing and the use of packaged software are now increasingly seen as realistic options for Japanese companies. Third, computer-supported new product development, electronic commerce, and other inter-organisational information systems developments are creating new demand for IT&T products and services. In the context of these powerful contextual dynamics, the Japanese IT&T industry has continued to grow several times faster than the rest of the economy. Although there were signs in 1998 that the Asian Financial Crisis was causing contraction even in IT&T, Kokuryō’s longer term perspective allows us to see that this was most probably a cumulative effect—the industry having already absorbed much turbulence in the 1990s. The longer term trends also explain Kokuryō’s optimism that Japan will emerge a stronger and more efficient economy.

Christina Soh and Boon Siong Neo provide current micro-economic data and analysis of IT spending by individual firms in Singapore. Their results suggest that large companies have mostly resisted knee-jerk responses to the Crisis. Most expect to continue to spend the same or more on IT over the next two years. Indeed, they find that companies were more likely to increase spending on infrastructure projects to accelerate them. This reflects a distinct inclination of companies to see IT as strategic and, in particular, as enabling business changes directed at coping with the depressed economic circumstances. Nevertheless, they do see signs that IT expenditures will be cut back in 1999 as a delayed response to the crisis. The longer term issue is whether such cut-backs will be extended or reversed in 2000 and what effects the 1999 cut-backs will have on those firms’ ability to respond when the economy picks up.

Bob Hayward considers this issue of future responsiveness in relation to Australia’s desire to improve the position of its IT&T industry vis-a-vis others in the Asia-Pacific. Based on GartnerGroup’s extensive consultancy contacts and industry analysis activities, he finds that although it has the most mature IT environment in the Asia-Pacific it is seriously hampered in developing the industry by strong negative perceptions, some justified, some not. His argument is that for a country like Australia to develop a strong IT&T industry requires the major multi-nationals to have a substantial presence. What counts therefore is how Australia is perceived as a location for IT&T business. Most of the negative perceptions he identifies relate more to the broader business infrastructure and context and less to Australian IT&T capabilities. Hence, although Australia has a high level of IT maturity and has weathered the financial crisis without serious mishap, Hayward shows us that Australia is not thereby significantly advantaged in the global competition for IT&T profits. There are too many barriers for Australia, and, by corollary other countries such as Singapore, Malaysia and Taiwan retain too many advantages for the regional balance of IT&T power to be significantly altered by the Financial Crisis. A more general conclusion to be drawn from his analysis is that industry policy for IT&T is too complex and cumbersome a tool to permit structural and institutional barriers to be rapidly removed. Australia would have needed to be better prepared in order to take really significant advantage of the slow-down in Asia.

In summary, while the Asian Financial Crisis has had adverse economic effects throughout the region, the IT&T industry has suffered minor damage in Japan, Singapore and
Australia relative to other industries. IT&T continues to be seen as a major opportunity for nation states. There are few signs that the existing regional balance of IT&T power will be upset. The authors of these essays also see IT&T as a continuing opportunity for individual firms. If anything, they suggest that the crisis has helped reinforce the view that IT is a crucial business enabler rather than a painful overhead cost.

The MIS Asia study cited below by Christina Soh and Boon Siong Neo helps confirm the view that the balance of IT&T power has remained unshaken. It provides data to demonstrate that Singapore has remained more bullish about IT than Malaysia, Thailand, Indonesia and the Philippines. Significantly, it also indicates that larger firms, firms with US or European parents, and firms in the more developed countries in the region have typically been more likely to continue to increase spending and less likely to cut back on IT than, respectively, smaller firms, firms with South-East Asian parents, and firms in less developed countries. Hence, the greater the economic strength, the easier it is for countries and firms to cope with the IT&T management issues as a result of a regional financial crisis. The experience of Japan in particular suggests that IT&T industries may be able to absorb some very severe economy-wide dislocation and upheaval.

Viewing the Asian Financial Crisis as a singularity, the evidence suggests that pre-existing economic strength permits IT&T activity within individual firms and national economies to absorb some severe turbulence. This adds further motivation for the already burgeoning trend to increased scale and globalisation. We might also speculate that singularities strengthen perceptions of the importance of IT to firms. It would be interesting to explore whether the Year 2000 problem will ultimately have a similar effect despite the perception that it is IT’s fault.

Many areas of further research suggest themselves. One which would be of great interest would be a comparative study of the winners, survivors and casualties. Crucial questions to address include whether foresight helps—is it possible to predict a regional financial crisis and buffer yourself from it, and if so, how?, and can firms prepare themselves to take advantage of such an event? Another area of research which would be particularly interesting is the impact of one singularity upon another. A prime case would be the impact of the Asian Financial Crisis on the Year 2000 problem where firms in the region are reported to be well behind in their Year 2000 remediation efforts, some even to the point of preparing to go out of business on 31 December 1999 because they have lacked the finances to repair the problem.

To conclude, by their very nature singularities such as the Asian Financial Crisis will always be difficult to research. Naturally, we should seek to deliver some immediately useful results, but our best learning may come after the event. We should therefore seek to learn some generic lessons in managing IT&T in the face of the unexpected because they can have wider applicability.

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