

Telecoms Infotech Forum

Briefing paper

The Internet & Hong Kong's Future as a Financial Hub

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I. The Internet and Hong Kong

Depending on how the exchanges, their members, and the regulators anticipate and respond to the various scenarios under consideration Hong Kong could emerge as the leading financial center in the region, or at the other extreme it could become marginalized.

– from “Internet Investment Services: Conclusions And Recommendations For Hong Kong” November 1998.¹

OFTA (www.ofta.gov.hk) reports that, as of February 1999, there were 646,899 Internet subscribers in Hong Kong. These numbers, however, are at best a ‘guesstimate’, and are open to significant interpretation. To wit:

In April 1999, *The Industry Standard* reported that there were some 65,000 home users accessing the Internet in Hong Kong. This report, released originally by Jupiter Communications, predicted the number to grow to 175,000 by the year 2000.²

Yet, in April 1998, AC Nielsen reported that there were 850,000 households accessing the Internet in Hong Kong. This number would mean that one in every four households in Hong Kong had a PC *and* a subscription to an Internet account. (The average home was found to have Internet users accessing the Internet 3-4 times each week for E-mail and general Web surfing.) At that time, AC Nielsen predicted more than a million Internet users online in Hong Kong by the middle of the year.³

While in October 1997, IDC Research reported that there were 165,404 people accessing the Internet in Hong Kong – a rather precise estimate. IDC estimated that the total number of Internet users would increase to 314,688 by the end of 1998 and 1.71 million by 2001. IDC also estimated that World Wide Web users – as opposed to Internet users – in Hong Kong would increase to 288,873 by the end of 1998 – again a rather precise estimate – and grow to 1.71 million by 2001.⁴

The raw numbers, while significant, are not the indicators that are important in understanding the impact that the Internet is having – and will have – upon Hong Kong’s development. Indeed, in simple raw numbers, Hong Kong pales as a regional market.

In October 1997, IDC Research reported that there were 5.08 million people accessing the Internet in the Asia Pacific region (not including Japan), thus meaning that the Hong Kong market represented about 3% – by IDC’s numbers. IDC estimated that the total number of Internet users would increase to 8.33 million by the end of 1998 and 24.37 million by 2001.

In January 1997, Paul Budde Communications reported that there were 3.8 million people accessing the Internet in the Asia Pacific. This report speculated that the number of Internet subscribers in Asia was expected to triple between 1997 and 1999, due to the large under-25 age population in Asian countries.

And yet Hong Kong remains an important centre of development. For the moment.

¹ This study was co-sponsored by the Better Hong Kong Foundation, the Securities and Futures Commission of Hong Kong, the Stock Exchange of Hong Kong and the Hong Kong Futures Exchange. A Project Committee was formed comprising representatives from the four organizations.

² International communications’ Headcount.com, June 1998, “*Who’s Online by Country*”, <http://www.headcount.com/globalsource/ecommerce/>

³ The methodology used for the AC Nielsen report was said to consist of a random sample poll of 2,000 Hong Kong residents aged 15-54 during February 1998. A similar but smaller scale study by the Telecommunications Research Project, which maps changes since 1992, comes up with similar figures. See **Error! Bookmark not defined.** Lower figures are reported by the 1998 General Household Survey, *Utilization of Internet service*, Special Topics Report No.20, Census & Statistics Department, Hong Kong SAR (China) Government.

⁴ IDC’s methodology is called the IDC “Internet Commerce Market Model”. This model extrapolates a number by combining such factors as: 1) the installed base for PC’s and other Internet access devices; 2) the number of users per device; 3) the amount of time users spend on the Web; 4) the value of user purchases on the Web; 5) the number of URLs on the Web.

One of the promises of the Internet is that it lowers costs by minimizing transaction costs and expediting distribution processes. Companies are able to cut purchasing and storage costs, for example, by more effectively managing supplier relationships, streamlining logistics and inventories, and shortening planning and production cycles. Another promise held out by the Internet is the elimination of intermediary institutions – in the jargon of the industry, the process of disintermediation. In addition, there exists the promise of reaching new customers, providing the *possibility* for firms to tap new and bigger markets around the world.

Seeing the potential for Internet-working technologies to contribute to the economy – particularly at a time of financial reform – many countries in Asia have attempted to put the development of their information infrastructure at the top of their development agendas. Countries such as Singapore are fiercely pushing ahead with such programs.⁵ This has provided Hong Kong with an important challenge: given that its neighbours are aggressively promoting the development and use of the Internet -- and relatedly of electronic commerce – will this affect Hong Kong's status as an international trade and financial centre? Can the Internet be used to leverage Hong Kong's existing physical infrastructure strengths and locational advantages? Or, does the Internet revolution threaten to negate Hong Kong's traditional advantages?

In this background briefing paper we outline the impact that the Internet may have on Hong Kong's position as a hub within the Asia Pacific region, specifically from the perspective(s) of the financial market and the banking system.

⁵ The Singapore government announced in 1992 its “IT 200 – A Vision of An Intelligent Island” project which aimed to persuade the use of information technology in every aspect of its society.

II. The Internet as a transactions mechanism

Internet technology is revolutionizing the banking and investment services markets. On-line banking, share trading, investment information, and IPOs on the Internet are now a reality. As a result, a wide range of new possibilities for linking market participants, disseminating information, transacting business, serving customers, and regulating markets are emerging. Looming on the horizon are virtual exchanges that transcend borders and regulatory regimes.

The future of the stock market (On-line trading)

For most of the last century, the average full-service brokerage firm has earned hundreds of dollars in commission on an average stock trade. Such fees have been justified as the result of the brokerage firm's aggregated experience, expertise, and guidance. In the 1970s, a number of so-called discount brokers – Charles Schwab and Fidelity Investments prominent among them – challenged the traditional model of broker commissions. Out of this challenge emerged a new model, one that recognized that technology had dramatically reduced the cost of executing a trade.

However, even with the advent of the discount brokers, the stock market remained a place for large, elite institutional investors and, increasingly, managed funds. Large institutions did not trade stock in the same manner as the small retail investor. Institutional investors were not required to go through brokers or through securities intermediaries. They simply connected to the market from their PCs and booked orders on the computer screen. No broker, no intermediary, no spread, and no payment for order flow. Trades were executed directly between buyer and seller, with the electronic trading facility that made the transaction possible taking a fractional fee per share traded.

Until recently it was inconceivable that a similar mechanism could work – or would be *allowed* to work – for individual retail investors. Enter the Internet. Now, instead of intermediaries (in this case, 'market makers') controlling order flow, the advent of companies such as E*Trade and Boom, means that the order goes to whoever posits the best price. Moreover, a wholly digital stock market will inevitably be able to handle more volume than the traditional market – at which point it will displace the traditional market. As a result, in the future, the stock market will not revolve around brokers or dealers or specialists. It will not be limited to a physical location, to a trading floor, even to a single central database. The stock market of the future will take place whenever individuals access each other to trade securities. A seat on the stock exchange of tomorrow will be any chair in front of a computer with a modem.

What this means is that basic transactional and information services will become low margin commodities. As a result of the heightened competition which this will attract, the average commission for traditional brokerage services will fall dramatically, with some estimates suggesting that the average commission for *traditional* brokerage services will decline to less than half of current levels by 2010.

As with the ISP market then, there will be a substantial shake-out and consolidation among Hong Kong brokers. Overall the profitability of traditional brokerage services will be seriously damaged.

And yet, opportunity is knocking: on-line trading volume has surged. Almost 30% of total retail trades were made on-line in the US in 1998, up from 17% in 1997. Moreover, the growth in on-line investing is expected to continue unabated. One study has estimated that there will be over 14 million on-line brokerage accounts, with nearly US\$700 billion in assets, by 2002.

The future of the bank (On-line transactions)

The historical differences between banking and brokerage, pensions and investments, derivatives and underlying assets are becoming increasingly meaningless. As with communication and information services, once separate financial services are now converging.⁶

Not surprisingly then, some on-line brokers are already moving into banking. E*Trade offers mortgage loans, with an on-line application. Virtually all of the top US on-line brokers provide money market accounts with cheque-writing facilities and most offer credit cards. Internet brokers are affiliating with retail banks. Quick & Reilly, now owned by the Fleet Financial Group, plans, for example, to sell bank products on-line and provides consolidated electronic account statements. Waterhouse received a bank charter from the US Comptroller of the Currency even before its acquisition by Canada's Toronto-Dominion Bank. Indeed, Waterhouse National Bank is a "virtual bank" with no branches and about 200,000 customers. Ameritrade is carrying the concept one step further: it will offer on-line customers a choice of providers of banking products.

Which brings us to the *real* threat to banks. Similar to the brokerages, banks have been based on closed user groups and a gatekeeping role. They have made their institutionalized profits through processing and transaction fees. However, with more and more people utilizing automatic teller machines (ATMs) to conduct their basic 'branch' operations, and credit cards to conduct their credit and, in many cases, checking operations, the need for an extensive intermediary network of suburban bank branches has come into question. But if the banks were to curtail much of this aspect of their retail operations, what would there be to distinguish them from a communications, or Internet-working, company? And once this realization were to dawn on the market, why would people trust a bank to be a communications company when they could choose a company whose core competence was communications?

The costs of on-line banking and investment services are dramatically lower than traditional services. At this point in time, transactions costs and annual account management costs appear to be about 20% or less of the costs of supplying traditional services.⁷ Moreover, the operating costs of on-line services decline steeply as volumes grow.

In the financial and banking market of the future, transactional revenues (of all sorts) and some asset-driven revenues (e.g., for fund management, custody and administrative services) will become severely commoditized. Primary profit sources will increasingly be liability-driven (e.g., margin lending) and the result of innovative service bundling. The most successful competitors will offer fully-integrated services (i.e., brokerage, banking, pensions) through multiple channels (i.e., *both* traditional and on-line).

The future of commerce (On-line trade)

The commercialization of the Internet has already delivered impressive results: millions of electronic customers, exponentially growing online revenues, and stratospheric market capitalization. Radical change is now underway in the markets for (among others) books, music, computers, and software.

However, while Internet commerce is perhaps best known for the books, toys, and music it delivers to home consumers, it is in business-to-business commerce where the Internet is having its most profound impact. To cite one recent industry article: "Thousands of travel agencies, offline and on, are caught in a market-share tug of war with the major airlines. The insurance industry looks to sever its ties with a network of commissioned agents. Auto dealerships are shifting focus as sales move online. The daily newspaper industry is watching its US\$19 billion classified ads business gravitate toward online go-getters such as eBay and Autoweb. A small Web-based electronic catalog is turning a US\$15 billion chemical industry upside down."⁸

The reason for this turbulence is the emergence of business sector 'infomediaries', who exploit the possibility of the new networks by targeting – and shortening – the old-line supply chain. Thus, Chemdex – a two-year old, 85-person, Web-based virtual warehouse for the global life-science supply market – not only has an online product inventory five times greater than that of the industry's biggest paper catalog, it is slashing buyers' transactions costs for a typical purchase from US\$100 to US\$10; offering small manufacturers new global shelf space; and saving researchers valuable time. It is also seen to be triggering overall market growth as inventory problems are removed and more players buy and sell through an electronic warehouse.

And what Chemdex is doing for the chemical market, MetalSite is doing for steel, Instill for food services, pcOrder.com for computers, and Plastics Net for plastics. But, what exactly is an 'infomediary' (or 'Net-based business), and what are they doing to the value chain? Neither of these questions are as easy to answer as they might first appear for the entire market is in flux. From yesterday's favoured 'push'-technology, to the current flavour of the month, 'portals', and tomorrow's fad, 'virtual communities', there is an on-going attempt to re-create closed user groups. Even if these groups are only virtually closed.

Infomediary Potential for Internet-based Businesses

Type	Advantages	Disadvantages
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⁶ However, the development of fully-integrated financial services will require an integrated framework for regulating financial institutions and markets. The UK, for example, is moving to consolidate the regulation of financial services under one super-authority. In Hong Kong, the immediate requirement is for coordinated banking and securities market regulation.

⁷ The Hong Kong commissioned study, *Internet Investment Services: Conclusions and Recommendations for Hong Kong*, November 1998, noted that "The commission for trading 1,000 shares on-line through one of the market leaders ranges from US\$8.00 to US\$29.95. For example, Ameritrade's commission is US\$8.00 per trade, Fidelity currently charges "active traders" US\$14.95, while Schwab's commission for on-line stock trades is US\$29.95. This compares to the average commission charged by full-service brokers of US\$284.00."

⁸ "Are you next? 20 industries that must change," *Business 2.0*, March 1999, p.44.

Portal	<ul style="list-style-type: none"> • High traffic generated by good marketing skills • Frequent visits by customers • Broad range of topics, which provides potential for broad profile • Strength in building partnerships • Innovative and risk taking 	<ul style="list-style-type: none"> • Little experience building trust-based relationships • Lots of trial, not much loyalty • Little to no experience managing profiles • Historically vendor focused versus customer focused
Virtual Community	<ul style="list-style-type: none"> • Customer focused rather than vendor focused • Strong trust-based relationships • Innovative and risk taking 	<ul style="list-style-type: none"> • Small traffic flows • Depending on scope, may be too narrow to build adequate profiles • Unproven database-driven marketing and relationship-building skills
Transaction aggregator	<ul style="list-style-type: none"> • Profiles include transaction data • Skilled at building partnerships • Skilled at handling transactions • Innovative and risk taking 	<ul style="list-style-type: none"> • Many are not broad enough • Although trusted to enable transactions, not necessarily a trust-based relationship • Profiles show transaction history only • Unproven database-driven marketing and relationship-building skills
Advertising Network	<ul style="list-style-type: none"> • Understanding of tools and skills required to capture customer information • The infrastructure to capture information across Web sites • Broad perspective on consumer behaviour • Experience managing networks of business relationships • Innovative and risk taking 	<ul style="list-style-type: none"> • Profiles contain usage data only, no transaction data • Completely vendor focused rather than customer focused • Not a trust-based relationship – no brand-name recognition or awareness

Source: *Business 2.0*, March 1999.

Several trends are combining to reinforce both the demand for, and the convergence of, the services outlined above:

- The penetration of personal computers and Internet connectivity is growing significantly;
- The convergence of communications services (telephony, cable, satellite TV) combined with intense competition among Internet service providers will drive down the cost of on-line access;
- Concerns about the reliability, security, and quality of on-line services will decline; and
- Increasing numbers of "Internet generation" consumers will be regular users of electronic banking and shopping.

Young, sophisticated, computer-literate people will become the predominant investors and consumers in Hong Kong. They will have high requirements for convenience and control over their finances. Many will be active investors, intense users of information, and interested in a wide range of securities, derivatives, and financing options.

III. Regional hubs

Given its locational and facilities advantages, along with one of the world's most advanced telecommunication infrastructures, Hong Kong's contemporary success has rested on its role as an international trade and financial hub.⁹

Hong Kong Financial Market Indicators

- 334 overseas securities and commodity dealers, 115 overseas insurers, 1,400 unit trusts;
 - One of the four largest gold markets in the world;
- Fourth largest market in volume of external banking transactions;
 - Fifth largest market in foreign exchange transactions;
- Ninth largest in stock market capitalization, and the second largest in Asia;
 - Capital-raising centre for the mainland.

Hong Kong's competitive advantages include efficient transportation, access to international news and financial information, advanced telecommunication services, a simple and low tax system, and a quality workforce with international exposure. To facilitate business operations, the Government has invested heavily in improving the territory's physical and business infrastructure. It launched the Helping Business Program to increase administrative efficiency and cut red tape.

A Global Business Centre

- 924 regional headquarters as of June 1, 1997;
- 474,335 companies registered in March 1998;
- 666 new overseas companies established in Hong Kong in first 11 months in 1997;
- Over 300 international conventions and exhibitions each year, e.g. the World Bank and the International Monetary Fund annual meetings in September 1997.

Hong Kong is an advanced user of communication services. Market penetration rates for telephone, fax, pager and mobile phones are all amongst the highest of the world. Annual investment in telecommunications infrastructure was estimated at HK\$19 billion (US\$2.4 billion) in 1997. In order to stimulate investment and competition, the Government has promoted deregulation in the industry. New communications services also bring versatile new technology to businesses and consumers. In March 1998, iTV was launched, the world's first interactive television service.

⁹ Hong Kong has long been an important entrepot. Over 800 sailings, 100 flights, 35 trains and 26,000 vehicles travel across the Hong Kong-China border daily. It is also the third busiest telecommunications traffic border in the world. Furthermore, approximately half of mainland China's exports are handled by Hong Kong. In 1997, 95 per cent of Hong Kong's total re-exports either originated from or were destined for China. Government Information Centre, 4 November 1998, "Hong Kong and China Economies", <http://www.tdc.org.hk/main/economic.htm>

A Regional Telecommunication Hub

- 14 satellite broadcasters uplink their signals to Asia;
- **Cable network offers up to 37 channels;**
- First major city to have a fully digital telephone network;
- **Over 2.16 million mobile phone users as of early 1988;**
- **Seventy telephone sets for every 100 people, the second highest in Asia;**
 - Nine fax lines per 100 telephone lines, the second highest in the world;
- **1.9 million mobile phones, one of the highest market penetrations in the world;**
 - 100 Internet service providers;
 - iTV launched in March 1998.

Asian Transportation Nexus

Hong Kong already has the busiest port and one of the busiest airports in the world. (The Hong Kong International Airport at Kai Tak (open until July 1998) was the busiest airport in the world in cargo throughput and the third busiest in number of passengers.) Given its strategic location in Asia and proximity to Southern China, Hong Kong has successfully exploited its position as an ideal transportation nexus for passengers and goods.

Bypassing the middle-man

However, China's determination to develop its national information infrastructure and to continue to accelerate its trade with the world, poses a threat to Hong Kong, in its role as the mainland's trade facilitator. Successful adoption of E-commerce on the mainland, for example, would provide international traders with the opportunity to 'move' directly to China without needing the physical facilities offered by Hong Kong. In other words, electronic commerce suggests the potential for Hong Kong's traditional mediator – or gatekeeper – role to be eliminated.¹⁰

Hong Kong faces further challenges from its regional neighbours – particularly Singapore.¹¹ As part of Singapore's "IT2000 master plan", a nation-wide broadband fibre-optic network was built to interconnect every home, office, school and Government agency, making Singapore an "intelligent" island. By early 1997, 100% of business premises in the central business districts were served with broadband backbone connectivity.¹² On 5 November 1998, the Singapore Government launched a S\$9 million program to help local enterprises to integrate electronic commerce into their business operations. The aim of the pilot project is to 'seed' the culture for the mass adoption of electronic commerce among local enterprises.¹³ Singapore's electronic commerce initiatives and sophisticated telecommunication infrastructure have attracted a large amount of business and foreign investment, providing Hong Kong with serious competition. Finally, as the Hong Kong press has extensively noted, Singapore has set its sights on challenging Hong Kong's stock market and financial market status.

Moreover, Hong Kong in the past has done little to fully exploit the excellence of its telecommunications infrastructure. The primary use of the network has been largely limited to phone communications. Electronic data interchange (EDI), which uses the network to transmit electronic documents, is popular among a few large companies such as Tradelink and Traxon. But many small and medium enterprises (SMEs) are still employing traditional trade methods either because of the lack of funds for IT research and development, or because they lack the incentive to adopt IT.

And while Hong Kong has earned its reputation as being among the freest economies in the world through its promotion of laissez-faire economics, most electronic commerce initiatives have so far been driven by the Government. This demonstrates a general lack of support of electronic commerce from the private sector. But ultimately is this really so different from Singapore? There too it is Government that has led. And as elsewhere, with the exception of the USA, a critical mass of Internet and web-users has yet to emerge.

¹⁰ China has been Hong Kong's major market for exports. In 1997, Hong Kong's exports and re-exports with China totaled US\$65,096 million and US\$159,566 million respectively.

Source: Department of Trade Development Council, 24 November 1998, *Hong Kong's External Trade Performance – Statistical Highlight*, <http://www.tdc.org.hk/hktstat/statist.htm>

¹¹ Despite highly questionable methodology, in terms of economic competitiveness Hong Kong was recently been ranked behind Singapore by the IMD Lausanne, April 1998, *The world competitiveness scoreboard*, <http://www.imd.ch/wcy/factors/overall.html>

¹² Wong Poh-Kam, November 1997, *Assessment of Electronic Commerce Developments in Singapore*, http://www.electronicmarkets.org/netacademy/publications.nsf/all_pk/194

¹³ National Computer Board Singapore, 5 November 1998, *S\$9 million local enterprise electronic commerce programme launched*, <http://www.ncb.gov.sg/ncb/press/0511981.asp>

IV. Hong Kong's role as an Asian financial hub

By proactively embracing and exploiting Internet technology, Hong Kong will lead the development of a virtual financial market and will position itself as one of the major hubs.

– from "Internet Investment Services: Conclusions And Recommendations For Hong Kong" November 1998.¹⁴

With technology and the related convergence of investment services developing rapidly, Hong Kong will be impacted in several interconnected ways. First, the wide-spread availability of on-line services in Hong Kong is inevitable. This will intensify competition, not only among brokers but also between Hong Kong and other financial centers – both globally and regionally. It will need to be recognized that whatever Hong Kong does, major US brokers will offer on-line trading in US and London listed stocks, bonds, and mutual funds to Asian investors. They will offer both very low cost transactional services (as E*Trade does) and relationship-based services (in the style of DLJ). The large US retail financial services groups, e.g., Fidelity, Schwab, and Morgan Stanley Dean Witter, are seeking global economies of scale, and in this regard they view Hong Kong as a high-potential market with local competition weakened and distracted by the region's economic and financial problems.

Second, on-line technology will facilitate unprecedented levels of convenience, access to information, and opportunities for integrating services, e.g., brokerage, banking, pensions, and smart cards. For example, in Singapore retail investors can trade shares, transfer money in and out of their brokerage account, apply for IPOs, and check on their share allotment via bank ATMs. However, this means that the customer has to go to the ATM, and the functionality is quite limited. In the US electronic access to both banking and investment services was first by telephone and now by PC (increasingly through the Internet). There PC penetration is high and the services are developing very rapidly, but the customer usually must be at his or her desk. In the UK banks are introducing electronic access via mobile phones, but through proprietary systems. For Hong Kong and many other markets Internet access via mobile phones and other wireless handheld devices, e.g., personal digital assistants (PDAs) and handheld personal computers (HPCs), could be an important solution. Mobile penetration is far ahead of *networked* home PCs.

Third, technology will profoundly affect the cost structure of investment services. As a result, 20 - 30% of retail investors will shift to on-line services by 2010. On-line services then will represent 30 - 40% of Hong Kong's total retail trading volume. However, access to on-line services will also facilitate a shift to foreign issues, composites, and derivatives, meaning that Hong Kong exchanges stand to lose significant volume to foreign markets unless local products fill these needs.

Fourth, a sound legal foundation for on-line banking and investment services will be required. Critical regulatory issues will include price competition, off-exchange transaction matching, and integration of brokerage and banking. Singapore, for example, has established the Singapore Central Depository (CDP). The CDP functions as an on-line "central server" and unifies account clearing. Both information technology and legal foundations need to be established for these unified clearing accounts, including standard protocols for disclosing information about unified accounts, e.g., to financial institutions or regulators.

The upcoming competition in banking and investment services will occur in many forms. Competition between on-line and traditional services is but one manifestation. Competition among on-line service providers themselves is another. Competition between Hong Kong and other financial centers for transaction volumes, investor assets, listings, and offerings is still another. These competitive dynamics are interdependent. Hong Kong's attractiveness to both investors and issuers depends on its liquidity, investor focus (e.g., China-related opportunities), turnover, product breadth, and availability of information. The dynamics are shaped by the characteristics of the Hong Kong market, the players in the Hong Kong investment services market, the goals and strategies of those competitors, and the opportunities that are presented.

Credits

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¹⁴ This study was co-sponsored by the Better Hong Kong Foundation, the Securities and Futures Commission of Hong Kong, the Stock Exchange of Hong Kong and the Hong Kong Futures Exchange. A Project Committee was formed comprising representatives from the four organizations.