

Case studies: London, New York, Singapore, Dubai

chapter 3

As observed in the two preceding chapters, IFS are being provided to the world by a few international financial centres (IFCs) located in the US, EU and East Asia. In this chapter, we present four case studies: London, New York, Singapore and Dubai.

We have chosen these four cities to look at closely because: (a) the first two epitomise what a fully-fledged GFC is, and what Mumbai should aspire to become as it matures; and (b) the latter two offer immediate competition in India's own neighbourhood of a kind that may compromise the emergence of Mumbai as an IFC.

Indeed, if policy-makers and regulators do not take the necessary actions for making Mumbai a credible/viable IFC in the near future, then Indian financial institutions that are managerially capable, and have freedom of manoeuvre, are likely to locate in the two proximate centres within a matter of months. From there they can offer their clients (whose IFS business they do not wish to lose by default) a range of IFS that they cannot offer from India today. Indeed Dubai International Financial Centre (DIFC) is counting on that eventuality materialising. Such a move would compromise, delay, and perhaps even prevent, Mumbai from becoming the kind of IFC that an economy of India's growing stature should have.

1. Summary overview

London has been an important IFC for over three centuries. It was predominant in 1830–1918 when the British Empire covered much of the world. After an interregnum in 1918–70 – when it ceded primacy to New York – it has now recaptured its status as the world's premier GFC. That has been a result of canny opportunism and adept regulation. It exploited the reality that financial markets

in other large economies such as Germany, France, Japan and the US were being over-regulated and over-taxed.

New York rose to prominence as an IFC with: (a) the growing stature of the US economy between 1870 and 1918 – similar to what is happening in China and India today; and (b) relentless American innovation in finance – which is not happening in China or India as yet. Financial innovation in the US (not just New York but Chicago as well) has continued ever since. New York became the world's dominant IFC in 1918 when war-ravaged Europe involuntarily ceded global leadership to America. That baton is now passing to Asia as the 21st century unfolds.

Singapore's IFC emerged in the 1980s and 1990s and is now well established if not yet fully developed. It is still a far cry from London and New York. But it is arguably ahead of Tokyo, Paris and Frankfurt. That is a remarkable feat for a small entrepot economy to have achieved in the space of a mere quarter-century.

Dubai – or more specifically, the Dubai International Financial Centre (DIFC) – is a newly emergent enclave IFC with the resources and infrastructure in place to develop very rapidly in providing IFS to markets in the Middle East as well as in West, Central and South Asia.

Unlike London and New York, the IFCs in Singapore and Dubai have not evolved as a consequence of their historical and geographical legacies, or natural evolution of their market economies at the crossroads of global financial flows for trade and investment. They have emerged as a result of a powerful push by their respective governments to develop IFCs. Singapore has the advantage of being at the centre of

the large and flourishing ASEAN regional economy. Dubai is located in a more volatile neighbourhood. Its political and administrative governance is not based on an established democratic structure, nor on global norms concerning the rule of law. It is based upon the unusual competence of two generations of a monarchic autocracy. But the next generation of leadership is as yet untried and untested. Succession is unclear. DIFC is incipient and has yet to prove itself. Dubai is only at incipient stages of establishing itself as a stable global city whose future is assured. But if its recent accomplishments in other spheres (in a shorter span than Singapore) are indicative, then portents for success are favourable.

Taken together, these four global cities (two old, two new) are natural reference points for a policy debate in India about establishing an IFC and how it might evolve. In a nutshell, Mumbai's IFC should, over the long term, aspire to emulate the City of London. It should operate and be regulated in the same flexible way. But it faces competition from Singapore and Dubai whose capabilities/ambitions are clearer. As noted, that may compromise Mumbai's development as an IFC in the nascent stage if the ingredients for a successful IFC are unavailable or poorly blended. The main such ingredients of course are political, administrative and regulatory leadership. They are required at central, state, municipal, and corporate, levels of governance.

If past experience is any guide, symbiotic relationships will develop across IFCs over the years. The task of global IFS provision is already fragmented into sub-components produced at the most efficient production location and synthesised at the point of contact with the client. Manufacturing in almost all industries is now organised on that basis in a seamless global production chain. Similar complex organisation of IFS production is now technologically feasible and becoming increasingly desirable in terms of cost-effectiveness and efficiency. Given the proximity of time zones, this will generate strong pressures for close working relationships between/among the IFS industry in Mumbai with that in Singapore, Dubai, London and New York.

From what we discern of IFC activity since 1980, it is clear that the emergence of competing IFCs does not necessarily displace work at other IFCs. A study on career development patterns in the global IFS industry insightfully suggests that it is typical for high-flyers to work in a number of IFCs; particularly London, New York and Singapore.¹ They do so for different global financial firms, and establish their own informal working networks, before settling down as senior executives in any one of them. Perhaps as a consequence of such human networks, the growth and development of Singapore as an IFC appears to have created more IFS business for London and New York rather than less. On that basis the emergence of Mumbai and Shanghai as IFCs should be welcomed by London and New York if not by Singapore and Dubai.

But, at the same time, anecdotal and quantitative evidence suggests that Singapore has diverted some business from Tokyo and Hong Kong. Tokyo has not been as global or culturally adaptable in its aspirations and outlook as an IFC. It has not adopted English as its IFC's *lingua franca*; nor is it as prone to financial innovation, or to light-touch regulation, that adapts quickly to changing national/global circumstances.

Similarly, the primacy of London appears to have constrained IFS opportunities for other European centres like Amsterdam, Paris and Frankfurt. These centres have not adapted governance frameworks for their financial regimes, nor their regulatory and tax practices, in tune with rapidly evolving global expectations/standards as London has; nor do they use English for communicating with the world. Though home to large immigrant populations they are not as open to, or as tolerant of, cultural and lingual heterogeneity on the same scale as London and New York. And they have onerous tax regimes that deter expatriates in the IFS industry from locating there.

Evidence from all four case studies – and contra-evidence from IFCs like Tokyo and those in continental Europe – suggests strongly that the use of English is an essential ingredient for the development of a viable

¹These results are from the 'Loughborough Study'.

IFC. That is because English is the default language of global business.

The following four case studies have been presented in order to help policy-makers and the wider public to understand in concrete terms what it takes for an IFC to be commercially viable, competitive and successful; and to guide debates about specific policy aspects important in the formation of IFCs. They are particularly relevant given the coming years of cooperation and competition that Mumbai will inevitably confront in its dealings as an IFC with Singapore, Dubai and London.

2. A closer look at the City of London

London is at present the most successful Global Financial Centre (GFC). It is the world's largest net exporter of financial services, earning a net surplus of about US\$ 31 billion in 2005 from IFS. It leads in international bank lending, consulting on cross-border mergers and acquisitions, and trading/issuing international bonds. It is the leading global currency trading centre, with a 31% market share of total global currency trading.

London's origins as an IFC can be traced back to just before the Napoleonic wars. Edward Lloyd's Coffee House – where maritime insurance was arranged – was established in 1688. The Bank of England was formed in 1694. By the late 17th and early 18th century, economic development in north and west Europe had advanced to a point where surplus savings were being generated. New types of financing needs were making themselves felt simultaneously. This was a period in which European imperial powers were expanding their colonial domains rapidly. Colonisation required substantial risk financing for transport (e.g. railway projects), trade, other infrastructure, as well as for productive investment in agriculture, mining and primitive manufacturing.

In financing commercial activity at home and abroad, London played a significant role in key innovations such as: the limited liability company, organised

equity trading and syndicated insurance. This triggered the growth of public traded securities and of merchant banks to deal in them. London invented the market-dominated financial system now known as the *Anglo-Saxon model*. Individual shipping ventures, as well as such enterprises as the British, Dutch and Danish East India Companies, were financed by equity interests privately distributed among wealthy aristocrats, government personages or merchants from sponsoring countries. Early mining ventures were routinely funded by the issue and sale of shares or participations.

Another need that London met was government financing for countries ranging from those of major European countries to small princely states; often for financing wars. Given the risks and difficulties of contract enforcement, wars could not be financed by equity participation. They were funded by debt arranged by bankers, such as the Rothschilds. Indeed, historians have noted that England had an advantage in waging war against France because of its superior expertise in bond financing with centuries of financing wars through large-scale sovereign bond issues. Such public debt was run down through fiscal surpluses in peacetime. The long history of the UK shows a remarkable ability to doggedly run surpluses and run down the debt/GDP ratio for decades on end in peacetime, which established the credibility required for borrowing of the order of 100% of GDP at the time of the Napoleonic wars, the First World War and the Second World War.

Capital flows in the 18th and 19th centuries involved issuing securities in Europe to finance development in the Americas and the colonies. Infrastructure (e.g., railways) in the US and Latin America, as well as mining, ranching and plantation ventures in the colonies, were financed through share and bond issues in London. In real terms, they would seem enormous even by today's standards.

Global trade, finance and capital flows were disrupted for three decades between the start of the First (1914) and end of the Second World War (1945). Between 1945 and 1957, the US exported capital to Europe and Japan to the tune of over 3% of its GDP for the

Marshall and Stimson Plans alone. A further 5% of GDP was transferred by way of private capital flows as major US corporations established manufacturing bases in Europe. But as domestic consumption in America grew during 1945–60, and as domestic production in Europe revived (much of it being exported to the US to earn surpluses that repaid US reconstruction loans), the US' trade balance with Europe shrank dramatically, thus deepening its overall balance-of-payments deficits.

Faced with a massive expansion of public spending under the Kennedy and Johnson Administrations, and the simultaneous financing of a war in Vietnam, the US Treasury realised in the early 1960s that capital exports to Europe could not continue. The US Treasury had begun encouraging European authorities to develop their own capital markets since the late 1950s. That initiative resonated well in London where the authorities began immediately to revive its role as an IFC.

In June 1963, the first Eurobond was issued in London by *Autostrade*, the Italian state highway authority. British merchant banks (e.g., Morgan Grenfell, Barings, Cazenoves, Flemings, Jardines, etc.) rapidly assumed leadership in Eurobond issues for sovereign, corporate, multilateral and parastatal issuers; not just from Europe but from around the world. That market expanded rapidly. It became so lucrative, that leading American investment banks such as Morgan Stanley, First Boston, Lehman Brothers, J.P. Morgan and Goldman Sachs also set up operations in London in the late 1960s; propelling its resurgence as an IFC. Its role was bolstered by the recycling of petrodollar surpluses via London throughout the 1970s via syndicated bank lending and sovereign bond issues.

American institutions operating out of London were joined in the 1970s by financial firms from Holland, Germany, Japan, France, Italy, Scandinavia and Canada. That second wave was followed by a third through the 1980s and 1990s from Singapore and the developing world. What cemented London's primacy as a GFC in the 21st century was the Big Bang triggered by the Thatcher Government in 1986. It resulted in total

deregulation and liberalisation of the UK's capital, insurance and currency markets and replaced the gentlemanly atmosphere in which business was traditionally done in the City. Professionalism was infused from abroad, mainly the US. London's financial markets were opened to all. That led to the entry of major global institutions (e.g., HSBC and Citigroup) as well as financial institutions from every economy in Europe, Japan and the developing world. An unfortunate consequence was that such opening-up led to the demise (through acquisition) of British owned investment banks which were outclassed by their better capitalised and more professionally run foreign rivals. However, many UK owned commercial banks and mortgage finance institutions continue to flourish in providing retail financial services to domestic customers rather than specialising in IFS.

The capstone for ensuring London's competitive edge in the provision of IFS was laid by the Blair Government in 1997. The Bank of England was made constitutionally independent and responsible solely for the conduct of monetary policy. That was to be done in a transparent manner with no interference by the Treasury. All tasks other than setting the base rate were shifted out of the Bank of England. The frameworks for accountability and for total transparency of decision-making were put into place for this one task. The Bank of England does not trade on the currency market to intervene in stabilising exchange rates, even in times of stress. The burden of financial regulation and supervision was transferred to a Financial Services Authority (FSA) that became a unified single regulator for all financial services. Regulatory unification prevented the fragmentation of finance, avoided regulatory turf wars, eliminated the problem of regulatory issues falling between the cracks when multiple regulators regulate different institutions, and increased benefits from economies of scale and scope.

The FSA developed and applied a unique framework of *principles-based regulation* — a counterpoint to the US and continental European approaches of rules-based regulation that necessitates

Table 3.1: London's share in global foreign exchange trading

April 2006	Global foreign exchange market turnover (\$bn)	% share of markets		
		UK	US	Japan
2001	1,277	31.1	17.7	9.1
2004	2,041	31.3	19.1	8.3
2005	2,103	31.5	18.9	8.3
2006	2,901	32.4	18.2	7.6

Source: IFSL estimates; Bank for International Settlements

codifying detailed rules and regulations that define all financial products and markets. The superiority of *principles-based regulation* (with its inherent flexibility in permitting financial innovation) over *rules-based regulation* (which cannot anticipate every future innovation and therefore tends to suppress it) has been proven over a decade. It has further entrenched London's role as a GFC. It has resulted indirectly in many global banks (investment and commercial) shifting entire divisions for major corporate financing functions from New York to London to take advantage of the regulatory flexibility offered in that location.

Table 3.1 shows the growth of the currency trading market in London while Table 3.2 indicates the share of London in overall IFS.

Why/How did London become the world's pre-eminent IFC? Eight factors made a major contribution to that outcome. They need to be considered carefully by Indian policy-makers.

1. **Location:** London has a particularly convenient time-zone location. In the morning, London talks with Tokyo, Sydney, Singapore, Hong Kong and Mumbai. In the evening, London talks with New York, Chicago, Miami and San Francisco. London daytime overlaps with daytime in Tokyo Singapore, South Asia, the Middle East, Europe and the Americas. These regions account for the bulk of world GDP. Longitudes from Mumbai to New York can be accessed through flights of below 8 hours from London.
2. **Open, genuine participatory democracy**

and rule-of-law: London has a long tradition of a mature democracy with freedom of speech, as well as an array of constitutional and popular checks-and-balances to curb the excesses of government, legislature, and politicians at every level of government. These are firmly respected and enforced without discrimination, fear or favour. London establishes global standards for the rule of law with a capable and sophisticated legal system for resolving commercial disputes. This attribute dovetails well with the contractual requirements of international finance.

3. **A multinational, multilingual workforce:** London has embraced a large population of immigrants thanks to the legacy of Empire and a tradition of providing asylum from oppression in Europe. People of all nationalities and ethnic origin are to be found in the City of London at every level for financial firms from all over the world. Ethnic origin and nationality do not pose insuperable barriers to employment or advancement in the City. That enables London to network and communicate with the rest of the world – including the most remote developing country – more effectively than any other IFC.
4. **Language:** With English having become the default language of globalisation, London (along with New York) has an advantage over other IFCs that operate in different lingual environments. Lack of English has hindered the emergence of Tokyo, continental European centres, as well as other aspirant IFCs such as Shanghai and Seoul.
5. **Capital Controls:** The UK has no capital controls. But, London was an IFC even when capital controls were in force between 1945 and 1979. However global circumstances have changed dramatically since then. In 1945–79, the cities that London competed against also had capital controls consistent with the then-prevalent Bretton Woods system. It is impossible to see London being as successful as a GFC if capital controls (of

Table 3.2: Market share in IFS (percent)

	UK	USA	Japan	France	Germany	Others
% share						
Cross-border lending (Sep 2005)	20	9	8	8	11	44
Foreign equities turnover (2005)	43	31	—	—	3	23
Currency spot turnover (Apr 2004)	31	19	8	3	5	34
Derivatives turnover						
– exchange-traded (2005)	6	34	2	2	12	44
– over-the-counter (Apr 2004)	43	24	3	10	3	17
International bonds – secondary market (2005)	70					
Fund management (as a source of funds, 2004)	8	45	12	5	4	26
Hedge fund assets (Dec 2004)	20	69	1	2	—	8

Source: IFSL, BIS, World Federation of Exchanges, LSE

even a limited sort) were now in place. Today, the Bank of England, the FSA and the UK Treasury do not attempt to even capture data about capital flows of the kind that the authorities in India feel is necessary. But the advent of new regulations aimed at preventing money laundering and the financing of terrorism may change that situation on an exceptional basis.

6. **Openness and lack of protectionism in the IFC:** The Big Bang of 1986 resulted in complete deregulation, liberalisation and opening up of the IFS market in the UK. Some restrictions remain on direct foreign entry into the domestic financial services market. But those can be overcome by acquiring extant financial firms operating in that market. This policy of openness was pursued despite the threat to the survival of venerable British merchant banks. That threat eventually materialised. But it did not deter the authorities from internationalising the City with no preconceived limit on foreign presence, nor any insistence on the participation of domestic institutions, nor on the employment of UK nationals in key executive positions. The internationalisation of its financial system that the UK has achieved is remarkable by any standards; particularly by Indian standards that favour protectionism over openness and efficiency. Table 3.3 shows that of the 347 banks authorised to operate in the UK, only 78 are UK owned and controlled. Many other countries

lack the level of commitment to openness which enables such a level of internationalisation (e.g., most continental European countries and Japan) and are thus unable to compete with London in providing IFS.

7. **Policy innovations of the late 1990s:** The 1997 reforms that: (a) gave the Bank of England statutory independence for the conduct of monetary policy with a single price stability target and without any interference from the UK Treasury and (b) created a single unified financial system regulator (the FSA) have together set global standards for cutting edge central banking and financial regulation. The UK example has, over the last decade, become the ideal model for central banks and financial regulators worldwide. Moreover the FSA's pioneering *principles-based approach to regulation* is now seen as more innovation friendly and less risky than traditional rules-based regulation.
8. **Policy focus on finance:** With a 2005 GDP of around US\$ 2.4 trillion, the UK economy is the world's fifth largest in nominal terms. That is more than three times the size of the Indian economy in nominal dollars; although it is actually slightly smaller in PPP terms. But the role of its financial services industry, and of IFS provision in particular, in generating employment, output and net export revenue is sufficiently large to command the special attention of politicians and government. Whereas the UK has lost competitiveness

Table 3.3: Ownership structure of banks operating in UK

	1995	2005
Total authorised banks	481	347
Incorporated in UK	224	165
UK owned and controlled	142	78
Foreign owned and controlled	82	87
Incorporated outside the UK	257	182
Total Foreign banks	339	264

in manufacturing, and a number of service industries as well (other than publishing, media and entertainment) it has remained competitive in the provision of IFS. This heightened prominence of finance has helped to ensure that the City of London attracts its best professional talent, as well as the attention of the UK's key administrators, political leaders and statesmen. It inclines them toward reaching consensus on far-reaching reforms in the financial services sector in a timely manner (such as the Bank of England and FSA reforms) and continually adjusting/fine-tuning the legislative framework and regulatory environment in keeping with changes in the global environment to assure continued competitiveness. If London lost market share in the global IFS marketplace, this would affect election outcomes in the UK through the large direct and indirect impact of IFS revenues upon UK GDP.

In contrast, whereas financial services in the US as a whole account for a significant proportion of value-added, net IFS exports are small in comparison with the size of the economy (US\$ 13 trillion in 2005) and of gross exports. American administrations and congressional leaders – inclined to be insular – lack a similar dedicated focus on IFS when compared to their UK counterparts. This has posed greater difficulties for the US in reforming unhelpful financial policies (such as the prolonged separation of banking and capital markets under Glass-Steagall).

Regulation is fragmented across the Fed for banking, the SEC for spot securities trading, the CFTC for derivatives, and the Office of the Comptroller of the Currency.

That has led to difficulties in co-ordinating multiple regulators across the financial system. Legislative myopia, and suspicion of the motives of foreigners in compromising the US's commercial interests, has resulted in the passage of legislation such as the Sarbanes-Oxley Act. Sarbox is anathema to the global business community. It imposes punitive measures on foreign firms and nationals for questionable reasons and attempts to exert extra-territoriality in extending the remit of US law.

After the tragic events of 9/11/01, there have been profound changes in the attitudes of the US authorities in response to public concern about terrorism on US soil. Homeland security concerns on the part of the US have, in turn, led to reciprocal concerns on the part of global financial firms about the stability, reliability and consistency of US policy-making under stress. There is now a perception on the part of capital surplus countries that hold large USD reserves of a heightened risk of foreign asset seizure; that has happened in the case of Iran. Consequently, a subtle change in attitudes has occurred on the part of foreign financial players about the wisdom of putting too many eggs in the New York IFS basket, simply as a matter of political risk-management. That perception, along with the UK's better regulation, has driven IFS business from New York/Chicago to London since 2001.

What London has achieved as a standard-setting GFC is surprising; especially given some weaknesses that might otherwise have seemed insuperable. London lacks the intellectual depth of academic financial economics in the US. American minds have dominated the development of modern quantitative finance from 1952 onwards. Yet, although short on theory and skills in quantitative finance, in practice London is not at a significant disadvantage where theoretical financial innovation is concerned. Financial innovations in instruments and markets are now diffused very swiftly.

London has established its own reputation for innovation: *e.g.*, in financial regulation and in arranging complex financial packages for politically sensitive privatisations and PPPs. In these areas it is

well ahead of New York. It lacks as large a national economy as other IFCs (e.g., New York, Frankfurt, Tokyo, and now Shanghai). Yet London has positioned itself to serve the EU economy as the premier IFC with other continental IFCs playing a subordinate role. Thus, London has leveraged its inherent strengths and flexibility to overcome some of its apparent handicaps.

3. New York/Chicago as the GFC for the Americas and the World

New York and Chicago are financial centres that reflect the overwhelming dominance of the US economy. Chicago has a strong position in exchange-traded derivatives. New York accounts for virtually all other financial activities in the US. But in both cities, the provision of IFS is secondary to serving the needs of the domestic economy whereas in London, IFS assumes primacy.

New York is home to NYSE and NASDAQ, the two largest stock exchanges in the world measured by the number and dollar value of transactions. It is also home to the New York Mercantile Exchange, the largest global commodity futures exchange. Virtually every major financial conglomerate and bank in the world, American-owned or not, has a presence in New York. Indeed any financial institution anywhere that deals directly in US dollars in large amounts finds it essential to maintain such a presence. New York has a bewildering array of integrated, as well as specialised, financial firms engaged in moving money from one place to another, inventing new trading strategies, raising capital in all markets and using derivatives to reshape risk.

London and other IFCs replicated the human capital and computer technology in their IFS industries to match New York/Chicago in terms of the instruments and contracts they could offer global clientele, and the platforms needed to trade them. London, on the other hand, led the way with innovations in financing privatisation and PPPs which New York did not keep pace with.

Despite these developments in each of these two competing GFCs, the overwhelming cerebral power reposed in the American academic establishment keeps New York ahead of London intellectually as the 'Silicon Valley' of finance with a key role in continued financial innovation. Box 3.2 shows one example of the fascinating interplay between the ideas of academic economics and the operations of real world finance. Another famous example of such an interaction is the pair of academic papers (Christie and Schultz, 1994; Christie *et al.*, 1994) which led to the demise of the erstwhile NASDAQ market design.

While New York continues to have remarkable strengths based on its intellectual community, to extend that metaphor, it creates the space and the precedent for Mumbai as an IFC to relate to New York/Chicago and London in the same way that Bangalore (and now many other centres in India) have prospered by relating to Silicon Valley.

The tides of global financial flows have been turning dramatically since 1990. A previously closed *second world* entered the global economy in 1990 as a full participant creating new demands and needs for IFS. After the lost decade of the 1980s, the developing (or third) world has grown substantially. It has become a more significant part of the global economy; despite ructions such as the Mexican debt crisis of 1994, followed by the Asian crisis of 1997–99 and the Turkish, Russian, Brazilian and Argentina debt crises of 1998–2002. The US has turned from being the world's largest creditor to being its largest debtor in a span of 20 years. Large fiscal and current account deficits in the US are now being financed largely by international investors. Table 3.4 shows purchases and sales of long-term US securities by foreign investors. Table 3.5 indicates US investor purchases and sales of long-term foreign securities. But, although global financial flows have reversed, the underlying transactions are still being done in New York.

The eight factors that contributed to London's success as an IFC have also contributed in large measure to the success of New York. But, over the last five years,

Box 3.1: A History of New York's emergence as an IFC

In the 17th century when London had begun operating as an IFC, New York was still in its infancy. The end of that century saw New York become a trading city when American wheat entered European markets. Through the first half of the 18th century, New York's role in shipping agricultural exports to Europe was enhanced. But it gradually became a gateway for reverse British and European investment in American farming, ranching and mining through the late 18th and 19th centuries. Until the War of Independence in 1776, independent finance was nonexistent in America. That was because local commercial banks were prevented from emerging. The prevailing mercantile theory in Britain and Europe was that capital invested in colonies should be loaned by imperial countries (to benefit from annual returns) rather than be generated and retained in the colonies for their own use through reinvestment.

After 1776, the first task of New York financiers was to help the new US government fund the huge war debt that had been run up for the war of independence. When that was accomplished New York faced competition from Philadelphia and Boston as a domestic financial centre. In 1814, a stock exchange was started in New York to compete with exchange-traded equities in Philadelphia. From 1817–29, the Erie Canal (linking the Great Lakes to the Atlantic) was built. It transformed America's commercial geography and proved immensely profitable. But it required an enormous amount of debt financing. Most of that was arranged in New York with a significant proportion being sourced from Europe. That canal opened up unprecedented trade opportunities. It made the produce of the American mid-west exportable to the world. In turn it increased needs for financing trade and investment in New York. Following the success of the Erie Canal, Wall Street grew from strength to strength, focusing on raising debt and equity for canals, railroads, and shipping companies as well as the cotton and wheat trade. Its role expanded as the West and the Pacific Coast were opened up and settled by successive waves of immigrants from Europe and Asia.

By 1850, New York had become the prime US financial centre. Its growth was related to a burgeoning domestic economy and its increased trade (similar to where Mumbai is now). The emergence of the US as the largest economy in the world (overtaking the British Empire) at the end of the 19th century, inevitably made demands on the domestic and

international financial systems. Between 1860–1914 these needs were met as much by London as by New York. The American Civil War placed great demands on New York in funding the war on the side of the Union, and thereafter, for the reconstruction and revival of all the 'united states', and for supporting continued migration and expansion of large territories in the West.

The *internationalisation* of New York occurred in the early 20th century when Europe was exhausted after internecine conflict that extinguished a generation. Interrupted temporarily by a global depression in 1929–32, New York's role as an IFC grew relentlessly between the two world wars (1918–38) as American corporations and financial firms invested abroad, particularly in the UK, Western Europe and Latin America. During World War-II (1939–45), the US was the main production engine for the Allied Forces. New York helped Washington to finance that war on a lend-lease basis and arranged war loans for its allies (mainly the UK, Canada, Australia and New Zealand as well as the USSR). New York's role as a GFC became more significant when the Second World War ended. In 1945 the US was the only economy capable of providing the finance needed to reconstruct and revive the world economy.

In the half-century between 1918–70 the US led the free world and dominated global finance. But, the US economy became overextended in the early 1960s. Europe was resurgent with the completion of reconstruction and revival of its war-shattered economies. European and Japanese export engines went into overdrive in the 1960s. American encouragement for reviving Europe's capital markets, as well as its own regulatory shortcomings, led to the creation of the Eurodollar and Eurobond markets which boosted London's revival as an IFC. Although the breakdown of Bretton Woods in 1971 triggered a gradual slide in the relative standing of New York, it still managed to lead London in financial innovation from the 1970s to the present.

New York pioneered the transition from *plain vanilla* to post-modern finance. It did so by incorporating risk management features into financial products and services. That stream of innovation has transformed the nature of global finance and of IFS. Although futures had existed for some time in the agricultural and mineral commodities businesses, American ingenuity led to

conceptualising tradable financial instruments for risk management *i.e.*, derivatives. Currency futures – introduced at the Chicago Mercantile Exchange (CME) in 1972 – were the first exchange-traded derivatives. In 1973, the Chicago Board Options Exchange (CBOE) was formed, and the Black/Scholes formula for pricing options was developed at MIT and Bell Labs.

Until 1990 the US was the world leader in computer technology and in financial economics. It probably remains so today although it now shares the space it once dominated totally with a number of other countries. Given the monetary and psychic income returns involved, many leading academics from top US universities migrated to Wall Street. They played an important role in key global firms, such as Fischer Black, who was partner at Goldman Sachs, and Merton and Scholes, who were involved in LTCM (Dunbar, 2000). The marriage of new computer technology with new financial economics resulted in explosive growth in financial sophistication in the 1980s. That enabled New York to maintain an intellectual lead even as it was ceding ground in IFS trading terms. The substantial presence of leading American financial firms in London led to the rapid transmission and diffusion of such innovation from New York to London and beyond.

By the same token, the wave of privatisation unleashed in Britain by the Thatcher government in the 1980s led to London becoming the leading IFC for conceptualising the financial engineering to achieve politically and socially sensitive financial transformations. As privatisation and denationalisation were propagated around the world by the World Bank and IMF during the era of structural adjustment (1981–97), London played a pivotal role in advising on, and arranging, most of these transactions in global capital markets. In the 1990s, London continued to play an innovative role in conceptualizing and executing complex financial/legal structuring of public private partnerships (PPPs) under the private finance initiative promoted by the Blair government, to augment limited public resources for investment in physical and social infrastructure. That specialised expertise provided another string for its versatile bow. So, at the turn of the 21st century, the intellectual/innovative edge that New York and Chicago had in creating and trading derivatives was becoming blunted.

global financial firms have begun moving key IFS operations from New York to London. This is partly attributed to London's more benign regulatory environment and partly to post-9/11 neurosis in the US.

Traditionally, New York firms had operated under a regulatory regime that was, in most respects, more open to innovation than those that governed other IFCs, with the exception of London.

Box 3.2: *Futures on the Value Line Index: A case study in the interplay of ideas and finance*

The US pioneered the idea of futures markets being applied to underlying contracts other than those for physical commodities. This began with currency futures in 1972, the success of which immediately led to attention on the stock market index as an underlying for derivatives. Operationalising stock index futures required a key innovation – cash settlement. Cash settlement is now mainstream in derivatives trading, and many commodity futures are now settled in cash. But, though obvious and standard now, it was an important innovation at the time. In all countries, cash settlement has presented legal difficulties owing to laws against wagering.

Three exchanges – the Chicago Board of Trade (CBOT), the Chicago Mercantile Exchange (CME) and the Kansas City Board of Trade (KCBT) – engaged in developmental work leading up to stock index futures trading. When the legal constraints were resolved, the regulator gave the green light first to KCBT since their application had been filed first – as early as 1977. Trading began in February 1982. The index used by KCBT was the Value Line Index. It was a geometric mean of prices of 1,650 shares. The pricing of futures on such an index presented a challenge that was not understood at the time. The market coped

bravely with the situation, treating the futures as an ordinary futures product, where the basis should be positive and should roughly reflect a cost of carry applied on the spot price.

In 1986, a pair of economists named T. H. Eytan and G. Harpaz wrote a paper in *Journal of Finance* titled “The Pricing of Futures and Options Contracts on the Value Line Index” where they worked out the new mathematics of how futures prices and arbitrage worked when the index was a geometric mean of prices (Eytan and Harpaz, 1986). Remarkably enough, their arbitrage procedures implied that the correct basis (i.e. the gap between the futures price and the spot price) for the KCBT index futures contract should be negative.

It is widely believed that Fischer Black, who was at Goldman Sachs at the time, took up these ideas and rapidly implemented them as an operational trading strategy (Ritter, 1996). As a consequence, almost immediately after the publication of Eytan and Harpaz, 1986, the basis on the KCBT flipped from a positive basis (which was based on traders wrongly thinking that the geometric mean of prices index was like any other index) to a negative basis (which correctly flowed from the

arbitrage strategy of Eytan and Harpaz, 1986). Once this arbitrage capital and mechanism was in place, the KCBT index futures were priced correctly (Thomas, 2002).

This story involves five remarkable elements:

1. The innovative spirit of the US financial industry in pushing on from commodity futures to currency futures to stock index futures;
2. The effort at KCBT to get going on such a product even if it involved an awkward geometric-mean-of-prices index;
3. The engineering approximation of traders who tried to make do in trading this index even though the theory was not developed;
4. Scholars like Eytan and Harpaz who solved the puzzle of how to arbitrage and price the product; and
5. Scholars like Fischer Black who were able to rapidly turn the idea from the academic literature into a trading strategy backed by enormous capital at Goldman Sachs, and thus bring market efficiency to the market.

Table 3.4: Foreign purchases and sales of long-term US securities (in USD mn)

	2002	2005
United Kingdom	186,691	361,822
Rest of Europe	57,064	158,173
Caribbean Banking centres	76,144	126,289
Japan	91,412	81,955
Rest of Asia	109,314	188,435
All other countries	26,940	126,272
Total	547,565	1,042,946

Source: Treasury International Capital Reporting System

Table 3.5: US investor's purchases and sales of long-term foreign securities (in USD mn)

	2002	2005
Foreign bonds	–28,492	28,603
Foreign stocks	1,493	126,735
Total	–26,999	155,338

Source: Treasury International Capital Reporting System

However, as other nations moved to liberalize their financial markets, while the US came up with legislation like Sarbox, this advantage has eroded dramatically.

The UK is now ahead of the US in terms of its regulatory approaches, attitudes and practices. The *rules-based* regulation of the US faces severe competition from the *principles-based* regulation of the UK. That competition is being worked out in the global marketplace as country after country opts for the UK model.

But whether New York leads London as an IFC, or vice versa, is less relevant than the growing reality that these two centres are beginning to increasingly operate as a single linked entity. The same global financial firms operate in, and dominate, both GFCs. In 2006 a move was made by exchanges in New York to acquire London's main stock exchange. IFS activity in these two centres is being undertaken within the same ten major global intra-group/inter-corporate brand umbrellas. The booking of any particular IFS transaction by a given firm is dependent on which jurisdiction offers the most favourable regulatory and tax environment for that activity.

What is now happening between London and New York may well extend to

bringing all *significant* IFCs within a single linked operating network that constitutes an integrated web of global finance. In that sense the specific IFS-industry based linkages between/among *global city* IFCs may supersede the importance of more general linkages between/among their national and regional economies. In such an environment, an Indian IFC needs to blend into that unified global financial industry.

Both London and New York will remain at the top of the GFC heap for some time to come, probably well into the middle of the 21st century. New York will represent the economic weight of the US and North America in the world economy and London will do the same for the EU. Singapore and, to a lesser extent, Tokyo (as well as other smaller IFCs) already serve East Asia. But with the growing weight of China and India, new IFCs will emerge, especially in these two countries. However, history suggests that Singapore and the newer IFCs will take decades to equal or surpass London and New York. While relative changes in the economic strength of countries (such as China and India) may occur quite rapidly, the more fundamental changes in institutional arrangements for handling global trade and investment transactions through IFCs will continue to occur more slowly, even in the 21st century.

Thus, while the US economy was larger than the British Empire by 1870, it still took New York another fifty years until 1918 to exceed London in importance as an IFC. By the same token, while the relative size of the US economy in the world economy has been steadily diminishing since the mid-1960s, and has now been overtaken by the enlarged EU, New York still remains one of the world's two key GFCs.

While new IFCs will spring up in China and India – if not by design then by default – they will take time to establish themselves and reach the same level of size, credibility and competitive ability as the premier league GFCs; even though transformational changes (such as in Dubai) are now occurring in a shorter time span than they did in earlier centuries.

The lessons that London and New York convey is that as other economies grow to

rival the two gigantic economic blocs of the US and EU–ASEAN, China, India seem to be the main contenders to do so in the 21st century – they will need equivalent IFCs to represent their financial and economic interests in the world economy in the same way and with the same skills and capabilities. But the most important lesson is that for IFCs in China and India to function as effectively as those that already exist, they will need to invite and embrace the same global players – who know no particular nationality of ownership as such – that are already operating in London and New York (and in Singapore, Dubai, Hong Kong, Sydney, Amsterdam, Paris, Frankfurt and other IFCs as well).

IFCs do not succeed in providing IFS effectively and competitively if, by policy design or regulatory preference, they remain closed and protected to favour only domestic players. Nor do IFCs succeed if the policy-makers attempting to promote them focus exclusively on the domestic scene, and remain unconcerned about what is happening in the world outside. Most of all, IFCs are unlikely to succeed or be competitive if financial system regulators and institutional operators do not adapt swiftly and responsively to changing global best practices and norms of regulation, risk management and corporate governance.

4. Singapore as the ASEAN/Asian GFC

In the 1970s and 1980s, many East Asian countries emulated the success of Japan in the 1960s and grew very rapidly. They increased employment with labour-intensive manufacturing exports and low barriers for imported inputs. Unlike Japan, they relied on FDI. Ironically, much of it was from Japan. The most successful East Asian economies – which provided a model later for China – were Hong Kong, Taiwan, and Singapore; followed in quick succession by South Korea, Malaysia, Thailand and Indonesia (although it suffered a near-fatal reversal in 1997). Singapore transformed its economy rapidly and sustained a high rate of growth between 1960–80. It adopted an export-orientated manufacturing hub

strategy with state-driven development of a regional transport and communications services hub based on state-of-the-art infrastructure (airports, ports, container terminal, airline, and shipping.)

By the late 1970s, Singapore was experiencing the limitations of depending for growth on transportation and FDI-driven manufacturing. In the early 1980s, it realised that to sustain its growth trajectory, and become a developed country, it required a shift in focus from low-cost manufacturing to high-value services. Singapore spotted IFS as a key opportunity for services-led growth in the world market. Its experience in attracting the regional headquarters of manufacturing MNCs was applied to global MNCs in finance through efforts to establish an IFC that were scripted and controlled by the government and implemented by the Monetary Authority of Singapore (MAS).

Singapore's IFC strategy was in marked contrast to the *laissez faire* approach of Hong Kong whose strengths in providing IFS arose purely as a side effect of liberal economic policies and market driven developments. But, until 1981, Hong Kong had benefited from being an exclusive gateway for the world into a closed China.

Since 1978, the Singapore government has been making profound financial sector reforms, opening new financial markets, introducing full convertibility, and enacting regulatory and fiscal incentives to attract foreign financial institutions to Singapore. It has reduced public ownership of banking firms and created a Singapore dollar bond market less to serve its own needs than to acquire credibility in the global IFS market.

One of the main objectives of MAS is to supervise the banking, insurance, securities and futures industries, and develop strategies in partnership with the private sector to promote Singapore's role as a GFC. As in the case of London, *internationalisation*, rather than a preoccupation with domestic finance, is at the core of MAS' perspective on its financial services industry. This is in marked contrast to the role of the monetary authorities in India whose attention (understandably) is on the domestic financial system, and whose concerns about IFS are, at best, peripheral in nature.

Singapore's strategy to become a GFC and a global city has proven successful. When other Asian countries had capital controls and policies inimical to the growth of their financial systems, Singapore positioned itself as a venue with no capital controls and sophisticated financial regulation. It became a genuine RFC for ASEAN as well as a GFC linking ASEAN to global markets. Foreign financial firms in Singapore have grown from fewer than 100 in the mid-1970s, to almost 500 in 2005. A full range of financial products and services are offered, including currency trading, derivatives, loan syndication, M&A, insurance, wealth and asset management and capital market activities. Financial services (mostly IFS) now account for nearly 12% of GDP.

When it first embarked on developing an IFC, Singapore had weak human capital and lacked world class intellectual depth in its universities. However, the presence of global financial firms in Singapore attracted highly skilled foreign workers (e.g. from India) to migrate to Singapore to work in finance as well as related services such as accountancy, law, management consultancy, and information technology. Expatriates hold most senior management positions in finance and banking, and constitute almost 50% of the finance workforce. Singapore has taken significant steps towards developing world-class universities by depending on foreign academics.

MAS initiated the establishment of SIMEX, now called Singapore Exchange Limited (SGX), which was the first demutualised and integrated securities and derivatives exchange in Asia. SIMEX attracts global issuers for listing, and trades derivatives on global underlying contracts such as the Japanese Nikkei 225 index or the Indian NSE-50 index. In 1984, SIMEX obtained a landmark contract with *mutual offset* for the Eurodollar futures traded at the Chicago Mercantile Exchange (CME). This enabled positions at CME to be fluidly traded at SIMEX and vice versa.

Singapore is now the world's fourth most active currency trading centre after London, New York and Tokyo. Daily trading volume in 2004 averaged nearly US\$ 157 billion.

Table 3.6: Financial market growth in Singapore

	1996	2005
Domestic banking units' external asset and liabilities (\$\$ mn)	60,302.3	117,685.9
Equity market turnover + market capitalisation (\$\$ mn)	88,855.1	205,164.4
Number of listed companies (SGX)	323	664
Foreign exchange market turnover (\$\$ mn)	44,974,690	70,734,830
Exchange traded derivatives turnover (number of contracts)	22,568,545	26,026,128

Source: Monetary Authority of Singapore

Singapore benefits from Indian restrictions on finance by capturing business that Indian regulatory and capital controls prevent. An active 'non-deliverable forwards' market exists in Singapore and Hong Kong on the INR-USD exchange rate, and there has been a mushrooming of interest rate derivatives on Indian underlying contracts.

Over the years, Singapore's financial sector has matured from providing basic services, to sophisticated, technology-driven, innovative IFS offerings. As a result, the financial services sector has developed simultaneously with the growth of the Asian Currency Unit (ACU), the Asian Dollar Bond (ADB) market and the Singapore Dollar Corporate Bond (SDCB) market.

Like the Eurodollar market, the Asian dollar market (ADM) has played a significant role in Asia's economic development. Through the ADM, financial institutions channel surplus funds from regional and international financial markets to finance development projects in ASEAN. Since its launch in 1968, the ADM has grown 15 times; it stood at US\$ 509 billion by end-2003. Table 3.6 shows the growth in the equity, foreign exchange and derivatives markets over a ten year period.

Since 1998, several initiatives have boosted the growth of the Singapore bond market. The issuance of more Singapore Government Securities (SGS) was aimed at building market depth and liquidity while the issuance of new 10 and 15-year SGS served to extend the benchmark yield curve. Rules relating to the use of the Singapore Dollar by foreign entities were liberalized to enable foreign players to participate more actively in issuing Singapore Dollar bonds. These have resulted in a series of landmark deals including the first Singapore Dollar foreign entity bond issued by the

World Bank's private sector affiliate – the International Finance Corporation, in 1998.

Singapore has established itself as a reliable and secure safe haven for private wealth management by wealthy individuals in ASEAN (particularly the wealthy and influential overseas Chinese community in Asia) resulting in a vibrant private banking industry. Given the difficulties with political stability of many neighbouring countries, Singapore has played a role as a safe haven which is reminiscent of that played by Switzerland in the 19th and 20th centuries in unstable Europe.

More than 200 international asset management firms are located in Singapore. This process has been assisted through a mechanism where asset management companies domiciled in Singapore are more able to obtain contracts from the government portfolios. Total assets under management (AUM) stood at S\$ 465.2 billion at the end of 2003.

Many of the world's leading names in insurance broking, captive management and risk management are present in Singapore. In addition to meeting the needs of the domestic market, numerous re-insurers and captive insurers use Singapore as a base to write risks in the region. Offshore insurance business has become a major component, accounting for more than half of the total general insurance business written. Singapore is the largest domicile for captive insurers in Asia.

Singapore is a remarkable success story about the extent to which the government was able to see the importance of an IFC in the late 1970s – roughly 30 years before this issue achieved salience in India. The build-up of modern knowledge in economics and finance at MAS, and the supportive role played by MAS in the

development of sophisticated finance, are both accomplishments that bear great lessons for India.

5. Dubai as a RFC for the Middle East and South Asia

The newest entrant into IFC space is Dubai, which has long pursued an economic strategy based on commerce and trade seeking to reduce dependence upon oil-related activities. The DIFC was setup in September 2004 and has been actively encouraging global financial firms, including Indian institutions, to set up operations there.

Most successful IFCs in the world reflect the organic strengths of a city gained from a legacy of geography and commercial history, as well as the potential for becoming a 'global city'. Singapore exemplifies how an IFC can grow out of a policy effort at cultivating relevant strengths such as financial regulation and taking advantage of its geography in the context of the regional ASEAN economy. It has also exploited to the full its connections (trade, investment and ethnicity) with China and India.

By contrast, DIFC represents an enclave approach brought to bear on developing another IFC in the context of an extremely small domestic financial sector and no established stature as a regional provider of IFS for the Middle East and Persian Gulf. That role, until now, has been dominated by Bahrain. Dubai is essentially a township surrounded by 1.2 million square miles of desert. DIFC's aim is to have 20,000 people providing a wide array of IFS to its region and to the world.

DIFC is providing world class infrastructure to global financial firms for their offices, communication and transportation. As with Singapore, a good quality airport, a world-class airline, and excellent telecommunications facilities are already in place.

In the case of both Singapore and Dubai, there is full capital convertibility. In addition, Dubai has set up unique tax privileges, declaring a zero tax rate on profits with a 50-year tax holiday. While the OECD has embarked on a synchronised effort at preventing countries from helping foreigners evade taxes, Dubai is in a unique position by

virtue of having a zero income tax for *locals*.

The institutional structure at DIFC involves a series of specialised agencies with supervisory and regulatory tasks: *i.e.*, DIFC Financial Services Authority, DIFC Courts and the DIFC Registry of Companies. These institutions will allow DIFC to operate independently of UAE federal law while still being under its broad umbrella.

These institutions are being staffed with world class talent recruited internationally. As with Singapore, this institutional infrastructure is supportive of global financial firms that use modern practices, and are fairly effective at supporting the innovative deployment of new kinds of financial products and practices. In terms of organised financial trading, Dubai International Financial Exchange and Dubai Gold and Commodities Exchange were started in September and November 2005.

DIFC is a very recent entrant in the IFC space. It is too early to tell how successful it will be. ICICI Bank and Kotak Mahindra (UK) have set up offices in DIFC, where a total of 73 global firms, including the likes of ABN-Amro, Lehman Brothers, Merrill Lynch, Morgan Stanley, JP Morgan Chase, Goldman Sachs International, Franklin Templeton Investment, Citigroup Global Markets, Deutsche Bank and Barclays Bank, have begun operations. However, as yet, DIFC is more of a location where staff is placed by global firms to book transactions and attract clients, rather than undertake the range of IFS activities typically found in a fully-fledged IFC.

Dubai as a city has recorded a stunning rate of growth and transformation over the last 15 years. But it has the disadvantage of being located in a highly unstable and volatile neighbourhood – from the viewpoint of security, politics and economics as well as growing social instability exacerbated by ethnic tensions – that is unlikely to be perceived as totally safe by global investors in the foreseeable future.

But, from the perspective of Indian corporates, Indian HNI with growing wealth management needs, and most importantly, a growing number of increasingly powerful and capable private Indian financial institutions, the DIFC is being seen as a convenient and easily accessible alternative for meeting their IFS needs in the immediate

neighbourhood (a mere 2.5 hour flight from Mumbai).

That opportunity will be evaluated – along with Singapore – by every Indian

financial firm that believes its capacity to expand, by providing essential IFS to their large client base, is being artificially restricted in the present Indian environment.