Domestic and Offshore demand for International Financial Services (IFS) in India

chapter 4

1. Implications of a large, rapidly growing home market for IFS

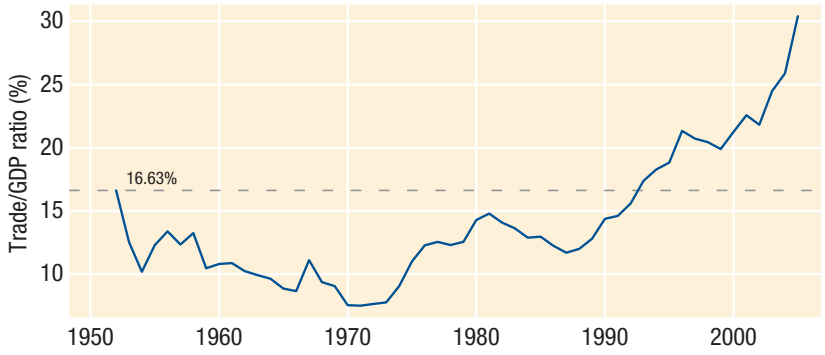
A little appreciated aspect of India's impressive growth from 1992 onwards is that it has resulted in even faster integration of India with the global economy and financial system. There has been a rapid escalation of two-way flows of trade and investment. Since 1992, India has globalised more rapidly than it has grown, with a distinct acceleration in globalisation after 2002. Capital flows have been shaped by (a) global investors in India (portfolio and direct); and (b) Indian firms investing abroad (direct). Indian investors – corporate, institutional and individual – have as yet been prevented from making portfolio investments abroad on any significant scale by the system of capital controls.

By the same token, Indian firms have borrowed substantially abroad. But foreign firms and individuals have yet to borrow from India. Capital controls still preclude that possibility.[1] Despite the controls that remain, these substantially increased two-way flows reflect an increase in demand-supply for IFS related to trade/investment transactions in India. Put another way, there has been an increase in IFS consumption by Indian customers and by global customers in India. Demand for IFS from both has been growing exponentially.

Cumulative two-way flows in 1992–2005 were a multiple of such flows in 1947–92. The degree of 'globalisation-integration' that has occurred in the last 15 years, since reforms began in earnest, is much larger than in the 55 years between independence and India embarking on 'serious' reforms. We have made up for six lost decades of economic interaction with the world in a decade and a half. Still, what has happened over the last 15 years is a small harbinger of what is to follow over the next twenty: particularly if the current growth rate of 8% per annum is accelerated to 9–10% as is evocatively being suggested, and if India continues to open

[1] In saying that, however, it has to be recognised that, over the past decade, the US Treasury has effectively 'borrowed' over US$ 110 billion from India. But, it does not appear that way because that 'borrowing' is seen as an investment of India's official reserves; *i.e.*, as meeting India's investment needs, rather than meeting the deficit financing needs of the US. The fact is that they are meeting both, because there is no such thing as a one-way financial transaction. By the same token European governments have 'borrowed' another US$30–40 billion or so in India as well. Such 'borrowing' may rise to US$ 200–250 billion or more by 2010. One problem created by not liberalising the domestic financial system, and removing capital controls more rapidly to permit more private investment abroad, is that such borrowings (by external issuers of reserve obligations) will remain increasingly confined within the ambit of 'official finance' rather than being marketised. That will result in concentration risk in India's reserve portfolio. It will make India vulnerable to increased currency, interest rate and political risk as reserves keep growing. Instead India's reserves could (unlike China's) be made more manageable by opening the capital account to encourage development of a more efficient, open and robust financial system that promoted rapid growth and global integration simultaneously. In that event Indian assets might not be concentrated only in US Treasuries or similar Euro obligations. They would be spread across a wider risk-return matrix of securities issued by the official and corporate world. That would yield higher returns in an overall economic 'welfare gain' sense if not for the central bank.

Figure 4.1: Evolution of the trade/GDP ratio



up the economy on both trade and capital flows.

This chapter illustrates the impact that economic growth in India is having on two-way financial flows by making them quantitatively explicit. The typical discussion about an Indian IFC exporting IFS (especially made by those arguing for locating such an IFC in a SEZ) has been analogous to that for software exports: *i.e.*, a sterile relationship between Indian producers and foreign customers of 'support-services'. However, in the case of IFS, India is itself a large, fast growing customer of IFS.

Conservative estimates of IFS consumption in India just a few years out, amount to $48 billion a year. That is more than the output of many Indian industries today. Domestic customers for IFS are India's to lose through neglect. If India does not make significant financial reforms **now**, this IFS demand will be continue to be met by IFS providers in New York, London and Singapore. Dubai may command an increasing share of that business in the coming years.

The HPEC believes that such reforms are urgent to unshackle the Indian financial system, and make it globally open and competitive, in the same way that Indian industry was freed and obliged to become globally competitive a decade ago. In the absence of a credible Indian IFC, the more capable Indian financial firms will have no option but to establish full-scale operations in IFCs elsewhere, simply to retain their customer base and not lose it to competing foreign financial firms that can provide their Indian customers with a more complete array of IFS. But, these customers constitute India's 'hinterland advantage'. India's attempt to establish an IFC in Mumbai will be aided by retaining such customers on the books of Indian financial firms. Dubai and Singapore have to go out of their way to attract them. India's own IFS customer base contributes a critical mass and induces economies of scale in a way that was not available to the Indian software industry in its nascent phase.

The local-customer argument should not be confused with 'self-sufficiency'. A self-sufficiency rationale for IFS provision from Mumbai – implying an autarkic mindset that has resulted in past failures – would be counter-productive. The Committee is not arguing that, because India has a rapidly growing need for IFS, only Indian financial firms should meet it. What it is arguing is that India's demands for IFS are large and growing rapidly; it would be cavalier, therefore, if not negligent, to forego using that 'home-market advantage' for developing IFS-provision capacity in a competitive IFC.

Such capacity should involve Indian and global financial firms operating in Mumbai to serve the world (and the home market) as, or more, competitively than extant IFCs are able to. That is not a self-sufficiency argument. It is an argument for using the advantage of a large and growing home-market for IFS to develop an IFC that can immediately achieve: (a) economies of scale and scope; (b) global competitiveness; and (c) substantial revenues from IFS exports.

A domestic customer base with rapidly growing IFS needs will provide an IFC in Mumbai with a comparative and competitive advantage that can be sustained for the foreseeable future. That is what the US, EU and Asean economies provide as hinterlands for New York, London and Singapore. These three GFCs have not grown through self-sufficiency: they grew because they were effective, competitive and innovative. That is what Mumbai should strive to be.

2. India's growing integration with the world

India's post-independence retreat into autarky till 1991, followed by hesitant

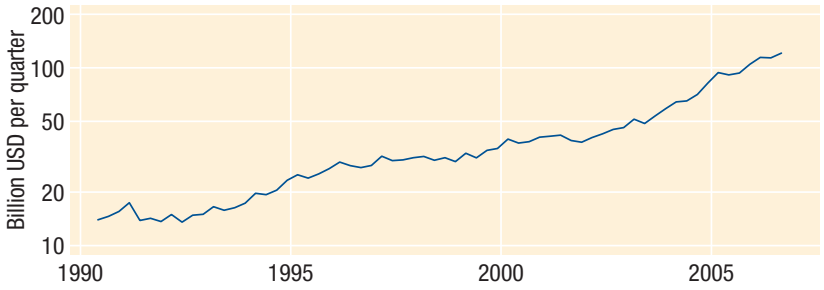
reintegration into the world economy since 1992, is illustrated in Figure 4.1 (Bhagwati, 1993; Desai, 1999; Panagariya, 2005). It measures the size of *merchandise trade* compared with GDP. At independence, the merchandise trade/GDP ratio stood at a respectable 16.6%. Almost all of it at the time involved transportation by sea. In the following decades, the trade/GDP ratio fell sharply - to below 10% - at a time when world trade was growing dramatically, assisted by technological improvements in transportation and communications. East Asian countries successfully harnessed world growth in trade to eradicate poverty. But India turned inwards, losing out on growth and faster poverty reduction for four decades.

The lowest Trade/GDP ratios in India were seen in the late 1960s to the mid 1970s which was an era of increasing state control of the economy. The timid liberalising reforms of the 1980s did not emphasise globalisation. As a result, the trade/GDP ratio actually fell through most of the 1980s. What distinguished the 1991 reforms from previous desultory attempts was the rapid growth of trade and investment related financial flows that resulted from openness. They have gathered steam continuously since. India reverted to its 1952 trade/GDP ratio (16.6%) in 1993. China had achieved that level (of 16.6%) in 1980 - i.e. Chinese trade reforms were roughly 13 years ahead of India. But then India opened up (1991–92) 13 years after China (1978).

Three interesting facts emerge from the graph above:

- The trade/GDP ratio in 1952 (16.6%) was 2.2 times bigger than the lowest-value of 7.5% reached in the 1970–73 period.
- The most recent trade/GDP ratio, in 2005–06, of 36.1% is almost five times the lowest-value. In other words, the Indian trade-GDP ratio dropped by 2.2 times with the retreat into socialism, and has recovered by four times thereafter. That suggests a six-fold turnaround from the nadir.
- The rate of change of the trade/GDP ratio has accelerated palpably in recent years. Insights into why India's globalisation has accelerated in recent years suggest that projections for the future should take into account a faster pace of change in recent years, when compared with the *average* pace of change that has taken place from 1991 to 2006.

Figure 4.2: Growth of gross flows on the current account



India has been particularly successful in exporting services. Services exports grew faster after the telecom reforms of 1999. Hence, the trade/GDP ratio for goods understates the extent of India's globalisation. This reinforces the sense of a palpable acceleration in the pace of globalisation from 1999 onwards.

Figure 4.2 shows the gross flows on the current account - summing across import and export of both merchandise and invisibles - in log scale. Starting from levels of roughly $15 billion a quarter in the early 1990s, gross flows have grown dramatically, and come to exceed $100 billion a quarter.

A casual examination of Figure 4.2 suggests that the rates of growth have not been constant over the 1990-2007 period. Using the econometrics of structural change,

Table 4.1: Growth rates for transactions volumes in **India's Balance of Payments**

CAGR 2004 over 1993	12%
CAGR 2006 over 1993	15%
CAGR 2006 over 2002	29%
CAGR 2006 over 2004	35%

Figure 4.3: Structural breaks in growth of gross flows on the current account

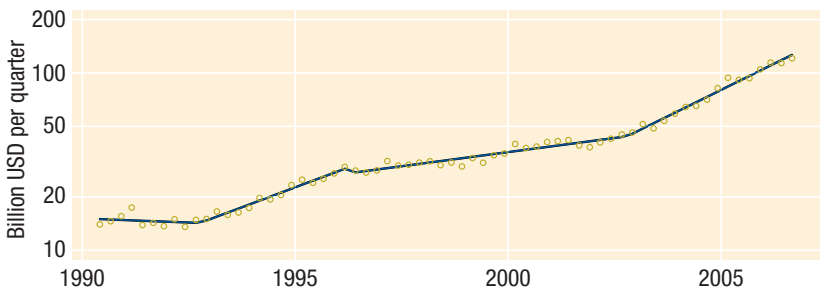
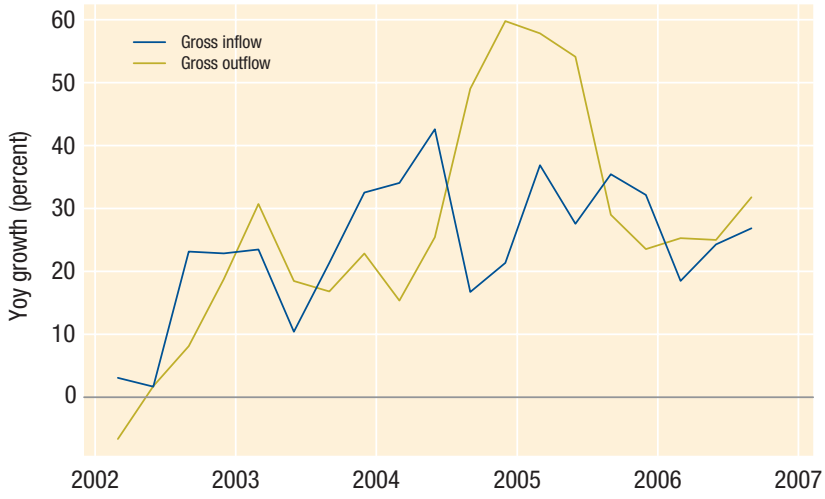


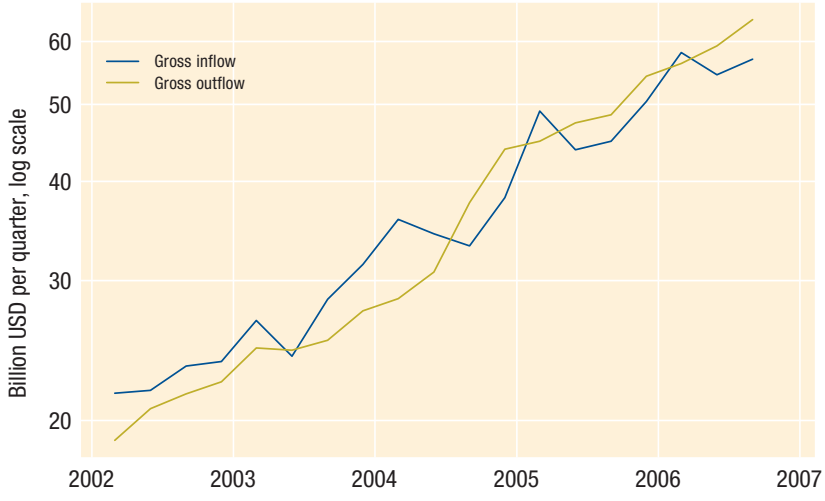
Figure 4.4: Year-on-year growth (in percent) of gross flows on the current account: 2002-2007



breakpoints are identified in the time-series. This analysis, shown in Figure 4.3 yields four phases of growth:

1. The early part is a continuation of the difficult conditions of the late 1980s, and actually involves a slighly negative slope.
2. Then the reforms of the early 1990s generated a positive trend, and gross flows grew from roughly $15 billion to roughly $30 billion by 1996.
3. This was followed by a period of slow growth until roughly 2002.
4. After 2002, the slope has sharply risen; indeed, the rate of growth seen in the post-2002 period exceeds the slope seen in the post-crisis recovery after the 1991-1992 reforms.

Figure 4.5: Gross flows (billion USD per quarter) on the current account: 2002-2007



These results encourage a focus on the 2002-2007 period as being different from the overall 1990-2007 experience, and being more pertinent for thinking about the coming decades. Figure 4.4 shows year-on-year growth rates of gross flows on the current account. Extremely high growth rates are seen for both the current account and the capital account, sometimes exceeding 50% per year.

Expressed in levels, gross flows on the current account for 2002-2007 are shown in Figure 4.5 in log scale. These values are in the units of billion USD per quarter. Both inflows and outflows have grown sharply, from the region of $20 billion per quarter in 2002 to $60 billion per quarter in 2007. This constitutes a *tripling in five years*.

An understanding of what drives rapidly growing demand for IFS in India needs to take into account two features:

- *First,* IFS demand is driven by increases in ***gross*** two-way financial flows that have occurred in transactions with the rest of the world. It is not driven by *net* flows. Demand for IFS by Indian customers – as well as foreign firms trading with and investing in India – is driven by imports ***and*** exports. India-related purchases of IFS are related to inbound **and** outbound FDI/FPI.
- *Second*, the annual growth of gross flows has accelerated dramatically in recent years. As shown in Table 4.2, India's external linkages have been transformed since 1991–92. **But that transformation has been more radical since 2002. The Indian economy is now exhibiting signs of a 'take-off' both in growth and even more rapidly in its globalisation (or integration with the world economy).**

Total two-way gross flows on all BoP transactions were $101 bn in 1992–93. They doubled to $237 bn in 2001–02. They increased another 2.8 times, to $657 bn in 2005–06. Doubling took nine years; the near-tripling took only four. What is noteworthy is that total gross transactions on India's balance of payments (BOP) accounts,

Table 4.2: Trends in India's Balance of Payments (in US$ billion)

		1992–93	2001–02	2003–04	2004–05	2005–06
INR/USD		30.65	47.69	45.95	44.93	44.27
GDP at factor cost		215.09	439.81	553.51	648.30	724.98
Current account (net)		−3.53	3.40	14.08	−5.40	−10.61
Merchandise	outflows	24.32	56.28	80	118.78	156.33
	inflows	18.87	44.7	66.29	82.15	104.78
Invisibles	outflows	7.41	21.76	25.71	40.63	50.54
	inflows	9.33	36.74	53.51	71.85	91.48
Total inflows		28.20	81.44	119.79	154.00	196.26
Total outflows		31.73	78.04	105.71	159.40	206.87
Gross flows on C Account		59.93	159.48	225.50	313.41	403.13
Gross flows on K Account		44.63	77.97	135.04	172.74	253.92
FDI	outflows	0.03	1.50	2.08	2.73	2.79
	inflows	0.35	6.23	4.46	5.97	8.52
Portfolio (equity + debt)	outflows	0.00	7.31	16.86	31.63	55.63
	inflows	0.24	9.26	28.22	40.54	68.12
Loans and Banking Capital	outflows	17.31	24.39	37.6	30.04	52.34
	inflows	20.67	25.47	38.39	44.26	57.88
Miscellaneous	outflows	1.4	1.52	2.62	3.40	3.85
	inflows	1.36	2.3	4.31	8.06	4.79
Net flows on K account	Total	5.16	8.56	16.76	31.03	24.70
Total external flows		101.29	237.45	360.54	480.04	657.05

Table 4.3: CAGR Growth comparison during selected reference periods (%)

		2002/1993	2006/1993	2006/2002
GDP at factor cost		8.27	9.80	13.31
Merchandise	outflows	9.77	15.39	29.1
	inflows	10.06	14.10	23.74
Invisibles	outflows	12.71	15.91	23.45
	inflows	16.44	19.19	25.62
Total inflows		12.50	16.09	24.59
Total outflows		10.52	15.79	27.60
Gross flows on Current account		11.49	15.79	26.09
FDI	outflows	54.45	41.72	16.78
	inflows	37.92	27.97	8.14
Portfolio (equity + debt)	outflows	148.81	119.72	66.09
	inflows	49.79	54.22	64.69
Loans & Banking Capital	outflows	3.88	8.88	21.03
	inflows	2.35	8.24	22.78
Miscellaneous	outflows	0.92	8.09	26.15
	inflows	6.02	10.18	20.13
Gross flows on K account		7.3	14.98	34.33
Total external flows		9.93	15.47	28.98

after having grown at a Compound Annual Growth Rate (CAGR) of 12% over the eleven years from 1992–93 to 2003-04, have **increased at a CAGR of 35% between 2004 and 2006.**

Table 4.3 shows a breakdown of the growth of gross flows. Large values characterise all components. Gross invisibles had been rising faster than merchandise trade in the Nineties, reflecting India's success with services exports, but merchandise trade growth has now caught up with the growth rates of services. The highest growth rates have been in FDI and Portfolio (FPI) flows, reflecting India's engagement with private capital flows.

As a proportion of GDP, external flows have increased from 47.1% of GDP in 1992–

Table 4.4: Trends in BOP components (as % to GDP)

		1992–93	2003–04	2004–05	2005–06
Current account (net)		**−1.64**	**2.54**	**−0.83**	**−1.46**
Merchandise	outflows	11.31	14.5	18.32	21.56
	inflows	8.77	12	12.67	14.45
Invisibles	outflows	3.45	4.6	6.27	6.97
	inflows	4.34	9.7	11.08	12.62
Total inflows		13.11	21.6	23.76	27.07
Total outflows		14.75	19.1	24.59	28.53
Gross flows on Current account		**27.86**	**40.74**	**48.34**	**55.61**
FDI	outflows	0.01	0.4	0.42	0.38
	inflows	0.16	0.8	0.92	1.18
Portfolio (equity + debt)	outflows	0.00	3	4.88	7.67
	inflows	0.11	5.1	6.25	9.40
Debt	outflows	8	6.8	4.63	7.22
	inflows	9.6	7	6.83	7.98
Miscellaneous	outflows	0.7	0.5	0.52	0.53
	inflows	0.63	0.8	1.24	0.66
Gross flows on capital account		**19.2**	**24.40**	**25.7**	**35.02**
Total external flows		**47.1**	**65.14**	**74**	**90.63**

Box 4.1: *Hong Kong and China*

Hong Kong evolved as an enclave IFC to provide IFS for traders dealing with a closed China. In the 1970s and 1980s, Hong Kong had superior institutions, and provided IFS to North Asia (China, Taiwan and Korea) as well as part of ASEAN (the Philippines and Vietnam which are closer to Hong Kong than to Singapore). But, as a colonial artifice, Hong Kong's role as an IFC was compromised, if not damaged, as China opened up and connected itself to the world through Shanghai and Beijing. Since the 1980s, China has not required its economic partners to deal with it exclusively through Hong Kong. With the gradual rise of Shanghai as an IFC, Hong Kong's role as an IFC serving China is diminishing, although it is unlikely to be completely eclipsed. At the same time ASEAN regional finance has gravitated decisively toward Singapore.

93 to 90.6% in 2005–06. Indian capital controls have resulted in slower growth of gross flows on the capital account; their share grew from 19% of GDP to 35%. The bulk of the growth has taken place on the current account, where India has reduced controls to a greater extent. This analysis illustrates in quantitative terms: (a) the potential generated by India's globalisation *i.e.*, the growth of two-way foreign trade and investment, for providing IFS through an IFC in Mumbai; and (b) the acceleration that has occurred in India's globalisation since 2002.

3. The impact of globalisation on IFS demand and on IFCs

When the economy of a country or region (*e.g.*, the EU or ASEAN) engages with the world through its current and capital accounts, a plethora of IFS are purchased as part-and-parcel of these cross-border transactions. The hinterland effect of a rapidly growing national or regional economy has been a crucial driver of growth in IFCs.

The 21st century has yet to unfold. But the emergence of China and India as global economic powers is likely (as in the US, EU and ASEAN) to provide the same raison d'etre for these two economies evolving their own IFCs to interface with those that serve other regions. History suggests that no country or regional economy can become globally significant without having an IFC of its own. But the emergence of IFCs has not always been a tale of growth potential and start-up followed by prolonged competitive success in exporting IFS to global markets. The trajectories of IFCs can wax and wane depending on how world events unfold.

Growth in Indian IFS demand is driven by the progressive, inexorable integration of the Indian economy with the world economy. As such integration deepens it triggers a variety of needs for IFS. For example:

- Current account flows involve payments services, credit and currency risk management.
- Inbound and outbound FDI (as well as FPI like private equity and venture capital) involves a range of financial services including investment

Table 4.5: Gross cross-border financial flows (in USD billion)

	Current account		Capital account		Overall		
	Inflows	Outflow	Inflow	Outflows	Inflows	Outflows	Total flow
1992–93	28	32	23	19	51	51	102
2001–02	81	78	43	35	125	113	238
2003–04	120	106	76	59	196	165	361
2004–05	154	159	99	68	253	227	481
2005-06	196	207	139	115	337	322	657

banking, due diligence by lawyers and accountants, risk management, etc.

- Issuance of securities outside the country involves fees being paid by Indian firms to investment bankers in IFCs around the world.
- The *stock* of cross-border exposure (resulting from accumulation of annual *flows*) requires risk management services to cover country risk, currency risk, etc. This applies in both directions: foreign investors require IFS to protect the market value of their exposure in India while Indian investors require the same services to protect the market value of their exposure outside the country.
- The shift to import-price-parity (owing to trade reforms) implies that Indian firms that do not import or export are nevertheless exposed to global commodity price and currency fluctuations. These firms require risk management services.
- Many foreign firms are involved in complex infrastructure projects in India. Indian firms are involved in infrastructure projects abroad. These situations involve complex IFS. The same applies to structuring and financing privatisations (especially those involving equity sales to foreign investors) and public–private partnerships which are becoming a growing feature in infrastructure development around the world.
- The growth of the transport industry (shipping, roads, rail, aviation, etc) involves financing arrangements for fixed assets at terminals (ports, etc.) as well as for mobile capital assets with a long life: *i.e.*, ships, planes, bus and auto fleets, taxis, etc. That is done by specialised firms engaged in 'fleet financing'. India is now one of the world's biggest customers of aircraft buying roughly 40% of the world's new output of planes in 2006. This requires buying 40% of the world's aircraft financing services.
- Indian individuals and firms control a growing amount of globally dispersed assets. They require a range of IFS for wealth management and asset management.

Outbound FDI by Indian firms in joint ventures and subsidiaries abroad has increased since 2004–05 as they have globalised. Foreign investments by Indian firms began with the establishment of organic presence, and acquisitions of companies, in the US and EU in the IT-related services sectors. Now they encompass pharmaceuticals, petroleum, automobile components, tea and steel. And, geographically, Indian firms are spreading well beyond the US and EU by establishing a direct presence or acquiring companies in China, ASEAN, Central Asia, Africa and the Middle East.

Such outward investments are funded through: draw-down of foreign currency balances held in India, capitalization of future export revenue streams, balances held in EEFC accounts, and share swaps. Outward investments are also financed through funds raised abroad: *e.g.*, ECBs, FCCBs and ADRs/GDRs. Leveraged buy-outs related to these investments and executed through SPVs abroad are not captured in the overseas investment transactions data. The Tata Steel-Corus transaction, for example, involved substantial IFS revenues going to financial firms in Singapore and London.

When two firms across the globe agree

Box 4.2: *Derivatives on Indian underlyings trading outside the country*

In the case of equity derivatives, Nifty futures started trading in Singapore at roughly the same time as trading started in India. However, over the years, the market share of Singapore as a trading venue has dropped to zero. This reflects the strength of institutional mechanisms and liquidity of the onshore exchange-traded equity derivatives market.

There is a significant market for OTC equity derivatives, on Indian underlyings. That market comprises dealers in Hong Kong, Singapore and London who sell OTC derivatives of two kinds. Sometimes, derivatives on Indian equity underlyings are sold to customers outside India who are barred from participation in India. At other times, OTC derivatives transacted outside the country are not available in India. The 'Participatory Note' (PN) is the simplest OTC equity derivative, sometimes with a simple linear payoff structure. It is favoured by customers who lack a license to trade in India, or by customers who find it cost efficient to not deal with the regulatory frictions of India.

As an example, an FII or FDI portfolio could choose to buy a one-year Nifty put option in order to eliminate downside risk on the portfolio. Nifty options of this maturity are not available in India. The maximum options maturity on NSE is only three months. This customer would typically access the OTC market in Hong Kong. A dealer in Hong Kong would sell the investor this option. The dealer would then go on to lay off this risk by setting up a hedging strategy utilising the Nifty derivatives that do trade in India. As an example, the risk of the put option can be hedged by a dynamic trading strategy based on a large number of transactions on the Nifty futures, which replicate the payoff of the put option.

In the case of currencies and interest rates, the onshore market has much weaker institutional mechanisms and liquidity. This has led to a blossoming of derivatives on the INR/USD exchange rate, and on the INR yield curve, outside India. As an example, the onshore interest rate swaps market has the following features:

- The market comprises a mere 15–18 active dealers and 80–100 participants. This compares adversely with the enormous scale of participation in the onshore equity derivatives market.
- The average daily dealt volume is about Rs. 2,500 crores of notional value. The bid-offer spread seems to be 1–2 basis points for OIS and 3–5 basis points for MIFOR swaps. While some liquidity is available all the way out to 10 years, the most liquid segments are 1 year and 5 years for OIS, and 2 years and 5 years for MIFOR swaps.

The currency derivatives market is similarly burdened with many problems. Both markets – the currency derivatives market and the interest rate derivatives market – lack speculative price discovery and market efficiency rooted in arbitrage. As a consequence, trading in derivatives on Indian interest rates and the INR/USD exchange rate has inevitably blossomed outside the country. The currency derivatives on the INR/USD exchange rate are typically "non-deliverable forward" (NDF) contracts.

The 'other benchmarks' in the table include MITOR swaps, CP based swaps, 1-year MIFOR swaps, etc. In addition to the products listed in the table, a recent development has been the rise of credit derivatives (CDS and CLN) on Indian credit risk underlyings, outside India. This is linked to the rise of FCCB borrowing by Indian firms, which generates demand for hedging against this credit risk. Global hedge funds are known to sell credit protection on Indian corporations, but these entities lack access to a local credit derivatives market.

Putting these together, there is perhaps a billion dollars a day of notional value of derivatives which are traded outside the country on Indian underlyings. This is an important development that has largely escaped the attention of policy makers. The growth of these markets underlines two points. First, India's movement towards *de facto* convertibility is now at a level of maturity that permits substantial derivatives trading on Indian underlyings outside the country. Second, these markets will wax and wane in response to the sophistication of Indian financial regulation. When India runs a tight license-permit raj, there will be a greater shift of trading to locations outside the country. When India runs relatively liberal policies, these markets could shift to India – though that cannot be taken for granted once liquidity has become well entrenched in markets trading elsewhere.

HPEC proposes no policy hostility to these markets. These offshore derivatives markets are a positive development for the Indian economy. When Indian financial regulation obstructs derivatives, offshore production of these products helps end-users to obtain these services and thus undertake better risk management of their securities portfolios. This helps the sophistication and growth of the Indian economy. On the other hand, these offshore derivatives trading situations represent a loss of IFS markets that could more easily and efficiently be onshore and fuel the growth of Indian financial firms and markets, if policy impediments were removed. There is a case for reforms of Indian financial sector policy so that some of this market shifts to Indian soil; there is no case for trying to force foreign banks to cease and desist from these activities so as to extinguish these markets.

OTC Debt Derivatives	Onshore			Offshore		
	Market lot	Spread	Avg. daily volume	Market lot	Spread	Avg. daily volume
OIS swaps	25 cr.	1 bps	2500–3500 cr.	$5Mn	1.5–2 bps	$50–150
MIFOR swaps	25 cr.	3–5 bps	250–500 cr.	$5Mn	10–15 bps	$50–100
Forward rate agreements	25 cr.	10 bps	250–500 cr.	Not liquid	N.A.	N.A.
1Y GOI swaps	25 cr.	10 bps	250–500 cr.	Not liquid	N.A.	N.A.
Other benchmarks	25 cr.	15 bps	100–200 cr.	Not liquid	N.A.	N.A.
Currency forwards	$5Mn	0.5–1 ps	$1.5–2.0 Bn	$5Mn	0.5–2 ps	$500–750 Mn

to undertake current or capital account buy–sell transactions, the associated IFS are usually bought by the firm with better access to high quality, low cost IFS. Consider the example of an Indian firm exporting complex engineering goods to a firm in Germany. It can contract and invoice in: INR, USD or EUR. Because India has limited IFS capabilities, and a stunted currency trading market, the transaction is likely to be contracted in INR or USD. But the German importer generates revenues in EUR. It has to buy INR or USD to pay the Indian firm. It may have to use a currency derivative (future, forward or option) to cover the risk of a movement in the exchange rate of the INR or USD *vs.* the EUR between placing the order and receiving the goods. This would typically be done in London.

However, if India had a proper currency spot and derivatives market, the Indian exporter would be able to invoice in EUR. Local IFS demand would be generated by this local firm converting locked-in future EUR revenues into current INR revenues at a known exchange rate.

Indian exporters are not as flexible as they wish to be in their choice of the INR or of global currencies for invoicing (*i.e.*, USD, JPY, EUR or GBP) – or even the choice of currencies such as the SGD or CNY for trade with ASEAN and China. If they were, that could influence the effective price received by them. When goods are sold by an Indian exporter, and a German importer pays IFS charges in London for converting EUR into INR and managing the exchange risk, the net price received by the Indian exporter is lower. When the Indian exporter sells in EUR, and local IFS are purchased for conversion of EUR receipts into INR, the price received would be higher.

These differences are invisible in standard BOP data, which do not separate out and recognise charges for IFS being purchased or sold as part and parcel of contractual structures on the current or the capital account. For this reason, the standard BOP data grossly understate the size and importance of the global IFS market. Focusing on the transactional aspects of trade flows would tend to understate IFS demand since this tends to ignore the risk management business which rides on trade flows.

4. Estimates for IFS consumption by India

As elaborated upon earlier, different types of IFS are required for different types of cross-border trade and investment transactions. A wide range of fees are charged. Baseline transaction fees on open trade financing accounts (*i.e.*, normal trade flows without L/Cs or guarantees) vary from 0.10% to 0.25% (*i.e.*, 10 to 25 basis points). Investment banking transactions typically involve fees of 2% to 4% of transaction value. Annual fees for asset management services are typically between 1–2% of the portfolio under management (at the time of valuation and not the originally committed funds) with entry fees varying from 2–5%. Private banking and hedge funds involve higher annual loads and charges that can be partly performance based and are negotiable on an individual basis; especially for very large portfolios.

Basic transaction *flows* are accompanied by layers of multiple hedging and derivative transactions to cover risk *exposures*. For instance, an ECB issue might have secondary transactions hedging currency risk. Underlying securities might be integrated into an asset pool for mitigating underlying credit risk, and so on. Trade finance involves hedging as well. In the case of the capital account, as economic agents within and outside the country build up larger *stocks* of cross-border assets, the exposure that requires hedging grows. Substantial assets outside the country are controlled by Indian households. They induce a flow of revenues for IFS such as private banking, money management, payments services, etc. which are being lost by India.

Using simple but defensible extrapolations for this report, it is estimated that IFS purchases related to trade/investment in India amount to about 2% of gross flows. This average is based on a weighted composite of: (a) generic charges for corporate transactions (fund raising, asset management etc.) and (b) standard service charges

on current account flows. These estimates have been derived after extensive discussions with customers and producers of the kinds of IFS enumerated above.

In 2005–06, applying 2% (base case) on gross two-way flows of $657 billion, the estimated IFS market was US$ 13 billion or INR 600 billion. If estimates of 1% (low case) and 3% (high case) are used, then the associated IFS market size would work out to a low of $ 6.5 billion and a high of $ 19.7 billion.

These estimates are conservative because they are based on *plain vanilla* transactions. In the real world, financial firms put together increasingly sophisticated packages of IFS with risk management services layered over a vanilla transaction. Structured products involve significantly higher fees. But, the HPEC's inclination to be conservative in making such broad projections/estimates, on a relatively simple but understandable basis, has precluded such complexities from being considered.

Regardless of arguments about how these broad estimates of extant and potential IFS revenues are derived and interpreted, what is unarguable is that rapid globalisation of the Indian economy has created domestic demand for IFS at a faster rate than the economy's growth. The 'globalisation over growth multiplier' is driving Indian demand for IFS more rapidly than the supply of IFS in India can cope with.

India has not yet made the policy, regulatory, structural, institutional, and market changes that are needed to match domestic supply of IFS with growth in domestic demand. Essential supply-side changes include: (a) the removal of capital controls at a more rapid rate that currently envisaged by the CAC-2 report to permit demand and supply of IFS to equilibrate more efficiently and responsively in tune with growth and globalisation; and (b) further rapid deregulation and liberalisation of Indian finance accompanied by structural, institutional and market integration of the Indian financial system with the global financial system, through a focused and intensive programme of financial sector structural adjustment and reform.

5. Projections for IFS consumption by India

5.1. Outlook for deep globalisation in India

Whether the focus is on trade in goods or services, or on the capital account, what India has done so far (1992–2006) to reintegrate into the world economy represents a small series of hesitant steps. The bulk of exports from India so far are sterile: *i.e.*, where an Indian company produces a good or service and tries to find buyers (importers) outside the country unconnected with the exporting company. 'Deep globalisation' comes about when a production facility in India is woven into global production chains that are becoming vertically (and horizontally) integrated. As a number of reports from UNCTAD and other sources confirm, over 35% of world trade in goods and services is now **'intra-firm'** trade; *i.e.*, transactions across borders that occur within the boundaries of a single MNC. A further 25% is **'inter-firm but intra-industry'** trade: *i.e.*, across firms, but within industries (*e.g.*, the auto industry).

Those percentages are likely to grow. As that happens deeper globalisation will occur with global MNCs in India (domestic and foreign) exporting to subsidiaries and/or affiliates of those same groups and their suppliers/customers worldwide. At this point, trade/GDP ratios that have already risen impressively since 1992 will turn upward even more dramatically as happened in China. Deep globalisation requires:

1. Continued reduction of government-induced barriers to trade, such as customs duties or capital controls, and a shift over to a modern VAT framework where imports of goods or services are charged the national VAT rate at entry and exports are zero-rated.
2. Global standards of physical infrastructure – *i.e.*, transportation and communications, ranging from container terminals and airports to fibre-optic cables giving broadband connectivity at world prices, with ubiquitous voice-over-internet protocol (VOIP) telephony, etc.
3. A substantial presence of the world's

major MNCs– whether Indian or foreign – being located in India; since the lion's share of trade in the world today takes place *within* MNC boundaries. This requires removing India's barriers to FDI and opening up to MNC participation in all sectors of the economy without as many obstacles, and encouraging more Indian firms to become global multinationals.

India has made significant progress on this three-fold agenda. It is worth noting that, post-1999 when swift advances on these three issues were made, gross flows rose dramatically. Yet, much work on all three fronts still remains to be done.

India cannot be sanguine about how far it has come in the last 15 years; although it has much to applaud in that regard. It has come a long way. But now India has to focus on how far it still lags behind the rest of the world (especially ASEAN, China, Korea, Brazil, South Africa, leave alone Japan, the EU and US) and what it must do to catch up; not in decades, but in months and years.

On the issue of tariffs and capital controls, the empirical experience is that substantial reduction of restrictions *compared with earlier years* led to small economic benefits as long as the *level* of the barriers remained high in absolute terms. When a tariff for a product is lowered from 100% to 50% this seems like a dramatic improvement. But 50% is still a high barrier that fundamentally undermines imports. It affects adversely the export competitiveness of industries that utilise the protected product as a raw material.

In the same way, in the financial world, allowing mutual funds to start schemes for overseas investment (subject to a series of quantitative restrictions on investment per fund and aggregate investment by all funds) is quite different from decontrolling overseas investment by mutual funds altogether and leaving them to get on with it. That is a key issue for understanding the outlook for India's future.

Since 1991–92, it appears as if India has made considerable progress in: lowering tariffs, lowering capital controls, improving infrastructure, and permitting entry to MNCs. But, on all these fronts, what has really changed in India is a shift from egregiously high barriers to modest barriers that are still much higher than they should be. Incremental changes have been made in lowering tariff and non-tariff barriers. Tariffs are still too high by global standards and for meeting India's own growth and development interests.

The reduction in barriers that has occurred so far, and the consequent improvement in competitiveness, while significant, are not sufficient; except in a few instances where remarkable results have been achieved. Similarly infrastructure has improved; but, insufficiently in terms of quantity or quality in every sub-sector: whether power, water, irrigation or transport. Communications infrastructure has improved dramatically; simply because reforms in that sector were more sweeping. It would improve even faster if such reforms were continued and foreign entry was opened up further. Entry barriers to MNCs have been lowered; but a host of mind-numbing restrictions, differentiated by sector, size and location, still remain.

The biggest economic gains (in terms of growth and diversification) will be achieved when India takes the next step in moving from modest barriers to no barriers. When barriers to entry and competition are removed altogether in the real and financial economies, two-way cross-border financial flows will grow dramatically – not incrementally – in the next ten years. As shown earlier, they doubled in 1992–02 and nearly tripled in 2002–06. If India 'goes for broke' in reducing extant barriers, especially in the financial sector, those flows may multiply yet again in 2007–10.

Another perspective that encourages nonlinear thinking is the empirical experience of IFCs such as Singapore. When Singapore became a GFC, the volume and variety of IFS transactions grew exponentially, not incrementally. If India is able to establish an IFC in Mumbai quickly, a point of inflection will be reached when growth will be non-linear and not incremental. The establishment of an IFC is similar, in that sense, to the provision of liquidity in financial markets where only a binary outcome is

Table 4.6: Segment-wise projections of BoP accounts (amounts in $ bn)

		GDP Share (%)			BoP component flows	
		2006	2010	2015	2010	2015
		1	2	3	4	5
Merchandise	outflows	21.6	26	28	305.14	600.05
	inflows	14.5	17	23	199.52	492.90
Invisibles	outflows	7.0	7.44	8.62	87.32	184.73
	inflows	12.6	15	16.7	176.04	357.89
Total inflows		27.1	33	32.62	375.56	850.78
Total outflows		28.5	29.44	32.79	392.46	784.78
Gross flows on C Account		55.6	62.44	66.00	768.02	1,635.56
Gross flows on K Account		35.0	35.20	35.20	412.64	754.35
Official flows	outflows	0.0	0.3	0.3	3.52	6.43
	inflows	0.0	0.5	0.5	5.87	10.72
FDI	outflows	0.4	1	0.6	11.74	12.86
	inflows	1.2	2	1.47	23.47	31.50
Portfolio (equity + debt)	outflows	7.7	6	8.94	70.42	191.59
	inflows	9.4	9.4	11.37	110.32	243.66
Debt	outflows	7.2	5	4	58.68	85.72
	inflows	8.0	9	6	105.63	128.58
Miscellaneous	outflows	0.5	0.46	0.27	5.40	5.79
	inflows	0.7	1.5	1.75	17.60	37.50
Total external flows		90.6	98	101	1,181	2,390

feasible: (a) explosive growth or (b) abject failure.

5.2. Baseline projections of external flows

Under reasonable and plausible assumptions, India's GDP at nominal market rates will exceed US$ 1 trillion in 2008. It will be over US$ 1.5 trillion by 2012 and over US$2.25 trillion by 2015.[2]

Based on these GDP growth rates, a crude metric of India's globalisation is provided by the proportion of total gross cross-border flows to its GDP. In 2005–06, this was 90% of GDP. This ratio is projected, conservatively, to rise to 100% of GDP by 2014–15. It is on that basis that the table below summarises BoP projections of India's external flows in the years 2009–10 and 2014–15. The figures in column 1 are actual shares of individual BoP components in 2005-06. Given deepening globalisation (*i.e.*, share of BoP as a share of GDP) observed in the past, and faster GDP growth likely in the future, we have assumed that external flows would be as large as GDP (columns 2 and 3 of the Table). The actual flows are computed by multiplying GDP (in USD billion) by the respective shares. The reasoning for these shares is as follows:

- Exports and imports (other than petroleum) have been growing at over 20% annually in the last two years. India's share of global merchandise trade remains below 1%. But its increasing competitiveness will take it above 25% of GDP by 2015. On the current account, India's merchandise trade share will rise, especially after 2009, with India's accession to the WTO trade regime. Moreover, providing further impetus to Mumbai's growth as an IFC, India's linkages with other growing countries will increase.
- In recent years, Asian economies have been emerging as major trading partners of India. Trade with these countries has grown faster than overall trade. Emerging Asia accounted for 22.4% of India's exports in 2004–05 (16.0% in 1999–2000) and 20.1% of total Indian imports (16.2% in 1999–2000). In 2004–

[2] Kelkar (2004b) offers arguments about why Indian GDP growth will accelerate into the coming decade.

Table 4.7: External BoP flows under different scenarios (US$ billions)

	CAGR	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Low	10%	657	723	795	875	962	1058	1164	1280	1408	1549
Medium Low	15%	657	756	869	999	1149	1322	1520	1748	2010	2311
Medium	20%	657	788	946	1135	1362	1635	1962	2354	2825	3390
Medium High	32%	657	867	1145	1511	1995	2633	3476	4588	6056	7994
High	40%	657	920	1288	1803	2524	3534	4947	6926	9697	13575

05, China emerged as the second major export market for India after the US. It has now become the largest source of imports, surpassing the US. Exports to China surged by 81% in 2004–05 and imports increased by 67%. A similar trend was noticeable vis-à-vis the ASEAN-5. Looking ahead, there is further scope for expansion in trade with these countries.

5.3. Alternative scenarios for foreign transactions growth

There are already signs of a profound qualitative change in India's financial linkages with the world, in its current and capital accounts. Table 4.7 indicates a rough quantitative measure of the change, in terms of overall transactions levels over various periods, starting from 1992–93 (the first inflexion point) to the latest year for which data is available, *i.e.*, 2005–06.

The following table indicates the magnitudes of BoP flows associated with a range of CAGRs that could be achieved over the next decade. It starts with BoP numbers for 2005–06, to which these different CAGRs are applied, assuming that the indicated compound growth rate continues apace over the next ten years. Obviously, this simplifies reality; but it provides a useful illustration nonetheless. The resulting projections of total BoP shares are consistent with the conservative CAGR's of 10–15% in the scenarios presented in Table 4.7 above.

The different growth rates shown above indicate the magnitudes of total external flows that would be generated. The choice of CAGRs corresponds to those observed over various time horizons in India. The 10–15% rates are in line with the CAGR in India's BoP over the 1990s and the early years of this millennium. The 20–32% rates correspond to growth in the last two years. The data available for 2006–07 indicate that an assumption of a 40% growth might be more justified in projecting two-way flows for the next few years.

5.4. Projections for the revenue potential of Mumbai as an IFC

The direct fees that IFS in Mumbai might generate by 2010 and 2015 are illustrated below. Ancillary taxes and other influences on current account flows, resulting in surpluses, would be additional. Although the range of fees varies widely across financial services, it is reasonable to estimate an aggregate average of these fees across various services. We have assumed fees for intermediating external sector flows to be about 2% of flows. We arrive at this approximation using the weighted average of generic charges for corporate transactions, including fund raising, asset management and add the service charges on current account flows.

In summary, our median (base case) projections involve IFS demand in India

Table 4.8: Projections of Fees (end-March, US$ billion)

	2006	2010	2015
Total external flows	**657**	**1,181**	**2,390**
Total fees @ 1%	6.57	11.81	23.90
Total fees @2%	**13.14**	**23.61**	**47.80**
Total fees @ 3%	19.71	35.42	71.70

rising from $ 13 billion in 2006 to $ 48 billion in 2015. A low-case assumption would see IFS consumption rising from US$ 6.6 to nearly US$ 24 billion over the same period. A more optimistic (but not implausible) 'high-case' assumption would see it grow from US$ 19.7 to nearly US$ 72 billion.

6. Implications for India's aspirations to create an IFC in Mumbai

The estimates shown and projections made for the purposes of this chapter require a new way of thinking about an IFC in Mumbai. The traditional approach for Indian service exports has been that of tapping into a quasi-infinite world market. This approach was taken in the case of the software industry. That industry has domestic sales of $0.5 billion a year and exports of about $15 billion a year. Indian software firms have grown by expanding their lists of *international* customers. The domestic market does not feature as significant in the minds of the CEOs of these firms. It certainly played no role in their graduating into multinational export-oriented firms.

IFS are similar to software in that they are labour and skill intensive. They thrive on human capital, telecommunications infrastructure, and sound policies. As has been argued in this chapter, there is a fundamental difference between finance and software: *i.e.*, India's hinterland advantage for IFS provision. The sheer size of the Indian economy, its growing integration with the world, and the high growth rates of cross-border flows that are likely to materialise in the future, all imply that *India* is already a large and growing customer for IFS. It will be one of the three largest customers in the world for these services within a short span of time.

6.1. The threat

Intuitively, a simple analogy for IFS might be made with (say) the steel industry. India's rapid growth implies that Indian demand for steel will rise sharply. Steel, like IFS, is a superior good: a 1% growth in GDP is likely to induce an above-1% growth in demand for steel. If Indian steel producers are unable to keep pace with the quality and quantity of steel required in the country, then Indian demand will be met by producers outside. Applying similar reasoning, if India chooses not to make the financial and urban governance regime changes required to create a viable IFC in Mumbai, then Indian customers will look to Singapore, Dubai, London and other IFCs. Financial firms and policy-makers in these three cities are already attuned to opportunities for selling IFS to India. They have embarked on strategies to exploit the infirmities of the Indian financial system, which – as discussed earlier – has not evolved apace with the IFS (or DFS) needs of a rising India.

6.2. The opportunity

At the same time, Indian IFS demand provides an opportunity for developing the overall capability of the IFS industry that the software industry never had. Indian software exports took place by dint of Indian human capital. IT firms asked nothing from the State other than telecom reforms though they were given tax benefits as well. Indian IT genius was able to conquer world markets in 1996–2006 in a way that could not have been predicted.

In the case of IFS, there is an identical opportunity for Indian financial genius to achieve success in the world market; but with one key difference. Unlike IT exports, the potential for achieving IFS exports are increased dramatically by a hinterland advantage. India's growth and the consequential domestic demand for IFS generate natural opportunities for IFS producers in India (local and foreign) to gain skills and realise economies of scale. But just as Indian software exports required an enabling framework from the State by way of telecom reforms, Indian IFS exports will require an enabling framework from the State through:

- The removal of capital controls as early as practicable
- Further reforms in the financial sector – involving deregulation, liberalisation, gradual exit from public ownership of

Table 4.9: The Global IFS market

	Market share (%)						Size (USD tn)
	UK	US	Japan	France	Germany	Others	Total
Cross-border bank lending (09/05)	20%	9%	8%	8%	11%	44%	20.3
Foreign equities turnover (2005)	43%	31%	–	–	3%	23%	5.8
Foreign exchange turnover (04/04)	31%	19%	8%	3%	5%	34%	600
Derivatives turnover							
- exchange-traded (2004)	7%	31%	2%	4%	12%	44%	
- over-the-counter (04/04)	43%	24%	3%	10%	3%	17%	368
International bonds - secondary market dealing (2005)	70%	...	...	...	...	...	50.6
Fund management (as a source of AUM, end-2004)	8%	45%	12%	5%	4%	26%	45.9
Hedge funds assets (end-2005)	20%	62%	1%	2%	–	8%	0.9

Sources: International Financial Services, London; Bank of International Settlements; London Stock Exchange, Bank of England, Systematics International, International Securities Market Association, World Federation of Exchanges, International Securities and Derivatives Association

financial firms, markets and exchanges, and open competition without restriction, by removing all remaining barriers to foreign and domestic competitive entry by financial and non-financial firms as investors in financial firms

- A dramatic improvement in the quality of urban facilities and governance in Mumbai.

To become a viable IFC, Mumbai must aspire to, and actually become, no less than a cosmopolitan and metropolitan 'global city' in every sense of that term.

7. IFS customers outside India as a market for an IFC in Mumbai

India's opportunities for providing IFS are not, however, confined to demand in its own market. Unlike continental European IFCs and Tokyo, an IFC in Mumbai need not be confined to serving only Indian customers; although that customer base gives it a clear start-up advantage. For the reasons discussed earlier, Mumbai has the potential as an IFC– if national financial policies and state/municipal urban governance are radically improved – to go beyond the confines of India and serve the world in a manner similar to London, New York and Singapore. The following tables should enable policy-makers to appreciate how large that opportunity is.

The scale of global IFS transactions is mind-boggling. The largest volumes are in currency and derivatives trading. These

Table 4.10: Global financial stock (USD trillions)

	2003	2010
Equity securities	31.9	56.8
Corporate debt securities	30.8	60.7
Govt debt securities	20.3	32.4
Bank deposits	34.8	58.8
Overall	117.8	208.7

segments will grow dramatically when the INR, CNY and ASEAN currencies become globally tradable. Foreign currency trading volumes were conservatively estimated at over US$ 600 trillion in 2004. The table shows that to be a credible 'global' IFC, a country has to cross the threshold of a 5% market share. France and Germany (Paris and Frankfurt) are examples of countries/IFCs that are clearly not 'global'. They have values of slightly below 5% in some areas and values of slightly above 5% in other areas. Singapore, which has mounted an impressive effort to become an IFC, has 5% of global currency spot trading with a daily turnover of $125 billion. In comparison, Indian currency spot turnover seldom exceeds $5 billion per day.

Funds under management by asset managers were nearly US$ 50 trillion in 2004. They have increased significantly since. Hedge funds now manage over US$ 1.2 trillion. That figure is growing by 40% annually. With both asset and hedge fund management, there is an important distinction between IFCs that are primarily *sources* of assets seeking management, and

Table 4.11: The Global IFS market

Component	*Projected world market in 2010 (Trillion USD)*	*5% market share (Trillion USD)*
Fund management (assets under management)	100	5
Turnover per day		
Currency spot	4	0.2
Exchange-traded derivatives	25	1.25
International bonds	0.3	0.015

GFCs in which fund managers set up their operations. Looking into the future, the consulting firm McKinseys estimates that the stock of global financial assets will almost double from US$ 118 trillion in 2003 to US$ 209 trillion by 2010. The breakdown of these totals is shown in Table 4.10.

The fees and profits associated with these magnitudes are enormous. A major mental paradigm-shift is required in India to comprehend these numbers: for market size, and the corresponding fees generated. As an example, most financial policy makers in India today would perceive a currency spot market with a daily turnover of $200 billion, or $50 trillion per year, as inconceivable.

Profits from investment banking services alone, internationally, were estimated at $53 billion in 2005. If India had a 5% share of 2005 investment banking revenues, that alone would have amounted to over US$ 2.6 billion. This estimate of course ignores the phenomenal growth of this particular IFS market after 2005.

It is worth reiterating that the services considered are only a small subset of the total range of financial services that are currently on offer.

8. International comparisons

Tables 4.12 and 4.13 show a rating comparison of established and emerging IFCs on demand for IFS from their national, regional and global clients. When compared against established IFCs, Mumbai fares well on domestic demand, but poorly on regional or global clients. When compared with emerging IFCs, Mumbai lags the others on demand from the region or the globe. But Mumbai stands out – and perhaps is matched only by Shanghai – on having a vibrant domestic market.

Table 4.12: Comparing Mumbai against emergent IFCs

Attributes, Characteristics and Capabilities of an IFC: (Scale of 0–10 with 0 = worst; 10 = best)	Mumbai	Hong Kong	Labuan	Seoul	Sydney	Dubai
A. Demand Factors for IFS						
A1. National (Domestic) demand for IFS	10	4	2	7	6	2
A2. Demand for IFS from Regional clients	1	7	5	2	3	9
A3. Demand for IFS from Global clients	0	2	2	2	3	5

Table 4.13: Comparing Mumbai against existing IFCs

Attributes, Characteristics and Capabilities of an IFC: (Scale of 0–10 with 0= worst; 10= best)	London	New York	Tokyo	S'pore	F'furt	Mumbai
A. Demand Factors for IFS						
A1. National (Domestic) demand for IFS	10	10	10	4	10	10
A2. Demand for IFS from Regional clients	10	10	3	9	7	1
A3. Demand for IFS from Global clients	10	10	3	5	3	0