Indian Healthcare Industry

TresVista
FINANCIAL SERVICES

August 2011

Contents

Executive Summary

- The Indian healthcare industry, currently worth $40.0 bn, is highly fragmented and dominated by private players. The sector is in rapid development phase fueled by large investments from existing corporate hospital chains and new entrants backed by private equity investors
- A growing old age population with rising incidence of lifestyle diseases, rising incomes and affordability, and increased penetration of health insurance are fuelling growth of the healthcare industry
- India's current healthcare infrastructure will be grossly inadequate to meet sky-rocketing demand, especially government infra-structure which will necessitate substantial investments by private players
- Most hospital chains have aggressive expansion plans to scale up their activities and establish a pan India presence. The sector is expected to grow at 24.1% CAGR through 2020
- Indian hospitals are exploring various innovative models to improve their performance and profitability, for instance, getting into telemedicine, and increasingly focusing on specialty centers and day care centers
- There is increased penetration into tier II and III cities which have lower capexand costs, using models such as hub and spoke and operating and maintenance contracts to expand reach
- The sector has witnessed significant interest from private equity players, playing an integral role in all strategies of Indian hospitals, including organic and inorganic growth, and to make hospitals asset-light enterprises

Industry Overview
Introduction

The Healthcare Opportunity [1]

- The Indian healthcare sector is currently estimated to be $40.0 bn, and is forecasted to almost double to $78.6 bn by 2012. The industry is likely to grow 7.0x to reach $280.0 bn by 2020, a CAGR of 24.1%
- India only spends 4.2% of GDP on healthcare, compared to an average of 8.5% globally, and lower than other emerging countries including Brazil (9.0%), China (4.6%), and Russia (5.4%)
- Growth in healthcare will be driven by a combination of growing and ageing population, increasing affordability, lifestyle diseases, and growing insurance penetration
- India currently faces a chronic shortage of healthcare infrastructure, especially in rural areas and tier II and III cities, with potential requirement of 1.75 mn new beds by the end of 2025
- Government-run facilities have inadequate equipment and poor quality. As a result, private players can capitalize on the opportunity to expand. The private sector is likely to contribute 80.0%-85.0% of the required $86.0 bn healthcare investment till 2025
- Increasing entry barriers like high capex intensity and reserve crunch will favor existing players to pursue accelerated growth
- High upfront investments, long gestation periods, and rising real estate costs will compel private players to innovate with business models and expand into under-penetrated tier II and III cities

Private players dominate the market, versus government dominance in developed nations

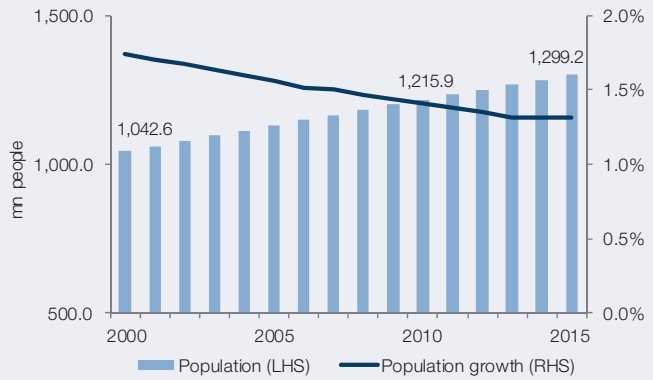
[1] Ernst & Young press release, January 2011.

Growth Drivers
Demographics

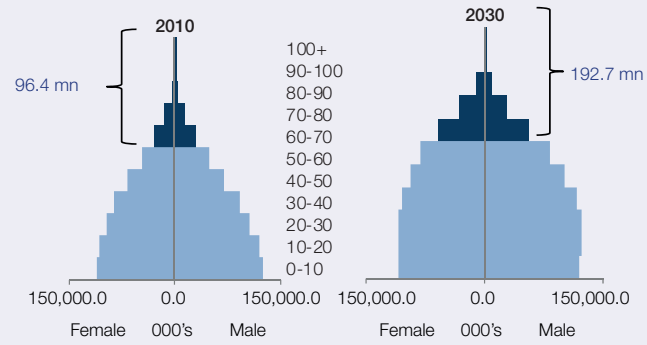
A Key Demand Driver

- India's population has grown from 1.0 bn in 2000 to 1.2 bn in 2010 and is expected to reach 1.3 bn by 2015, at a CAGR of 1.3%
- Increasing population will put pressure on the already inadequate healthcare infrastructure, creating an acute need for more hospital beds
- India's average life expectancy has increased from 57.0 in 1990 to 65.0 in 2009. This, coupled with a declining population growth rate, implies that the number of people in old age groups (>60 years) is likely to increase [1]
  - Population above the age of 60 is likely to double from 96.4 mn in 2010 to 192.7 mn in 2030

Population Growth [2]



Old Age Population [3]



Increasing old age population will drive demand for healthcare services

[1] WHO.
[2] IMF.
[3] US Census Bureau, International database.

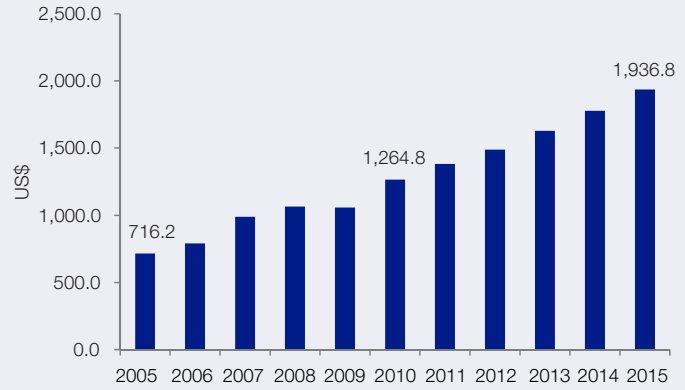
Growth Drivers *(contd.)*

Rising Affordability

Affluence Leading to Health Consciousness

- India has witnessed rapid growth in recent years, resulting in increasing income levels and wealth
  - GDP per capita has grown from $716.2 in 2005 to $1,264.8 in 2010, and is expected to reach $1,936.8 by 2015
- Rising wealth and standard of living has led to greater awareness for health, resulting in higher healthcare spending
  - Healthcare expenditure per capita in India has increased from $22.7 in 2004 to $29.2 in 2010
- Rising affordability and the resultant quality consciousness along with increasing healthcare spending is a major factor driving the demand for the healthcare industry

GDP per Capita [1]



Healthcare Expenditure per Capita [2]

Rising affordability and attention to quality of life will result in increasing healthcare expenditure

[1] IMF.
[2] NSSO.

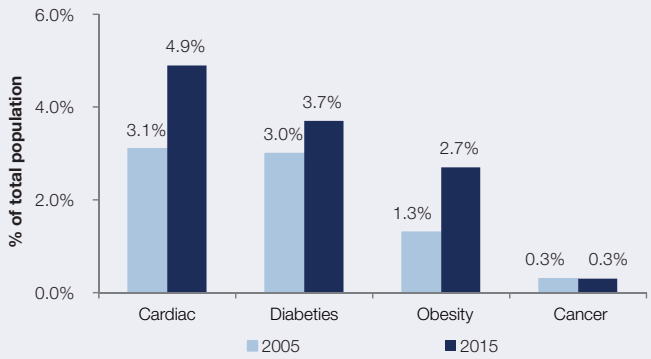
Growth Drivers *(contd.)*

Lifestyle Diseases [1]

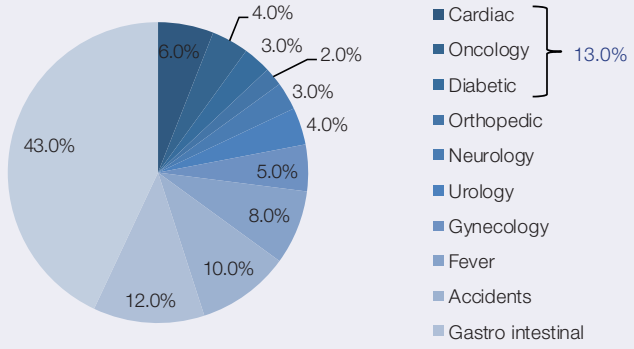
Accelerates Incidence of Lifestyle Diseases

- India is experiencing rapid growth in people suffering from lifestyle related diseases
  - % of population suffering from cardiac diseases, diabetes, obesity, and cancer are expected to rise from 7.7% in 2005 to 11.6% in 2015
- As of 2008, lifestyle related diseases comprised 13.0% of total ailments in India. This is expected to increase to 20.0% by 2018
- This increase in the incidence of lifestyle related diseases is likely to trigger additional demand for specialized treatment, which can be better done in specialty or super-specialty hospitals
- Increasing incidence of lifestyle related diseases will also lead to increasing margins for hospitals, since these are the high margin end of disease spectrum

Increase in Lifestyle Related Ailments



Ailment-Wise Case Mix (2008)



Rising incidence of lifestyle related diseases will increase demand for specialized healthcare

[1] Edelweiss research, October 2010.

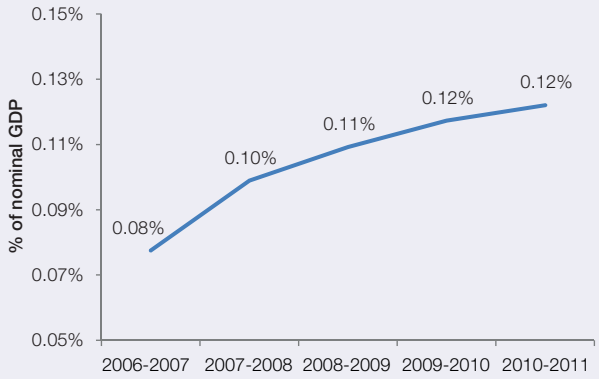
Growth Drivers *(contd.)*

Rising Health Insurance

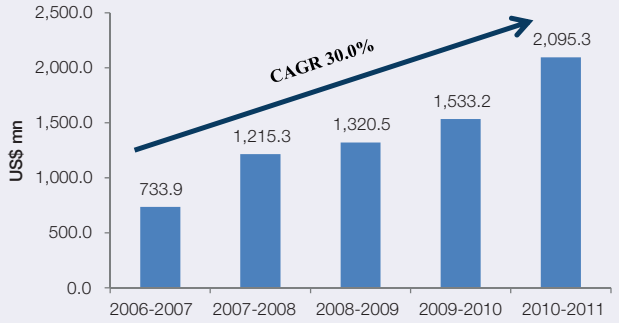
Complementing Increasing Affordability

- Health insurance is gaining rapid momentum in India
  - Penetration (as % of GDP) has risen from 0.08% in 2006-2007 to 0.12% in 2010-11
  - Gross health insurance premiums have increased at a CAGR of 30.0%, from $733.9 mn in 2006-2007 to $2,095.3 mn in 2010-2011
- The increase in health insurance is substantiated by the reduction in out-of-pocket expenses on health from 92.2% of total private expenditure in 2000 to 74.4% in 2008 [1]
- Penetration of health insurance will significantly increase the affordability of healthcare services by the population, while improving the quality of healthcare

Health Insurance Penetration [1]



Gross Health Insurance Premium [2]



Higher penetration of health insurance will lead to higher affordability

[1] WHO.
[2] IRDA, RBI; Insurance penetration = gross premium / nominal GDP.

Growth Drivers *(contd.)*

Medical Tourism

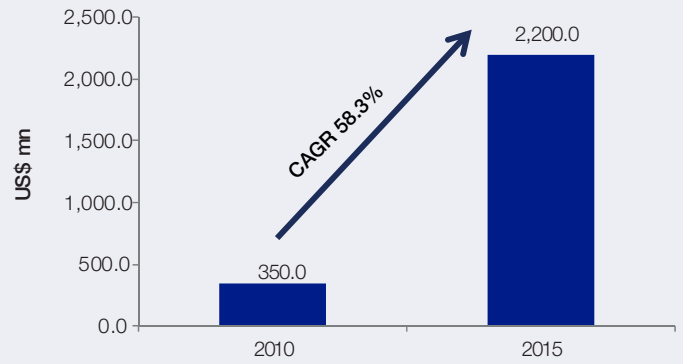
Low Costs to Drive Growth

- Treatment for major surgeries in India cost ~10.0% of that in developed countries
- Indian tertiary and specialty hospitals boast of a high level of quality
- Medical tourism becomes an attractive proposition for patients from developed countries (due to the cost advantage) as well as emerging countries (due to better quality)
- India's large expat population itself is a significant target market
- The medical tourism industry is expected to increase from $350.0 mn in 2010 to $2.2 bn in 2015
- Specialty care and tertiary hospitals are estimated to account for $1.0-$1.5 bn of the total potential revenue

Healthcare Cost Differential [1]

Treatment	Cost (US$)			India cost as % of USA
	India	USA	Singapore	
Heart surgery	4,800	100,000	15,312	4.8%
Heart valve replacement	4,800	160,000	13,000	3.0%
Bone marrow transplant	30,000	250,000	150,000	12.0%
Liver transplant	69,000	300,000	140,000	23.0%
Knee replacement	5,000	48,000	25,000	10.4%
Hip replacement	5,200	38,000	12,000	13.7%

Medical Tourism Industry Size [2]



Low cost, super-specialty facilities, and improved connectivity attracting patients from abroad

[1] Morgan Stanley research, October 2010.
[2] PUG research, September 2010.

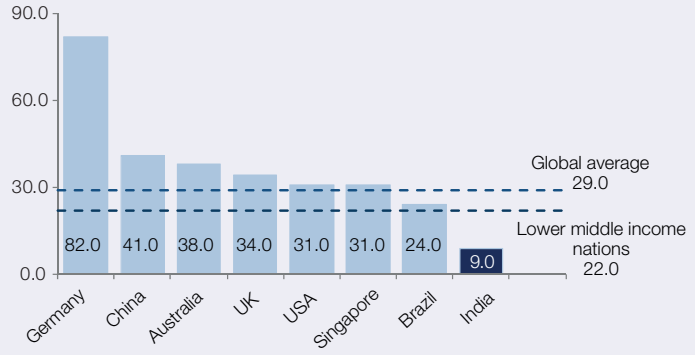
Growth Drivers *(contd.)*

Medical Infrastructure Gap

Bridging Requires High Investments

- India faces a chronic shortage of healthcare infrastructure
  - It has 9 beds per 10,000 people, a third of the global average of 29 beds and even lesser than 22 beds per 10,000 people in lower middle income countries
  - The problem is more severe in rural areas, where only 43.5% villages in the country have a doctor
- Merely to bridge the gap between India and the world, India needs 1.75 mn additional hospital beds, requiring an investment of $86.0 bn [1]
- As more attention is drawn to the medical infrastructure gap in the country, increasing amount of investment is being attracted into the space to bridge this gap

No. of Beds (Per 10,000 Population) [2]



Health Infrastructure in Villages [3]

Infrastructure / services	% Villages
Connected with roads	73.9%
Having any health provider	95.3%
Having trained birth attendant	37.5%
Having anganwadi worker	74.5%
Having a doctor (private & visiting)	43.5%
Having a private doctor	30.5%
Having a visitor doctor	25.0%

Significant medical infrastructure investments needed to bridge supply side gap

[1] Ernst & Young press release, January 2011.
[2] IMF.
[3] Intel case study.

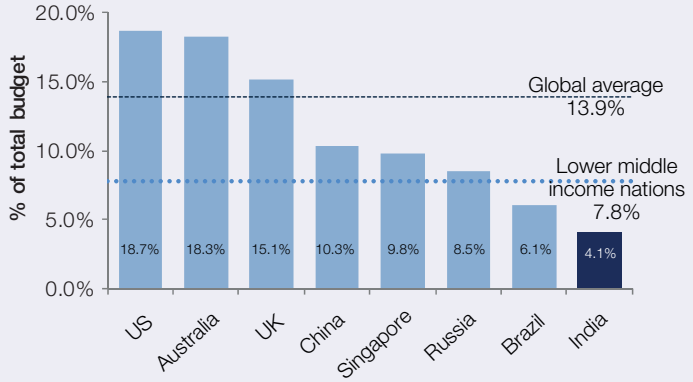
Growth Drivers *(contd.)*

Inadequacy of Public Sector

Opportunity for Private Sector

- Healthcare has received inadequate attention from the government in India
  - Indian government spends 4.1% of its total budget on healthcare, compared to a global average of 13.9%
  - The government contributes only 32.8% of total healthcare costs, compared to a 60.5% globally
- Government-run healthcare facilities are not well managed, and are known to have poor quality of services and inadequate infrastructure and equipment
- This opportunity can be capitalized by private players to expand operations into smaller towns which lack good quality private hospitals

Government Expenditure on Health [1]



Healthcare Expenditure [1]

Country	Health expenditure as % of GDP	Govt. expenditure on health as % of total health expenditure	Per capita govt exp. on health (US$)
India	4.2%	32.8%	15.00
Brazil	9.0%	45.7%	335.00
China	4.6%	50.1%	85.00
Russia	5.4%	64.4%	306.00
Singapore	3.9%	41.1%	618.00
UK	9.3%	83.6%	2,747.00
USA	16.2%	48.6%	3,602.00
Australia	8.5%	70.1%	2,711.00
Global average	**8.5%**	**60.5%**	**517.0**

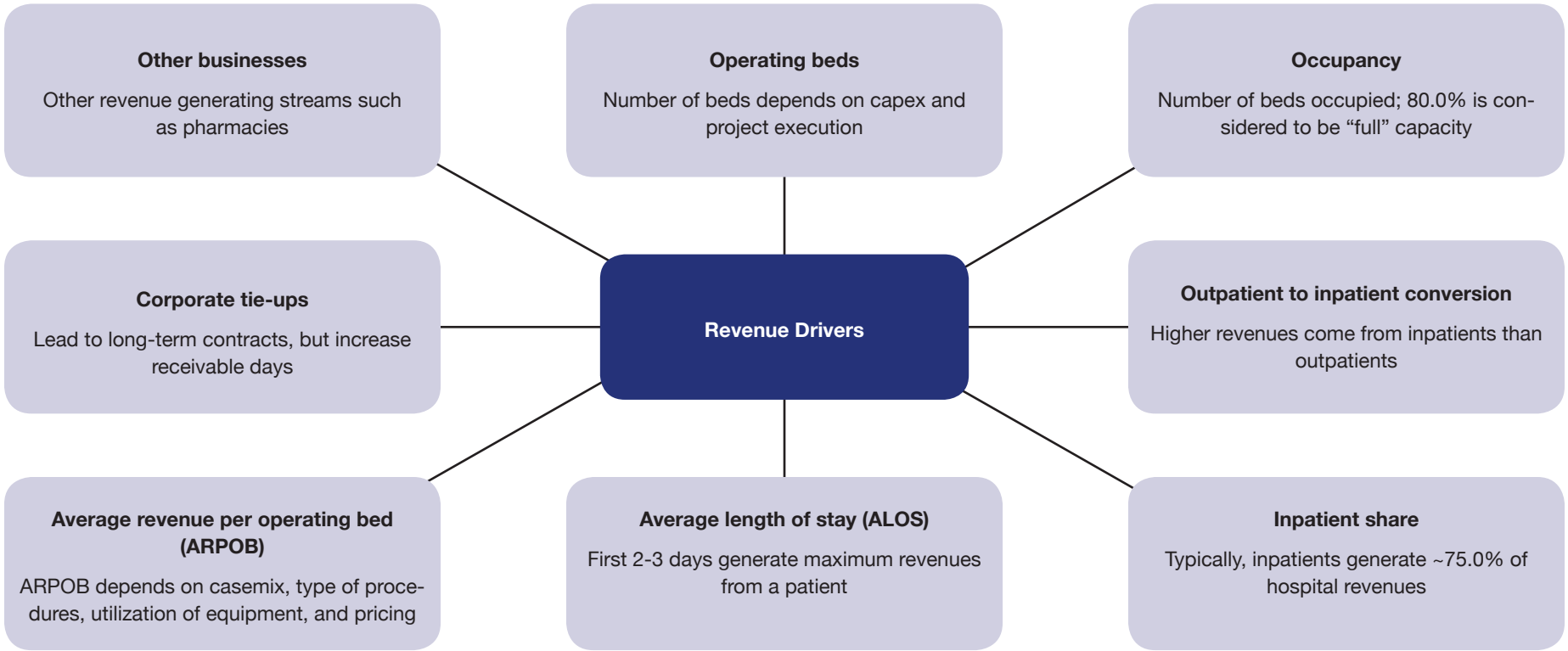
Insufficient government investments present an opportunity for private players

[1] WHO Report, 2008.

Business Dynamics

Revenue Drivers

Revenue Drivers of a Tertiary Hospital

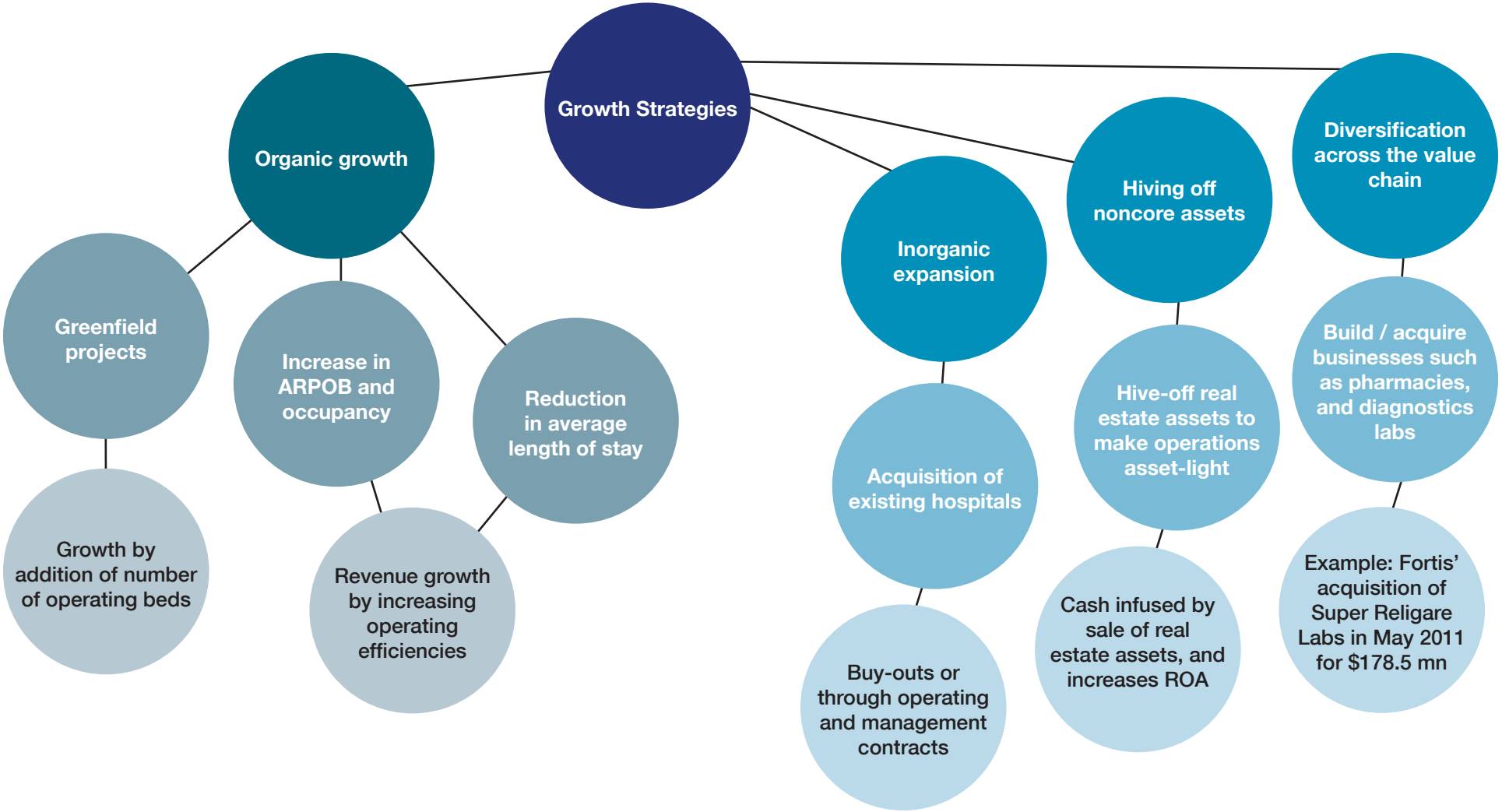


Hospitals should mainly focus on occupancy, ALOS, and ARPOB to maximize revenues

Business Dynamics *(contd.)*

Growth Strategies

Various Strategies in Play Across the Industry



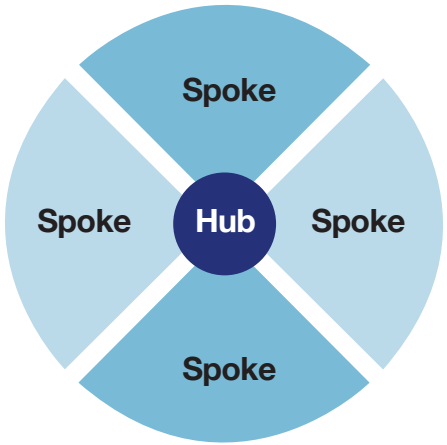
The asset-light model is the preferred growth strategy for PE investors

Business Dynamics *(contd.)*

Operating Models

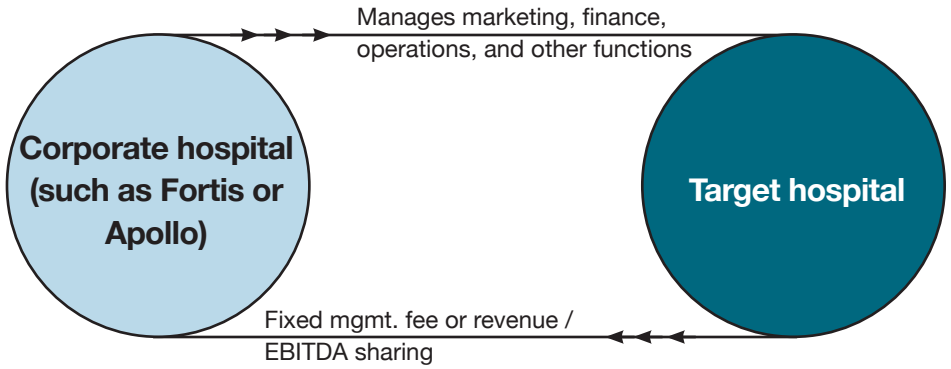
Hub and Spoke Model

- Under a hub and spoke model, a super-specialty hospital (hub) is established in a major city of a region, with smaller multi-specialty hospitals or day care centers in surrounding towns
- Enhances profitability by ensuring better treatment at the spokes, and transfer of patients to hubs only if required, increasing occupancy and ARPOB



Operating and Maintenance Contracts

- A corporate chain (like Fortis or Apollo) takes over management of a hospital owned by a trust
- The corporate hospital may or may not acquire an equity stake in the target
- In return, the corporate hospital gets a fixed annual management fee or a share of the revenue / EBITDA



Hospitals are increasingly implementing alternative operating models to maximize profitability

Business Dynamics *(contd.)*

Delivery Formats

Healthcare Cities

- They are one-stop shops which offer healthcare services, including wellness centers, educational and training institutes, retail and hospitality, and commercial and residential complexes
- Due to large land requirement, these are often situated on the outskirts of a city and attracting patients could be a major challenge
- There are 9 health cities currently being planned in India at an investment of $2.3 bn

Day Care Surgery Centers

- These are units which conduct procedures where patients are discharged on the same day and not hospitalized
- Enables hospitals chains to free up capacity at tertiary hospitals and increase ARPOB, while retaining patients within the network
- Requires low capex, making breakeven period shorter

Single-Specialty Hospitals

- Offer “best in class” treatment in certain therapies and position themselves as centers of excellence in those treatments
- Enables them to attract best specialists and drive patient volumes overriding geographies
- Most effective for highly specialized therapy segments like oncology and cardiology
- Examples include Narayana Hrudayalaya (cardiology), Healthcare Global (oncology) and Arvind Eye Care (opthalmology)

Various formats are being used to deliver effective and high quality healthcare services

Regulations Governing Healthcare

Regulatory Scenario

Key Regulations

Regulation	Purpose
Drug and Cosmetic Act, 1940	Regulates the import, manufacture, distribution, and sale of drugs and prohibits the manufacture and sale of drugs which are misbranded, adulterated, spurious, or harmful. Specifies license requirements for manufacturer / distributor of drugs and cosmetics
Bio-Medical Waste (Management and Handling) Rules, 1998	Regulates the mode of treatment and disposal of bio-medical waste. Requires the institution which generates waste to ensure that waste is handled without adverse impact on health and environment
Clinical Establishment Bill, 2010	Makes it mandatory for all clinical establishments to register under the act. The act will eventually be implemented nationwide and may lead to closure of nursing homes which do not meet requirements
National Accreditation Board for Hospitals and Healthcare Providers (NABH)	NABH accreditation of facilities confirms quality assurance and its standards focus on patient safety and quality of patient care
Drug Controller General of India (DGCI)	DGCI formulated guidelines in July 2006 for the import and manufacture of medical devices
Foreign Ownership	FDI in hospitals is permitted up to 100.0% under the automatic route

If implemented effectively, the recent Clinical Establishment Bill is a step in the right direction

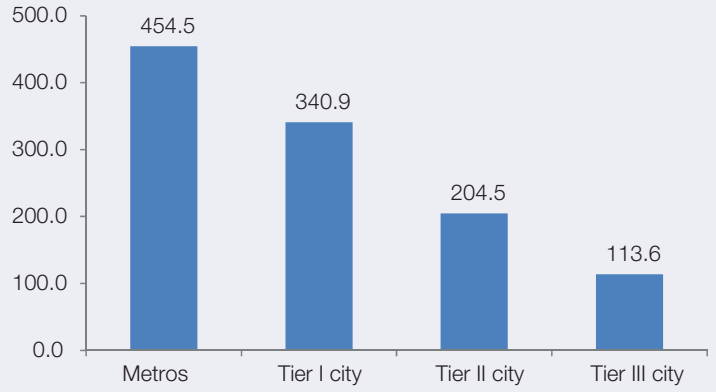
Recent Trends

Focus on Smaller Cities [1]

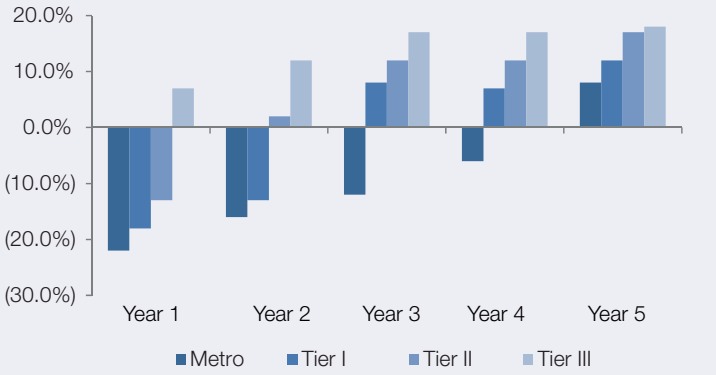
Better Profitability in Tier II and III Cities

- The healthcare market in tier II and III cities is expected to grow at a CAGR of 17.9% through 2023
  - This is ~5.0% higher for the healthcare market in metros
- Hospitals in tier III cities require capex of $113,600.0 per bed, and in tier II cities require $204,500.0 per bed, versus $454,500.0 per bed in metros
- Operating costs in tier II and III cities are ~30.0% lower than metros and tier I cities
- Lower costs help hospitals in tier II and III cities achieve breakeven much faster than a similar hospital in a tier I city
- A tier II and III city hospital attains operating profitability in the 1st or 2nd year of operations, against 5th year for hospitals in metros

Capex per Bed



Operating Margins of Hospitals



Payback period for hospitals in tier II and III cities is ~5-6 years, compared to 8-10 years in a metro

[1] PUG research, September 2010.

Recent trends *(contd.)*

Other Major Trends

Expat Doctors

- Medical professionals of Indian origin working abroad are willing to return and settle in India
- This trend is being supported by:
  - Improved healthcare infrastructure in India
  - Increase in medical tourism
  - Improved salaries
  - Growing restrictions on licensing and practicing in UK and Europe

Telemedicine

- Telemedicine has enormous potential in meeting challenges of healthcare delivery to rural India and remote areas
- Telemedicine is also being used by major healthcare companies to provide quality care especially in eye care, and cardiac care
- Narayana Hrudayalaya, a Bangalore-based cardiac care hospital, operates one of the largest telemedicine networks in the world

Holistic Well-Being

- Holistic well-being is a blend of modern and traditional medicine
- Various hospitals have tiedup with holistic health centers to combine traditional healthcare knowledge and practices with conventional systems
- Various services offered in wellness centers are diet and nutrition, yoga, herbal medicine, humour therapy, and biofeedback
- The Ananda Spa (Rishikesh) and The Ayurvedgramm (Bengaluru) offer various health services

Technology and changing conventions have created opportunities in various ancillary areas

Risk Factors and Mitigating Elements

Risks to Growth

Appropriate Mitigating Elements to Offset Risk

Risk factors	Mitigation elements
Long gestation periods: Hospitals require significant upfront investments and have a long payback period. This makes investments in the sector less attractive	Increasing number of hospital acquisitions are happening through operating and maintenance contracts which have short gestation periods and faster revenue ramp up
Lack of qualified staff: Finding qualified staff and specialized doctors is a major challenge for hospitals in India especially for new start ups, leading to wage inflation and inadequate quality	Stringent license requirements abroad and improving health infrastructure in India is encouraging doctors to return to India. Medical education and training is seeing growing investments, especially by healthcare companies such as Manipal
Rising real estate prices: Increasing real estate prices lead to higher initial outlay or higher lease payments, resulting in decreasing profitability	Substantial amount of growth in the industry is driven from tier II and III cities, mainly because of lower real estate cost. This results in higher profitability in hospitals in smaller cities
Lack of capital: Huge capital will be required to meet the growing demand of healthcare. However, long gestation periods makes the sector unattractive	The growth prospects of the industry have led to a rapid increase in investments in hospitals. Private equity players have invested $373.4 mn in the space since 2010, and existing players are rapidly deploying capital for expansion
Increasing operating cost: Increasing costs of equipment and labour leading to margin pressure and lower profitability	Equipment manufacturers like GE and Philips are increasingly focusing on India to sell healthcare products, resulting in favourable terms of supply

The industry still faces various risks to its growth, but these can be mitigated with right strategy

Outlook

Bright Future Prospects

Growing Market and Evolving Models

- India's healthcare industry is on the cusp of major growth
  - Over the next 4-5 years, it is expected to grow at a CAGR of ~20.0%
- Growth will be driven by increasing investments mainly by private players, and to a smaller extent by the government
- The strong prospects of the Indian healthcare industry has caught the attention of global institutional investors. Healthcare has seen increasing private equity investments since 2010

	Market size			
	Current	Estimate	Estimate	
Source	(US$ bn)	(US$ bn)	for year	CAGR
Ernst & Young	40.0	280.0	2020	24.1%
Fitch	50.0	100.0	2015	18.9%
IDFC	62.0	125.0	2015	19.2%
IBEF	34.2	78.6	2016	18.1%

- The healthcare industry is likely to see more innovation in business models and delivery mechanism, driven by an increasing focus on profitability of investments. This is likely to become a strong trend as more private equity players chase the healthcare story
- There is an urgent need for healthcare penetration in smaller cities and rural areas. With growing use of technology, telemedicine may become a full-fledged model to operate clinics in such centers. Private players are also using hub and spoke model and opening more day care centers to expand their reach
- Lifestyle related diseases are expected to comprise 20.0% of ailment mix by 2018. This will further increase the need for single-specialty hospitals to treat cardiac and oncology patients

High investments in a growing market, along with openness to innovate bode well for the sector

Appendices
a) Competitive Profiles

a) Competitive Profiles

Fortis Healthcare

Overview

- Established in 1996, Fortis Healthcare operates 53 hospitals with ~8,000 beds across India
- Owns, operates, and manages multi-specialty and super-specialty hospitals in India
- Specialties include cardiac, neuro-sciences, orthopedics, cancer, renal sciences, and kidney and liver transplants

Financial Summary [1]

US$ mn	FY 09	FY 10	FY 11
Revenue	138.1	198.0	322.1
Growth	*11.6%*	*43.4%*	*62.7%*
EBITDA	19.3	29.9	10.3
Margin	*14.0%*	*15.1%*	*3.2%*
EBIT	8.7	17.2	(12.7)
Margin	*6.3%*	*8.7%*	*(3.9%)*
Net profit	4.6	14.7	27.3
Margin	*3.3%*	*7.4%*	*8.5%*

Operating Model

- Focus on high-margin, high-growth fields such as cardiology, oncology, and orthopedics
- Build and lease model - facility owned by a partner and Fortis leases infrastructure on a long-term basis for a fixed margin of revenues
- O and M contracts - 411 beds under them
- Hub and spoke - establishing specialty facilities in key cities and feeder units across the region

Recent News

- Aug 1, 2011 - Fortis announced plans to start 6 new hospitals in western and southern India at an investment of $238.6 mn
- May 16, 2011 - Fortis acquired 75.0% stake in Super Religare Laboratories for $178.5 mn
- Apr 28, 2011 - Fortis announced plans to raise $500.0 mn via Singapore listing

[1] Bloomberg.

Competitive Profiles *(contd.)*

Apollo Hospital Enterprise

Overview

- Established in 1983, Apollo Hospitals currently owns ~8,500 beds across 50 hospitals
- Offers services such as cardiology, orthopedics and joint replacement, spine surgery, oncology and surgical gastroenterology
- Also engaged in medical support services such as health insurance and pharmacy

Financial Summary [1]

US$ mn	FY 09	FY 10	FY 11
Revenue	353.6	427.8	572.0
Growth	*16.9%*	*21.0%*	*33.7%*
EBITDA	50.4	64.4	93.2
Margin	*14.3%*	*15.1%*	*16.3%*
EBIT	36.6	48.5	72.5
Margin	*10.3%*	*11.3%*	*12.7%*
Net profit	22.5	29.0	40.4
Margin	*6.3%*	*6.8%*	*7.1%*

Operating Model

- Expansion in metros through JVs
- Focus on high-margin, high-realization businesses
  - Core focus on CONCOR (cardiology, oncology, neurology, orthopedics, and radiology)

Recent News

- Jul 14, 2011 - Apollo Hospitals launched institutional share issue to raise $73.0 mn
- Jul 8, 2011 - Apollo announced a 13.0% rise in revenue per bed per day to $415.7 in FY 2011
- Apr 6, 2011 - Apollo Hospitals announced plans to invest $222.2 mn to add 2,500 more beds in 20 new hospitals by 2013

[1] Bloomberg.

Competitive Profiles *(contd.)*

Max Healthcare

Overview

- Promoted by Max India, a publicly-listed company, Max Healthcare is one of the leading hospital chains in the National Capital Region
- Started as 16-bed hospital in 2001, it currently has 1,100 beds across 8 hospitals in the region
- Key shareholders include Max India (92.0%) and IFC (3.1%)

Financial Summary [1]

US$ mn	FY 07	FY 08	FY 9	FY 10
Revenue	53.7	89.6	77.9	112.4
Growth	*90.4%*	*66.9%*	*(13.1%)*	*44.3%*
Contribution	27.6	47.5	43.2	64.3
Margin	*51.4%*	*53.0%*	*55.5%*	*57.2%*

- 41.3% annual revenue growth over last 4 years, with 8.0% annual growth in ARPOB to ~$450.0
- Expansion of contribution margins due to efficiencies and expansion of scale

Operating Model

- Conventional hub and spoke model, with tertiary facilities supported by secondary care hospitals and primary care clinics
- Aggressive expansion plans - targets to open 4 new hospitals till FY 2012 and 1 more between FY 2012-2016

Recent News

- Jun 17, 2011 - Max India announced acquisition of Warburg Pincus's stake in Max Healthcare for $30.0 mn
- Feb 13, 2011 - Max Healthcare announced plans to set up medical college with investment of $220.0 mn
- Jan 14, 2011 - Max Healthcare announced target to open 4 new hospitals by FY 2012

[1] IDFC report, November 2010.

Competitive Profiles *(contd.)*

CARE Hospitals

Overview

- Established in 1997 as a 100-bed hospital, CARE Hospitals is a ~1,400 bed chain with 13 hospitals across India
- Quality Care India Ltd is the holding company
- Offers services in areas of cardiology, nephrology, urology, neurology, emergency medicine, and gastro-enterology

Financial Summary [1]

- Quality Care's revenues have grown at a CAGR of 35.0% over FY 2006-2009
- Mature hospitals have EBIT margins of >20.0%
- FY 2009 reported results:
  - Operating income: $73.3 mn
  - Net income: $2.2 mn

Operating Model

- Affordable prices
  - Treats patients under state insurance scheme at up to 35.0% subsidized rates
- Low capital cost
  - Capital cost of ~$55,000.0 per bed to keep costs low and provide affordable care

Recent News

- May 13, 2011 - Care Hospitals announced plans to invest $77.8 mn for expansion in 2 years
- July 5, 2010 - Care Hospitals was looking to raise around $40.0 mn in a deal which could lead to the exit of some financial investors including Rakesh Jhunjhunwala and Matrix Laboratories founder Nimmagadda Prasad

[1] Bloomberg.

Competitive Profiles *(contd.)*

Manipal Healthcare Systems

Overview

- Manipal Healthcare Systems, part of the Manipal Education and Medical Group, is a leading healthcare provider in South India
- Offers primary, secondary, and tertiary healthcare services
- Operates ~8,000 beds across 23 hospitals and several clinics

Geographical Presence

Besides these, Manipal also has hospitals in Nepal and Malaysia

Operating Model

- Operates a hub and spoke model, comprising a mix of owned hospitals, JVs, and managed units
- Inorganic growth strategy
- Looking at O and M contracts
  - "Delhi is a big hub for medical tourism from the northern belt and we are looking at management contracts" [1]

Recent News

- Aug 2, 2011 - Manipal Group and AMRI Hospitals places bids of more than $110.0 mn to acquire Sterling Hospitals, which has 9 hospitals in Gujarat, from PE major Actis
- Jul 26, 2011 - Manipal Group divested its biomedical arm to Italian firm TBS for $8.5 mn
- Nov 2, 2011 - MediVed Innovations, owned 37.0% by the Manipal Group, plans to raise $5.0 mn in its second round of funding

[1] Interview of Dr Ranjan Rai, MD and CEO of MEMG to VCCircle, published on July 02, 2010.

b) Public Comparables

Relative Valuation

Public Market Comparables

Global Healthcare Players

Company	Enterprise Value * (US$ mn)	EV/ Revenue		EV/EBITDA		P/E		EV/bed (US$ '000)
		LTM	CY 11E	LTM	CY 11E	LTM	CY 11E	
India								
Fortis Healthcare	1,728.2	5.23x	3.96x	37.1x	25.5x	63.2x	44.9x	216.0
Apollo Hospitals	1,695.4	2.92x	2.58x	17.9x	15.8x	37.3x	32.5x	199.5
	Mean	4.07x	3.27x	27.5x	20.6x	50.2x	38.7x	207.7
Developing Asia								
Bangkok Dusit	3,422.3	4.22x	3.09x	19.3x	12.9x	39.2x	26.1x	686.2
Raffles Medical	1,092.6	5.15x	4.83x	21.7x	19.1x	27.5x	26.0x	N.A.
Bumrungrad Hospital	1,035.8	3.14x	2.89x	13.6x	12.0x	21.2x	18.3x	1,869.7
KPJ Healthcare	998.3	1.72x	1.60x	13.4x	12.2x	22.4x	19.4x	384.0
	Mean	3.56x	3.10x	17.0x	14.0x	27.6x	22.5x	980.0
Developed nations								
Community Health System	11,368.7	0.84x	0.82x	6.4x	6.2x	9.6x	7.7x	587.2
Universal Heath Services	8,141.0	1.22x	1.07x	8.2x	6.9x	13.4x	10.4x	324.3
Tenet Healthcare	6,873.2	0.73x	0.71x	6.1x	5.6x	17.5x	10.9x	510.8
	Mean	0.93x	0.86x	6.9x 6.2x	13.5x	9.6x	474.1	
	Overall Mean	2.80x	2.39x	16.0x	12.9x	27.9x	21.8x	597.2

Indian players are valued at a premium to global peers due to strong growth dynamics

Financials and estimates from Bloomberg.

Note: * Enterprise Value = Market Value of Equity + Short-term Debt + Long-term Debt + Minority Interest + Preferred Equity - Cash and Marketable Securities
Valuation as of 05/31/2011

c) Recent Deals

c)Recent Deals

Deals in the Healthcare Industry

Private Equity Deals

Date	Target	Acquirer	Deal Value ($ mn)	Deal Mutiples		
				Sales Multiple	EBITDA Multiple	Net Income Multiple
Jun-11	Angels Health Pvt Ltd	Housing Development Finance Corp	NA	N.A.	N.A.	N.A.
Jun-11	Vaatsalya Healthcare Solutions	Aquarius India & Seedfund	10.0	N.A.	N.A.	N.A.
May-11	Jeevanti Healthcare	Seedfund	2.2	N.A.	N.A.	N.A.
May-11	Super Religare Laboratories	Sabre Partners	11.1	8.6x	N.A.	N.A.
Apr-11	Super Religare Laboratories	Avigo Capital Partners	22.2	7.6x	N.A.	N.A.
Mar-11	MedPlus Health Services	Mount Kellett, TVS Capital, and Ajay Piramal Group's healthcare fund	88.4	N.A.	N.A.	N.A.
Jan-11	Glocal Healthcare	Sequoia Capital and Elevar Equity	3.3	N.A.	N.A.	N.A.
Jan-11	Integrated Health and Healthcare Services	Halcyon Finance & Capital Advisors	44.4	N.A.	N.A.	N.A.
Dec-10	BSR Super Speciality Hospitals	Aureos Capital	10.0	N.A.	N.A.	N.A.
Nov-10	Medfort Hospitals	TVS Shriram Capital & ePlanet Ventures	13.1	N.A.	N.A.	N.A.
May-10	Nova Medical Centres	GTI Group and New Enterprise Associates	5.3	N.A.	N.A.	N.A.
Apr-10	Manipal Health Systems	Kotak PE	33.5	N.A.	N.A.	N.A.
Feb-10	HealthCare Global Enterprises	Milestone Religare Advisors	10.0	N.A.	N.A.	N.A.
Nov-09	Krishna Institute of Medical Sciences	Milestone Religare Advisors	12.9	N.A.	N.A.	N.A.
Mar-09	Vaatsalya Healthcare Solutions	Oasis Fund and Seedfund	3.7	N.A.	N.A.	N.A.
Feb-09	Kavery Medical Centre and Hospitals	India Venture Advisors	17.8	N.A.	N.A.	N.A.
Jun-08	CARE Hospitals	Ashmore Group	23.0	N.A.	N.A.	N.A.
Sep-07	Apollo Hospitals Enterprise	Apax Partners	104.0	4.0x	24.0x	39.5x
Mar-07	Fortis Healthcare India	Trinity Capital	19.7	6.5x	66.9x	N.A.

Bloomberg, VCCircle, Press releases.

Recent Deals *(contd.)*

Deals in the Healthcare Industry

Strategic Deals

Date	Target	Acquirer	Deal Value ($ mn)	Deal Mutiples
Jul-11	Indian Health Organization Pvt Ltd	Aetna Inc	N.A.	Enables Aetna to gain entry into Indian market and get access to 80,000 IHO customers, 3,000 doctors, clinics, and wellness programmes
Jun-11	Max Healthcare	MAX India	31.2	The deal gives an exit to Warbug Pincus, which had invested in the Company in 2 tranches in 2004 and 2005
Apr-11	Super Religare Laboratories	Fortis Healthcare India	178.5	Integrates operations of a hospital company with a diagnostic chain. SRL has a strong network of laboratories, wellness centers, and collection centers. Fortis has been looking for acquisitions in new specialties to augment its current operations. SRL is promoted by the Singh brothers, who are also promoters of Fortis
Jan-11	Dr Agarwal's Eye Hospital	Dr Agarwal's Health Care	2.0	The acquirer (promoter) bought 20.0% additional stake in the target via open offer to increase promoter stake to 75.0%
Aug-09	10 Wockhardt Hospitals	Fortis Healthcare India	185.2	The acquisition costs $107,000.0 per bed, against a greenfield cost of $133,000.0 per bed. Also, the deal gives Fortis a strong presence in Mumbai and Bangalore, where it did not have presence

Increase in deal activity in the healthcare space displays optimistic PE view on the sector

Bloomberg, VCCircle, Press releases.

About TresVista

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