

DIAGNOSTICS

Speed bumps ahead; prefer hospitals over diagnostics

India Equity Research | Healthcare

Organised diagnostics players have demonstrated strong growth thus far, propelled by strong underlying growth of the sector as well as wresting market share from unorganised players. Listed players are thus quoting at premium valuations. However, the sector landscape is undergoing a rapid shift with private equity (PE) capital enabling subscale players to become more aggressive in the market, and the hospital chains/corporate houses seeding diagnostics ventures. Going forward, we believe that several players will scramble for the same share that will exert pressure on volume growth and pricing. Despite the likely pressure on growth and EBITDA margin for players, sector's low entry barriers and imminent risks like quality regulation and price controls, premium valuations of listed players is factoring very high terminal growth rate. Meanwhile, the hospital sector is at the end of its capex cycle and will see acceleration in profit growth and RoCE expansion going forward. Hence, we prefer hospitals over diagnostics players. In this note, we have profiled 7 emerging diagnostics entities along with 3 established players.

Sector appeal attracting funds, thereby intensifying competition

Attracted by high growth rates and lucrative returns, smaller unlisted diagnostic players have lately evinced high interest from PE funds, enabling them to quickly pivot models and chase growth. At least 9 primary fund-raising deals have been sealed in just past 2-3 quarters (table 1). These include players like: (i) [Krsnaa](#) which is developing a low-priced shop-in-shop model; (ii) [Healthians](#) which is developing an asset-light aggregator-like model; (iii) [Core](#) and [iGenetic](#) who are developing a focused high-end diagnostics model; and (iv) strong regional players like [Suraksha](#) (table 2). Existing hospital chains like Max India and Apollo Hospitals, along with corporate houses like Mankind and Dalmia, are also seeding similar businesses.

Competition likely to dilute sector's lure

As players gasp for volume growth, pricing pressure is likely. Growth for players is set to slow down and margins likely to shrink. Multiple suitors and lofty valuations for listed players have increased expectations of smaller players who are acquisition targets, thereby rendering inorganic growth more expensive in future. As is the global trend, consolidation in the sector is likely, but it will come at the cost of RoCEs.

Prefer hospitals over diagnostics

Indian diagnostics players are trading at much higher valuations of ~42x P/E and ~25x EV/EBITDA versus global peers (~20x and ~12x forward P/E and EV/EBITDA (table 9). Valuations of diagnostics players are factoring in high terminal growth rates of ~9-10%, which we believe are at risk given competition, impending quality regulations and price controls. While RoCE of the business is currently high, it is likely to dilute as incremental capital employment will not be able to generate similar returns. On the other hand, hospitals are poised for RoCE improvement as their capex cycle comes to an end and they sweat assets. We continue to prefer hospitals over diagnostics.

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Attracted by high growth rates and lucrative returns, smaller unlisted diagnostic players have lately evinced high interest from PE funds, enabling them to quickly pivot models and chase growth. At least 9 primary fund-raising deals have been sealed in just past 2-3 quarters (table 1). These include players like: (i) Krsnaa which is developing a low-priced shop-in-shop model; (ii) Healthians which is developing an asset-light aggregator-like model; (iii) Core and iGenetic who are developing a focused high-end diagnostics model; and (iv) strong regional players like Suraksha (table 2). Existing hospital chains like Max India and Apollo Hospitals are also looking to leverage their brands to scale up their diagnostics business beyond captive volumes. In addition, corporate houses like Mankind and Dalmia are also seeding similar businesses.

Intensifying competition from PE and corporate house backed players

Attracted by high growth rates and lucrative returns, the domestic diagnostic sector has been witnessing high interest from the private equity players. Low entry barriers, low capex requirements and minimum regulatory supervision make the sector susceptible to new competitors. In past 2-3 quarters, there have been at least 9 deals related to the diagnostic service/ equipment providers. These include investments in regional players like Suburban Diagnostics, Vijaya Diagnostics, Suraksha Diagnostics, Medall Healthcare, specialty diagnostic start-ups like Core Diagnostics and iGenetic, and diagnostic start-ups working on new business models like Krsnaa Diagnostics (shop-in-shop model), Healthians (asset-light aggregator-like model), Airmed Pathlabs, etc. In addition, backed by corporate houses, a number of new players have been cropping up like Pathkind Diagnostics and Thumbay Labs. While these players will hasten the pace of shift from unorganised to organised, they will also exert pressure on larger players who are trying to maintain high growth rates on a much higher base than past.

Emergence of new business models

Increasing focus on PPP agreements

In recent times, several states including UP, Assam, HP, Gujarat, Maharashtra, among others, have started engaging private players to provide diagnostic services at public hospitals under the PPP (Public Private Partnership) mode. Although diagnostic players earn lower EBITDA margin on such agreements, it continues to remain a lucrative proposition to expand due to the low capital requirements and high volumes. Both pan-India large players as well as smaller regional labs in the region have been focusing on such agreements to expand operations. Among the larger players, SRL (currently has 3 PPP agreements) and Krsnaa Diagnostics have shown keen interest to continue to focus on the PPP mode.

Table 1: PE investments during last 2-3 quarters

Investor	Company	Date of investment	Investment (INR mn)	Stake (%)
Sequoia Capital India Growth Fund II	Suburban Diagnostics	Oct-16	469	NA
Beenext (Japanese investor)	Healthians (Aggregator)	Oct-16	200	NA
Kedaara Capital Advisors	Vijaya Diagnostics	Dec-16	4,300	significant minority stake
Eight Roads Ventures/ F-Prime Capital Partners (Fidelity)	Core Diagnostics	Dec-16	840	NA
OrbiMed	Suraksha Diagnostic	Dec-16	1,613	35
Abraaj	Medall Healthcare (earlier known as Precision Diagnostics)	Jan-17	16,000	80
PerkinElmer	Tulip Diagnostic (Provider of reagent)	Jan-17	NA	NA
Brand capital	Airmed Pathlabs	Jan-17	100	NA
CDC Group Plc and Manipal Group	iGenetic diagnostics	Feb-17	1300	NA

Table 2: PE investments in diagnostic service/ diagnostic equipment companies

Company	Investor	Date of investment	Investment (INR mn)	Stake (%)	Company valuation (INR mn)	EV/EBITDA
Pan-India						
Thyrocare	CX Partners	Dec-10	630	28	6,270	17.6
	Samara capital	Dec-10	38	2	6,270	17.6
	Norwest Venture Partners	Sep-12	1,200	10	12,000	18.9
	Emerging India Fund (ICICI Bank)	Oct-13	1,300	2	12,901	19.3
	Aditya Birla PE	Feb-14	1,250	8	16,000	22.3
Dr Lal	Sequoia Capital (WestBridge)	Jun-05	420	26	1,610	
	TA Associates	Aug-10	1,630	16	10,000	17.7
	WestBridge	Feb-13	1,883	13	15,000	10.8
	TA Associates	Feb-13	484	3	15,000	10.8
Metropolis	ICICI Venture Fund	May-06	350	27	1,296	
	Warburg Pincus	Jun-10	3,920	27	14,519	32.2
	Promoter bought back (WP stake)	Apr-15	5,500	27	20,370	15.7
	Carlyle group	Sept-15	9,000	37	24,324	17.9
SRL Diagnostics	Avigo Capital Partners	Apr-11	1,000	9	10,787	
	Sabre Partners	May-11	500	3	16,167	
	Jacob Ballas	Mar-12	2,500	NA	NA	
	IFC	Mar-12	1,200	NA	NA	
Krsnaa Diagnostics	Fortis	Sept-15	1,050	3	33,950	
	Somerset Indus Capital Partners and Kitara Capital	May-15	500	44	1,621	18.7
North						
Diwan Chand Medical Services Pvt. Ltd.	Asian Healthcare Fund	Mar-10	1,000	76	1,519	
	Asian Healthcare Fund	Mar-12				
Core Diagnostics	Eight Roads Ventures/ F-Prime Capital Partners (Fidelity)	Dec-16	840	NA	NA	

Source: Edelweiss research

Table 3: PE investments in diagnostic service/ diagnostic equipment companies (contd.)

Company	Investor	Date of investment	Investment (INR mn)	Stake (%)	Company valuation (INR mn)	EV/EBITDA
South						
Primex Healthcare and Research Pvt. Ltd.	Kalpathi Investments Pvt. Ltd.	Feb-10	55	55	101	
Vijaya Diagnostics	Kedaara Capital Advisors	Dec-16	4,300	significant minority stake	NA	
Medall Healthcare (earlier known as Precision Diagnostics)	Peepul Capital Fund II LLC	Nov-09	2,006	95	2,110	
	Siguler Guff India Advisors Pvt. Ltd.	Jun-14	675	4	18,049	36.0
	Abraaj (on-going)	Jan-17	16,000	80		
MedGenome (genomics-based diagnostics solutions)	Emerge Ventures	June-14	260			
	Sequoia Capital	July-15	1,270			
West						
Suburban Diagnostics	Sequoia Capital	Oct-12	400	31	1,333	30.5
	Sequoia Capital India Growth Fund II	Oct-16	469			
Wellspring	Catamaran Ventures	Jun-11	146			
	Blueshield Venture Partners	Jun-11		NA	NA	
	Reliance Venture Asset	Jun-11				
	Asian Healthcare Fund	Jun-13	100	NA	NA	
	Catamaran Ventures	Sep-13	120			
	Blueshield Venture Partners	Sep-13		NA	NA	
iGenetic diagnostics	CDC Group Plc and Manipal Group	Feb-17	1,300			
East						
Suraksha Diagnostic	India 2020 Fund II Ltd.	Jan-13	300	16	1,984	57.5
	OrbiMed	Dec-16	1,613	35	4,830	21.3
Others						
Healthians (Aggregator)	Beenext (Japanese investor)	Oct-16	200			
Airmed Pathlabs (Aggregator)	Brand capital	Jan-17	100			
Agappe Diagnostics Ltd. (Provider of reagent)	Konark Capital Partners Ltd.	May-15	452	20	2,354	15.1
Tulip Diagnostic (Provider of reagent)	PerkinElmer	Jan-17				

Source: Edelweiss research

The company has won a PPP tender for pathology services for Uttar Pradesh (UP) and plans to have 900 pathology collection centers, 50 processing labs and 1 centralised lab in the state.

Case study: Krsnaa Diagnostics - The cost disruptor

Company Description and Background

Headquartered in Pune, Krsnaa Diagnostics (Krsnaa) was established in 2011 with the motto of providing quality healthcare at affordable prices to the masses. It has grown its presence in 10 states and ~1,500 locations within 4 years. Krsnaa operates only through hospital-based labs and currently has a network of labs in 270 government and 18 private hospitals across the country. The company first started with 2 private centers as a pilot project. It then relied on the PPP model to spread its network, with its first PPP project in Himachal Pradesh (HP). In HP, Krsnaa has already installed 13 CT scanners in district hospitals and plans to install 5 more. Before its entry, there were just 2 CT scanners installed in the entire state. The company also recently won a teleradiology project in Assam and is setting up 100 X-ray centers. Mainly focused on providing imaging services, Krsnaa has now also forayed into the pathology space. The company has won a PPP tender for pathology services for Uttar Pradesh (UP) and plans to have 900 pathology collection centers, 50 processing labs and 1 centralised lab in the state.

Business Model

- **Pan-India presence:** Krsnaa has presence in 10 states including Jammu & Kashmir, HP, Madhya Pradesh, Gujarat, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, UP and Assam.
- **Focus on semi-urban and tier II/III regions:** Focused on providing services to semi-urban and rural regions where infrastructure is inadequate.
- **Focus on PPP model:** Relied on the PPP model to grow with projects in several states like HP, Assam, UP, Gujarat etc. In PPP tenders, it faces competition from smaller regional players like Medall (strong presence in southern India), Aarti Scans, Vijaya Diagnostic, Sanya Diagnostics, HLL as well as larger players like SRL, Dr Lal, Metropolis, etc.
- **Hospital-based labs:** Operates only through hospital-based labs with current presence in 270 government and 18 private hospitals across the country.
- **Cost disruptor:** Services are priced ~40-50% lower than other private diagnostic centres - CT scans at INR600 compared to market rate of INR800 and MRI scans at INR3,000 versus market rate of INR6,000.

Table 4: MRI scan priced at ~50-70% discount to peers

	Krsnaa	Hiranandani	Apollo	SRL	Vijaya	Medall	Medanta
Cost of MRI scan-cervical spine plain	2,500	10,000	11,000	7,000	7,500	8,250	8,000

Source: Edelweiss research

- **Focused on imaging services:** Primarily an imaging services player, though now also entering the pathology space with its recent PPP project in UP.

PE investments

In May 2015, raised INR500mn from Somerset Indus Capital Partners and Kitara Capital for 44% stake. According to media reports, Krsnaa was looking for fresh PE funding as of January 2017.

Healthians has an asset-light model wherein it doesn't set up its own labs, rather it enters into tie-ups with local labs in the unorganised segment and provides services under the 'Healthians' brand.

Case Study: Healthians – Asset-light model

Company Description and Background

Incubated in November 2014, Healthians aims to provide high-quality at-home diagnostic services at low price. The company currently provides pathology tests in the NCR region. Healthians aims to provide high customer satisfaction by providing tests at low prices with the convenience of home testing and ensuring reliable reports in reasonable time. In order to process samples, it enters into partnerships with local labs where the tests are conducted, but controls quality at these labs. The company has served over 1,50,000 customers in Delhi/NCR.

Business Model

- **Asset-light diagnostic lab:** Healthians has an asset-light model wherein it doesn't set up its own labs, rather it enters into tie-ups with local labs in the unorganised segment and provides services under the 'Healthians' brand. Decisions regarding the number of tie-ups to be entered are made to ensure the samples reach labs within the stipulated time and the quality of the sample is maintained. Currently, the company has tie-ups with 6 labs.
- **@ home service:** Provides a doorstep sample collection service through trained and certified team members. The sample is then transported to the nearest lab where the tests are conducted. They have the highest strength of phlebotomists (home collection staff) compared to large players like Dr Lal and SRL in Delhi/NCR.
- **Focus on quality:** Lays emphasis on quality of services provided and controls quality at partner labs. In addition to being technologically integrated with partner labs, the company also has its own employees at the labs to oversee quality. It has 300 testing parameters at its labs and algorithms are run to test the accuracy of the reports.
- **Focused on pathology services:** Currently provides only pathology services. Majority of the tests conducted are preventive and chronic in nature. Complex tests make up 15-20% of the total tests and cover ~95% of tests prescribed by doctors.
- **Digital dominated:** Earns most of its revenue through digital routes with a small proportion coming through offline mode like corporate campaigns, etc. Healthians provides customers the convenience of booking tests through their mobile apps and also makes reports available through emails and on the app.
- **Pricing strategy:** Prices charged by Healthians are in line with local labs and much lower than larger players like Dr Lal and SRL.
- **Expansion plans:** Although Healthians currently operates only in the Delhi/NCR region, the target is to expand and have presence in the top 6 cities within the next 1 year.

PE Investments

- Healthians first received funding from YouWeCan Ventures in July 2015.
- In the second round of funding, it raised ~INR200mn from BEENEXT, Digital Garage and BEENOS.

Conglomerates tapping diagnostics space

In addition to the existing hospital chains and smaller regional labs, companies having established business in other sectors and/or geographies have also been showing interest to tap the diagnostic market in India. Entry of such players, having a track record of successfully running other businesses, is bound to further intensify competition in the space.

ITC, the multi-business conglomerate with diversified presence in FMCG, hotels, paperboards and packaging, agri business and information technology has also been considering entry into the healthcare space including diagnostics and hospitals, which could further aggravate the competitive intensity.

Mankind Pharma (Mankind), a pharmaceutical company, is looking to enter the diagnostic space with an investment of INR3.05bn through its new venture 'Pathkind'. Pathkind will bet on an organic growth strategy and tap into the rural market to carve a niche for itself and compete against established industry players. The company intends to have a sub-hub and spoke model. Under this model, while smaller towns will have basic tests like haemogram, bigger ones will do slightly more complex tests. There will be a central lab in Gurgaon where esoteric testing will be done. The company's initial focus will be UP followed by Uttarakhand, Bihar and North-East, post which it will move to other geographies. Pathkind plans to have 1 central lab, 11 network labs and 22 small labs by March 2018. In the next 5 years, its target is to be able to set up 125 labs and 1,200 collection centres. Mankind has already hired Sanjeev Vashishta, former chief executive officer of SRL Diagnostics to launch its new business.

Thumbay Labs, a network of private diagnostic labs in the Middle East region owned by Thumbay Group, has forayed into the Indian diagnostic sector with its first lab in the country at Hyderabad. The company plans to open more outlets with comprehensive clinical testing facilities like imaging, cardio/neuro tests, occupational health related tests, allergy and intolerance testing and a wide array of preventive health panels. Thumbay Labs also undertakes hospital lab management and intends to rely on mergers to further expand its presence.

Dalmia Medicare (aggregator), the diagnostic arm of the Dalmia group, is an aggregator for diagnostic services. The company currently has tie-ups with more than 40 diagnostics centres in Delhi/NCR and aims to increase its presence in the region. It helps the diagnostics centres in branding and promotion, and upgrading technology. It has a revenue sharing agreement with the owners of the diagnostics centres.

Growing focus of hospitals

In addition to competition from regional PE-backed labs, the diagnostic sector is likely to witness competition from existing hospital players. Diagnostics is a lucrative business opportunity for existing hospitals to utilise their strong experience of operating in-house labs to earn higher margins with low additional investment. It also enables them to leverage on their brand image and enhance utilisation of existing lab capacity. With Fortis already present in the diagnostic segment through SRL (page 18), other players like Max India and Apollo Hospitals (page 8 and 9) have also been focusing on scaling up their diagnostic business segments.

Max has entered the B2B segment and is now targeting the B2B segment. They are looking to expand the diagnostics business in entire North India, and not just NCR.

Case Study: Max India – Focus on North India

Company Description

Max India (Max) currently operates a network of 14 hospitals (~2,600 beds, with ~80% of the beds in NCR region) across North India. Max is now looking to leverage its existing brand image and expand its diagnostics business. The diagnostics business will enable it to enhance utilisation of its existing labs by processing samples collected from nursing homes, small hospitals and home orders.

Diagnostics business

- **B2B segment:** Max has entered the B2B segment and already has 250 tie-ups for either setting up labs in hospitals or pickups from hospital in NCR since its launch in May 2016. As on Q3FY17, the company is doing business of INR8 - 8.5mn/ month from its B2B business.
- **B2C segment:** In addition to the B2B model, it has also launched the B2C business recently in its endeavour to go directly to patients (go for home orders, etc).

North India focused expansion strategy

Max is looking to expand its diagnostics business in entire North India, and not just NCR. The plans to scale up are still at preliminary stages and would require another 3-9 months. Post optimum utilisation of its existing lab capacity, the company is also open to start some external labs to expand the business. It is also open to using the franchisee model for expansion. In long term, it may also consider moving it to a separate subsidiary.

Financial details and guidance

- Max currently accrues ~INR2.5bn revenue from in-house pathology services and has 20% market share in the hospital-based diagnostic market in NCR.
- The company's first aimed milestone is to achieve ~INR6bn revenue or ~10% market share of the INR60bn Delhi market, out of which INR2.5 - 3bn will be external business.
- It is looking at achieving EBITDA margin of ~20-25% from this segment, much higher than ~14% EBITDA margin clocked by its mature hospitals.

Apollo currently has 42 labs and 135 collection centres in the 4 south Indian states of Andhra Pradesh, Telangana, Karnataka and Tamil Nadu. It has a 'state-by-state' approach, wherein it aims to saturate the entire state by setting up dedicated branded Apollo Diagnostic centres first at the metros and then at tier 2 cities.

Case Study: Apollo Hospitals

Company Description

Apollo Hospitals (Apollo) is widely recognised as a pioneer of private healthcare in India with an aim to cover the entire healthcare landscape. The group includes India's largest hospital chain with 6,800 beds across 61 hospitals, pharmacies, primary care and diagnostic clinics, telemedicine centres and Apollo Munich Insurance branches panning the length and breadth of India. The group operates its retail healthcare formats, including its diagnostic business, under the Apollo Health and Lifestyle (AHL) brand. AHL recently raised INR4.5bn from IFC to fund its expansion plans, with diagnostics being one of the 4 focus areas.

Business model

- **Pathology focused plans:** Apollo provides only pathology tests with no plans to enter the imaging segment. The test menu comprises mostly of day-to-day sickness related and chronic tests like diabetes, etc.
- **B2C model (retail diagnostics business):** Unlike most of its larger peers, Apollo relies on the B2C model and aims to service the retail customers. The company has smaller regional labs rather than operate through 1 main lab. Also, unlike Max and SRL, which include diagnostic business from their hospitals as a part of their revenue, Apollo aims to keep its hospital related diagnostic business separate.
- **Operational experience:** The Apollo group has a successful track record of operating diagnostic labs in its network of hospitals and clinics.
- **South India presence:** The company began its diagnostics business in South India which is relatively a less competitive market in terms of presence of large players, to leverage on its strong brand presence in South India. It currently has 42 labs and 135 collection centres in the 4 south Indian states of Andhra Pradesh, Telangana, Karnataka and Tamil Nadu.
- **Infrastructure:** The company has a structure wherein it has 1 national reference lab in Hyderabad, regional reference labs (capex of ~INR3-5mn) in each state and smaller satellite labs (capex of ~INR2-2.5mn) to cater to routine tests. In addition to labs, it also has collection centres (capex of ~INR0.4mn) which may either be owned by the company (~20-25%) or operated through franchisees. They generally have 4-5 collection centres per lab, with the ratio of collection centres being much higher in bigger cities.

Expansion strategy

- **State-wise approach:** Apollo has a 'state-by-state' approach, wherein it aims to saturate the entire state by setting up dedicated branded Apollo Diagnostic centres first at the metros and then at tier 2 cities. Currently, it has presence in the 4 south Indian states of Andhra Pradesh, Telangana, Karnataka and Tamil Nadu and aims to expand in eastern Indian in the states of Orissa, West Bengal, Assam and other north eastern states. Rather than targeting market share of larger organised players, Apollo aims to target the segment serviced by unorganised players.

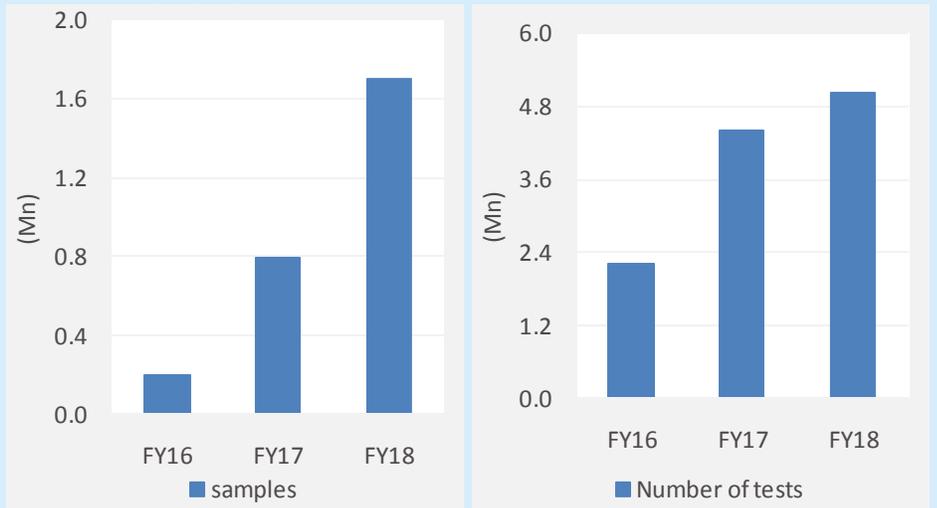
Case Study: Apollo Hospitals (contd.)

- East focused expansion strategy:** Having established strong presence in South India, it is now looking to expand in the next 2 years to eastern and north-eastern parts of the country including the states of Orissa, West Bengal and Assam. The company aims to expand and have 68 labs and 235 collection centres in FY18 from its current 42 labs and 135 collection points.
- Increase in collection centres:** With the central and regional labs already established, focus would be on increasing the collection centres. Apollo would also have the advantage of using some of its pharmacies as collection centres.
- Inorganic growth:** The group would be open to M&As, though given high valuations it would tread caution to use the inorganic growth pathway.

Financials and guidance

- Although the established diagnostic business for Apollo is earning industry-level margins, the segment still hasn't achieved breakeven and is still in investment phase with most of the money being ploughed back for expansion.
- The diagnostics segment is expected to register revenue of INR750mn in FY18 with internal (Apollo Clinic, Apollo Cradle, etc) and external (revenue from collection centres, labs operated in hospitals, walk-ins, etc) segments contributing equally.
- AHLL, including all other business segments, is expected to breakeven in FY19.

Chart 1: company expects to scale volumes



Source: Company

Table 5: Geography-wise presence of diagnostic players (current)

	Presence				
	North India	South India	West India	East India	Central India
Thyrocare	√	√	√	√	√
Dr Lal	√ (big player)	√	√	√	
Metropolis	√	√	√ (big player)	√	√
SRL Diagnostics	√ (big player)	√	√	√	√
Diwan Chand Medical Services Pvt. Ltd.	√				
Core Diagnostics	√				
Primex Healthcare and Research Pvt. Ltd.		√			
Vijaya Diagnostics		√			
Medall Healthcare		√ (big player)			
Suburban Diagnostics			√ (big player)		
Wellspring (Healthspring)	√	√	√		
Suraksha Diagnostic				√ (big player)	
Krsnaa Diagnostics	√	√	√	√	√
iGenetic diagnostics		√	√		
MedGenome		√			
Apollo Diagnostics		√			
Max	√				
Thumbay Labs		√			
Oncquest Laboratories Limited	√	√	√	√	
Bhilai Scan and Research (BSR) Healthcare				√	
Atulaya Healthcare	√				
Elbit Diagnostics		√			
Aarathi Scans		√			
Quest Diagnostics	√				
Supratech Micropath Laboratory and Research Institute			√		
Sterling Accuris Wellness Ltd			√		
Healthians (Aggregator)	√				
Airmed Pathlabs (Aggregator)			√		
Dalmia Medicare (aggregator)	√				
Mankind					

Source: Company, Edelweiss research

Table 6: Geography-wise presence of diagnostic players (expansion plans for key players highlighted in red)

	Presence				
	North India	South India	West India	East India	Central India
Thyrocare	√	√	√	√	√
Dr Lal	√ (big player)	√	√	√	√
Metropolis	√	√	√ (big player)	√	√
SRL Diagnostics	√ (big player)	√	√	√	√
Diwan Chand Medical Services Pvt. Ltd.	√				
Core Diagnostics	√				
Primex Healthcare and Research Pvt. Ltd.		√			
Vijaya Diagnostics		√			
Medall Healthcare		√ (big player)			
Suburban Diagnostics			√ (big player)		
Wellspring (Healthspring)	√	√	√		
Suraksha Diagnostic				√ (big player)	
Krsnaa Diagnostics	√	√	√	√	√
iGenetic diagnostics		√	√		√
MedGenome		√			
Apollo Diagnostics		√	√	√	√
Max	√				
Thumbay Labs		√			
Oncquest Laboratories Limited	√	√	√	√	
Bhilai Scan and Research (BSR) Healthcare				√	
Atulaya Healthcare	√				
Elbit Diagnostics		√			
Aarthi Scans		√			
Quest Diagnostics	√				
Supratech Micropath Laboratory and Research Institute			√		
Sterling Accuris Wellness Ltd			√		
Healthians (Aggregator)	√				
Airmed Pathlabs (Aggregator)			√		
Dalmia Medicare (aggregator)	√				
Mankind	√			√	

Source: Company, Edelweiss research

Regulatory supervision

The government, in its recently released National Healthcare Policy, 2017, has emphasised on the need to increase regulatory supervision in the sector. Some of the key measures proposed include:

- Creating a Standard Regulatory framework for laboratories and imaging centers
- Introducing price control measures for essential diagnostics and equipment
- Advocacy with state governments to increase adoption of the Clinical Establishment Act
- Grading clinical establishments and adopting standard treatment guidelines
- Protecting patient rights in clinical establishments, setting up a separate empowered medical tribunal for speedy resolution to address disputes/complaints regarding standards of care, prices of services, negligence and unfair practices

Such regulatory measures, if introduced, would provide the much needed regulatory overview for the sector improving overall quality of service, act as an entry barrier for the small players and help in the unorganised to organised shift. Although the bigger players are unlikely to be impacted due to standards on quality control, they would still be impacted by any price control measures.

Competition likely to dilute sector's lure

As players gasp for volume growth, pricing pressure is likely. Growth for players is set to slow down and margins likely to shrink. Multiple suitors and lofty valuations for listed players have increased expectations of smaller players who are acquisition targets, thereby rendering inorganic growth more expensive in future. As is the global trend, consolidation in the sector is likely, but it will come at the cost of RoCEs.

Pricing pressure inevitable

Unlike the hospital sector, where certain hospitals have the advantage of claiming premium prices based on superior doctors, the diagnostic sector especially for the basic tests, has an inherent limitation of having standardised services. With incremental competition expected in future, the diagnostic market will get commoditised and larger players will be forced to reduce prices. Therefore, for players like Dr Lal and Thyrocare growth is likely to slow down (compared to ~25% revenue CAGR witnessed in the past) and EBITDA margin is likely to come under pressure.

In the past, with price controls already implemented in drugs, the government has been increasingly focusing on introducing similar measures for diagnostics and equipment. This is also one of the proposed policy measures in the recently released National Health Policy, 2017. The government has already commenced its efforts in this direction by capping prices of dengue tests at INR600 during the outbreak of the seasonal fever in August last year and the very recent price ceiling imposed on cardiac stents. Such regulatory pricing pressures are bound to increase in the future and put incremental pressure on revenue and EBITDA margin.

Globally, EBITDA margins and return ratios of diagnostic players are much lower than that of Indian players.

Table 7: Comparison with global peers

	Country	EBITDA margins	Fixed asset turnover	ROCE	ROE	Net Debt/equity
Quest Diagnostic	US	19.7	1.0	10.4	13.8	0.7
Laboratory Corporation of America	US	19.7	0.8	7.7	14.0	1.0
Alere	US	18.9	0.5	6.5	14.5	1.3
Sonic Healthcare	Australia	17.6	0.9	8.7	13.0	0.6
Thyrocare	India	38.8	1.5	23.8	15.3	(0.3)
Dr Lal	India	26.5	6.8	43.5	31.2	(0.6)

Source: Bloomberg, Edelweiss research

Inorganic augmentation to become expensive

Large diagnostic players in the past have relied on acquisitions for growth. Since FY01, Dr Lal made several strategic acquisitions in India of smaller-scale diagnostic healthcare service providers that currently contribute ~10-12% of overall revenues. Dr Lal intends to continue to explore strategic acquisitions of regional diagnostic healthcare service providers to grow in under-represented areas.

Table 8: Dr Lal's inorganic acquisitions

Year of acquisition	Business acquired
FY01	Amolak Diagnostics Private Limited
FY03	Sanya Chemicals Private Limited
FY08	Medex Healthcare Private Limited
FY09	Paliwal Medicare Private Limited
FY09	Paliwal Diagnostics Private Limited
FY13	Medicave Diagnostic Centre Private Limited
FY14	Medicave Medical Systems Private Limited
FY14	APL Institute of Clinical Laboratory & Research Private Limited
FY16	Business of Dr. Bhanudas Yashwant Shinagare
FY17	M/s. Delta Ria & Pathology Private Limited

Source: Company, Edelweiss research

In addition to the big players, smaller regional players are also looking at acquisitions to grow. iGenetic Diagnostics, which recently raised INR1.3bn, intends to utilise the capital to fuel inorganic growth. The company is looking at acquisition targets with revenues ranging from INR10-500mn and intends to close 3-4 deals in the next 6 months.

The number of suitors for smaller players is bound to increase as both existing and upcoming players use the inorganic path to expand operations. Besides, the high valuation that the listed players are quoting at has raised expectations of smaller players targeted for acquisitions, thereby making inorganic augmentation more expensive in future.

In recent times, there has been a trend of smaller labs getting affiliated with either pan-India players or large regional labs wherein the basic tests are conducted in-house while the more complex ones are outsourced for a commission to larger players who have an advantage in both capex and operating costs due to economies of scale.

High valuations unsustainable

The landscape for diagnostic players is set to get challenging in future, with increased competition from PE-backed regional players and hospitals, making it difficult for existing big players to maintain their high growth rates. Current valuations of diagnostics companies are factoring in high growth rate for a long period, which is unlikely considering the current competitive environment.

Diagnostic companies in India receive higher valuations due to the scarcity of diagnostic services in the country. Incremental investments in the sector are bound to increase availability of these services, thereby making the scarcity premium unsustainable going ahead.

Indian diagnostic players are currently trading at valuations much higher than their global peers. While listed global peers like Quest Diagnostic (NYSE), Laboratory Corporation of America (NYSE), Alere Inc (NYSE) and Sonic Healthcare (Australia) trade at ~20x 1-year forward P/E and ~12x 1-year forward EV/EBITDA, the Indian listed diagnostic players have been trading at ~42x P/E and 25x EV/EBITDA.

Table 9: Valuations - Comparison with global peers

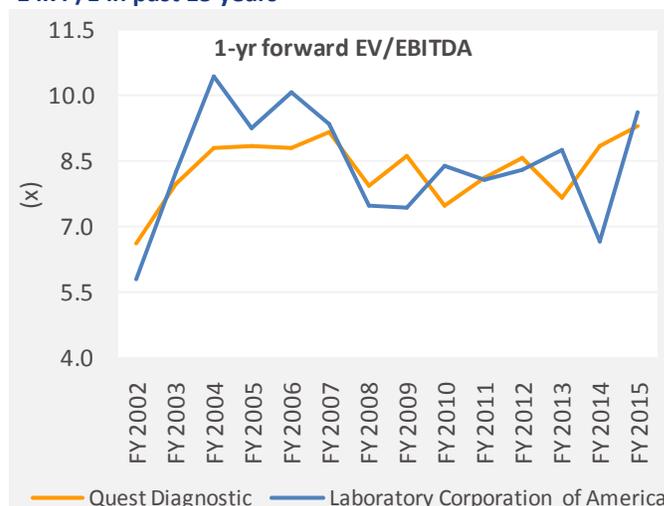
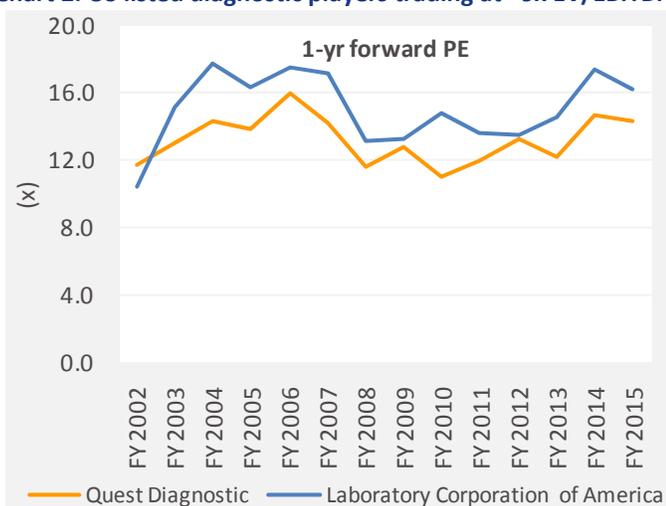
	Country	P/E				EV/EBITDA				EV/sales			
		FY16	FY17	FY18E	FY19E	FY16	FY17	FY18E	FY19E	FY16	FY17	FY18E	FY19E
Quest Diagnostic*	US	18.4	17.5	16.7	15.7	11.3	10.8	10.4	9.9	2.2	2.2	2.1	2.1
Laboratory Corporation of America*	US	16.4	15.3	14.3	13.1	10.5	9.9	9.4	8.9	2.1	2.0	1.9	1.9
Alere*	US	40.7	25.3	17.9	NA	15.2	14.2	12.2	NA	2.9	2.8	2.7	NA
Sonic Healthcare*	Australia	20.9	20.3	18.3	16.9	13.1	12.7	11.6	10.9	2.3	2.2	2.1	2.0
Thyrocare	India	75.6	55.7	43.7	34.5	40.8	32.7	25.6	20.4	16.5	13.4	10.7	8.7
Dr Lal	India	60.3	49.7	39.5	30.6	36.6	30.9	25.2	20.7	9.7	7.9	6.4	5.4

Source: Bloomberg, Edelweiss research

Note: * Bloomberg consensus

The 2 major independent clinical laboratories in the US, Laboratory Corporation of America Holdings and Quest Diagnostics Incorporated, have been trading at ~9x 1-year forward EV/EBITDA and ~14x 1-year forward P/E in past 15 years.

Chart 2: US listed diagnostic players trading at ~9x EV/EBITDA and ~14x P/E in past 15 years



Source: Bloomberg, Edelweiss research

Prefer hospitals over diagnostics

Valuations of diagnostics players are factoring in high terminal growth rates of ~9-10%, which we believe are at risk given competition, impending quality regulations and price controls. While RoCE of the business is currently high, it is likely to dilute as incremental capital employment will not be able to generate similar returns. On the other hand, hospitals are poised for RoCE improvement as their capex cycle comes to an end and they sweat assets. We continue to prefer hospitals over diagnostics.

Table 10: Valuation and recommendation snapshot

	CMP INR	Target Price	Reco	Mcap (USD bn)	P/E (x)			EV/ EBITDA (x)				FCFF yield (market cap)				ROACE (%)*			
					FY17E	FY18E	FY19E	FY16	FY17E	FY18E	FY19E	FY16E	FY17E	FY18E	FY19E	FY16	FY17E	FY18E	FY19E
Apollo Hospitals	1,172	1,540	BUY	2.5	52.8	36.4	26.4	23.6	22.9	19.1	15.5	(3.5)	(1.4)	(0.1)	0.9	10.0	8.8	10.7	12.5
Fortis Healthcare	203	265	BUY	1.6	19.0	187.3	62.8	25.9	22.3	17.8	14.8	(1.3)	(7.3)	(2.2)	0.3	2.2	4.8	4.2	6.2
Max India (MHC network)	148	175	BUY	0.6	477.4	277.7	97.0	34.0	25.4	19.8	16.2	(11.1)	0.9	(3.0)	1.5	6.7	7.9	10.1	12.3
HCG	270	310	BUY	0.4	226.2	235.1	81.7	28.0	22.8	18.7	14.6	(8.1)	(10.9)	0.9	1.3	6.7	5.6	6.4	9.9
Narayana Hrudayalaya *	321	NC	NC	1.0	82.7	56.0	40.0	39.0	29.3	22.7	18.4					2.3	7.8	10.5	12.8
Kovai Medical *	1,201	NC	NC	0.2	21.4	18.5		14.0	10.5	9.3						25.8	22.5	21.2	
Indraprastha Medical Corporation *	62	NC	NC	0.1	23.5	21.6		6.3	7.8	7.5						14.2	21.9	19.6	
Hospitals					40.0	60.8	36.7	20.9	18.7	16.8	13.8	(5.6)	(3.5)	(1.4)	1.0	5.9	6.6	7.3	9.7
Dr Lal Pathlabs	966	1,230	BUY	1.2	49.8	39.6	30.7	36.7	30.9	25.3	20.8	1.3	1.6	2.1	3.4	43.5	37.6	36.9	36.8
Thyrocare	739	720	BUY	0.6	56.4	44.3	35.0	41.4	33.2	25.9	20.7	1.3	1.5	1.8	1.6	23.8	26.9	30.9	34.7
Diagnostics					51.8	41.0	32.0	38.1	31.6	25.5	20.7	1.3	1.6	2.0	2.8	35.1	33.8	35.2	36.7
Overall					45.3	54.2	35.9	24.6	21.5	18.8	15.3	(3.3)	(1.9)	(0.5)	1.3	7.5	8.3	9.2	11.8

Source: Company, Bloomberg, Edelweiss research

Established player profiles

SRL

Company description

Fortis group’s diagnostic arm, Super Religare Laboratories (SRL), is India’s largest organised diagnostic player with ~6-7% share of the overall market and one of the best walk-in ratios. SRL has a network of ~352 labs with a pan-India footprint. The company is present in all segments of pathology testing, which includes screening, diagnostic, predictive, preventive and monitoring tests. SRL conducts over ~125,000 tests per day.

Infrastructure

- 4 reference labs (Mumbai, Gurgaon, Kolkata and Bangalore)
- 352 network labs (of which 100 labs are in Kerala and ~91 labs are in hospitals)
- 1,074 collection centres
- 6,271 direct clients
- Workforce -6,000 (including 500 doctors)

Chart 3: Geographical revenue split

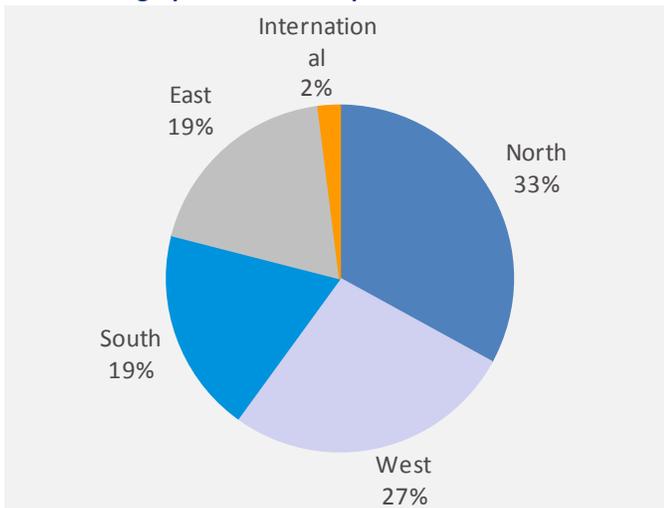


Chart 4: Customer revenue mix

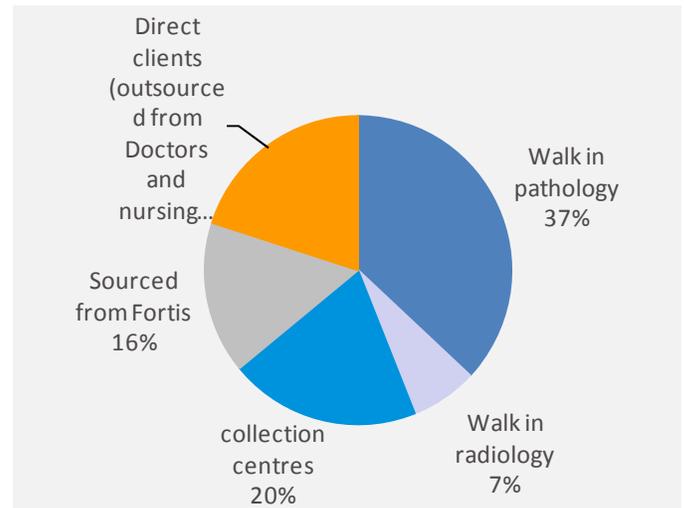
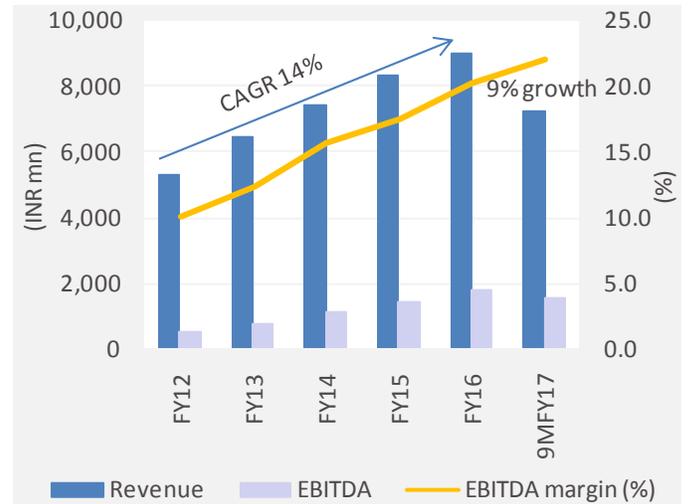
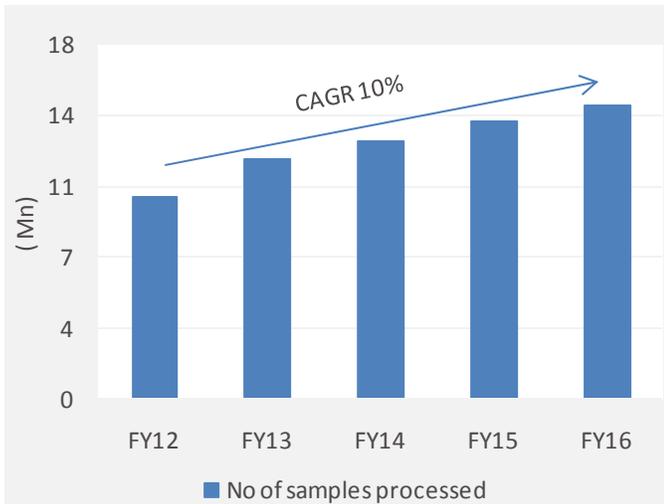


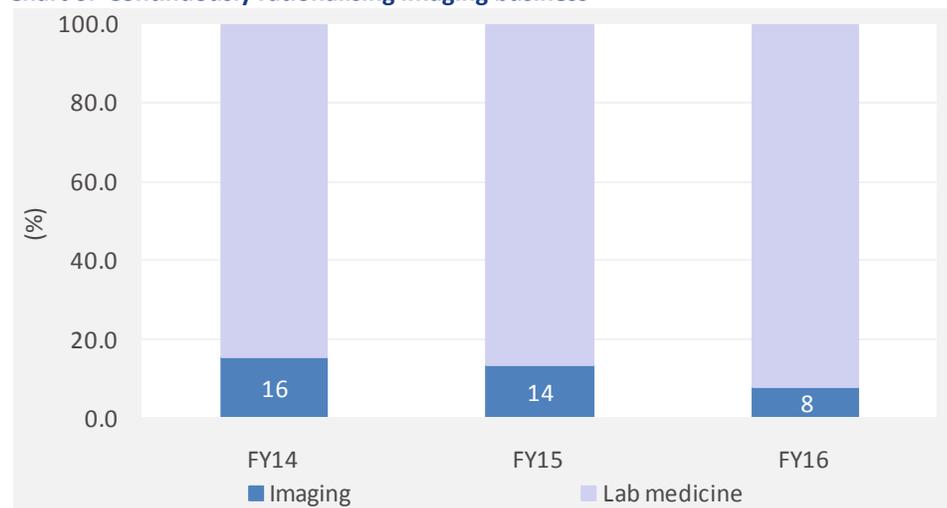
Chart 5: Financials



Source: Company, Edelweiss research

Financials and historical growth trend:

- Historically, SRL has grown at 14% CAGR during FY12-16 and EBITDA margin has improved from 10% to 20% during the period.
- Contributors to growth:
 - Same store growth – 3-4%
 - Price growth – 2%
 - Network expansion - balance
- In past 3 years, SRL has reduced contribution from radiology business to ~7-8% versus 16% in FY14, which has affected its growth

Chart 6: Continuously rationalising imaging business**Table 11: Radiology contribution declining**

	FY15	Current
Revenue	1,100	700
EBITDA	40	170
contribution to revenue (%)	14	7

Source: Company, Edelweiss research

Growth strategy: Aims to grow at ~15% CAGR over medium term with EBITDA margin of 25-26%

- Network expansion:** New collection centres and direct clients under the franchisee model are bound to be major growth drivers in future.
- Growth in existing centers:** SRL is currently in the process of shutting down non-profitable centers and existing centers are expected to grow at 5% in future.
- PPP model:** SRL currently has PPP agreements for 3 states- HP, Jharkhand and UP and earns 2.5% of its revenue from this segment. Unlike HP and Jharkhand where the company sets up its own labs, a different model is followed in UP where no labs are set up by it and it operates only through collection centers. Although EBITDA margin under this model are lower at 8-12% versus ~30% since prices of majority of the tests are capped, they may also include certain high-end tests outside price control which could

help improve margins. SRL currently earns INR200mn in revenue and EBITDA margin of 22% in HP. The company expects to be able to win new PPP tenders banking on its successful track record of operating labs under this model. It has also entered into an agreement to provide services under the UNICEF program to test nutrition levels among children.

- **Expansion of business from Fortis hospitals:** SRL currently earns 16% of its revenue from Fortis hospitals. Revenue from this stream is likely to grow with expansion of the Fortis network and introduction of new programmes like bone marrow transplant, nephron, etc., which lay emphasis on diagnostic tests.
- **Radiology business:** In the past, SRL rationalised its radiology business and reduced contribution from 16% in FY14 to ~7-8% as it shut down the non-profitable centres. It currently has 10 radiology centres (2 centers in hospitals and 8 standalone centers). Having completed the rationalisation process, this business is expected to grow in the future and earn higher-than-company level margins.

Dr Lal Pathlabs

Company description

Started in 1949, Dr Lal is a provider of diagnostic and related healthcare tests and services in India. Through its integrated and nation-wide network, the company offers patients and healthcare providers a broad range of diagnostic and related healthcare tests and services for use in core testing, patients' diagnosis and prevention, monitoring and treatment of disease and other health conditions. Its customers include individual patients, hospitals and other healthcare providers and corporate customers. Dr Lal's country-wide network comprises a national reference laboratory in New Delhi, supported by 172 clinical laboratories, 1,559 patient service centres and over 4,967 pickup points. The company has an exhaustive catalogue of tests which includes over 1,110 test panels, 1,934 pathology tests and 1,561 radiology and cardiology tests and it keeps adding newer and more effective tests over time. The company employs over 3,000 personnel work with >55% of the staff engaged in laboratory functions. It has a qualified team of 147 pathologists, 8 radiologists, 13 microbiologists, 5 biochemists and 11 specialists with doctorate degrees.

Expansion strategy

- **Expanding presence in North India**

Dr Lal will continue to focus on its core market - North India. It intends to further strengthen its position by opening new franchised patient service centers to expand its network reach. Currently, the region contributes 47% to Dr Lal's total revenue.

- **Focus on penetrating deeper in East and Central India**

To drive next phase of growth in East and Central India, Dr Lal intends to expand presence through construction of regional reference laboratories in Lucknow (December 2018) and Kolkata (September 2017) at a capex of ~INR400-450mn over and above the land cost. The company believes its overall penetration is low in these regions and perceives immense potential to grow by opening additional smaller clinical laboratories and new complementary PSCs.

According to the company, the NCR market is growing at ~13-15% and the East at ~17-18% with potential to grow at >25%. Dr Lal expects to penetrate deeper into the promising markets of Bengal, Bihar and North East using the Kolkata reference lab. Currently, East India contributes 13% to Dr Lal's total revenue.

Similarly, it expects the new reference lab in Lucknow to help it penetrate UP and MP markets. It expects Lucknow to become a major medical hub with Medanta's Medicity launch there.

- **Bolstering services**

Dr Lal will continue to increase the breadth of its diagnostic healthcare testing and services platform through adoption of new and cutting-edge diagnostic healthcare testing technology as it believes this will expand its revenue sources and further enhance its brand's reputation. The company intends to offer more preventive healthcare screening and chronic and lifestyle disease management services, given increasing health awareness and concomitant increase in chronic and lifestyle ailments in India. This includes further development in genetics, molecular and oncology testing and further

sprucing up of its current chronic disease management and wellness programmes. It also intends to further beef up its corporate customer base by continuing to market its healthcare proposition to human resource departments and other corporate decision makers.

- **Eyeing new geographies via strategic acquisitions and partnerships**

Since FY08, Dr Lal has made several strategic acquisitions in India of smaller-scale diagnostic healthcare service providers that currently contribute ~10-12% of overall revenues. The company last made a small INR40mn acquisition in FY15. Strong cash flows from business could be utilised for further strategic acquisitions. Dr Lal proposes to continue exploring expansion opportunities in India, including strategic acquisitions of regional diagnostic healthcare service providers who have brand recall among its existing patient base and healthcare providers. Dr Lal believes future acquisitions will provide it operating synergies and aid organic growth in these new regions through introduction of specialised testing in addition to those already offered by the acquired company. It will also enjoy additional purchasing power with its suppliers and increased economies of scale.

Plans are also afoot to expand presence in South and West India by opening additional clinical laboratories and PSCs. It is also continuously enhancing breadth of its diagnostic tests. On a combined basis, South and West contribute 15% to total revenue currently.

- **Expanding lab management venture**

Dr Lal is looking at scaling up the offshoot model whereby it undertakes management of laboratories which are functioning within a hospital. Every hospital has a routine lab. This far, the company has only been tapping part of the business which is being outsourced to Reference Labs. Having realised that with its scale, size and productivity, it can manage these labs operationally with co-branding of Dr Lal, thereby protecting margins for these hospital-based laboratories and still be able to make margin gains (~18-20%). While this margin may not be to the extent it makes in its existing business, it could secure a very large captive high volume business. Initial response has been encouraging (~18-20 labs) and it is looking at adding more such contracts going forward.

Thyrocare

Company description

Thyrocare, set up in 1995 and incorporated in 2000, is a leading pan-India diagnostic chain conducting an array of medical diagnostic investigations that center on early detection and management of disorders. The company focuses on clinical chemistry. It has a CPL in Navi Mumbai and 6 RPL. It is planning to set up RPLs in a few more places. Thyrocare has a nationwide presence with over 30,000 source points for sample collection managed by its pan-India network of authorised service providers spread over more than 2,000 towns across more than 450 cities in 29 states. Thyrocare has a wholly owned subsidiary Nuclear HealThyrocare (NHL). NHL is engaged in imaging diagnostic services, viz. PET-CT scans, nuclear scanning, etc. Its scanning centres are in Navi Mumbai, New Delhi and Hyderabad. NHL is planning to set up scanning centres in more places.

Expansion strategy

- **Multi-lab model driving volume growth**

Thyrocare is planning to strengthen and expand its regional coverage across India via its network of RPL and authorised service providers. Patna, Lucknow, Bhubhaneshwar and Chandigarh are the next RPL targets. By expanding this network, it will simultaneously widen its customer base, generate higher volumes of samples for processing, improve turnaround time and optimise logistics costs. It has developed long-term relationships with authorised service providers with the goal to maintain consistency in quality of services across its network and prune churn.

- **Expand service platform by developing new channels**

Moreover, on the anvil are plans to widen breadth of its testing and services platform via new channels that leverage its brand, multi-lab model and pan-India network of service providers. Thyrocare will use the expanded network of RPL and authorised service providers to bolster brand visibility and enhance accessibility of its services. Thyrocare has introduced Online Client System through which people and organisations with sample collection capabilities (laboratories, diagnostic centers, doctors, clinics, nursing homes, hospitals, medical representatives) can outsource the processing of samples to the company. It is in the process of establishing Thyrocare Metabolic Clinic (TMC), a chain of nation-wide branded metabolic clinics for individuals with chronic illnesses or plans to undergo a healthcare procedure. It will provide doctors and other healthcare professionals a platform to deliver their expertise to potential patients. Over the next 3 years, Thyrocare intends to develop clinics across India and is currently planning to open TMCs in Mumbai and New Delhi. As another example, through the brand Sugar Scan, it offers a sugar scan blood glucose monitor, one of the simplest ways for patients to instantly determine their blood glucose levels at an affordable cost. The company is also forging corporate relationships with insurance providers, helping patients streamline hospitalisation expense claims to such insurance providers. Currently the company has institutional contracts with 2 IT companies (contributing revenue of ~INR50mn and INR18mn), BMC (INR40mn) and few insurance companies.

- **Emphasis on wellness and preventive healthcare**

Under its Aarogyam brand, Thyrocare offers a suite of wellness (preventive health care) tests. The wellness segment contributes ~50% to the company's business. The strategy is

to continue to grow its wellness and preventive offerings and expand product offerings of diagnostic and other tests. As Thyrocare recognizes the growth opportunity in this segment and is well positioned to leverage its expertise and brand, it is focusing a significant proportion of its marketing efforts on preventive diagnostic and wellness offerings. It has set up an in-house marketing team and a network development team and is expanding its call center operations to directly market its wellness and preventive offerings to referring doctors and individual customers. Thyrocare also routinely sets up health camps to spread awareness of lifestyle disease and benefits of undergoing preventive health checks. This has enhanced equity of the Aarogyam brand among customers.

- **PET-CT scan business added to the fold**

Thyrocare is developing a network of molecular imaging centers (radiology) for cancer diagnosis through its subsidiary Nueclear Healthcare (NHL). The aim is to replicate its 'low cost + high volume' efficiencies driven model to drive ~40% standalone EBITDA margin in the PET-CT scan segment—a highly underpenetrated diagnostic tool in India. However, the business has a dilutive return profile versus the pathology business and is fraught with a unique set of risks. While a PET-CT costs ~USD1mn, a cyclotron costs ~USD2mn. This renders the business much more capital intensive compared to the pathology business.

Thyrocare currently has 3 imaging centers operating 5 PET-CT scanners—2 in Navi Mumbai, 2 in New Delhi and 1 in Hyderabad—and is planning to expand the scanning operation to other major cities in India. For example, it intends to open molecular imaging centers in Kolkata and Raipur. It believes, backward integration with its own cyclotron lends it with greater flexibility, reliability and cost effectiveness as it expand operations. While PET-CT scanners are currently owned by NHL, in order to further expand the business and improve capital efficiencies, it intends to deploy a franchisee model, whereby PET-CT scanners will be owned by the franchisee and revenue will be shared between NHL and the franchisee. Thyrocare is currently setting up such an arrangement with a party in Raipur. By April 2020, the company aims to have 60 PET-CTs, 3 cyclotrons, 30 scans/PET-CT/day with total investment of ~USD80mn.

A major factor discouraging the use of these diagnostic procedures is the high cost. Therefore, the ability of diagnostic service providers to offer procedures at competitive rates will be a key determinant of the segment's growth. Accordingly, to take advantage of the expected spurt in PET-CT scanning services demand, Thyrocare is planning to offer such services at competitive prices, thereby growing its referring doctor and hospital customer base, which is bound to drive scanning volumes.

Appendix I: The Diagnostics Industry

Within the healthcare system, diagnostic services play the role of an information intermediary, providing useful information for correct diagnosis and treatment of diseases. Diagnostic services have lower share in overall healthcare spends (~4% of total), but play a vital role in identifying problem areas and major illnesses.

Several factors drive high growth of diagnostic services versus overall healthcare industry growth, including:

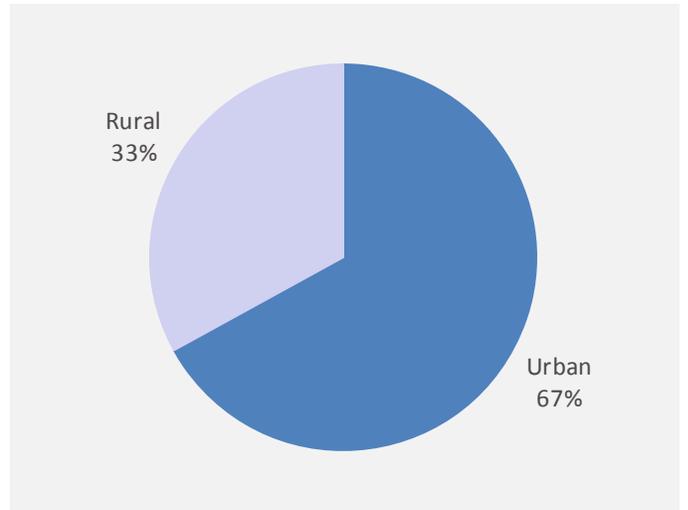
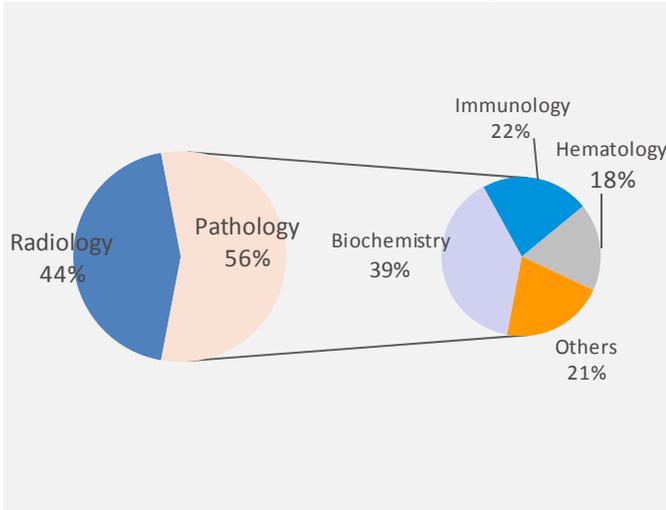
- While in the past, the style of treatment relied somewhat lower on evidence-based approaches, this trend has seen a quick turnaround in the previous decade.
- Focus on prevention was limited earlier, but it is steadily inching up as evident from the faster growth rate in the wellness segment of the sector. Screening, early detection and monitoring reduction in downstream costs.

Table 12: Diagnostics market segments

Ticket size (INR)	Category	Sub-category	Comment
250-500	Clinical Pathology	Biochemistry	Tests the changes in the chemical composition of body fluids in response to a particular disease or condition compared to results from healthy people, eg. Blood sugar
		Hematology	Study of diseases which affect blood. Eg. number of blood cells, clotting & bleeding studies
		Immunochemistry	Study of diseases caused by an abnormal immune response through analysis of blood serum components. Eg. Allergies, auto-immune & immunodeficiency diseases.
		Microbiology	Study of diseases caused by bacteria, viruses, fungi, etc. done by culturing organisms from specimens such as urine, faeces and swabs to identify pathogens
		Coagulation	Amount of time required for coagulation of blood. point of care tests popular
		Urinalysis	Detect and measure various properties of urine. point of care tests popular
800-1000	Anatomical Pathology		Anatomical tests diagnose diseases through microscopic study of organs and tissue samples
1000-1500	Molecular Diagnostics		Analyse DNA and RNA to detect heritable or acquired disease-related genotypes, mutations, phenotypes or karyotypes
Radiology Market Segmentation			
INR 4000-5000	MRI systems		
	Ultrasound systems		
INR 2000-3000	Computed Tomography (CT) Systems		
	Nuclear Imaging Systems		
INR 150-200	X-ray systems		

Source: Edelweiss research

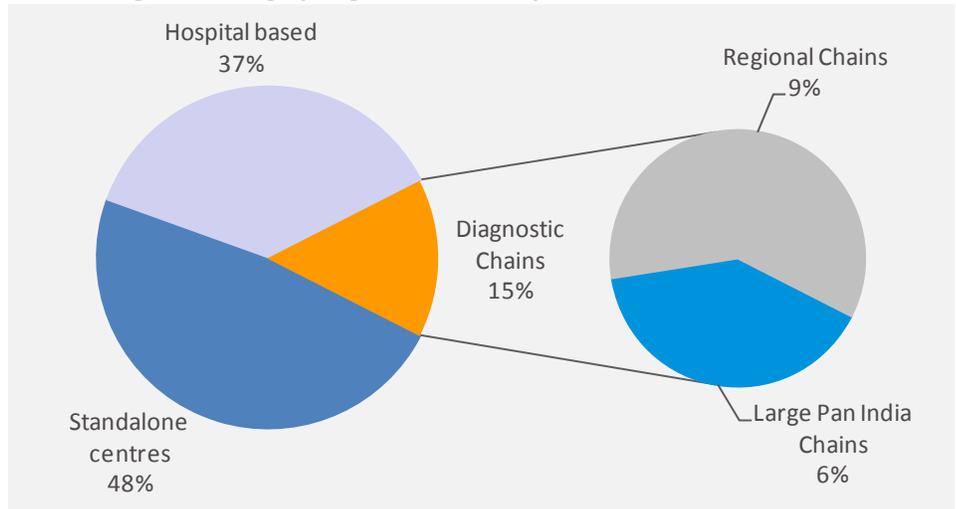
Chart 7: Break-up of the ~USD4bn Indian diagnostics market



Source: CRISIL, Edelweiss research

There is much fragmentation with >100k labs in the country. But, demand for institutionalised services has led to organised players becoming more relevant in this sunrise sector. SRL, Metropolis, Dr Lal, Thyrocare, Vijaya Diagnostics and Medall, among others, are major organised players in the segment.

Chart 8: Diagnostics - Highly fragmented industry

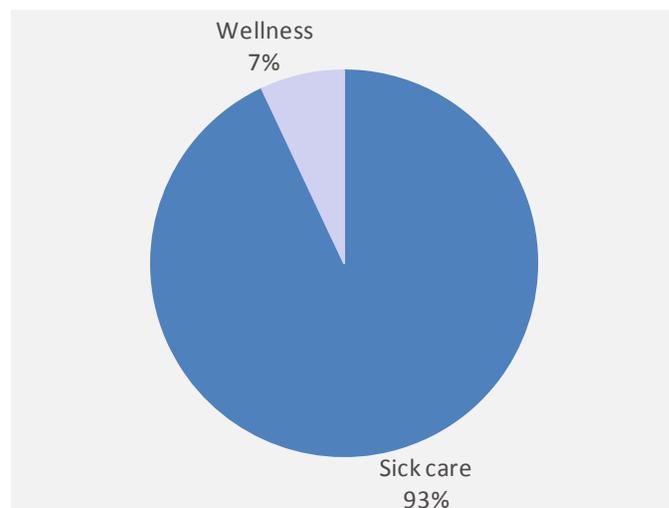
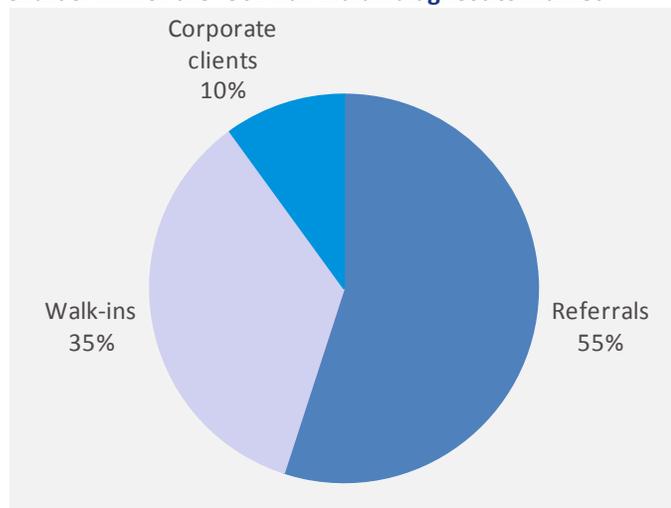


Source: CRISIL, Edelweiss research

To understand demand in the diagnostics market, we have broken it up across channels:

- (a) Referrals are the biggest channel, making up ~50-60% cases of the market. These require commission payments to doctors of ~30-40% by small/new labs and ~5-10% by established labs. While walk-in patients make up ~30-35% of cases, corporate clients make up the balance.
- (b) While a chunk comprises the sick-care market, ~7% of overall value is derived from wellness and preventive diagnostics.

Chart 9: Mix of the ~USD4bn Indian diagnostics market



Source: CRISIL, Edelweiss research

Table 13: Diagnostics companies compared

FY16 numbers unless mentioned, INR mn	Dr Lal	Thyrocare	SRL
Number of laboratories	172	7	314
Number of samples (mn)	26	12	15
Revenue CAGR (FY11-16)	27	24	14
Revenue	7,913	2,312	8,980
EBITDA Margin (%)	27	39	20
ROCE (%)	44	24	12
Market Cap (INR bn)	90	33	N/A
Test profile	<10% imaging ~70% routine tests like CBC and lipid profile ~30% specialized like molecular diagnostics, genetics, thyroid, etc.	<10% imaging Only Biochemistry tests offered ~20% thyroid ~50% preventive healthcare ~30% non thyroid tests	< 10% imaging <5% preventive healthcare rest are routine and specialized tests
Revenue mix	~40% walk-ins (172 labs) ~ 35% from collection centers (1,560 patient service centers) ~ 25% from pickup points (4,970 centers)	All revenues derived from franchises across India (~ 1,200)	~ 33% walk-in (314 labs) ~24% collection centers (7,200 centres) ~20% hospitals ~16% direct clients
FY18 P/E	40	44	N/A
FY18 EV/EBITDA	25	26	N/A
FY19 P/E	31	35	N/A
FY19 EV/EBITDA	21	21	N/A

Source: Company, Edelweiss research

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Coverage group(s) of stocks by primary analyst(s): Pharmaceuticals

Apollo Hospitals Enterprise, Aurobindo Pharma, Cadila Healthcare, Cipla, Divi's Laboratories, Dr. Lal Pathlabs Ltd, Dr.Reddys Laboratories, FORTIS HEALTHCARE LTD, Glenmark Pharmaceuticals, HealthCare Global Enterprises Limited, Ipca Laboratories, Lupin, Max India Limited, Natco Pharma, Sun Pharmaceuticals Industries, Thyrocare Technologies Ltd, Torrent Pharmaceuticals

Recent Research

Date	Company	Title	Price (INR)	Recos
12-Apr-17	Dr. Reddy's Laboratories	More challenges ahead; <i>Company Update</i>	2,645	Hold
03-Apr-17	Pharma	Earnings to be in weak terrain; <i>Quarterly Result Preview</i>		
21-Mar-17	Divis Laboratories	Import alert to Unit-II, risks loom large; <i>Company Update</i>	634	Hold

Distribution of Ratings / Market Cap

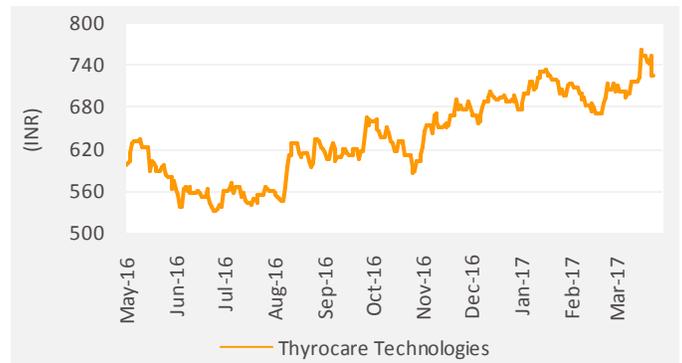
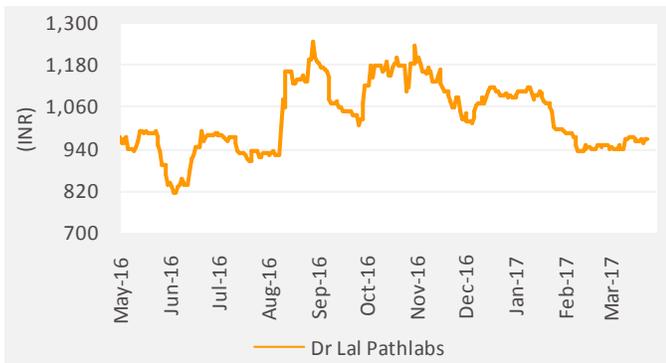
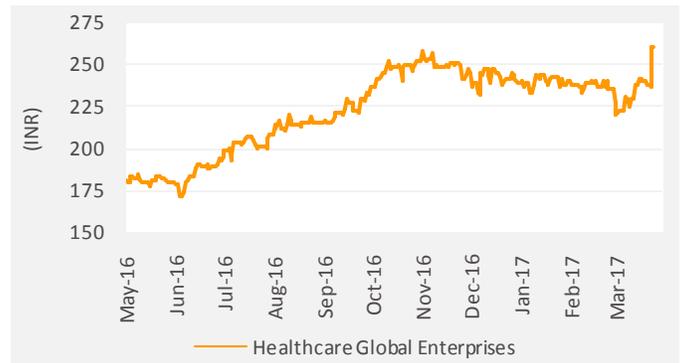
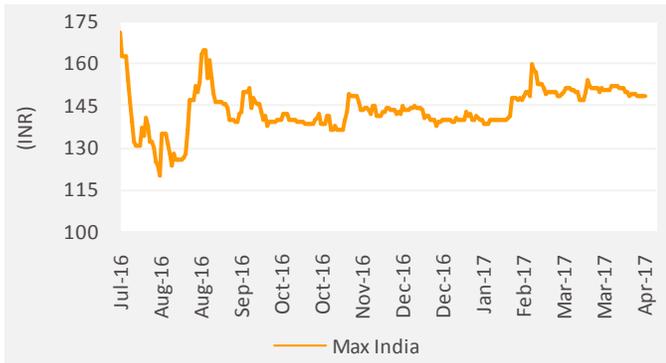
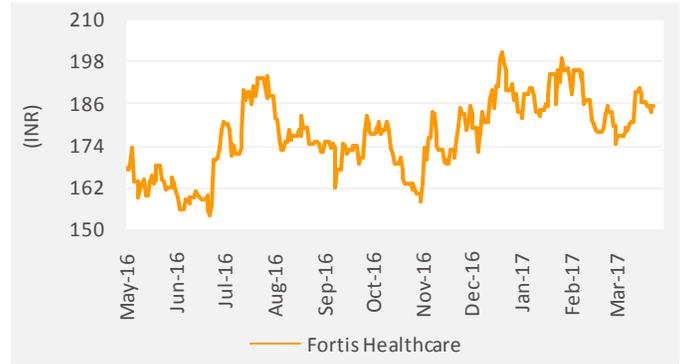
Edelweiss Research Coverage Universe

	Buy	Hold	Reduce	Total
Rating Distribution*	161	67	11	240
* 1stocks under review				
	> 50bn	Between 10bn and 50 bn	< 10bn	
Market Cap (INR)	156	62	11	

Rating Interpretation

Rating	Expected to
Buy	appreciate more than 15% over a 12-month period
Hold	appreciate up to 15% over a 12-month period
Reduce	depreciate more than 5% over a 12-month period

One Year price charts



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