

# Singapore Healthcare Sector

**Research Analysts**

**Su Tye Chua**  
 65 6212 3014  
 sutye.chua@credit-suisse.com

**Cher Ying Poh**  
 65 6212 3098  
 cherying.poh@credit-suisse.com

**INITIATION**

## Strong growth diagnosis

Singapore's private healthcare operators look set to witness a period of robust growth, as they continue to capture a greater share of healthcare spending, driven by a demographic shift, rising income levels, an influx of medical travellers and ongoing reforms in Singapore's healthcare financing system. We initiate coverage of Parkway and Raffles Medical, both with OUTPERFORM ratings.

- **Shot in the arm.** We believe that the private sector's share of healthcare spending will increase significantly in the medium term, driven by: 1) changing demographics, 2) rising affluence, 3) an increase in medical tourism and 4) ongoing reforms to Singapore's healthcare financing system. In our view, current valuations have not factored in the growth prospects for Singapore's private healthcare operators, driven by the population's healthcare needs over the longer term.
- **Asia's healthcare demand proxy.** Parkway is Asia's largest private healthcare operator, with Singapore and Malaysia as its key growth drivers. We favour the company's expanding regional footprint, and view its recently established REIT as an opportune vehicle for asset monetisation over the longer term. We initiate coverage of Parkway with an OUTPERFORM rating and a 12-month target price of S\$4.80, based on a sum-of-the-parts valuation, implying 25% potential upside.
- **Operating room leverage.** As an operator of the largest network of outpatient clinics, a potential feed for referrals and an under-utilised but high quality hospital asset, we believe Raffles Medical is best positioned to benefit from a potential structural supply constraint in bed capacity over the medium term, as well as increasing patient volume-driven by ongoing changes to Singapore's healthcare landscape. We initiate coverage of Raffles Medical with an OUTPERFORM rating and a 12-month target price of S\$1.90, based on DCF valuation, implying 26% potential upside.

**Figure 1: Singapore comparative valuations**

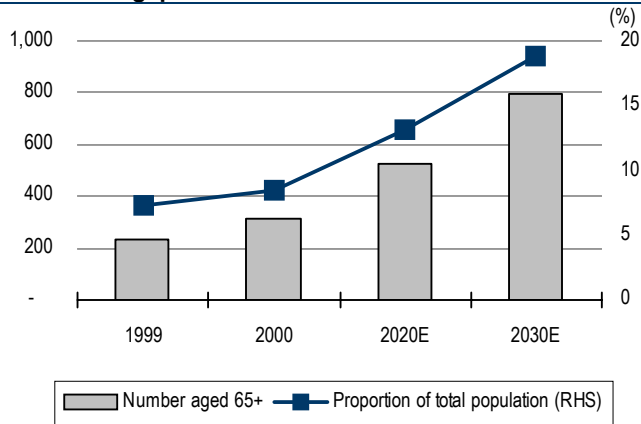
	Bberg	Rating	Target price (\$)	% up/down side	Mkt cap (US\$ mn)	Avg. 3M T/O (mn)	P/E (x)			EPS	PB	ROE	Div. yld
							2007E	2008E	2009E	grth (%) (2007-09)	(x) 2007E	(%) 2007E	(%) 2007E
Parkway	PWAY SP	O	4.80	25	2,062	7.1	27.5	24.5	22.0	11.8	4.6	16.3	3.6
Raffles Med	RFMD SP	O	1.90	26	542	0.4	35.1	24.7	20.8	29.9	5.9	16.2	2.3
Thomson Med.	THOM SP	NR	-	-	133	0.2	19.4	16.9	12.9	22.6	2.0	13.7	2.5
Pacific HC	PACH SP	NR	-	-	70	0.1	16.6	13.5	10.7	24.3	n.a.	13.0	2.7
<b>Average</b>							<b>24.7</b>	<b>19.9</b>	<b>16.6</b>	<b>22.1</b>	<b>4.2</b>	<b>14.8</b>	<b>2.8</b>

Source: Company data, Credit Suisse estimates

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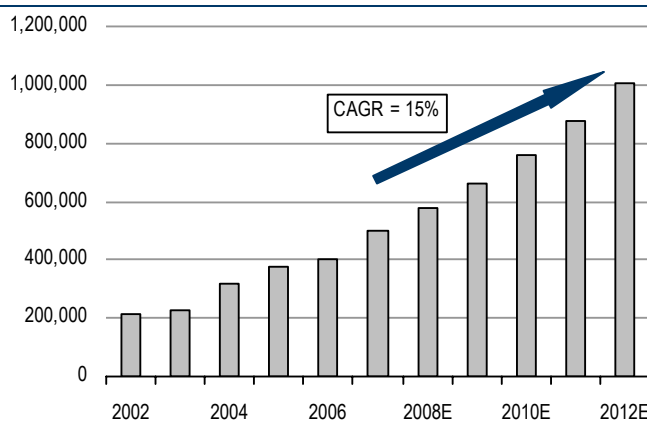
# Focus charts

**Figure 2: Number and proportion of persons aged 65 and above in Singapore**



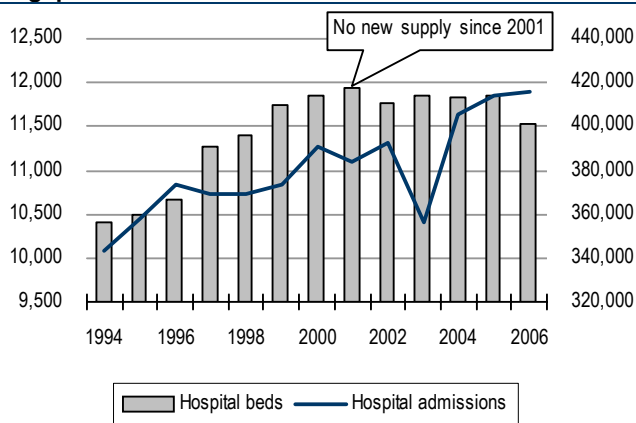
Source: Ministerial Committee of the Aging Population 1999, Credit Suisse estimates

**Figure 4: Number of foreign patients treated in Singapore**



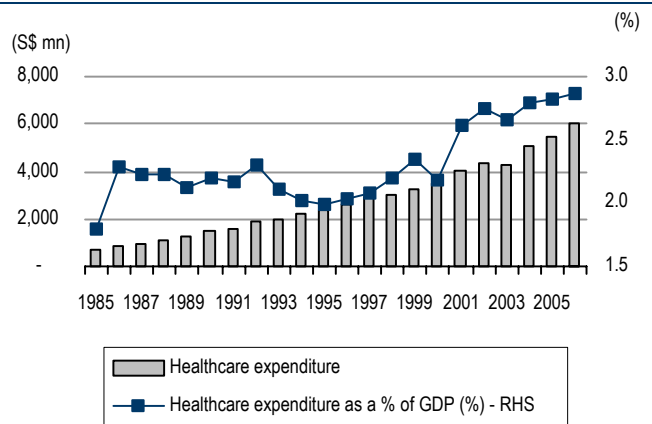
Source: Singapore Tourism Board, Credit Suisse estimates

**Figure 6: Hospital bed capacity and admissions in Singapore**



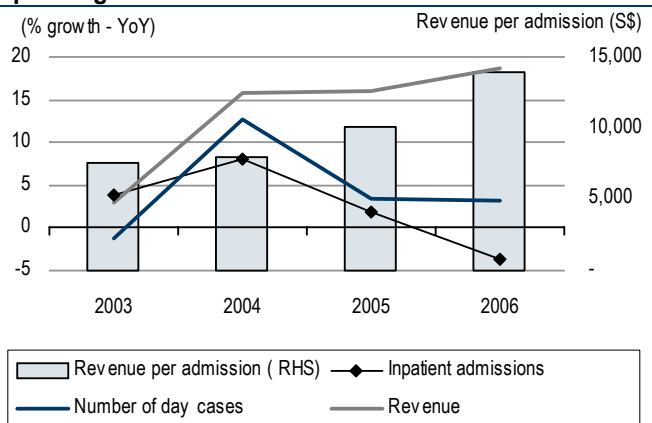
Source: CEIC, Credit Suisse estimates

**Figure 3: Private healthcare expenditure as a proportion of GDP**



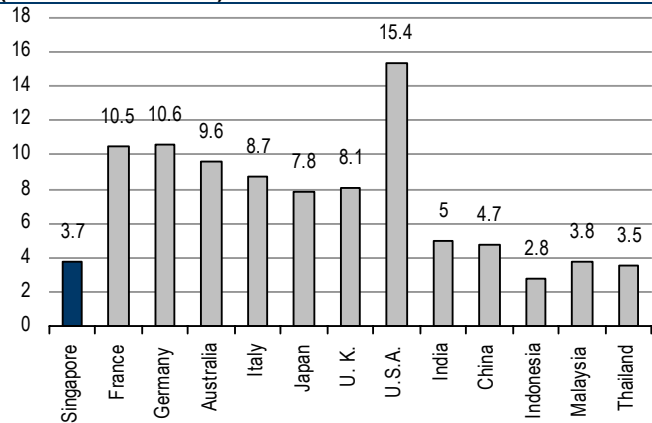
Source: CEIC

**Figure 5: Parkway – Singapore hospital revenue and operating statistics**



Source: Company data, Credit Suisse estimates

**Figure 7: Total healthcare expenditure as a % of GDP (selected countries)**



Source: World Health Organization

## Strong growth diagnosis

Singapore's private healthcare operators look set to witness a period of robust growth, as they continue to capture a greater share of healthcare spending, driven by a shift in demographics, rising income levels, an influx of medical travellers and ongoing reforms in Singapore's healthcare financing system. In our view, current valuations have not factored in the growth prospects of Singapore's private healthcare operators, driven by the population's healthcare needs over the longer term. We initiate coverage of Parkway and Raffles Medical with OUTPERFORM ratings.

### Shot in the arm

We believe that the private sector's share of healthcare spending will increase significantly over the medium term, driven by: 1) changing demographics, 2) growing medical tourism and 3) ongoing reforms in Singapore's healthcare financing system. In our view, current valuations have not factored in the growth prospects of Singapore's private healthcare operators, driven by the population's healthcare needs over the longer term.

We see strong growth drivers for Singapore's private healthcare operators

### Asia's healthcare demand proxy

Parkway is Asia's largest private healthcare operator, with Singapore and Malaysia as key growth drivers. We favour the company's expanding regional footprint, and view its recently established REIT as an opportune vehicle for asset monetisation over the longer term. We initiate coverage of Parkway with an OUTPERFORM rating and a 12-month target price of S\$4.80, based on a sum-of-the-parts (SOTP) valuation, implying 25% potential upside.

We initiate coverage of Parkway with an OUTPERFORM rating and S\$4.80 target price

### Operating room leverage

As the operator of the largest network of outpatient clinics, a potential feed for referrals, and an under-utilised but high-quality hospital asset, we believe that Raffles Medical is best positioned to benefit from a potential structural supply constraint in bed capacity over the medium term, as well as increasing patient volume driven by ongoing changes to Singapore's healthcare landscape. We initiate coverage of Raffles Medical with an OUTPERFORM rating and a 12-month target price of S\$1.90, based on a DCF valuation, implying 26% potential upside.

We initiate coverage of Raffles Medical with an OUTPERFORM rating and a S\$1.90 target price

### Risks

Negative macroeconomic conditions, increasing competition from regional private healthcare providers, and changes in healthcare policies, which are subject to extensive governmental regulation, could have significant and potentially unfavourable effects on the price and availability of private medical services.

A slowdown in macro drivers, rise in competition and changes in government policies are key investment risks

# Sector valuation

Figure 8: Sector valuation comparison

Bberg	Rating*	Cur- rency	Current Target		% up/ downside	Mkt cap (US\$ mn)	Avg. 3M T/O (mn)	P/E (x)			EPS grth (%) (2007-09E)	P/B (x)		ROE (%)		Div. yld (%)		
			price (local)	price (local)				2007E	2008E	2009E		2007E	2008E	2007E	2008E	2007E	2008E	
			Parkway	PWAY SP				O	S\$	3.84	4.80	25	2,062	7.1	27.5	24.5	22.0	11.8
Raffles Med	RFMD SP	O	S\$	1.51	1.90	26	542	0.4	35.1	24.7	20.8	29.9	5.9	5.6	16.2	22.8	2.3	3.2
Thomson Med	THOM SP	NR	S\$	0.66	-	-	133	0.2	19.4	16.9	12.9	22.6	2.0	1.8	13.7	16.3	2.5	3.6
Pacific HC	PACH SP	NR	S\$	0.37	-	-	70	0.1	16.6	13.5	10.7	24.3	n.a.	n.a.	13.0	14.7	2.7	2.7
KPJ Healthcare	KPJ MK	O	RM	3.40	5.80	71	215	0.3	11.4	9.9	8.9	13.1	1.5	1.4	13.7	14.8	4.2	0.0
TMC Lifescience	TMCL MK	NR	RM	1.36	-	-	77	0.3	23.4	23.9	16.2	20.3	n.a.	n.a.	13.4	16.9	0.7	0.7
Bangkok Dusit	BGH TB	NR	Bt	33.00	-	-	1,343	25.7	35.8	26.0	19.8	34.5	3.3	3.0	13.6	16.3	1.5	1.9
Bumrungrad Hospital	BH TB	NR	Bt	40.00	-	-	978	23.8	24.5	21.9	18.5	15.0	6.3	5.4	31.3	31.5	2.1	2.4
Bangkok Chain Hospital	KH TB	NR	Bt	8.30	-	-	265	8.9	17.5	15.1	12.9	16.7	2.6	2.3	17.3	17.9	3.0	3.5
Apollo Hospital	APHS IN	U	Rs	558.50	453.00	-19	734	14.1	37.1	28.6	23.3	26.2	3.9	2.7	8.7	10.7	1.4	0.0
Fortis	FORH IN	NR	Rs	118.20	-	-	682	40.7	n.a.	n.a.	132.8	n.a.	4.0	3.9	(2.0)	5.0	n.a.	n.a.
Ramsay Health	RHC AU	NR	A\$	10.69	-	-	1,623	3.7	18.8	16.2	14.0	15.6	2.2	2.0	13.4	14.5	2.7	3.3
Primary Health	PRY AU	NR	A\$	11.78	-	-	1,464	1.5	24.5	21.4	18.8	14.2	3.0	3.0	15.0	16.8	3.9	4.5
Healthscope	HSP AU	NR	A\$	5.41	-	-	1,132	5.5	15.8	15.5	13.8	6.9	1.5	1.5	10.4	11.0	3.0	3.7
Wakefield health	WFD NZ	NR	NZ\$	8.55	-	-	93	0.1	19.8	15.7	13.9	19.5	1.6	1.5	10.5	11.0	2.2	2.6
<b>Average</b>									<b>23.4</b>	<b>19.6</b>	<b>24.0</b>	<b>19.3</b>	<b>3.3</b>	<b>3.0</b>	<b>13.6</b>	<b>15.9</b>	<b>2.6</b>	<b>2.6</b>

\* O = OUTPERFORM, U = UNDERPERFORM, NR = NOT RATED

Note: Estimates for stocks that are not rated are from IBES

Source: Company data, Credit Suisse estimates

# Strong growth diagnosis

We believe that the private sector's share of healthcare spending should see a significant jump over the medium term, driven by 1) changing demographics, brought about by an aging population and a shift in the population mix, 2) rising affluence, 3) an increase in medical tourism and 4) the ongoing reforms in Singapore's healthcare financing system.

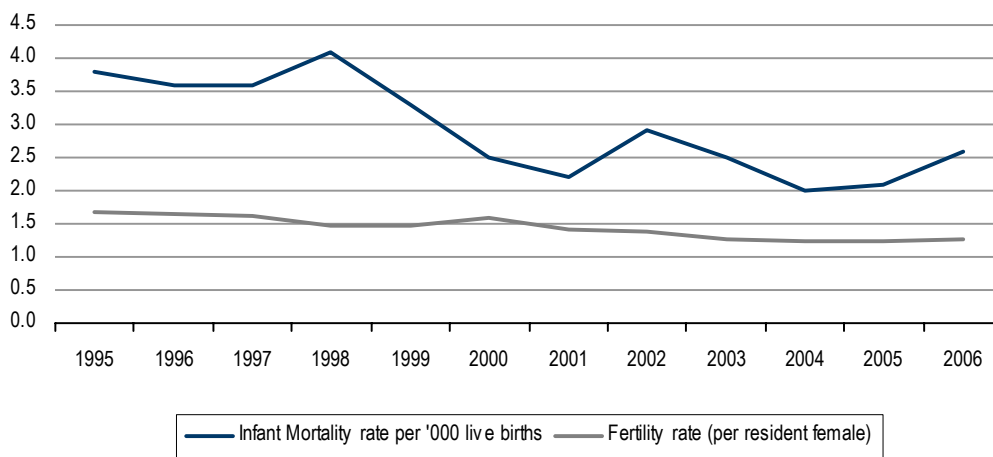
## Changing demographics

### Aging population

Despite generous government incentives to procreate, Singapore faces the same predicament as many other developed countries, namely a falling birth rate. The evidence should not be surprising. The total fertility rate (TRF) of the average Singapore female has been declining over the years, even dipping below the replacement rate over the past decade, inadequate to maintain Singapore's population, let alone produce labour for sustained economic growth.

Singapore has not been able to replace its population ...

Figure 9: Total fertility rate and infant mortality rate

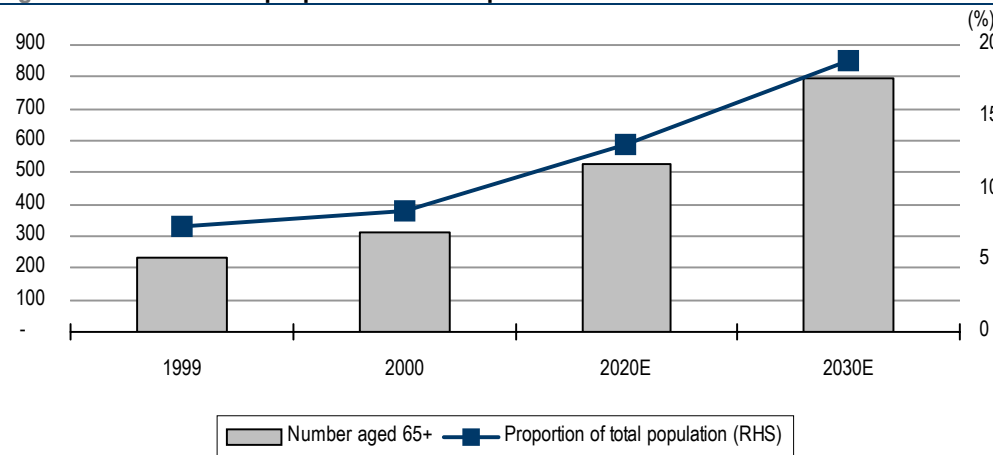


Source: Department of Statistics

The government estimates that the proportion of people aged 65 or older, which logically sees a relatively higher hospital admission rate, compared to other age segments, will increase from 8.5% currently, to 18.9% of the total population by 2030. This, in turn, implies a significant need for long-term healthcare resources.

... while the current population continues to "age" ...

Figure 10: Number and proportion of older persons



Source: Ministerial Committee on the Ageing Population 1999, Credit Suisse estimates

**Figure 11: Projected demand for elderly healthcare services**

	1997A	2000A	2010E	2020E	2030E
Acute care geriatric care	217	235	310	530	800
Geriatric care	22	25	30	55	80
Community hospital beds	761	820	1,090	1,855	2,800
Sick hospital beds for the chronically ill	326	352	480	800	1,200
Nursing home beds	6,087	6,566	8,800	14,900	24,000

Source: Frost & Sullivan 2007

**Foreigner-induced growth**

Attracting foreign talent has been a key strategy in Singapore’s drive to diversify and globalise its economy. A liberal immigration policy and an assimilating domestic environment for foreigners have enabled Singapore to expand its talent pool and bring in new ideas.

Pragmatic immigration policies, which include low personal income tax rates and compelling family amenities, have played an important role in addressing this problem and will continue to gain traction, in our view. Many developed countries, such as the US, UK, Canada and Australia, have successfully pursued liberal immigration policies to bolster sustained economic growth, and Singapore is aiming to emulate this with the National Population Secretariat targeting to add about 200,000 permanent residents over the next five years.

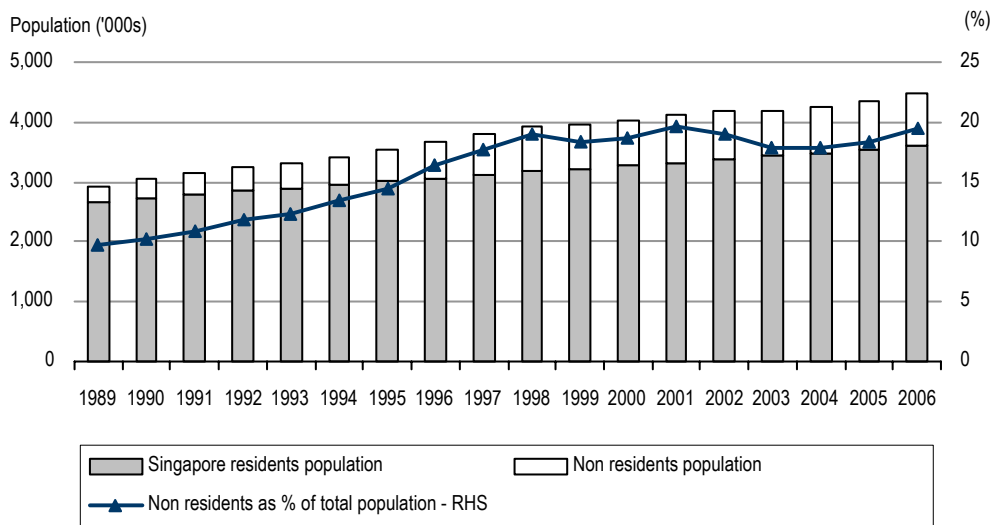
While considering the government’s longer-term population parameter of 6.5 mn, we believe it is reasonable to assume that a large part of this population growth will be front-loaded, in anticipation of planned economic activities in the near term. We see a significant shift in the population mix, driven by an influx of non-residents that are ineligible for healthcare subsidies. This implies that the private healthcare operators should capture the lion’s share of any incremental expenditure on healthcare services as Singapore’s population grows.

... which implies a need for long-term healthcare resources

Foreigners have instead driven population growth

An increasing proportion of the population is likely to rely on fewer healthcare subsidies

**Figure 12: Singapore’s population growth trend**



Source: Department of Statistics

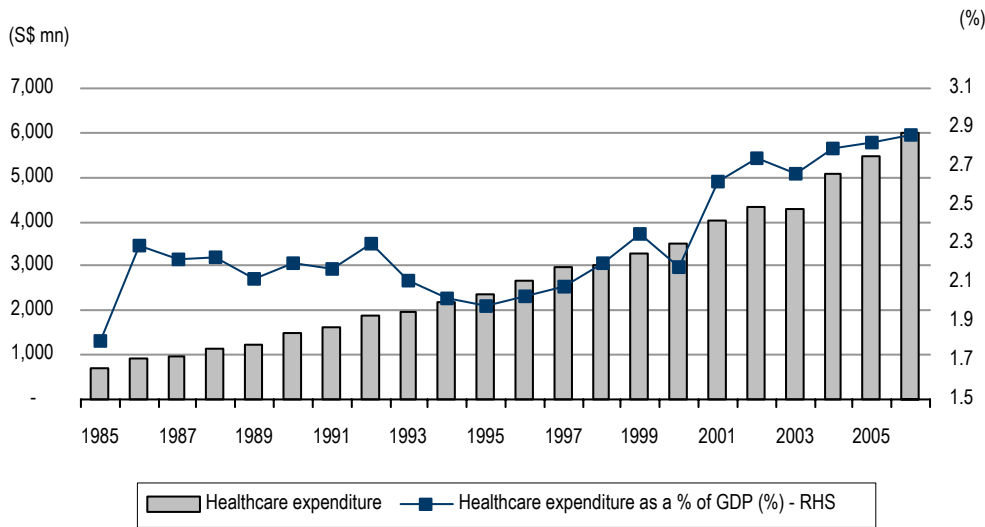
**Rising affluence**

Both rising income and education levels have raised the standard of health awareness among the resident population, boosting demand for both standard and advanced healthcare services. This can be observed by the rising trend of private healthcare expenditure as a proportion of GDP over the past decade, where the average growth of

Rising affluence has driven demand for private healthcare services

11% in private healthcare expenditure has outpaced the average annual GDP growth rate of 8%. In fact, we note that other than 2003, private healthcare expenditure has grown annually, regardless of GDP growth.

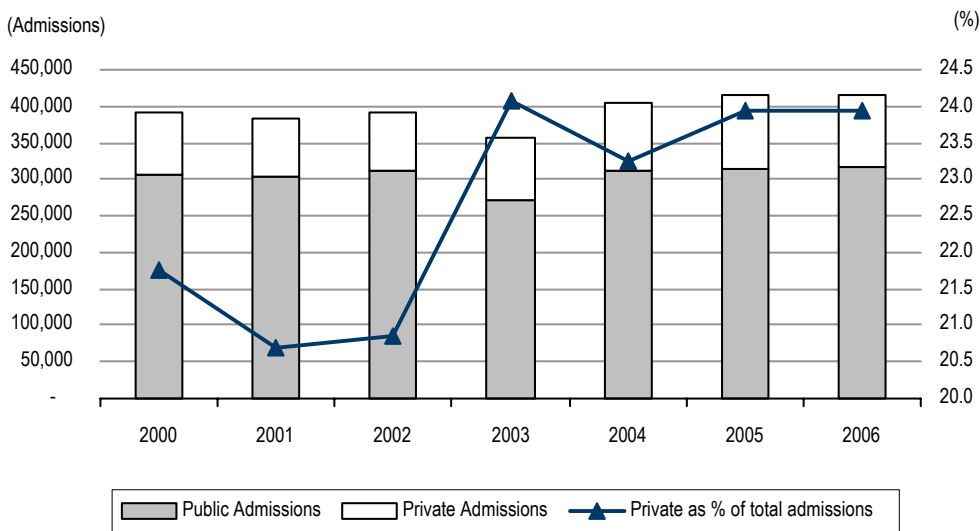
**Figure 13: Private healthcare expenditure as a proportion of GDP**



Source: CEIC

Another noticeable trend is that, in recent years, private hospitals have gained share from public hospitals, as reflected in admission numbers, reflecting this shift in bias towards demand for private healthcare services.

**Figure 14: Singapore's private versus public hospital admissions**

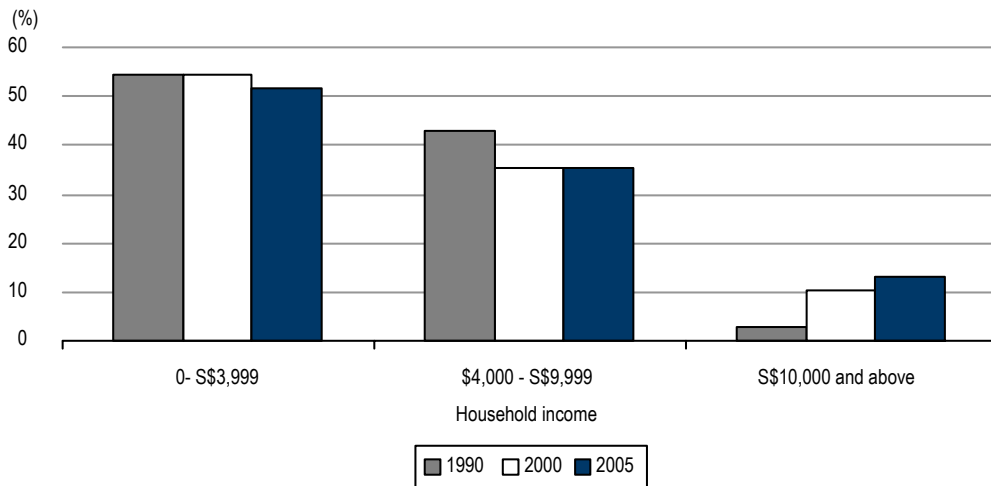


Source: Ministry of Health

We believe that this trend is likely to continue, with the positive macroeconomic backdrop, on the back of strong economic growth and overall rising affluence, continuing to support the growth in healthcare-related spending, with the private sector further gaining share.

Strong economic growth should continue to sustain the positive trend

**Figure 15: Income distribution**



Source: Ministry of Manpower

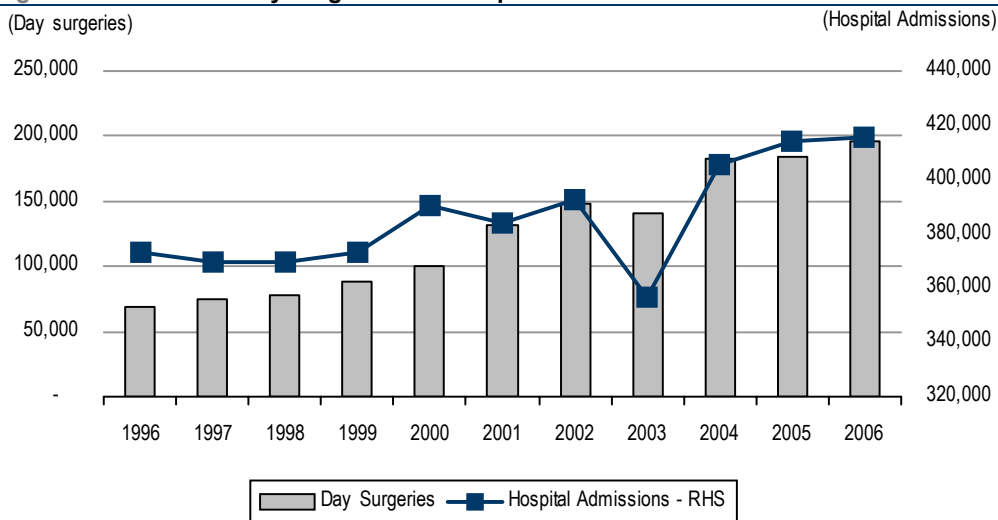
## Rising demand for outpatient treatment

One of the key thrusts of the government’s plans in managing its physical healthcare resources as it gears up for healthcare needs over the longer term is to move the system away from unnecessary hospitalisation, thus expanding demand for day surgeries.

This initiative has been supported in a large part through more efficient operating techniques, given the advent of minimally invasive surgical procedures, which help to moderate post-surgery pain and nausea, as well as improved technologies, such as key-hole surgery, which implies smaller wounds and hence faster recovery times. In aggregate, this has helped raise the general acceptance for day surgery procedures, as opposed to inpatient treatment, with the former accounting for 207,000, or 57% of all operations in 2006, as compared to 36% a decade ago.

As day surgeries have a substitutive effect on inpatient surgeries, which are strongly correlated to hospital admissions, we should expect a declining trend in hospital admissions over the period that day surgeries have increased. Yet this is hardly the case, with hospital admissions having instead climbed during the time. This implies that underlying healthcare needs have been more than robust enough to support the system’s shift towards unnecessary hospitalisation, a trend that we expect to continue.

**Figure 16: Number of day surgeries and hospital admissions**



Source: Ministry of Health

## Reforms in the healthcare financing system

### Medisave

One of the key aims of the government-administered compulsory national savings plan, Medisave, is to aid Singaporeans (especially middle-income earners) in reducing their cash outlay for hospital bills when they stay in class B1 and higher wards.

An increase in the proportion of medical bills covered by the scheme should ultimately encourage more patients to utilise private hospital services, in our view.

Recent initiatives so far include:

- (1) Raising the Central Provident Fund (CPF) daily withdrawal limits (effective May 2007) for:
  - Inpatient services (from S\$400 to S\$450 per inpatient day), which would increase the effective inpatient daily limit coverage to 82% of each B1 bill and 66% of each <A>private hospital ward bill, compared to the present 76% and 57%, respectively
  - Outpatient treatment (from S\$200 to S\$300 per day surgery case), which would reduce the cash outlay for an additional 30,000 day surgery episodes.
- (2) Increasing the annual withdrawal limit for inpatient psychiatric bills by 43% (from S\$3,500 to S\$5,000).
- (3) Extending the use of Medisave funds to the outpatient treatment of four chronic diseases (diabetes, high blood pressure, lipid disorder and stroke), which in aggregate affect about a quarter of the total population, as well as diagnostic scans for cancer treatment.

An increase in the proportion of medical bills covered by Medisave promotes the utilisation of private hospital services

### Medishield

The ongoing reforms of Medishield, the government-administered national illness insurance scheme, which covers 80% of the resident population, will continue to shift healthcare demand towards the private sector, in our view.

Since 2005, the government has extended participation in the scheme to all private insurers, leading to increased competition, lower premiums and more innovative healthcare plans, which in aggregate have resulted in a surge in participation in enhanced insurance coverage.

This shifting bias amongst the population towards enhanced healthcare insurance schemes (where policyholders can be covered for as much as S\$500,000 a year and get unlimited lifetime coverage, while Medishield, by comparison, has a claim limit of S\$50,000 a year) should be boosted further by the introduction of automatic coverage for newborns from December 2007, and for those below the age of 20, starting from July 2008.

Higher insurance coverage should boost the demand bias for private healthcare services

Other government initiatives that are likely to raise the affordability of private healthcare services, hence driving demand, include:

- A reduction in the minimum co-insurance requirement from 15% to 10%, with claim limits being raised across the board. This effectively reduces co-payment levels from 60% to 30% for large hospital bills.
- An increase in the maximum age from 80 to 85 years for coverage under Medishield.

### Tightening of healthcare subsidy rules

All residents in Singapore have access to varying levels of healthcare subsidies, which are determined by a patient's age, his citizenship status and the type of medical care received, if treatment is received at a public healthcare facility. Under the current framework, about 3.6 mn individuals are entitled to these subsidies, which cover 25-80% of the cost of treatment received.

The government has, since the start of 2008, reduced the existing hospital subsidy rates for permanent residents by 5 p.p. These subsidies, which apply to inpatient services, day surgery and specialist outpatient clinics in public hospitals and national centres, will be further reduced by 5 p.p. starting in July 2008.

A reduction of subsidies for higher-earning PRs should further level the playing field for private services

In addition, non-residents, which current contribute about 9% (or 20,000) of total subsidised inpatient admissions, and 7% (7,000) of total subsidised day surgery episodes, are ineligible for all forms of healthcare subsidies from October 2007.

**Figure 17: Revision of subsidy for permanent residents**

Type of ward class/service	Citizen subsidy level (%)	PR subsidy level (%)	
		Jan. 2008	July 2008
Class B1	20	15	10
Class B2	65	60	55
Class C	80	75	70
Day Surgery	65	60	55
Specialist outpatient clinic (SOC)	50	45	40

Source: Ministry of Health

We believe that with the government's longer-term plans to facilitate a more defined allocation of healthcare subsidies towards the needy, this streamlining of eligibility rules would ultimately impact non-citizens and middle to high income earners, and continue to level the playing field for the private sector.

## Other potential catalysts

### Means testing

We believe that the extent of healthcare subsidy allocation remains a critical focus of the government's ongoing healthcare reforms. Public hospitals in Singapore have adopted a graded hospital ward system, whereby patients receive a subsidy level linked to the class of inpatient accommodation they choose. That said, although subsidies are being allocated based on this criteria, there is excess demand in the C class wards, with 40% of all patients choosing C class beds in 2006, compared with 27% in 2003. This suggests that many are still opting for the heavily subsidised wards, even though they can afford to be admitted into class B wards, which are less subsidised. Means testing, whereby the level of subsidy is tied to an individual's income level, is under evaluation, and when implemented, should drive further demand towards the private hospitals.

Means testing is likely to tighten subsidy rules and could disincentivise the use of public healthcare facilities

### Portability of public healthcare subsidies

The government is also in the process of reviewing the feasibility of extending the use of healthcare subsidies (now concentrated in public healthcare services) across the entire healthcare system (by extending to private healthcare facilities). The adoption of such a move would considerably transform the competitive landscape to the benefit of the private sector, in our view.

## Medical tourism

The increase in the number of people prepared to seek treatment abroad has been driven primarily by inexpensive travel, a rise in the number of individuals with longer life expectancies and excess income, coupled with expensive and long waiting periods for domestic treatment, and the information revolution sparked by the Internet.

In October 2003, Singapore launched SingaporeMedicine, a multi-agency government initiative aimed at developing Singapore into one of Asia's leading medical destinations for international patients. It targets drawing 1 mn foreign patients to Singapore by 2012, while at the same time helps to generate S\$3 bn in revenue for the medical travel industry. The Economic Development Board (EDB), Singapore Tourism Board (STB) and International Enterprise (IE) Singapore are part of this initiative.

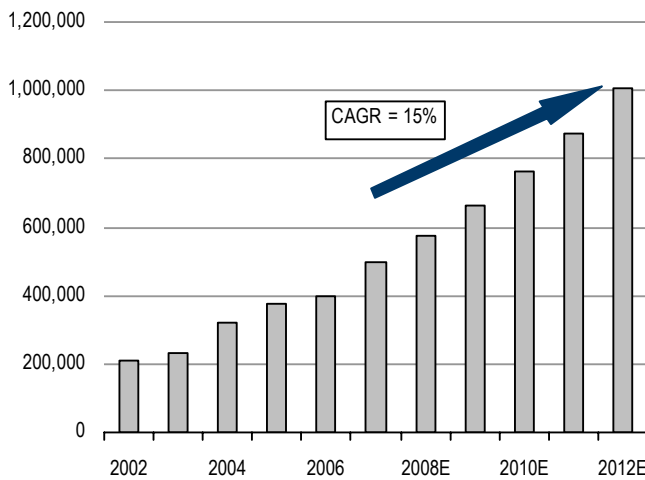
The EDB's role in SingaporeMedicine is promoting new investment and developing new capabilities in the healthcare industry. The STB spearheads the marketing aspect, looks into strengthening service delivery for foreign patients and develops overseas referral channels. IE Singapore's role is to promote growth and expansion of Singapore's healthcare players into the region.

Singapore has made some headway on this front, in part due to the zealousness of the STB in leading doctors on road shows overseas to promote health services in Singapore. More than 400,000 foreign patients were treated in Singapore in 2006, up 89% from 211,600 in 2002, or at an average increase of 20% per year.

We expect the strong growth trend in foreign patient volumes to continue, with growth rates likely to achieve or even exceed the government's targets (of attracting 1 mn foreign patients per annum by 2012), implying a CAGR of 15% over the next five years. Indeed, industry players are forecasting that Asia's medical travel industry is expected to grow from US\$500 mn currently to some US\$4 bn by 2012.

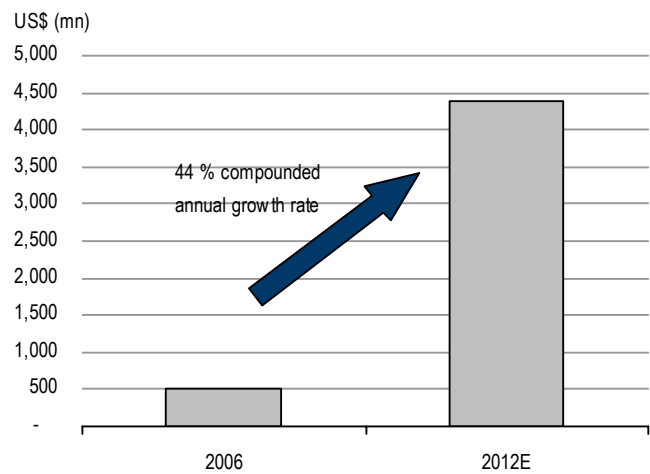
Singapore is targeting a 15% CAGR in foreign medical tourists over five years

**Figure 18: Number of foreign patients treated in Singapore**



Source: Singapore Tourism Board, Credit Suisse estimates

**Figure 19: Asia medical tourism industry**



Source: Abacus

While foreigners generally make up only 5% of all patients at public hospitals, they account for 34% of total admission at Parkway's hospitals, and a third of total hospital attendances at Raffles Hospital. For Parkway, more importantly, foreign patients contribute to 55-60% of total revenue at its Singapore hospitals, given that revenue per foreign patient is almost twice that of a local patient.

Foreigners are a critical revenue generator for private hospitals

# Parkway

(PARM.SI / PWAY SP)

Rating	<b>(OUTPERFORM*</b>
Price (04 Jan 08)	3.84 (S\$)
Target price	4.80 (S\$) <sup>1</sup>
Chg to TP (%)	25.0
Mkt cap (S\$ mn)	2,946 (US\$ 2,054)
Enterprise value (S\$ mn)	2,854
Number of shares (mn)	767.09
Free float (%)	55.28
52-week price range	4.60 - 2.89

\* Stock ratings are relative to the relevant country index

<sup>1</sup> Target Price is for 12 months

## Research Analysts

**Su Tye Chua**

65 6212 3014

sutye.chua@credit-suisse.com

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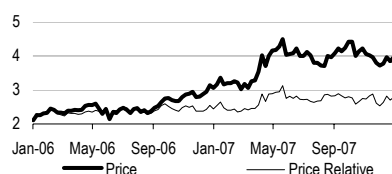
65 6212 3098

cherying.poh@credit-suisse.com

## Asia's healthcare demand proxy

- **Singapore and Malaysia – key growth drivers.** Parkway derives more than 60% of its revenue from Singapore, where we expect a continued focus on developing clinical programmes to drive increases in higher revenue-intensive cases as well as raise the utilisation of outpatient services, such as diagnostic services and cancer treatment. In Malaysia, we believe that Parkway will continue to streamline operations and improve efficiencies across the Pantai hospitals, and we see opportunities for Parkway to extract synergies from a larger pool of hospitals by leveraging off a broader network of both its Gleneagles and Pantai hospitals.
- **Expanding regional footprint.** Parkway's overseas growth strategy aims to rationalise current businesses to drive operational efficiencies and profitability, leverage expertise in specialist services via consultancy contracts, and aggressively seek strategic acquisition opportunities to broaden the patient pool for its medical centres.
- **Sound asset-light strategy.** Parkway's operational scale has enabled it to establish its own REIT, whereby it is able to supplement existing core earnings via management fees, and at the same time retain control over its properties. The REIT offers an opportune tool for monetising its portfolio of healthcare facilities, and to recycle this capital into strategic acquisitions. We believe that acquisition momentum is likely gather pace, driven by Parkway's obligation as a REIT sponsor, and specifically we expect the REIT proceeds to be channelled towards investing in a greenfield hospital in Singapore.

### Share price performance



The price relative chart measures performance against the SINGAPORE STRAITS TIMES(NEW) index which closed at 3353.06 on 04/01/08

On 04/01/08 the spot exchange rate was S\$1.43/US\$1

Performance over	1M	3M	12M
Absolute (%)	1.6	-11.5	22.3
Relative (%)	4.2	-2.6	7.6

### Financial and valuation metrics

Year	12/06A	12/07E	12/08E	12/09E
Revenue (S\$ mn)	868.0	857.7	955.4	1,015.6
EBITDA (S\$ mn)	186.5	194.8	181.9	199.6
EBIT (S\$ mn)	129.8	152.6	158.9	175.1
Net income (S\$ mn)	43.9	—	—	—
EPS (CS adj., S\$)	0.09	0.14	0.16	0.17
- change from prev. EPS (%)	n.a.	n.a.	n.a.	n.a.
- consensus EPS	n.a.	0.12	0.14	0.17
EPS growth (%)	4.8	52.4	12.5	11.1
P/E (x)	41.9	27.5	24.5	22.0
Dividend yield (%)	4.8	3.6	4.1	4.5
EV/EBITDA (x)	17.7	14.6	15.7	14.4
P/B (x)	6.9	4.6	4.6	4.6
ROE (%)	15.4	16.3	18.4	20.4
Net debt/equity (%)	43.9	—	—	—

Source: Company data, Thomson Financial Datastream, Credit Suisse estimates

# Parkway: Asia's healthcare demand proxy

Parkway remains a good proxy on the long-term demand for healthcare services in Asia, in our view, given its dominant Singapore base and expanding regional franchise. Parkway is Asia's largest private healthcare operator, with Singapore and Malaysia as key growth drivers. We favour the company's expanding regional footprint, where several hospital joint ventures across Asia, which help to feed traffic to the Singapore hospitals for acute cases, driving growth in revenue intensity. We view its recently established REIT as an opportune vehicle for asset monetisation over the longer term. We initiate coverage of Parkway with an OUTPERFORM rating and a 12-month target price of S\$4.80, which is based on a SOTP valuation, implying 25% potential upside.

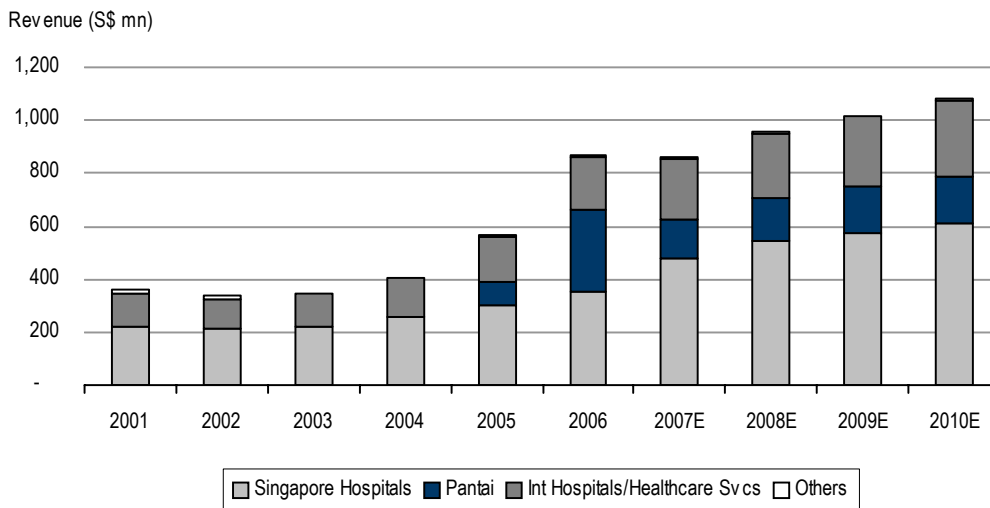
## Singapore and Malaysia – key growth drivers

### Singapore

In Singapore, where Parkway derives more than 60% of its revenue, we believe that growth prospects are likely to be intrinsic, rather than extrinsic, and we expect Parkway to continue to focus on developing clinical programmes to drive increases in higher revenue intensive cases as well as raise the utilisation of outpatient services, such as diagnostic services and cancer treatment.

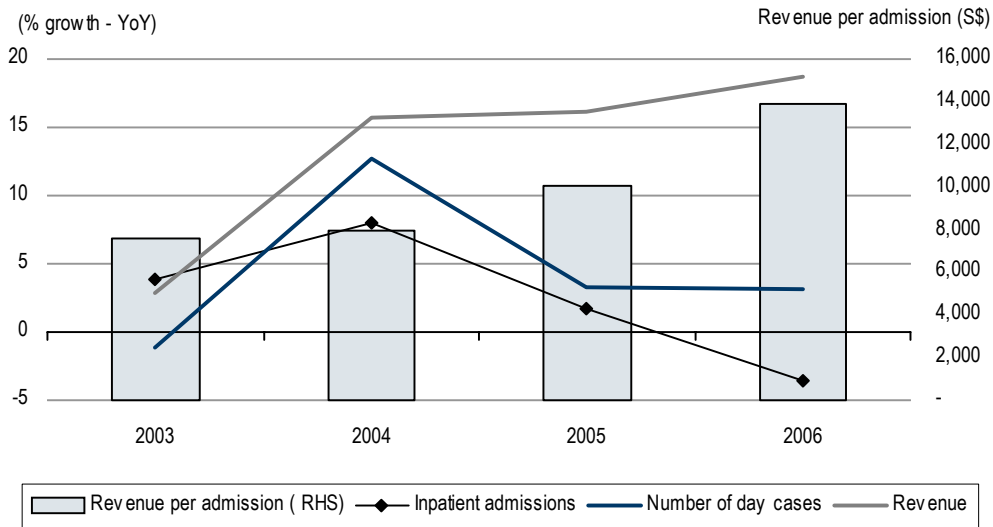
Singapore is Parkway's largest revenue and earnings driver

Figure 20: Revenue forecasts



Source: Company data, Credit Suisse estimates

**Figure 21: Singapore hospitals revenue and operating statistics**



Revenue intensity, as measured by net revenue per average patient day (PAPD) driver growth

Source: Company data, Credit Suisse estimates

Thus, higher-yielding patients, rather than volume growth, should continue to drive growth in net revenue per average patient day (PAPD), which remains the key driver of profitability.

We also see opportunities for Parkway to continue driving initiatives to increase revenue intensity at its hospitals through the conversion of administration space, which may increase the revenue yield area, or the reconfiguration of clinics for higher revenue generation, such as the newly established Paediatric Oncology Centre at East Shore Hospital

**Malaysia**

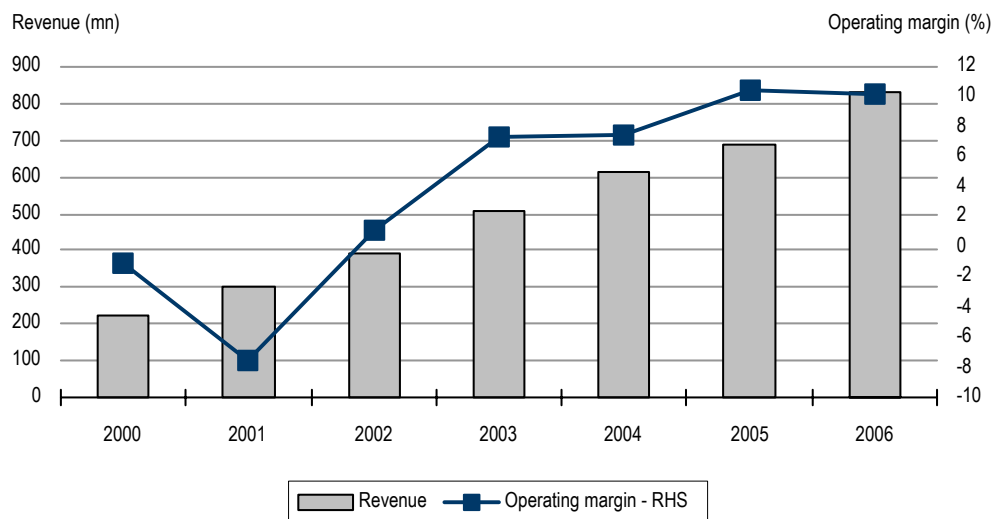
In Malaysia, Parkway currently owns a 40% stake in Pantai via a JV with Khazanah, Malaysia’s investment agency, and has direct interests in Gleneagles Intan, Kuala Lumpur and Gleneagles Penang.

Parkway’s operations are benefiting from both rising affluence and an increase in employer-paid private insurance benefits, given that Malaysians, by and large, do not have the benefit of a similar healthcare safety net via the Medisave scheme in Singapore, and therefore private sector services are financed exclusively on a non-subsidised, fee-for-service basis. We believe that Pantai will also gain through the Malaysian government’s push to grow the country’s share of the medical travel pie, given 1) the cost differential between similar treatments in Singapore, 2) more stringent US visa requirements post-September 11 have led to an influx of Middle Eastern patients, particularly into Thailand and Singapore, and 3) we see potential for Malaysia to capture a significant share of this incremental travel dollar from Muslim patients, given the cultural and religious similarities.

We believe that Parkway will continue to streamline operations and improve efficiencies across the Pantai hospitals. We therefore see operating margins currently at 10% rising and to trend gradually towards those enjoyed by Parkway’s Gleneagles hospitals in Malaysia of 12-15%.

Parkway’s Malaysian operations are driven by similar growth engines ...

**Figure 22: Pantai revenue and operating margins**



Source: Company data, Credit Suisse estimates

In Malaysia, we also see opportunities for Parkway to extract synergies from a larger pool of hospitals by leveraging off a broader network of both its Gleneagles and Pantai hospitals, given the differentiation in the patient segment. Pantai targets less price-sensitive patients, where daily bed charges are on average 10-15% higher than those of the Gleneagles' hospitals, given similar locations.

We find it worthwhile to highlight that Pantai, which was previously consolidated, has been proportionately consolidated from 4Q06. This change in accounting methodology has made year-on-year comparisons less meaningful above the net profit line.

... where it could drive synergies through a broader and differentiated hospital network

## Expanding regional footprint

We believe that Parkway's plan to expand its regional footprint is strategically sound. Relative to its home base, the healthcare market in the other parts of Asia remain underdeveloped, which should offer significant growth opportunities for the more established operators, in our view. This is further augmented by government reforms, which are aligned with the recognition of longer-term healthcare needs of an aging population base.

**Figure 23: No of people aged 65 and above ('000)**

	2000	2025	2050	% change
Asia	206,822	456,303	857,040	314
East Asia	114,729	244,082	393,802	243
South-East Asia	24,335	57,836	128,958	430
South Asia	67,758	154,385	334,280	393

Source: Frost & Sullivan, 2007

In China, for instance, provincial reimbursements to public hospitals will be gradually reduced and private investors, both local and foreign, will be allowed to invest in the healthcare industry. Hence, public hospitals now have a high degree of operating autonomy, as they no longer receive the bulk of their funding from the government. China also faces the prospect of having too small a workforce to support a rapidly aging population, as a result of the country's "one-child" policy. The dramatic decline in fertility and improved average life expectancy over the past two decades are creating a large elderly population, thus adding pressure to China's healthcare system, and this is likely to result in escalating healthcare costs over the longer term.

The rest of Asia offers good growth prospects for established franchises like Parkway's

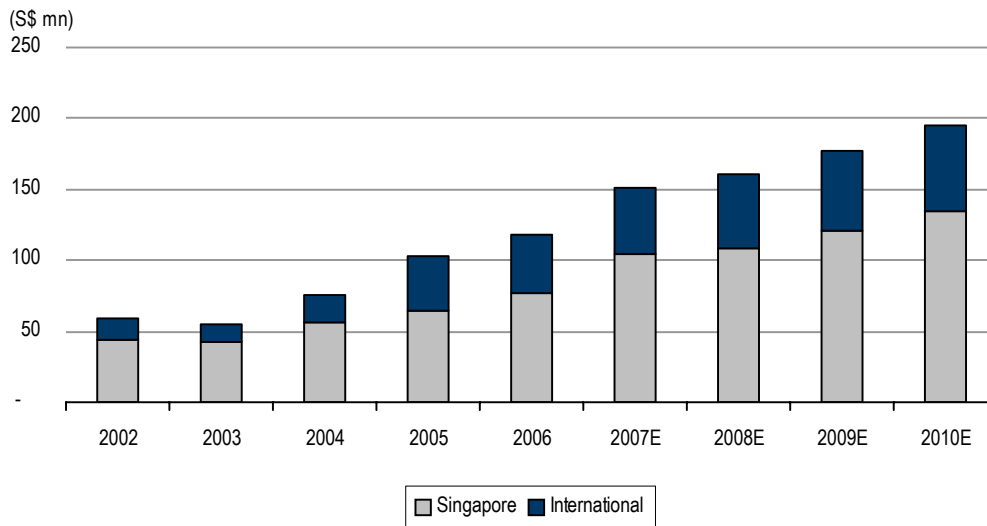
Parkway's overseas investments so far have been in cities with a large population base, and with rising disposable income.

- **India** – In Kolkata, Parkway has a 50-50 joint venture with the Apollo Group to build and manage Apollo Gleneagles Hospital, Kolkata. Apollo Gleneagles Hospital has 325 operational beds.
- **China** – Parkway commenced operations of the Shanghai Gleneagles International Medical and Surgical Centre in 2007. This is an ambulatory surgical centre offering services such as aesthetics, general practice/health screening, dentistry, obstetrics and gynaecology and general surgery.
- **Brunei** – Parkway has a joint venture with the Brunei government to run a 20-bed cardiac centre, Gleneagles KPMC Cardiac Centre.
- **Vietnam** – Parkway has an aesthetics clinic in Ho Chi Minh City.

Parkway's strategy is to continue expanding its network of overseas hospitals to refer some of its more complicated procedures back to its Singapore or Malaysia hospitals, as well as to explore new markets as test beds before positioning further capex into these geographies. We believe that Parkway will also seek opportunities to set up medical specialty centres, as in the case of its tie-up with Mumbai-based Asian Heart Institute and Research Centre, which remains consistent with its longer-term focus on driving growth through yield versus volume.

Several hospital JVs across Asia also help to feed traffic into its Singapore hospitals for acute cases, driving growth in revenue intensity

**Figure 24: Operating profit breakdown**



Source: Company data, Credit Suisse estimates

## Sound asset-light strategy

Parkway's operational scale has enabled it to establish its own REIT, ParkwayLife REIT (PREIT), whereby it is able to supplement existing core earnings via REIT management fees, and at the same time retain control over its properties. PREIT offers an opportune tool for monetising its portfolio of healthcare facilities, in our view, and to recycle this capital into strategic acquisitions.

Parkway will grant the right of first refusal to PREIT on future asset sales and, vice-versa, Parkway will have the first right of refusal to lease assets acquired by PREIT which are without an operator at that time. We believe, therefore, that the acquisition momentum is likely to gather pace, driven by Parkway's obligation as PREIT's sponsor.

PREIT offers a convenient tool for monetising Parkway's growing portfolio of healthcare facilities to be recycled into strategic acquisitions

Specifically, we expect the REIT proceeds to be channelled towards investing in a greenfield hospital in Singapore. We believe that Parkway is eyeing two of four potential major land sites reserved for private hospitals and day surgery centres, which the government launched in 2H07. Both sites have their merits:

- The Novena Terrace site is strategically located within the growing Novena medical cluster, comprising the 1,400-bed Tan Tock Seng Hospital, National Skin Centre, John Hopkins International Medical Centre, National Neuroscience Institute, Thomson Medical Centre, Renci Hospital and Far East Organisation's Novena Medical Centre, and is highly accessible, and within close proximity to the city.
- The Biopolis site, situated within Singapore's biomedical research cluster, offers the winner an opportunity to leverage off clinical trials, but would appeal more to foreign research-based institutions, in our view.

We expect Parkway to bid aggressively for the Novena Terrace site, with a maximum gross floor area of 72,350 sq m, which realtor Knight Frank estimates could cost S\$600-670 mn or S\$770-860/sq ft per plot ratio. In the event that Parkway is unsuccessful in its bid for the Novena Terrace site, which was launched for sale by public tender on 29 October 2007, with the successful bidder known only in 1Q08, we believe that Parkway is likely to bid for the Biopolis site, which is anticipated to be released in 2008.

Specifically we expect the REIT proceeds to be potentially invested in a greenfield hospital in Singapore

## Valuation

Our valuation analysis for Parkway suggests that at current levels, potential benefits from the increasing longer-term healthcare needs of an aging population have not been fully considered. We have used a discounted cash flow (DCF)-based sum-of-the-parts (SOTP) methodology to arrive at our 12-month target price of S\$4.80 for Parkway. With 25% potential upside, we initiate coverage with an OUTPERFORM rating.

### We value Parkway's healthcare business at S\$4.49

Applying the discounted cash flow valuation for Parkway's healthcare business, we have arrived at a fair value of S\$4.49 per share.

We believe that a DCF valuation methodology is better able to capture the earnings stream of its healthcare operations, since this is leveraged to the longer-term nature of a population's medical needs as it grows.

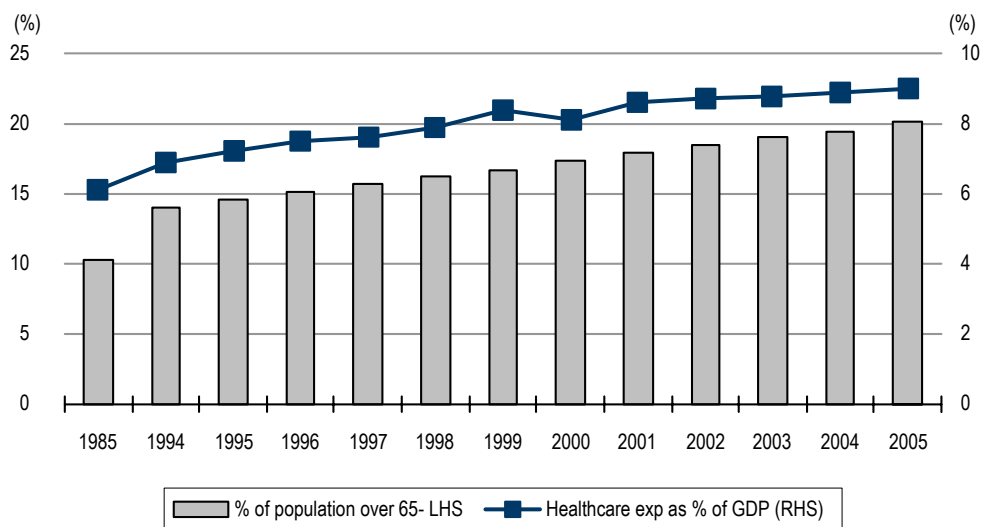
A DCF valuation better captures the longer-term growth profile of Parkway's healthcare business

We have compared the potential "greying" population phenomenon in Singapore against the existing situation in Japan to argue our case. We observe that Japan's healthcare expenditure as a proportion of its GDP has grown from about 6% to 9% (or by 3 p.p.) over the past two decades. During this time, its total population has "aged" from 10% to 23% of the population above 65 years of age.

Based on the Singapore government's expectations that about 18.9% of the population should be above 65 years of age by 2030 (from 8.5% currently), we expect healthcare expenditure as a proportion of its GDP to grow, which we have assumed by a similar magnitude (of 3 p.p.) to 6% over the longer term. This forms the basis of our longer-term growth rate assumption. Coupled with a secular GDP growth rate of 5%, we arrive at a long-term growth rate of 8% for Parkway for FY08-30.

Singapore's "greying" population, like Japan's, implies that healthcare needs could reach 6% of its GDP by 2030

**Figure 25: Healthcare expenditure in Japan since 1985**

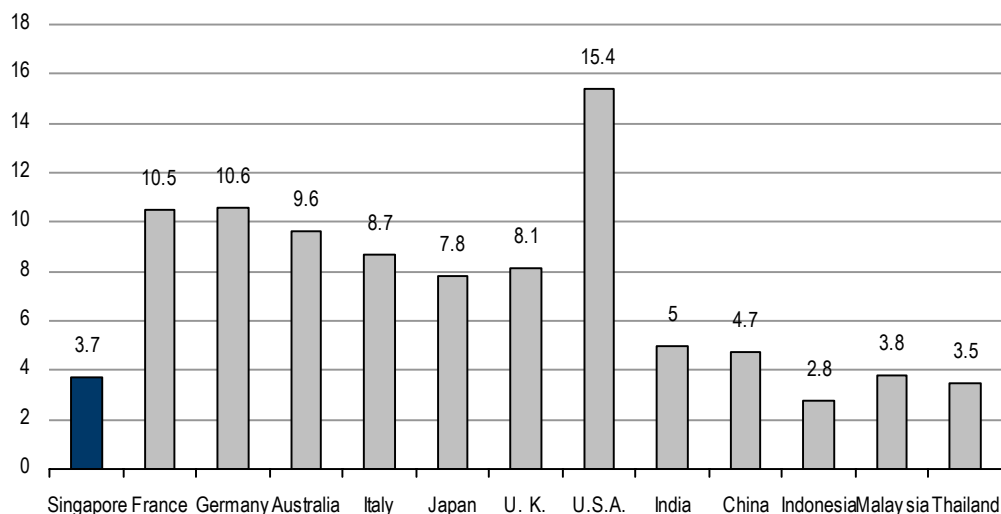


Source: CEIC, Credit Suisse estimates

We believe that our growth assumptions are not aggressive, given that Singapore's total healthcare expenditure as a proportion of its GDP of 6.6% over the longer term remains fairly low when benchmarked against other developed economies, which are at present already witnessing significantly higher healthcare expenditure ratios.

Our assumptions for longer-term growth rates are conservative when benchmarked against other developed countries

**Figure 26: Total healthcare expenditure as % of GDP (selected countries)**



Source: World Health Organization

The assumptions to our DCF valuation can therefore be summarised as follows.

**Figure 27: Key valuation assumptions**

	(%)
Singapore healthcare expenditure as % of GDP (FY06)	3.6
Singapore healthcare expenditure as % of GDP (FY30)	6.6
GDP growth rates (FY08-30)	5.0
Parkway growth rate (FY08-30)	8.0
Terminal growth rate (from FY30)	4.0

Source: Credit Suisse estimates

**Figure 28: WACC computation**

Risk free rate (%)	3.50
Equity risk premium (%)	6.50
Beta	1.00
Cost of equity (%)	9.50
Terminal growth rate (%)	4.0
Debt in capital structure (%)	0
Cost of debt (after tax) (%)	6.0
<b>WACC (%)</b>	<b>10.00</b>

Source: Credit Suisse estimates

**Sensitivities to our assumptions**

Given that our DCF valuation methodology has been extended to 2030, our fair value is thus sensitive to the secular growth rate of Singapore's GDP, as well as our health expenditure as a percentage of the GDP assumption.

We believe that our fair value is also highly sensitive to changes in our terminal growth rate and WACC assumptions, given that a large part of Parkway's valuations are dependent on the growth of its future cash flows. We illustrate the sensitivities to our DCF valuation in the following tables.

**Figure 29: Sensitivity to GDP and healthcare expenditure**

		GDP growth rate				
		3.0%	4.0%	5.0%	6.0%	7.0%
<b>Healthcare expenditure as % of GDP</b>	3.5%	2.63	2.90	3.21	3.57	4.00
	4.5%	2.90	3.21	3.57	4.00	4.48
	5.5%	3.21	3.57	4.00	4.48	5.05
	<b>6.5%</b>	3.57	4.00	<b>4.49</b>	5.05	5.71
	7.5%	3.57	4.00	4.48	5.05	5.71
	8.5%	4.00	4.48	5.05	5.71	6.47
	9.5%	4.00	4.48	5.05	5.71	6.47

Source: Credit Suisse estimates

**Figure 30: Sensitivity to WACC and terminal growth rate**

		WACC				
		9.0%	9.5%	10.0%	10.5%	11.0%
<b>Terminal growth rate</b>	2.5%	4.97	4.52	4.14	3.81	3.53
	3.0%	5.13	4.65	4.24	3.89	3.59
	3.5%	5.32	4.79	4.35	3.98	3.66
	<b>4.0%</b>	5.55	4.97	<b>4.49</b>	4.08	3.74
	4.5%	5.83	5.17	4.64	4.20	3.83
	5.0%	6.18	5.43	4.83	4.34	3.94
	5.5%	6.63	5.74	5.06	4.51	4.07

Source: Credit Suisse estimates

**We value Parkway at S\$4.80**

Our sum-of-the-parts valuation inputs a market valuation for Parkway's 35% stake in PREIT, which gives us an end-2008 target price of S\$4.80 for Parkway.

**Figure 31: Parkway – sum-of-the-parts valuation**

	Value (S\$ mn)	S\$/share	Methodology
Parkway Holdings	3439.7	4.49	DCF (10% WACC, 4% terminal growth rate)
ParkwayLife REIT (35% interest)	234.6	0.31	Market value
Total SOTP value	3674.3	4.80	

Source: Credit Suisse estimates

Given that the establishment of PREIT has materialised and we expect Parkway, as the sponsor, to actively use the REIT as a convenient vehicle for asset monetisation. Our fair value of S\$4.80 for Parkway does not factor in potential upside risk from the reinvestment of asset securitisation proceeds.

## Risks

### Regulatory

Private healthcare operators, like Parkway, are vulnerable to changes in policies driven by the government and its affiliated agencies, which license and regulate all medical establishments and healthcare professionals in the country and to a large extent therefore, influence the supply of medical infrastructure in the system. For now, we believe that reforms have been biased towards demand for private healthcare services which have likewise benefited the private operators.

### Macroeconomic backdrop

A slowdown in the macroeconomic environment could impede Singapore's economic drivers, such as employment and population growth. However, we note that growth trends in healthcare expenditure have been positive over the last two decades, even during periods of slower economic growth.

### Competition

Increasing competition from regional private healthcare providers, which not only compete on foreign medical tourists, but local Singaporeans seeking to go abroad as an alternative lower-cost source of customised private healthcare. Foreign patients contribute about 34% of the total in Parkway's Singapore hospitals.

### Pandemics

Medical tourist arrivals could decline sharply if there is such an outbreak and contamination of hospitals. During an outbreak, the government may impose regulations on hospitals such as activating emergency plans that will affect their normal routine of operations.

### Execution

This includes failure to execute on planned initiatives to improve revenue intensity at its hospitals, inability to attract or retain specialists, which adversely affects volume growth, as well as higher-than-expected start-up losses in new clinics or medical centres.

**Figure 32: Profit and loss statement**

Year-end 31 Dec (\$\$ mn)	2005A	2006A	2007E	2008E	2009E	2010E
Revenue	563.6	868.0	857.7	955.4	1,015.6	1,079.1
Singapore hospitals	300.3	356.3	475.2	545.2	577.2	612.2
Pantai	92.1	302.9	154.2	161.9	170.0	178.5
International hospitals/healthcare services	168.5	205.3	225.3	245.3	265.3	285.3
Others	2.7	3.5	3.0	3.0	3.0	3.0
Operating profit	103.5	118.0	151.7	171.5	183.1	195.3
Singapore hospitals	65.0	77.1	104.5	119.9	127.0	134.7
Pantai	9.6	30.9	16.1	17.3	18.6	20.0
International hospitals/healthcare services	25.8	18.9	36.1	39.3	42.5	45.7
Others	3.1	(8.8)	(5.0)	(5.0)	(5.0)	(5.0)
EBITDA	140.3	186.5	194.8	192.8	205.3	220.0
Depreciation	(40.6)	(60.3)	(46.2)	(27.5)	(29.5)	(31.3)
Associates	0.2	3.6	4.0	4.5	5.0	5.5
Financing costs	(9.0)	(19.3)	(22.7)	(3.7)	(2.7)	(3.2)
Profit before tax	90.8	110.6	129.9	166.1	178.2	190.9
% change	34	22	17	28	7	7
Tax	(22.0)	(30.1)	(19.5)	(33.2)	(35.6)	(38.2)
Profit after tax	68.8	80.5	110.4	132.9	142.5	152.7
Minority interests	-5.4	-13.6	-3.3	-4.0	-4.3	-4.6
PATMI before EI	63.3	67.0	107.1	128.9	138.2	148.2
Exceptional items	-1.4	-11.7	220.8	0.0	0.0	0.0
PATMI after EI	62.0	55.3	327.9	128.9	138.2	148.2
% change	23	-11	0	0	0	0
EPS (after EI) (\$\$)	0.085	0.076	0.427	0.168	0.180	0.193
% change	25	5	52	20	7	7

Source: Company data, Credit Suisse estimates

**Figure 33: Balance sheet**

Year-end 31 Dec (S\$ mn)	2005A	2006A	2007E	2008E	2009E	2010E
<b>Current assets</b>						
Cash and equivalents	108.0	93.5	290.0	289.7	274.0	258.9
Trade debtors	77.5	86.7	82.2	91.6	97.4	103.5
Other receivables	25.2	17.9	17.9	17.9	17.9	17.9
Inventory (stocks and WIP)	17.4	16.4	13.0	14.5	15.4	16.4
Other current assets	14.8	7.2	2.6	1.9	1.6	1.3
Total current assets	242.9	221.7	405.7	415.6	406.2	397.9
<b>Non-current assets</b>						
Fixed assets	804.1	670.4	307.0	335.5	362.1	386.7
Associates and JVs	50.0	108.0	208.0	208.0	208.0	208.0
Goodwill/intangibles	180.9	152.9	196.9	190.9	184.9	178.9
Deferred tax assets	1.8	1.0	1.0	1.0	1.0	1.0
LT investments/other assets	64.3	77.4	77.4	77.4	77.4	77.4
Total non-current assets	1,101.2	1,009.7	790.4	812.9	833.4	852.0
Total assets	1,344.0	1,231.4	1,196.1	1,228.5	1,239.6	1,249.9
<b>Current liabilities</b>						
Trade creditors	115.1	104.3	98.1	114.9	122.1	129.5
Accruals and other payables	42.3	25.3	25.3	25.3	25.3	25.3
Dividends payable	-	-	-	-	-	-
Tax provision	25.3	23.8	19.6	35.2	39.1	42.1
Borrowings	47.8	70.9	70.9	70.9	70.9	70.9
Other liabilities	3.6	58.0	60.0	60.0	60.0	60.0
Total current liabilities	234.1	282.3	273.9	306.3	317.4	327.8
<b>Non-current liabilities</b>						
Borrowings	427.7	377.2	127.2	127.2	127.2	127.2
Other non-current liabilities	-	104.1	104.1	104.1	104.1	104.1
Deferred tax liabilities	35.5	32.7	35.0	35.0	35.0	35.0
Total non-current liabilities	463.2	513.9	266.2	266.2	266.2	266.2
Total liabilities	697.3	796.2	540.1	572.5	583.7	594.0
Minority interests	231.2	11.2	11.2	11.2	11.2	11.2
Shareholders' equity	415.5	423.9	644.7	644.7	644.7	644.7
Total equity	646.7	435.2	656.0	656.0	656.0	656.0
Total equity and liabilities	1,344.0	1,231.4	1,196.1	1,228.5	1,239.6	1,249.9

Source: Company data, Credit Suisse estimates

**Figure 34: Cash flow statement**

Year-end 31 Dec (\$\$ mn)	2005A	2006A	2007E	2008E	2009E	2010E
EBIT	98.5	118.2	373.4	169.8	180.9	194.1
Depreciation	37.1	48.7	40.2	21.5	23.5	25.3
Amortisation	3.5	11.6	6.0	6.0	6.0	6.0
Changes in working capital	(3.6)	(26.6)	1.6	6.0	0.5	0.3
Other (disposals/write-offs etc)	1.2	9.3	0.0	0.0	0.0	0.0
Cash generated from operations	136.6	161.1	421.2	203.3	210.8	225.8
Investment & interest income	3.7	6.4	3.1	6.2	7.2	6.7
Interest paid	(10.9)	(21.6)	(25.8)	(9.9)	(9.9)	(9.9)
Income tax paid	(14.1)	(23.0)	(21.4)	(17.6)	(31.7)	(35.2)
Net cash provided by operations	115.3	122.9	377.1	182.0	176.5	187.3
Capex	(41.5)	(66.3)	(60.0)	(50.0)	(50.0)	(50.0)
Net change in LT investments	(98.0)	(6.6)	0.0	0.0	0.0	0.0
Net investment in assoc. & JV	0.4	2.2	(100.0)	0.0	0.0	0.0
Dividends from assoc. & JV	0.0	0.0	0.0	0.0	0.0	0.0
Other investing items (disposals etc)	9.8	(46.3)	350.0	0.0	0.0	0.0
Net cash impact of investing activities	(129.3)	(117.0)	190.0	(50.0)	(50.0)	(50.0)
Dividends paid	(62.5)	(133.2)	(120.6)	(132.2)	(142.2)	(152.4)
Shares issued (bought back)	9.8	80.7	0.0	0.0	0.0	0.0
Change in borrowing	(21.8)	84.4	(250.0)	0.0	0.0	0.0
Other financing activities	0.3	(52.3)	0.0	0.0	0.0	0.0
Net cash impact of financing activities	(74.1)	(20.4)	(370.6)	(132.2)	(142.2)	(152.4)
Net cash flow	(88.2)	(14.5)	196.5	(0.3)	(15.8)	(15.1)
Beginning cash	196.2	108.0	93.5	290.0	289.7	274.0
Ending cash	108.0	93.5	290.0	289.7	274.0	258.9

Source: Company data, Credit Suisse estimates

**Figure 35: Summary financials**

Year-end 31 Dec	2005A	2006A	2007E	2008E	2009E	2010E
<b>Financials (S\$ mn)</b>						
Revenue	564	868	858	955	1,016	1,079
Singapore hospitals	300	356	475	545	577	612
Pantai	92	303	154	162	170	179
International hospitals/healthcare services	169	205	225	245	265	285
Others	3	3	3	3	3	3
Operating profit	103.5	118.0	151.7	160.6	177.3	195.3
Profit after tax	68.8	80.5	110.4	124.2	137.9	152.7
Minority interest	-5.4	-13.6	-3.3	-3.7	-4.1	-4.6
PATMI before EI	63.3	67.0	107.1	120.4	133.8	148.2
PATMI after EI	62.0	55.3	327.9	120.4	133.8	148.2
EPS (before EI) (S\$)	0.04	0.03	0.07	0.08	0.11	0.13
BVPS (S\$)	0.25	0.25	0.32	0.39	0.50	0.62
Net DPS (S\$)	0.00	0.00	0.00	0.00	0.01	0.01
<b>Growth rates (%)</b>						
Total revenue	38	54	-1	11	6	6
Singapore hospitals	16	19	33	15	6	6
Pantai	n.a.	229	-49	5	5	5
International hospitals/healthcare services	15	22	10	9	8	8
Others	24	28	-14	0	0	0
Operating profit	35.2	26.7	17.7	3.9	10.2	10.9
PATMI before EI	25.5	5.7	59.9	12.5	11.1	10.8
EPS (before EI)	24.9	4.8	52.4	12.5	11.1	10.8
<b>Valuation ratios</b>						
P/E (x)	44.6	42.6	27.9	24.8	22.4	20.2
Price-to-book (x)	6.8	7.1	4.6	4.6	4.6	4.6
Dividend yield (%)	2.2	4.7	3.6	4.0	4.5	5.0
<b>Margins (%)</b>						
EBITDA	24.9	21.5	22.7	19.0	19.7	20.4
Operating	17.7	14.5	17.3	16.2	16.7	17.5
Dividend payout ratio	122.9	145.5	100.0	100.0	100.0	100.0
<b>Returns (%)</b>						
Returns on asset	7.4	10.5	12.8	13.0	14.2	15.6
Returns on equity	9.8	15.4	16.3	18.4	20.4	22.6
<b>Financial leverage &amp; liquidity (%)</b>						
Net debt to equity	88.4	83.6	-14.3	-12.9	-10.5	-8.2
Total debt to equity	114.4	105.7	30.7	30.7	30.7	30.7
Net debt/invested capital	45.2	58.1	-20.9	-18.7	-15.0	-11.6
Total debt/invested capital	58.5	73.5	45.1	44.5	43.9	43.4
Interest cover (x)	8.2	5.5	5.9	16.0	17.7	19.6

Source: Company data, Credit Suisse estimates

# Raffles Medical

(RAFG.SI / RFMD SP)

Rating	<b>OUTPERFORM*</b>
Price (04 Jan 08)	1.51 (S\$)
Target price	1.90 (S\$) <sup>1</sup>
Chg to TP (%)	25.8
Mkt cap (S\$ mn)	777.82 (US\$ 542.30)
Enterprise value (S\$ mn)	726.20
Number of shares (mn)	515.11
Free float (%)	33.00
52-week price range	1.58 - 0.88

\* Stock ratings are relative to the relevant country index

<sup>1</sup> Target Price is for 12 months

## Research Analysts

**Su Tye Chua**

65 6212 3014

sutye.chua@credit-suisse.com

**Cher Ying Poh**

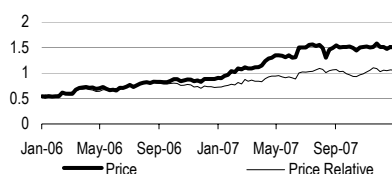
65 6212 3098

cherying.poh@credit-suisse.com

## Operating room leverage

- Hospital services to drive growth.** We expect Raffles Medical's hospital services to be the company's chief growth engine going forward. We expect revenue growth to be achieved through an improvement in the utilisation of bed capacity at its flagship hospital and increase in patient volume, driven by changes to the national savings plan, given that these schemes can now pay for a larger portion of an individual's medical bill, a pick-up in the number of medical visitors and market segmentation initiatives.
- Least constraint.** We anticipate a potential supply crunch in inpatient capacity in the medium term, given that the number of hospital beds is unlikely to show a meaningful capacity increase before 2010, while private healthcare demand is expected to rise. We believe that Raffles Medical is the least constrained, because within its existing premises, it is able to more than double the number of operational beds (from 150 beds currently to 380) with minimal capex, and is thus best leveraged to cope with rising patient volume and gain through a potential increase in bed rates, in our view.
- Acquisition of remaining 50% stake in Raffles Hospital building – strategic move.** Raffles Medical funded its recent acquisition through the placement of new shares to Temasek Holdings and the Qatar government. The company believes the advantages of this are twofold. First, full ownership of its premises allows for flexibility in terms of operations, and offers internal asset yield enhancement initiatives. Secondly, it has gained strong partners, which we believe could spearhead growth opportunities in China and the Middle East.

### Share price performance



The price relative chart measures performance against the SINGAPORE STRAITS TIMES(NEW) index which closed at 3353.06 on 04/01/08

On 04/01/08 the spot exchange rate was S\$1.43/US\$1

Performance over	1M	3M	12M
Absolute (%)	-3.2	0.7	68.7
Relative (%)	-0.7	10.8	48.4

### Financial and valuation metrics

Year	12/06A	12/07E	12/08E	12/09E
Revenue (S\$ mn)	134.2	171.8	213.1	234.3
EBITDA (S\$ mn)	20.9	29.2	43.3	50.0
EBIT (S\$ mn)	18.4	27.7	37.1	44.1
Net income (S\$ mn)	15.7	20.9	31.2	37.2
EPS (CS adj., S\$)	0.03	0.07	0.06	0.07
- change from prev. EPS (%)	n.a.	n.a.	n.a.	n.a.
- consensus EPS	n.a.	0.06	0.06	0.08
EPS growth (%)	27.5	99.9	-11.2	19.1
P/E (x)	43.9	22.0	24.7	20.8
Dividend yield (%)	180.6	228.0	323.3	384.9
EV/EBITDA (x)	35.3	24.9	16.5	13.9
P/B (x)	—	—	—	—
ROE (%)	13.9	16.2	22.8	25.3
Net debt/equity (%)	net cash	net cash	net cash	net cash

Source: Company data, Thomson Financial Datastream, Credit Suisse estimates

# Raffles Medical: Operating room leverage

As the operator of the largest network of outpatient clinics, a potential feed for referrals, and an under-utilised but high-quality hospital asset, we believe that Raffles Medical is best positioned to benefit from a potential structural supply constraint in bed capacity over the medium term, as well as increasing patient volume driven by ongoing changes to Singapore’s healthcare landscape. We initiate coverage of Raffles Medical with an OUTPERFORM rating and a 12-month target price of S\$1.90, which is based on a DCF valuation, implying 26% potential upside.

## Hospital services to drive growth

We expect Raffles Medical’s hospital services to be the company’s chief growth engine going forward. We see revenue growth being achieved through:

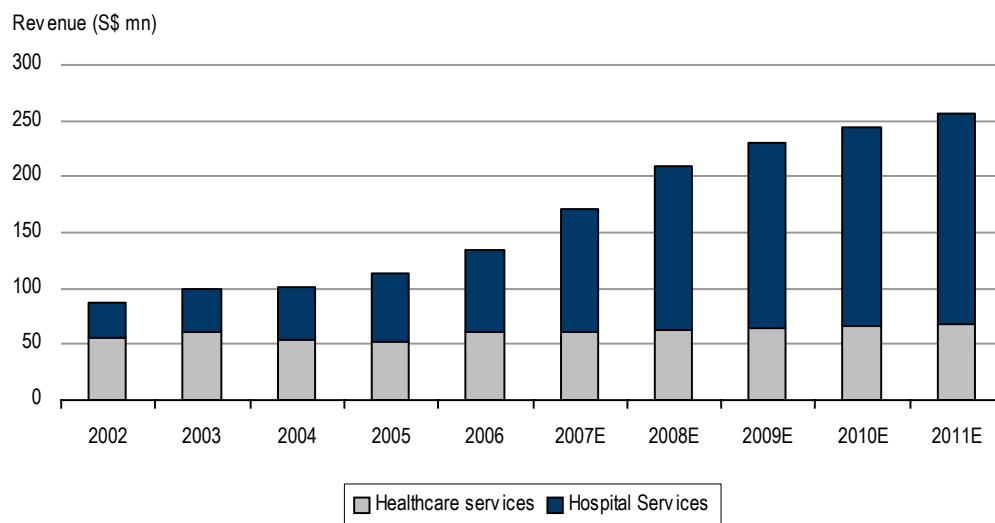
- Improvement in the utilisation of bed capacity at its flagship hospital (150 out of a total of 380 licensed beds are operational currently)
- Increase in patient volume driven by 1) changes to Medisave and Medishield, given that these schemes can now pay for a larger portion of an individual’s medical bill, 2) a pick-up in the number of medical visitors and 3) market segmentation initiatives (e.g. the opening of Traditional Chinese Medicine clinics).

Higher hospital utilisation and patient volume drive revenue growth for Raffles Medical

Although Raffles owns the largest network of medical clinics in Singapore, and is therefore best positioned to benefit from an increase in outpatient visits as a result of changes to the usage of Medisave, competition in the primary healthcare segment is intense.

Going forward, we do not expect this business to witness a significant growth trajectory, although the clinics are likely to continue to generate volume growth and, more importantly, act as a feed through patient referrals to Raffles Hospital.

**Figure 36: Revenue forecast**

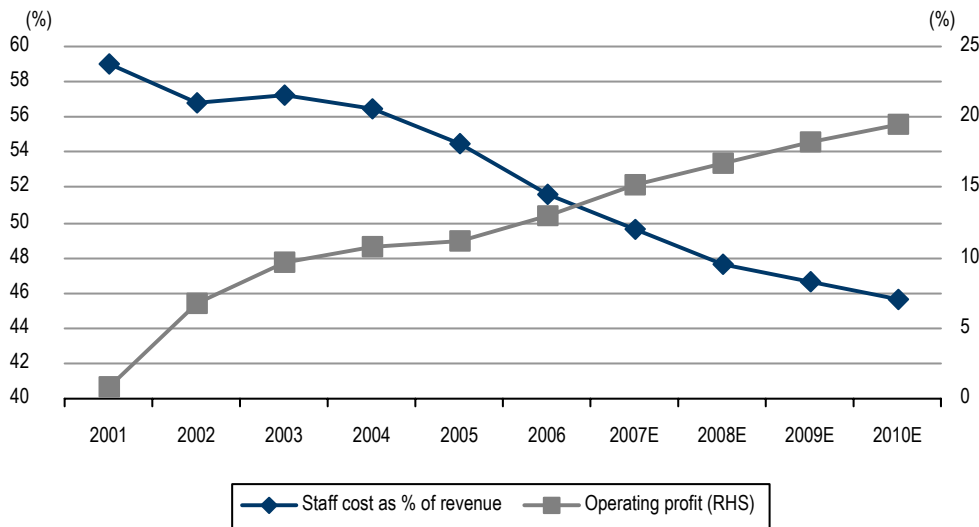


Source: Company data, Credit Suisse estimates

We believe that Raffles Medical’s group practice model should also offer further opportunities for the recruitment of specialists to attract higher-yielding patients, since demand for hospital services does not shift to new facilities immediately, but instead tends to aggregate around ‘star’ specialist doctors, as well as for the group to capture a larger portion of the patient’s bill as the doctor’s fees accrue to the hospital rather than the doctor, who is a salaried employee.

Staff expenses are the greatest cost driver for Raffles Medical (at almost 70% of total operating costs) and are likely to remain so. However, with patient volume expected to remain strong, we believe that there should be further room for operating leverage, and we expect operating margins to rise from 13% currently to 20% by FY10.

**Figure 37: Staff costs as % of revenue and operating margin**



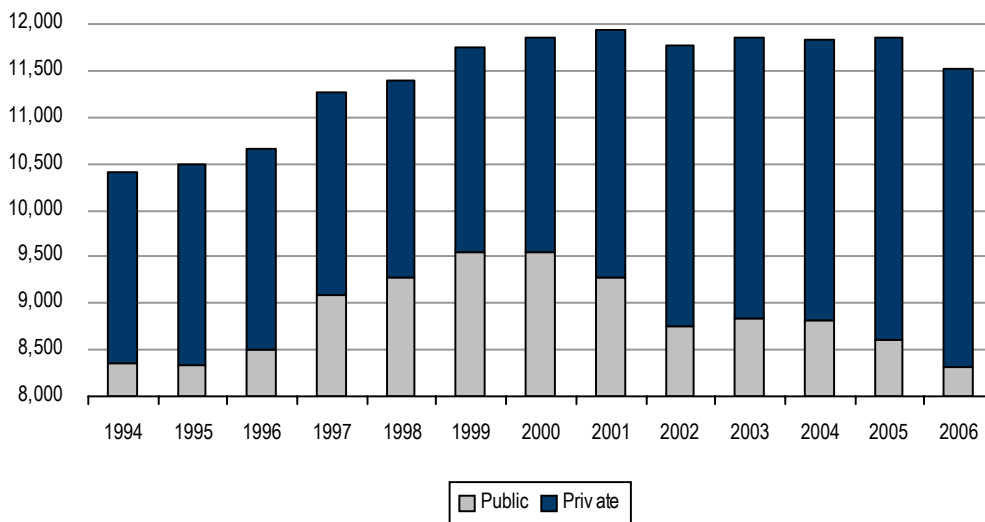
Source: Company data, Credit Suisse estimates

## Least constraint

We expect Raffles Medical to gain from our anticipation of a potential supply crunch in inpatient capacity in the medium term, as we observe that the number of hospital beds in Singapore has been on a declining trend over the past decade, owing largely to consecutive economic shocks in 1997 (Asian economic crisis), 2001 (9/11) and 2003 (SARS), which depressed demand for private healthcare services. Indeed, there has been no meaningful supply of hospital beds since the completion of Raffles Hospital in 2001.

Raffles Medical is the least constrained by a potential bed supply crunch, given its under-utilised capacities

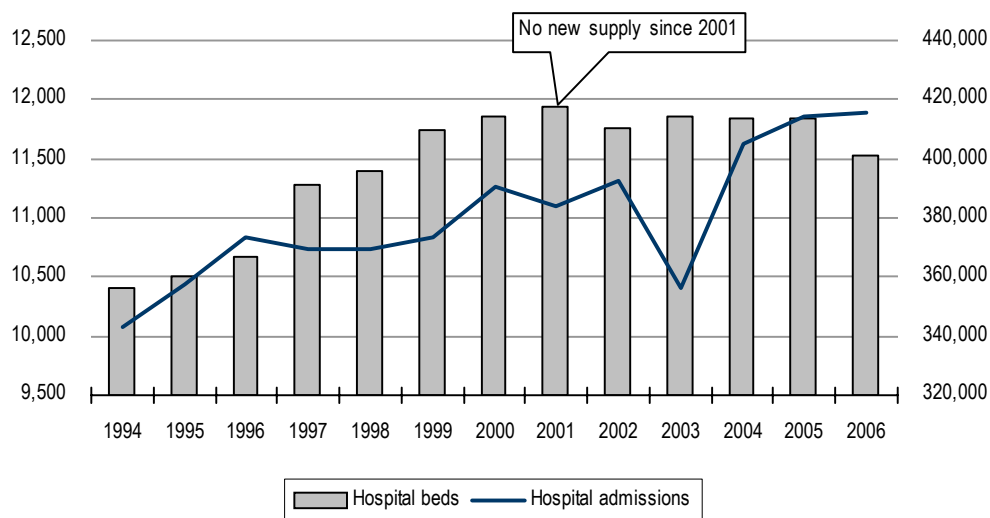
**Figure 38: Singapore hospital bed capacity**



Source: Ministry of Health

During this time however, demand for inpatient care has been steadily rising, with total hospital admissions up 8%, largely driven by private hospital admissions, which are up 25% since 2001.

**Figure 39: Hospital bed capacity and admissions**



Source: Ministry of Health

In anticipation of rising healthcare needs, the government has commenced construction of a new public hospital with a 550-bed capacity, to be opened in phases from early 2010. The government has also launched two of four potential major land sites reserved for private hospitals and day surgery centres so far. In aggregate, both of these sites, situated at Novena and One-North are expected to add another 400 more beds to private capacity. In addition, the government has indicated that a possible third site could be released in the Northern part of the island to cater to private operators wanting to target medical tourists from Malaysia.

Despite this, there is a lengthy time lag of about three years before the new capacity comes on stream, when one considers the construction period of the physical facilities. This suggests that there is unlikely to be any meaningful increase in bed capacity before 2010-11, even as demand is expected to rise.

Additional capacity will arrive only after 2010, driving bed rates up in the near term

**Figure 40: Potential new supply coming online**

Public hospitals	Potential supply	Timing	Remarks
Jurong	Unknown	unknown	
NUH and CGH	67 beds	2008	Additions to current facility
Woodlands Avenue 1	300 to 500 beds	unknown	
Yishun – Khoo Teck Puat Hospital	550 beds	2011	
Private hospitals	Potential supply	Timing	Remarks
Race course road	Permissible gross floor area of 57,225 sq m		To be developed by consortium – Singapore Health Group. Consists of a hotel cum hospital development
Novena	Total floor area of 7.2 ha, of which 35% is to be used for inpatient wards	Expected to be completed by 2015	Launched for tender in 29 Oct. 2007. Raffles Medical has expressed interest in the site
Northern Singapore	Unknown	unknown	To cater to Malaysian patients
One – North Site	Unknown	unknown	

Source: Factiva, Company data

In Singapore, medical fees and bed rates within private healthcare facilities are unregulated and subject to the free market forces of demand and supply. The implication of this, given the growing demand-supply imbalance in bed capacity, is that bed rates should increase in the near to medium term.

Despite this, we believe that Raffles Hospital appears to be the least constrained by the tightening bed capacity situation, as we note that within its existing premises, it is able to more than double the number of operational beds (from 150 beds currently to 380) with

minimal capex. Raffles Medical is thus best leveraged to cope with rising patient volume, and gain through a potential increase in bed rates, in our view. Beyond 2010, as and when the additional capacity becomes operational, we expect this to be absorbed gradually into the system, to meet the healthcare needs of Singapore's aging population, as well as its growing status as a medical tourist destination. We thus do not see a situation of excess capacity arising in the future.

## Hospital purchase – strategic move

In June 2007, Raffles Medical raised net proceeds of S\$63 mn to finance the purchase of the remaining 50% stake of its flagship Raffles Hospital from CapitaLand, by issuing 25 mn new shares each (at S\$1.30) to Temasek Holdings, and Qatar Investment Authority, which now each own 4.9% of Raffles, based on its enlarged share capital base of 513.5 mn shares.

While Raffles could have easily funded the hospital purchase using internal cash or debt, given its strong cash flow generation and low gearing, we believe that Raffles took the opportunity to issue shares to fulfil demand for its stock by strategic investors, as well as cement a relationship with Temasek and the Qatar government, which could prove useful in spearheading an overseas growth strategy going forward.

This purchase should also allow Raffles Medical greater flexibility in terms of utilising the hospital building, to drive asset yields without having to seek its partner's consent. It also suggests that Raffles may have keen intentions to expand its existing hospital premises, with the convenience of time and space, of full control over its decision-making process.

Raffles Medical has gained strategic partners through a recent equity-raising exercise ...

... and has now full flexibility in driving its hospital operations to enhance asset yields

## Valuations

We have adopted a discounted cash flow (DCF) valuation methodology to arrive at a fair value of S\$1.95 for Raffles Medical. We believe that DCF valuation methodology is better able to capture the earnings stream of its healthcare operations, since this is leveraged to the longer-term nature of a population's medical needs as it grows.

We have driven our longer-term growth rate assumptions using a similar argument as those for Parkway, which we maintain are conservative. However, we believe that a lower growth rate assumption of 6% (less 2 p.p.) over the longer term is justified, given that Parkway is operating on a much larger scale, and has a growing regional franchise, whereas Raffles Medical's operations are limited to the domestic market, which in the near to medium term should continue to witness strong growth.

DCF valuation is better able to capture the longer-term growth profile of healthcare needs

**Figure 41: Key valuation assumptions**

	%
Singapore healthcare expenditure as % of GDP (FY06)	3.6
Singapore healthcare expenditure as % of GDP (FY30)	6.6
GDP growth rates (FY08-30)	5.0
Parkway growth rate (FY08-30)	8.0
Raffles Medical growth rate (FY08-30)	6.0
Terminal growth rate (from FY30)	3.0

Source: Credit Suisse estimates

**Figure 42: WACC computation**

Risk free rate (%)	3.5
Equity risk premium (%)	6.5
Beta	1.0
Cost of equity (%)	10.0
Terminal growth rate (%)	3.0
Debt in capital structure (%)	0
Cost of debt (after tax) (%)	6.0
<b>WACC (%)</b>	<b>10.0</b>

Source: Credit Suisse estimates

Again, we find it worthwhile to illustrate the sensitivities to our GDP growth and healthcare expenditure as a percentage of GDP assumptions, as well as those of our WACC and terminal growth rates, given that a large part of Raffles Medical's valuations is dependent on the growth of its future cash flows.

**Figure 43: Sensitivity to GDP growth rates and healthcare expenditure**

		GDP growth rate				
		3.0%	4.0%	5.0%	6.0%	7.0%
<b>Healthcare expenditure as % of GDP</b>	3.5%	1.21	1.31	1.42	1.56	1.71
	4.5%	1.31	1.42	1.56	1.71	1.89
	5.5%	1.42	1.56	1.71	1.89	2.09
	<b>6.5%</b>	1.56	1.71	<b>1.90</b>	2.09	2.33
	7.5%	1.56	1.71	1.89	2.09	2.33
	8.5%	1.71	1.89	2.09	2.33	2.61
	9.5%	1.71	1.89	2.09	2.33	2.61

Source: Credit Suisse estimates

**Figure 44: Sensitivity to WACC and terminal growth rate**

		WACC				
		9.0%	9.5%	10.0%	10.5%	11.0%
<b>Terminal growth rate</b>	1.5%	2.08	1.93	1.79	1.68	1.57
	2.0%	2.12	1.96	1.82	1.70	1.59
	2.5%	2.17	2.00	1.85	1.72	1.61
	<b>3.0%</b>	2.23	2.05	<b>1.90</b>	1.75	1.63
	3.5%	2.30	2.10	1.93	1.78	1.66
	4.0%	2.39	2.16	1.98	1.82	1.69
	4.5%	2.49	2.24	2.03	1.87	1.72

Source: Credit Suisse estimates

## Risks

### Regulatory

Private healthcare operators, like Raffles Medical, are vulnerable to changes in policies driven by the government and its affiliated agencies, which license and regulate all medical establishments and healthcare professionals in the country and to a large extent therefore, influence the supply of medical infrastructure in the system. For now, we believe that reforms have been biased towards demand for private healthcare services which have likewise benefited the private operators.

### Macroeconomic backdrop

A slowdown in the macroeconomic environment could impede Singapore's economic drivers, such as employment and population growth. However, we note that growth trends in healthcare expenditure have been positive over the last two decades, even during periods of slower economic growth.

### Competition

Increasing competition from regional private healthcare providers, which not only compete on foreign medical tourists, but local Singaporeans seeking to go abroad as an alternative lower-cost source of customised private healthcare. Foreign patients currently make up about a third of the total at Raffles Medical's flagship hospital in Singapore.

### Pandemics

Medical tourist arrivals could decline sharply if there is such an outbreak and contamination of hospitals. During an outbreak, the government may impose regulations on hospitals such as activating emergency plans that will affect their normal routine of operations.

## Personnel

Staff costs typically account for over half of its revenues, with the bulk of the costs attributable directly to the medical professionals. Given this, an inability to attract or retain specialists, which adversely affects volume growth, or higher than expected increase in wages, will more significantly impact Raffles Medical versus Parkway.

**Figure 45: Profit and loss statement**

Year-end 31 Dec (S\$ mn)	2005A	2006A	2007E	2008E	2009E	2010E
Revenue	112.9	134.2	171.8	209.6	230.8	243.8
Healthcare services	52.6	60.7	60.9	62.6	64.3	66.1
Hospital services	60.2	73.5	110.9	147.0	166.4	177.7
Investment holdings	0.1	0.1	0.1	0.1	0.1	0.1
Segmental profit	13.5	19.2	28.0	37.8	45.2	51.5
Healthcare services	3.3	6.1	7.3	8.1	8.4	8.6
Hospital services	9.9	12.9	20.5	29.4	36.6	42.6
Investment holdings	0.2	0.2	0.2	0.2	0.2	0.2
EBITDA	15.8	20.9	29.2	43.3	50.0	55.5
Depreciation & amortisation	(3.1)	(3.4)	(3.0)	(7.7)	(7.4)	(7.2)
Associates	1.4	0.9	1.5	1.5	1.5	1.5
Financing income (costs)	0.7	1.6	1.8	2.1	2.5	3.0
Profit before tax	14.8	20.0	29.4	39.2	46.6	52.9
% change	34	22	17	28	7	7
Tax	(2.8)	(4.3)	(8.4)	(7.8)	(9.3)	(10.6)
Profit after tax	12.0	15.8	21.0	31.3	37.3	42.3
Minority interests	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
PATMI before EI	12.0	15.7	20.9	31.2	37.2	42.2
Exceptional items	0.0	0.0	12.5	0.0	0.0	0.0
PATMI after EI	12.0	15.7	33.4	31.2	37.2	42.2
% change	26	31	113	-7	19	13
EPS (after EI) (S\$)	0.027	0.034	0.043	0.061	0.073	0.082
% change	23	28	25	42	19	13

Source: Company data, Credit Suisse estimates

**Figure 46: Balance sheet**

Year-end 31 Dec (\$\$ mn)	2005A	2006A	2007E	2008E	2009E	2010E
<b>Current assets</b>						
Cash and equivalents	35.1	41.9	53.6	66.4	86.3	106.3
Trade debtors	12.3	16.8	21.2	26.3	28.9	30.5
Inventory (stocks and WIP)	2.9	3.4	3.8	4.9	5.4	5.7
Investment in commercial notes	13.0	14.3	14.1	15.0	11.9	9.8
Total current assets	63.3	76.4	92.7	112.7	132.5	152.3
<b>Non-current assets</b>						
Fixed assets	21.4	20.2	128.7	123.9	119.5	115.3
Associates and JVs	53.0	54.0	0.0	0.0	0.0	0.0
Goodwill/intangibles	0.3	0.2	0.2	0.2	0.2	0.2
Deferred tax assets	0.8	1.0	1.0	1.0	1.0	1.0
LT investments/other assets	0.1	0.1	0.1	0.1	0.1	0.1
Total non-current assets	75.6	75.5	130.0	125.2	120.8	116.6
Total assets	138.9	151.8	222.6	237.9	253.3	268.9
<b>Current liabilities</b>						
Trade creditors	24.4	30.0	39.1	46.5	50.5	52.6
Dividends payable	0.0	0.0	0.0	0.0	0.0	0.0
Tax provision	3.8	5.9	9.6	9.7	11.3	12.8
Borrowings	2.3	2.0	2.0	2.0	2.0	2.0
Other liabilities	0.0	0.0	42.0	42.0	42.0	42.0
Total current liabilities	30.5	37.9	92.6	100.3	105.7	109.4
<b>Non-current liabilities</b>						
Borrowings	0.0	0.0	0.0	0.0	0.0	0.0
Deferred tax liabilities	0.7	0.7	0.7	0.7	0.7	0.7
Total non-current liabilities	0.7	0.7	0.7	0.7	0.7	0.7
Total liabilities	31.2	38.7	93.4	101.0	106.5	110.1
Minority interests	0.2	0.3	0.3	0.3	0.3	0.3
Shareholders' equity	107.5	112.9	129.0	136.6	146.5	158.5
Total equity	107.7	113.1	129.2	136.9	146.8	158.7
Total equity and liabilities	138.9	151.8	222.6	237.9	253.3	268.9

Source: Company data, Credit Suisse estimates

**Figure 47: Cash flow statement**

Year-end 31 Dec (\$\$ mn)	2005A	2006A	2007E	2008E	2009E	2010E
EBIT	14.1	18.4	27.7	37.1	44.1	49.8
Depreciation – FA only	3.1	3.4	3.0	7.7	7.4	7.2
Amortisation	0.1	0.1	0.0	0.0	0.0	0.0
Changes in working capital	0.9	0.7	46.3	1.2	0.9	0.2
Other (disposals/write-offs, etc.)	0.4	0.4	0.0	0.0	0.0	0.0
Cash generated from operations	18.5	22.9	77.0	46.0	52.4	57.2
Investment & interest income	0.7	1.6	1.9	2.2	2.6	3.1
Interest paid	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Income tax paid	(1.4)	(2.3)	(4.8)	(7.7)	(7.8)	(9.0)
Net cash provided by operations	17.8	22.1	74.0	40.4	47.1	51.2
Capex	(5.8)	(2.3)	(3.0)	(3.0)	(3.0)	(3.0)
Net change in LT investments	0.0	0.0	0.0	0.0	0.0	0.0
Net investment in assoc & JV	0.0	0.0	0.0	0.0	0.0	0.0
Dividends from assoc & JV	(1.4)	(0.9)	0.0	0.0	0.0	0.0
Other investing items (disposals, etc.)	(2.9)	(1.2)	(42.0)	0.0	0.0	0.0
Net cash impact of investing activities	(10.0)	(4.5)	(45.0)	(3.0)	(3.0)	(3.0)
Dividends paid	(8.0)	(15.5)	(17.3)	(24.6)	(29.3)	(33.2)
Shares issued (bought back)	3.0	4.8	0.0	0.0	0.0	0.0
Change in borrowing	0.2	(0.2)	0.0	0.0	0.0	0.0
Other financing activities	0.0	0.0	0.0	0.0	5.0	5.0
Net cash impact of financing activities	(4.8)	(10.9)	(17.3)	(24.6)	(24.3)	(28.2)
Net cash flow	2.9	6.8	11.7	12.8	19.8	20.0
Beginning cash	32.2	35.1	41.9	53.6	66.4	86.3
Ending cash	35.1	41.9	53.6	66.4	86.3	106.3

Source: Company data, Credit Suisse estimates

**Figure 48: Summary financials**

Year-end 31 Dec	2005A	2006A	2007E	2008E	2009E	2010E
<b>Financials (S\$ mn)</b>						
Revenue	113	134	172	210	231	244
Healthcare services	53	61	61	63	64	66
Hospital services	60	74	111	147	166	178
Investment holdings	0	0	0	0	0	0
Operating profit	13.5	19.2	28.0	37.8	45.2	51.5
Profit after tax	12.0	15.8	21.0	31.3	37.3	42.3
Minority interests	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
PATMI before EI	12.0	15.7	20.9	31.2	37.2	42.2
PATMI after EI	12.0	15.7	33.4	31.2	37.2	42.2
EPS (before EI) (S\$)	0.03	0.03	0.07	0.06	0.07	0.08
BVPS (S\$)	0.24	0.25	0.26	0.27	0.29	0.31
Net DPS (S\$)	0.03	0.03	0.03	0.05	0.06	0.07
<b>Growth rates (%)</b>						
Total revenue	11	19	28	24	10	6
Healthcare services	-4	15	0	3	3	3
Hospital services	30	22	51	33	13	7
Investment holdings	1	-32	0	0	0	0
Operating profit	15.8	37.9	49.5	35.9	19.8	13.4
PATMI before EI	26.1	31.4	112.9	-6.6	19.1	13.5
EPS (before EI)	23.2	27.5	99.9	-11.2	19.1	13.5
<b>Valuation ratios (x)</b>						
P/E	52.3	41.0	32.8	23.1	19.4	17.1
Price-to-book	5.8	5.7	5.5	5.2	4.8	4.5
Dividend yield (%)	2.0	1.9	2.4	3.5	4.1	4.7
<b>Margins (%)</b>						
EBITDA	14.0	15.6	17.0	20.3	21.4	22.4
Operating	11.2	13.0	15.2	16.7	18.2	19.5
Dividend payout ratio	104.6	79.3	80.0	80.0	80.0	80.0
<b>Returns (%)</b>						
Return on assets	10.1	12.1	12.4	15.6	17.4	18.5
Return on equity	11.1	13.9	16.2	22.8	25.3	26.6
<b>Financial leverage &amp; liquidity (%)</b>						
Net debt to equity	net cash	net cash	net cash	net cash	net cash	net cash
Total debt to equity	2.2	1.8	1.5	1.5	1.4	1.3
Net debt/invested capital	net cash	net cash	net cash	net cash	net cash	net cash
Total debt/invested capital	4.3	3.4	1.5	1.5	1.4	1.3
Interest cover (x)	0.0	0.0	0.0	0.0	0.0	0.0

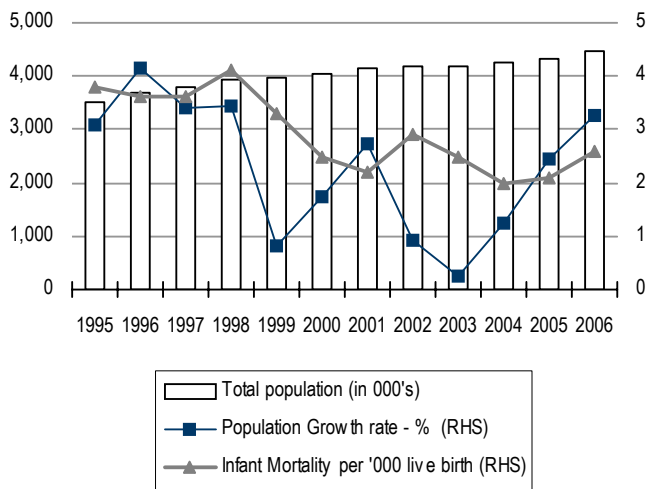
Source: Company data, Credit Suisse estimates

# Appendix

## Overview

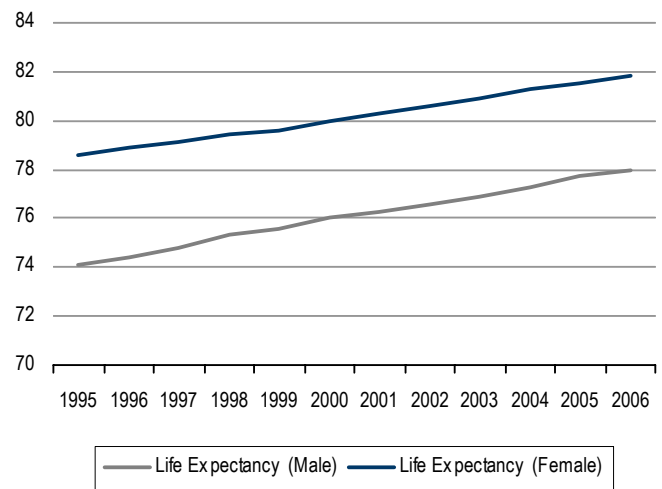
Singapore's healthcare financing system combines collective savings accounts with supplementary programmes to aid the poor and address potential market failures in health financing. This relationship between individual incentives, targeted subsidies and other cost containers has played an important role in the success of Singapore's healthcare system so far. Healthcare indicators in Singapore have improved substantially over the years, and Singapore currently boasts the lowest infant mortality rate in the world.

**Figure 49: Total population and population growth rate, infant mortality rate**



Source: Department of Statistics

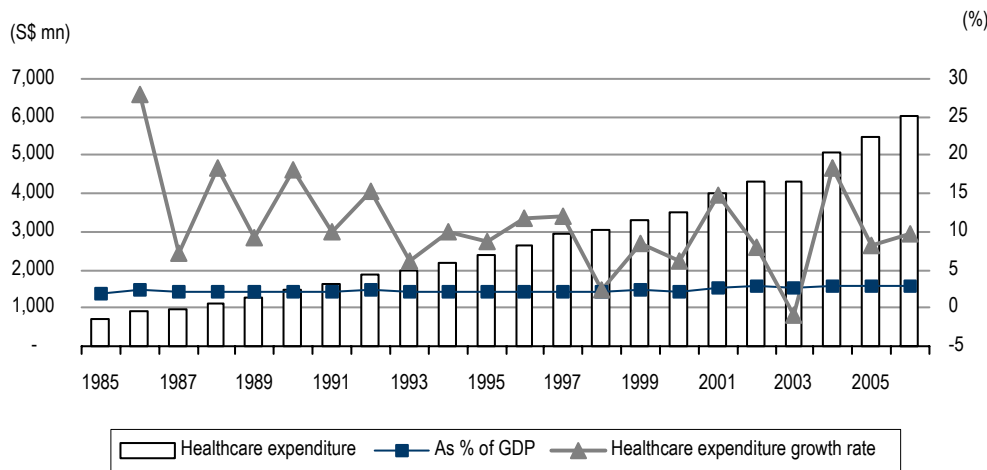
**Figure 50: Life expectancy for males and females**



Source: Ministry of Health

Singapore's total healthcare expenditure has been fluctuating at around 4% of its GDP, within close proximity of WHO standards at 5% of a country's GDP. Per-capita healthcare expenditure has increased by 3.7% p.a. from US\$819.50 in 2000 to US\$1,019.73 in 2006, largely on the back of rising affluence, healthcare awareness and increasing expectations of healthcare quality.

**Figure 51: Singapore's healthcare expenses and growth**



Source: CEIC

## Healthcare financing system

Healthcare costs in Singapore are financed mostly by private consumers, with the government taking on the indirect burden through subsidised medical services run by government-owned hospitals and clinics. Although Singapore does not have a direct social benefit plan for its aging population, Medisave, which was introduced in 1984, is a compulsory national medical savings scheme in which every individual saves a part of their monthly salary to meet any future medical expenses required. The minimum sum for Medisave is adjusted by the government in July every year to ensure that Medisave is sufficient in the face of rising healthcare costs.

**Figure 52: Singapore's healthcare financing system**

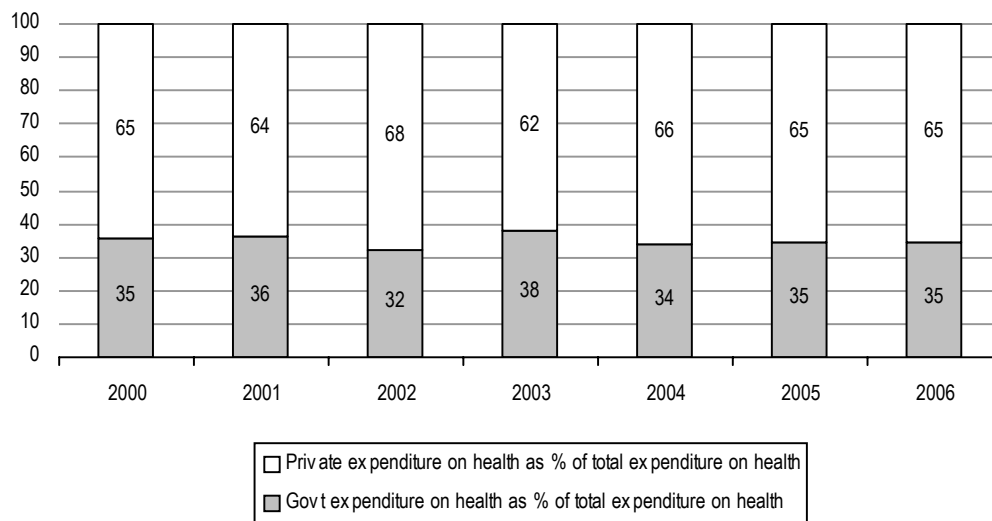
Name	Year started	Description	How it works
Medisave	1984	A compulsory national medical savings scheme that helps individuals set aside part of their income to meet future personal hospitalisation, day surgery and certain outpatient expenses. Medisave may be used for outpatient treatments of four chronic diseases (diabetes, high blood pressure, lipid disorder and stroke) that affect about 1 mn Singaporeans.	Under this scheme, every employee contributes 6.5-8.5% (depending on age group) of his monthly salary to a personal Medisave account, which can be withdrawn to pay the hospital bills of the account holder and his immediate family members.
Medishield	1990	A low-cost catastrophic illness insurance scheme designed to help members meet medical expenses from major or prolonged illnesses, which could not be sufficiently covered by Medisave balances.	Medishield operates on a co-payment and deductible system to avoid problems associated with first-dollar, comprehensive insurance.
Medifund	1993	An endowment fund that acts as a safety net for those who cannot afford the subsidised bill charges, despite Medisave and Medishield coverage.	The government injects capital into the fund when budget surpluses are available, and utilises interest income from the capital sum, which currently stands at S\$1.48 bn, to finance the needy.
Eldershield	2002	A severe disability insurance scheme which provides basic financial protection to those who need long-term care, especially during old age.	It provides a monthly cash payout to help pay the out-of-pocket expenses for the care of the severely disabled.

Source: Ministry of Health

The government's healthcare expenditure as a proportion of total healthcare expenditure declined marginally from 35.4% in 2000 to 34.6% in 2006. This can be attributed to the increase in coverage of private health insurance and the use of funding from the compulsory national savings scheme (Medisave) by individuals to finance healthcare expenses. The restructuring of the public healthcare system into its two distinct clusters – National Healthcare Group (NHG) and Singapore Health Services (SingHealth) in 2001 and the outbreak of the Severe Acute Respiratory Syndrome (SARS) in 2003, explains why the government's expenditure in 2001 and 2003 was higher than in previous years.

The government has committed in the recent 2007 Budget speech, to increase public healthcare expenditure by 50% to US\$1.8 bn per annum by 2012, from US\$1.2 bn currently. These funds will be channelled into the grooming of doctors and nurses, to meet the anticipated demand for elderly care and chronic disease management. The government also plans to improve hospital infrastructure by increasing the number of acute hospital beds, as well as create academic medical centres in both the National University Hospital and Singapore General Hospital to integrate academic and clinical practice.

**Figure 53: Composition of Singapore's healthcare expenses (2000-06)**



Source: Ministry of Health

## Healthcare delivery system

Singapore's healthcare system consists of public, private and non-profit healthcare providers. The public sector hospitals, speciality clinics and polyclinics are grouped into two integrated 'clusters' – the National Healthcare Group (NHG) and Singapore Health Services (SingHealth). Each cluster is wholly owned by the state and run autonomously, offering primary, secondary and tertiary healthcare services. Parkway is the largest private hospital operator in Singapore, and runs three of five hospitals which provide tertiary acute services across the broad spectrum of medical specialisations. Raffles Hospital is wholly owned and operated by Raffles Medical while Mount Alvernia Hospital is privately held.

**Figure 54: Hospitals in Singapore**

	No of licensed beds
<b>National Healthcare Group (NHG)</b>	
Alexandra Hospital	400
National University Hospital	928
Tan Tock Seng Hospital	1,400
<b>SingHealth</b>	
Changi General Hospital	776
KK Women's & Children's Hospital	830
Singapore General Hospital	1,516
<b>Raffles Medical Group</b>	
Raffles Hospital	380
<b>Parkway</b>	
Gleneagles Hospital	380
East Shore Hospital	123
Mount Elizabeth Hospital	505
<b>Privately-held</b>	
Mount Alvernia Hospital	303
Thomson Medical Centre	190

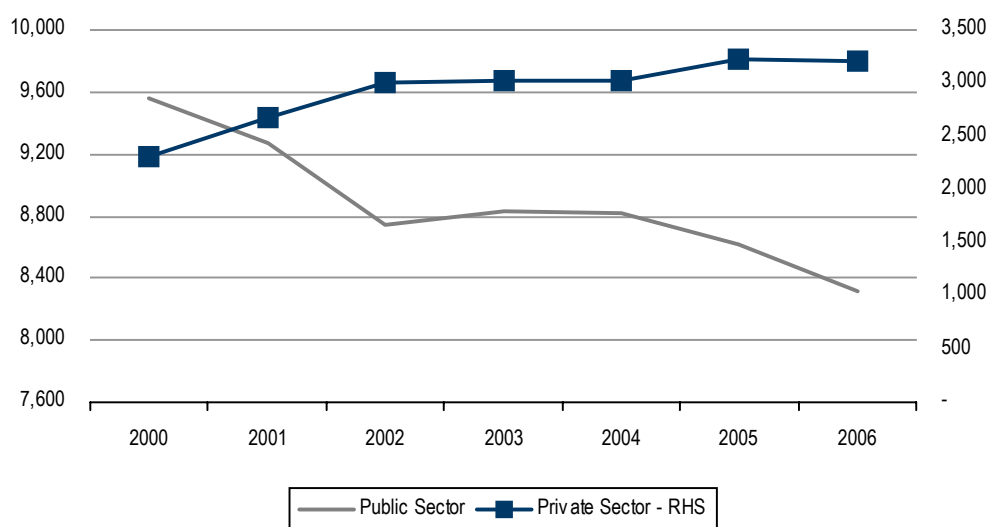
Source: Ministry of Health

In 2006, there were a total of about 11,545 hospital beds in the 29 hospitals and speciality centres in Singapore, or a ratio of 2.6 beds per 1,000 total population. About 72% of the beds are in the 13 public hospitals and speciality centres with bed complements between 185 to 2,064 beds. The 16 private hospitals tend to be smaller, with capacity ranging from 20 to 505 beds.

**Hospital beds**

Two key trends in terms of healthcare infrastructure have surfaced over the past five years. First, the number of beds in the public hospitals has fallen by 2% during this period, along with the overall trend in hospital beds during the same period, and secondly, the number of hospital beds in the private sector has risen by some 7% during this time, to more than 3,400 in 2006. We believe this growth has been spurred by the increase in patient volume (both local and international), on the back of rising affluence and with that greater consumer expectations, and hence demand for individualised healthcare in private hospitals.

**Figure 55: Number of beds in public and private hospitals**



Source: Ministry of Health

**Manpower**

There has been an overall increase in the number of healthcare personnel over the last decade, with the number of doctors and nurses increasing at a 3.9% and a 4.6% CAGR, respectively. Yet despite this positive trend, the government realises that this is insufficient to meet the demands of an aging population and especially the influx of foreign patients, which will inevitably worsen the demand supply imbalance and inflate overall healthcare costs. To meet the rising demand for doctors in the longer term, the government has recently tied-up with Duke University to open a new medical college, and is also relaxing registration rules for foreign doctors, by reducing their probation periods and recognising qualifications from more foreign medical schools to boost the number of doctors here. The public sector currently employs 3,156 doctors, which translates to one doctor for every two patients at any given time, still some distance to go towards realising the government's longer term aim in having one doctor per patient in its public hospitals.

**Types of healthcare**

**Primary**

Primary healthcare includes preventive healthcare and health education. About 78% of primary healthcare services are provided by more than 2,000 private medical practitioner's clinics, with the remaining 22% by a network of 18 outpatient government polyclinics, which are subsidised one-stop health centres, offering outpatient medical care, the follow-

up of patients discharged from hospitals, immunisation, health screening and education, investigative facilities and pharmacy services. Public hospitals provide 80% of the more costly hospital care with the remaining 20% by private hospital care.

### Hospital care

Singapore has seven public hospitals that comprise five acute general hospitals (SGH, NUH, CGH, TTSH & AH), a women's and children's hospital (KKH) and a psychiatry hospital (IMH). The general hospitals provide multi-disciplinary acute inpatient and specialist outpatient services and a 24-hour emergency department. In addition, there are also six national specialty centres for cancer, cardiac, eye, skin, neuroscience and dental care.

Within the public hospitals, patients have a choice of the different types of ward accommodation on their admission. 80% of the public hospitals' beds (class B2 and C) are heavily subsidised with the remaining 20% with lower subsidy at 20% for class B1, and no subsidy for class A wards.

### Intermediate and long-term care

The long-term healthcare needs of Singaporeans are catered for by a comprehensive range of residential and community-based healthcare services. These services include community hospitals, chronic sick hospitals, nursing homes, sheltered homes for the ex-mentally ill, inpatient hospice institutions, home medical, home nursing and home hospice care services, day rehabilitation centres, dementia day care centres, psychiatric day care centres and psychiatric rehabilitation homes.

Through the Chronic Disease Management Programme (CDMP), patients work with their doctors to manage their diseases. They regularly monitor their conditions, seek early medical treatment and make the necessary lifestyle changes.

### Dental services

Dental care begins with preventive dentistry promoted through the Health Promotion Board. The Board targets students through a network of 200 static clinics located in the schools as well as 30 mobile dental clinics. This plus fluoridation of potable water and the availability of fluoridated toothpaste has greatly diminished dental decay and tooth loss. Public dental services are available in some polyclinics and hospitals, and the National Dental Centre.

## Means testing

Means testing was first introduced by the government in 2000 to provide financial assistance to the poor in need of healthcare facilities. Means testing is a methodology in calculating and allocating the level of subsidies taking into consideration the wealth of an individual and his/her family. The levels of subsidies on hospitalization bills, which were first introduced in 2000 are as shown below:

**Figure 56: Means testing on hospital bill subsidy implemented in 2000**

Per-capita income	Rate of subsidy (%)
S\$0-300	75
S\$301-700	50
S\$701-1000	25
More than S\$1000	0

*Note: Per-capita income is defined as total household income over number of household members*

*Source: Ministry of Health*

In 2001, the government also allowed patients transferring from private to public hospitals to downgrade to heavily subsidised ward classes (i.e. class B2/C) via a simple means test. Previously, transfers were disallowed to encourage social responsibility and prevent private hospitals from shifting their patients to public hospitals after their financial resources had been exhausted.

**Figure 57: Means testing on patient transfers from private hospitals implemented in 2001**

Per-capita income	Ward downgrade allowed
Below S\$500	C
Below S\$1,000	B2
Others	Downgrade can be requested if hospital bills in public hospitals exceed \$15,000

Source: Company data, Credit Suisse estimates

The government is also looking into the use of means testing to efficiently allocate beds in Class B2 and C Wards. As these wards are currently subsidized for all Singaporeans (see Figure 59), this creates an over-demand and incentive to use subsidized wards meant for those in the lower income bracket, with, 22% of the top 20 percentile still using subsidised B2 and C wards (see Figure 58).

**Figure 58: Utilisation of government wards by household income level**

Per-capita household income percentile	Class A & B1 (%)	Class B2 (%)	Class C (%)
Bottom 20%	44	23	33
20 <sup>th</sup> to 40 <sup>th</sup> %	52	23	25
40 <sup>th</sup> to 60 <sup>th</sup> %	60	21	19
60 <sup>th</sup> to 80 <sup>th</sup> %	66	20	14
Top 20%	78	13	9

Source: Straits Times

**Figure 59: Level of government subsidies on various wards**

Ward	Typical charges (S\$)	Government subsidy on charges (%)
A	244-275	0
B1	160-169	20
B2	45-58	65
C	23-27	80

Source: Company data, Credit Suisse estimates

Although no details on means testing have been unveiled, Singapore's Health Minister has recently reassured its residents that healthcare will remain affordable with means testing, if implemented, to be based on five criteria, that:

- Patients can continue to choose the ward they want, albeit at a different subsidised cost for each individual
- Class C and B2 wards will be subsidised to different degrees depending on their income levels
- Assessment of means testing is to be simple
- Means testing must be sensitive to retirees and those who rely on their savings as they no longer generate a recurring income
- No patient will be denied treatment due to affordability reasons

## Company profiles

### Parkway

Parkway owns and manages three hospitals (Gleneagles, Mount Elizabeth and East Shore) and a chain of about 39 clinics in Singapore. In Malaysia, 40%-owned subsidiary Pantai (which has been de-listed) owns eight hospitals located in Kuala Lumpur, Penang, Malacca, Johor and Perak. Pantai also holds lucrative government concessions to conduct the medical examination of foreign workers and also for government healthcare support services. Parkway's other investments overseas include several JVs in India, Vietnam, and China.

**Raffles Medical**

Raffles Medical is the second-largest listed private hospital operator in Singapore, after Parkway. Besides its flagship Raffles Hospital, it has the largest clinic network in Singapore with about 60 clinics treating about 1 mn patients annually and more than 5,000 corporate clients. Overseas, Raffles has two clinics in Hong Kong and has converted its Jakarta representative office into a medical centre. Currently, about a third of its patients are foreigners, mainly Indonesians, and the management is targeting for this figure to rise to 50% within three years.

**Companies Mentioned** (Price as of 07 Jan 08)

- Apollo Hospitals Enterprise (APLH.BO, Rs572.00, UNDERPERFORM, TP Rs453.00)
- Bangkok Chain Hospital (KH TB, Bt8.3, NOT RATED)
- Bangkok Dusit (BGH TB, Bt33, NOT RATED)
- Bumrungrad Hospital Pcl (BH.BK, Bt39.75, NOT RATED)
- HealthScope (HSP.AX, A\$5.50, NEUTRAL, TP A\$5.92, UNDERWEIGHT)
- KPJ Healthcare Berhad (KPJH.KL, RM3.46, OUTPERFORM, TP RM5.80)
- Pacific Healthcare (PACH SP, S\$0.37, NOT RATED)
- Parkway Holdings (PARM.SI, S\$3.96, OUTPERFORM, TP S\$4.80)
- Primary Health Care Limited (PRY.AX, A\$11.90, RESTRICTED)
- Raffles Medical Group (RAFG.SI, S\$1.50, OUTPERFORM, TP S\$1.90)
- Ramsay Health Care Limited (RHC.AX, A\$10.90, OUTPERFORM, TP A\$13.16, UNDERWEIGHT)
- Thomson Medical (THOM SP, S\$0.66, NOT RATED)
- TMC Lifescience (TMCL MK, RM1.36, NOT RATED)
- Wakefield Health (WFD NZ, NZ\$8.55, NOT RATED)

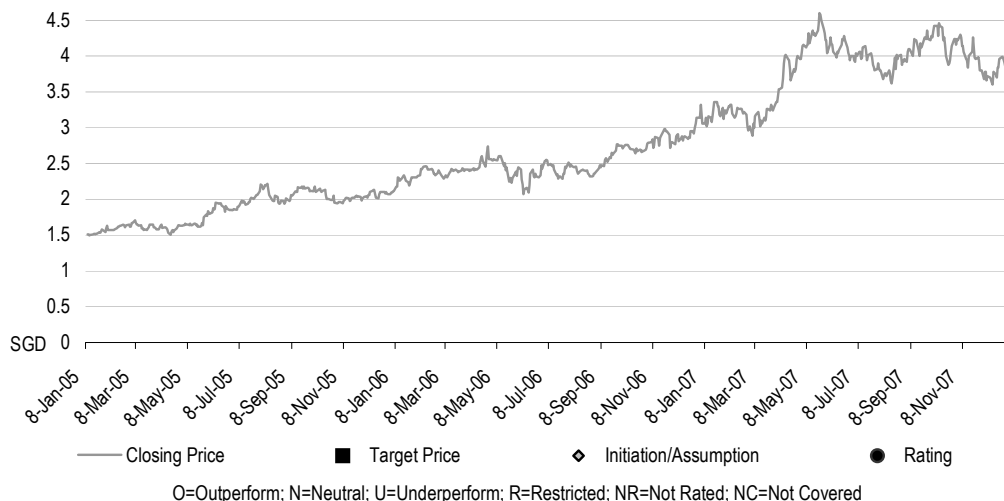
**Disclosure Appendix**

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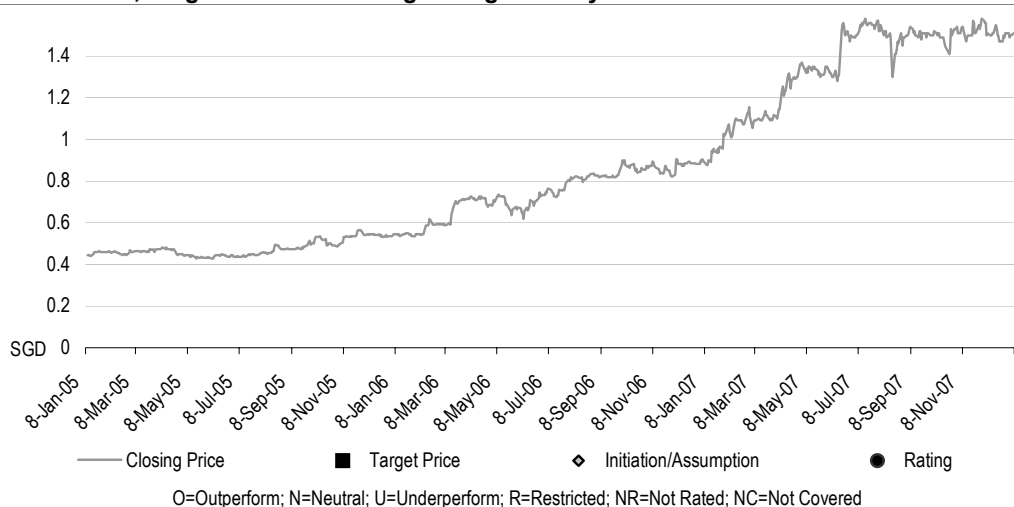
See the *Companies Mentioned* section for full company names.

**3-Year Price, Target Price and Rating Change History Chart for PARM.SI**



PARM.SI	Closing Price	Target Price	Initiation/
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**3-Year Price, Target Price and Rating Change History Chart for RAFG.SI**



RAFG.SI	Closing Price	Target Price	Initiation/
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**Outperform:** The stock's total return is expected to exceed the industry average\* by at least 10-15% (or more, depending on perceived risk) over the next 12 months.

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**Underperform\*\*:** The stock's total return is expected to underperform the industry average\* by 10-15% or more over the next 12 months.

\*The industry average refers to the average total return of the analyst's industry coverage universe (except with respect to Asia/Pacific, Latin America and Emerging Markets, where stock ratings are relative to the relevant country index).

\*\*In an effort to achieve a more balanced distribution of stock ratings, the Firm has requested that analysts maintain at least 15% of their rated coverage universe as Underperform. This guideline is subject to change depending on several factors, including general market conditions.

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**Price Target:** (12 months) for (PARM.SI)

**Method:** Our S\$4.80 target price for Parkway is based on a discounted cash flow (DCF) valuation, with a weighted average cost of capital (WACC) of 10% (a 3.5% risk-free rate, a 6.5% equity risk premium and a beta of 1), a terminal growth rate of 4%, and a medium-term growth rate of 8% over 2007 to 2030.

**Risks:** Key risks to our S\$4.80 target price for Parkway include: 1) regulatory changes driven by government policies 2) a potential macroeconomic slowdown, which would affect employment and population growth, 3) increased competition from regional healthcare providers, 4) risk of a pandemic outbreak, 5) execution risks.

**Price Target:** (12 months) for (RAFG.SI)

**Method:** Our S\$1.90 target price for Raffles Medical is based on a discounted cash flow (DCF) methodology of a weighted average cost of capital (WACC) of 10% (a risk-free rate of 3.5%, an equity risk premium of 6.5% and a beta of 1), a terminal growth rate of 3%, and a medium-term growth rate of 6% over 2007-2030.

**Risks:** Key risks to our target price include: 1) Regulatory changes driven by government policies 2) Macroeconomic slowdown affecting employment and population growth 3) Increasing competition from regional healthcare providers 4) Risk of a pandemic outbreak 5) Inability to attract talent and Increased labour costs

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**CREDIT SUISSE (Hong Kong) Limited**  
Asia/Pacific: +852 2101-6000