

Bangkok Dusit Medical Services (BDMS)
Investor Presentation 3Q17&9M17 Results

December 2017

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- Healthcare Industry
- Operational Statistics
- Financial Highlights













Overview

BDMS

Overview



45 Hospitals



8,000+ Beds



9 Centers of Excellence



BDMS Wellness Clinic



11,000+ Doctors 7,000+ Nurses 14,000+ Staffs



Pharmaceutical manufacturer and drug stores

Established	on	February	<i>1</i> 26.	1972
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- Top 5 private hospital operators in the world by market capitalization
- Hub-and-Spoke model with an established patient referral system helps create efficiency through scale

	Brand	No. of Hospitals	No. of Beds*
3	Bangkok Hospital	21	3,352
**	Phyathai Hospital	5	1,340
4	Samitivej Hospital	6	1,288
**	Paolo Hospital	5	960
ENH HOSPITAL 104CT 1844	BNH Hospital	1	144
R	Royal Hospital	2	130
	Local Hospital	5	801

^{*} Maximum number of beds according to structure of the hospitals





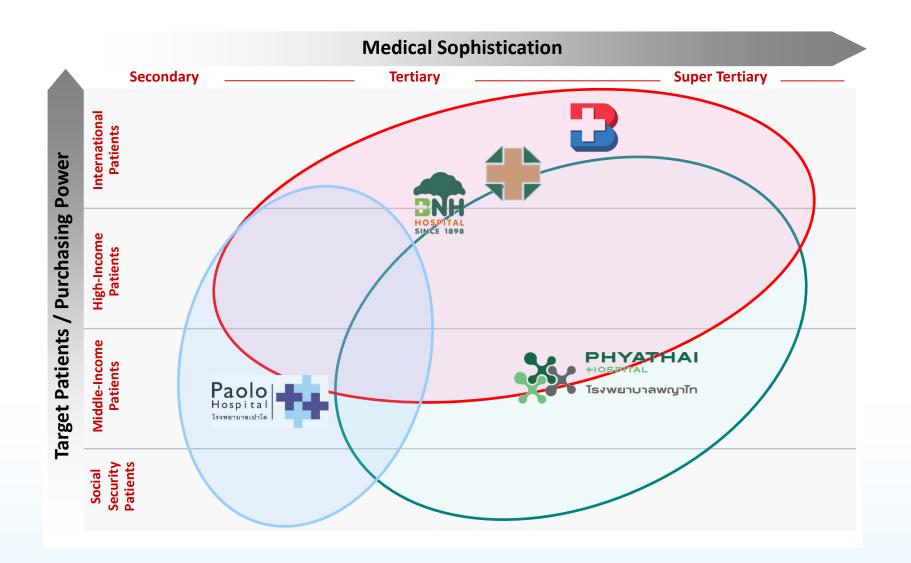








Diversification of Patient Mix















BDMS Future Plan

Key Strategies 2017 2018 2019 2020 **45** Hospitals ~ 50 hospitals 8,015 beds ~ 8,500 beds ✓ Paolo Kaset Bangkok Chiangrai O Phoenix Project International **Hospitals in** (162 beds) (80 beds) (175 beds) **Hospital Pipeline Bangkok Surat** (100 beds) (150 beds) Chiva Transitional **BDMS Wellness** Care (52 beds) **Clinic (4Q17)** Increase utilization of ramping-up hospitals Focus on Improving operational efficiencies Margin Centers of excellence **Expansion** International medical affiliation



- **Completed continuum of healthcare**
- **Top referral hospitals in Asia Pacific**













Successful Track Record of Expansion Through M&A and Greenfield Projects

Strong Share Price Performance Backed by a Successful Expansion Track Record



^{*} Transfer of business to our new facility, Royal Phnom Penh

Solid Revenue Growth Over the Past Decade (2004-2016 CAGR of 24.7%) with Resilient EBITDA margin



BDMS has developed 14 new hospitals and acquired a total of 30 hospitals to date









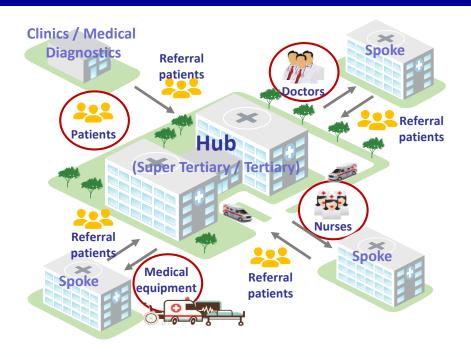




^{**} Rebrand from Bangkok Chinatown to Samitivej Chinatown in Oct 2017

'Hub-and-Spoke' Model

Providing a Proven Patient Referral System and Creating Efficiency Through Scale





- Strong patient referral system within and across each hub and spoke
- 2 Enhances synergies and benefits of scale among hospitals within the group
- 3 Shared supporting services among multiple hubs which enhance efficiency and competitiveness
- 4 Established system provides a platform for future expansion













BDMS Complete Continuum of Healthcare



Centers of Excellence



Super Tertiary Care



Tertiary Care

Secondary Care

Promotive

Preventive

Early Detection

Curative

Transitional

Rehabilitative



BDMS Wellness Clinic



Phoenix Project



Chiva Transitional Care Hospital





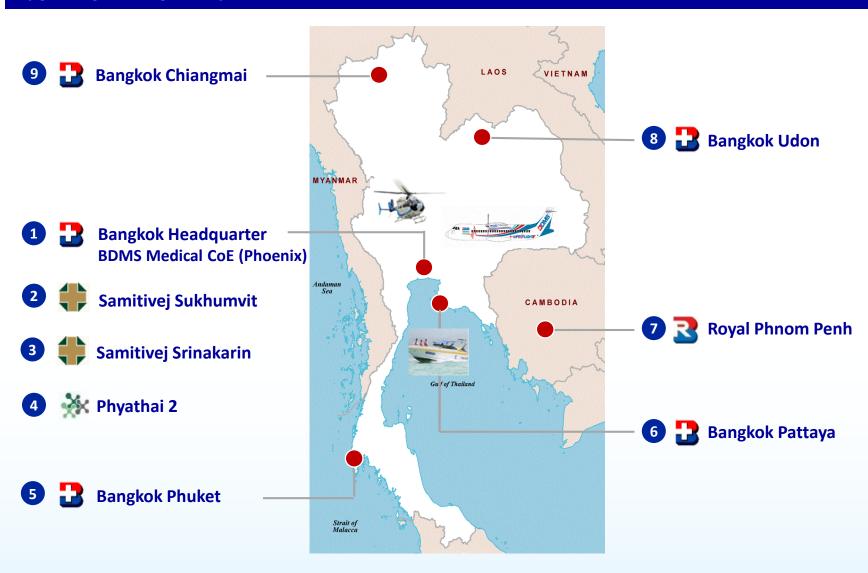






BDMS Centers of Excellence Network

Upgrading Existing 9 Hospitals to Become Centers of Excellence with the Focus on International Patients















Medical Cooperation

International and Local Partnership

Cancer



Sister Institute with MD Anderson on cancer

Occupational health, Pediatrics, Rehabilitation and Informatics



Collaboration with Oregon Health and Science
 University on occupational health, pediatrics,
 rehabilitation, clinical simulation and informatics

Trauma and Orthopedics



 Collaboration with Missouri Orthopaedic Institute, University of Missouri Health Care in education, training and research



Collaboration with Hannover Medical School for education and research on trauma and orthopedics



 Collaboration with Stanford University for knowledge sharing on orthopedics













Medical Cooperation

International and Local Partnership

Neuroscience



Research collaboration with Department of **Neurosurgery, Cedars-Sinai on the TRFS laser** device for brain tumor surgery

Collaboration with Black Brain Health Center of Dr. Keith L. Black, one of the world leading neurosurgeons

Gastrointestinal



■ Collaboration with Sano Hospital on **Gastrointestinal Medicine**



Collaboration with Nagoya University for education, medical treatment assistance and patient referral

Others







Collaboration with local institutions













BDMS Wellness Clinic

A Brand New Wellness Clinic Delivering World-Class Services









- **Comprehensive preventative-care center**
- **Targeting high-end Thai and International customers**
- 1 and 2 will be opened by 4Q17
- The rest will be opened by 1H18















Sports medicine clinic

8 Centers of Preventive Excellence

Cardiology & Cardiometabolic Clinic

Neuroscience Clinic

Gastrointestinal Clinic

6 **Breast screening Clinic**

Fertility Clinic

International Dental Clinic

Investment Pipeline

Accommodate Rising Demand in Healthcare







Phoenix Project

Bangkok Hospital Headquarter Area

Hospitals	Total Beds	Project Details	Commission Date
1 Bangkok Hospital Chiangrai	80	 Targeting residents of Chiangrai, Phayao and Nan area and international patients from Southern China, Myanmar and Laos 	2018
2 Chiva Transitional Care Hospital	52	 Focus on elderly care and rehabilitation for patients who require extended hospitalization 	2018
3 Phoenix Project at Bangkok Hospital Headquarter (BHQ)	175	 Focus on Neurology Center, Orthopedics Center, Spine Center, Longevity Care Center and Rehabilitation Center 	2019









Investment in Pipeline

Accommodate Rising Demand in Healthcare





International Hospital

Expansion of Samitivej Sukhumvit Hospital

Hospitals	Total Beds	Project Details	Commission Date
4 Expansion of Samitivej Sukhumvit Hospital	45	 Focus on Japanese patients, liver and Gastrointestinal Located near Samitivej Sukhumvit Hospital on the land of 1 Rai 	2019
5 International Hospital	100	 7- storey building consisted of 2 buildings, dedicated to international patients Relocated international clinics:- Japan, Arabic, CLMV, China and Bangladesh from Wattanosoth hospital 	2020













Investments

Investments in Other Hospitals : - Listed Companies

- Ramkhamhaeng Hospital PCL (RAM) 38.24%
- Bumrungrad Hospital PCL (BH) 20.50%

Non- Hospital Strategic Investments*

Pharmaceutical Business

•	A.N.B. Laboratories	100%	Sterile pharmaceutical product manufacturer & distributor
•	Save Drug Center	100%	Drugstore
•	The Medicpharma	87%	Generic pharmaceutical product manufacturer
•	General Hospital Products PCL	46%	Sterile pharmaceutical product manufacturer

Other Complimentary Business

•	National Healthcare Systems	100%	Central lab, central supply chain, procurement & other shared services
٠	Greenline Synergy	100%	Shared IT services
•	Bangkok Premier Life Insurance Broker	100%	Health & life insurance broker
•	Bangkok Helicopter Services	100%	Transportation of patients via helicopter

THB mm Non-Hospital Revenues



^{*} Not included all BDMS' investments







services

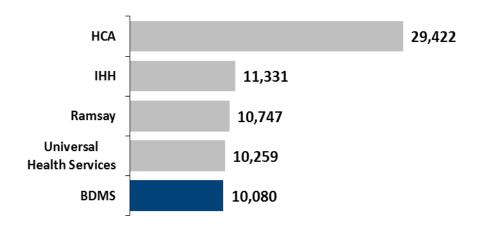




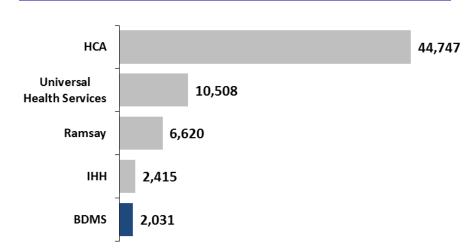


Global Hospital Rankings

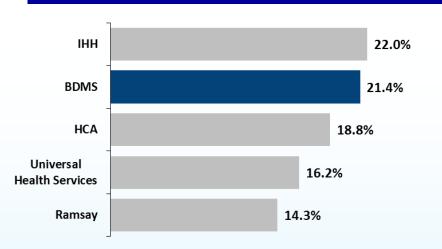
Market Capitalization (USD mm)



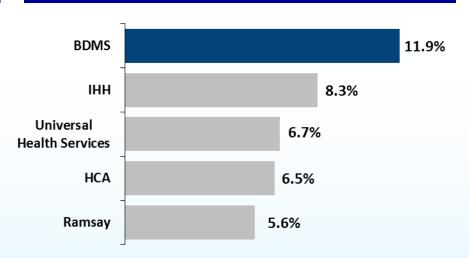
Revenue (USD mm)



EBITDA Margin



Net Profit Margin



Remark: - Market capitalization as of 6 December 2017

- Financial performance (excluding non-recurring items) for year ended December 2016 except Ramsay for the year ended June 2017













Healthcare Industry

Key Trend for Thai Healthcare Industry

Supportive
Demographic and
Economic Trends

- Aging demographics and rising income will drive demand for Thai healthcare
- Thai healthcare spending is expected to grow 5-6% p.a. in the next 3 years *

Favorable Government Policies

- Expanding visa for medical tourist from CLMV and China to 90 days
- Thai Government recently approved tax break on premiums paid for health insurance. This should benefit private hospitals as it could boost healthcare demand

Changing Behavior and Opportunities

- Increase health conscious and greater affordability driven a growing demand on preventive care
- Thailand's attractiveness as travel destination, convenient infrastructure
 & facility and value for money help support medical tourism

Health Tech

- Mobile health apps would increase health conscious and preventive care
- Support existing healthcare service rather than replacement
- Mostly in searching for doctor and personal health information

* Source: EIC SCB









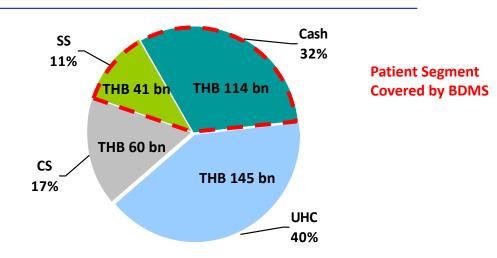




Thailand Healthcare Coverage

Healthcare Segments in Thailand

Total Expenditure for 2014: THB 360 bn*



^{*} Excluding general government expenditure on healthcare Source: SSO, NHSO, WHO, BOT, Phatra Securities estimates

Universal Healthcare Coverage (UHC)	A welfare program for Thai people to receive medical coverage for IPD and OPD care at registered facilities
Civil Servant (CS)	A welfare program provided to employees of governments and state-owned enterprises
Social Security Scheme (SS)	Minimum requirement of healthcare provided to employees of private companies
Private Healthcare (Cash)	Proportion of Thai population not covered or choose not to use public healthcare schemes (UHC, CS and SS), though may have private insurance coverage













Thailand Healthcare Demand & Supply

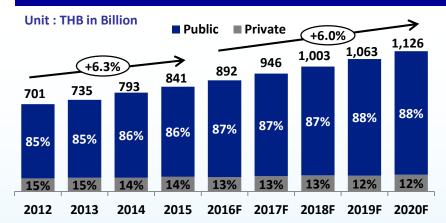
Healthcare Supply in Thailand (2014)

	# of Hospitals	# of Beds
Private	329	34,567
Public	1,019	120,322
Total	1,348	154,889

(Number per 10,000 population)	Thailand	Global
Doctor	4	14
Nurse	21	30
Bed	21	26

Source: WHO, Department of Health Service Support, Bureau of Policy and Strategy

Increasing Healthcare Expenditures in Thailand



Source: EIC SCB and WHO

โรงพยาบาลกรุงเทพ BANGKOK HOSPITAL





BDMS Market Coverage (2014)

	Total Private Beds	BDMS Registered Beds	Market Share
Bangkok	14,339	2,571	18%
Central	10,654	1,890	17%
South	2,467	601	24%
Northeast	2,904	337	12%
North	4,128	194	5%
Total	34,492	5,593	16%

Source: WHO and Department of Health Service Support

Low Healthcare Penetration

% of Healthcare expenditure to GDP



Source: WHO (2014)



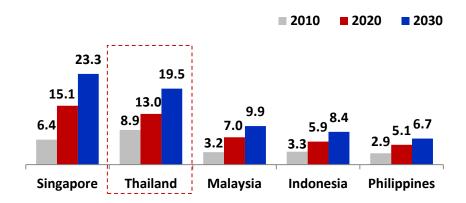




Increasing Healthcare Demand

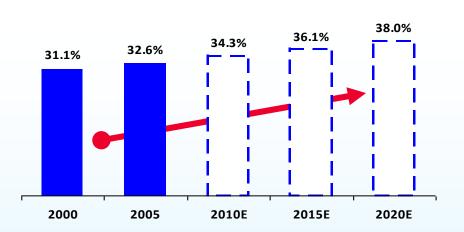
Population Growth and Aging Profile

Percentage of population above 65 years (%)



Source: UN Population Database: 2015

Urbanization



Sources: NESDB, Health & Welfare Surveys, National Statistics Office (Data related to Thailand)

โรงพยาบาลกรุงเทพ BANGKOK HOSPITAL



BNH HOSPITAL ISOMETUTANIELIEST (Sathern - Convent)

Commentary

- Aging population will have great implications on both healthcare costs as well as its capacity to serve demand. In addition, aging population also means a strain on healthcare capacity if it fails to catch up well with increasing demand
- Increasing degree of urbanization is expected over time from 31.1% in 2008 to 38.0% in 2020
- The trend has also been the same for overall South East Asia countries where rapid urbanization is expected from 36.7% in 2000 to 50.6% in 2025

Rising Monthly Income per Capita

2007 2011 2015

42 41

35

27

46%

27 26

19 21

18 21

17 19

20

14 17 19

20

14 17 19

Northeastern

Vicinity
Source: NSO

Bangkok and



Unit: THB Thousand



Central

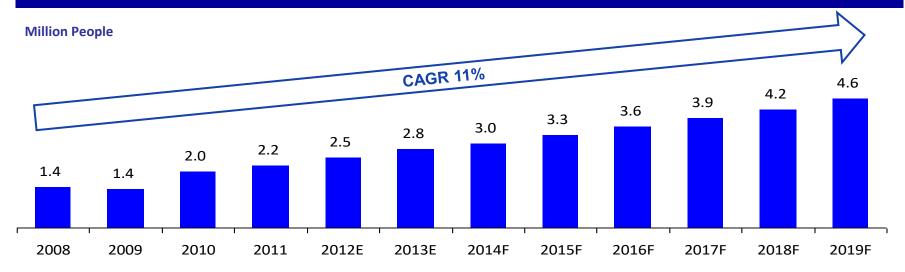


Northern

Southern

Medical Tourism

Increasing trend of international patient visits



Source: EIC, SCB and Ministry of Commerce

Medical Tourism as a Rising Phenomenon

Procedures (In USD)	USA	Singapore	Thailand	Malaysia	India
Heart Bypass	123,000	17,200	15,000	12,100	7,900
Heart Valve Replacement	170,000	16,900	17,200	13,500	9,500
Hip Replacement	40,364	13,900	17,000	8,000	7,200
Knee Replacement	35,000	16,000	14,000	7,700	6,600
Spinal Fusion	110,000	12,800	9,500	6,000	10,300
Gastric Bypass	25,000	13,700	16,800	9,900	7,000
IVF Treatment	12,400	14,900	4,100	6,900	2,500

Source: Medicaltourism.com (2016)

BANGKOK HOSPITAL







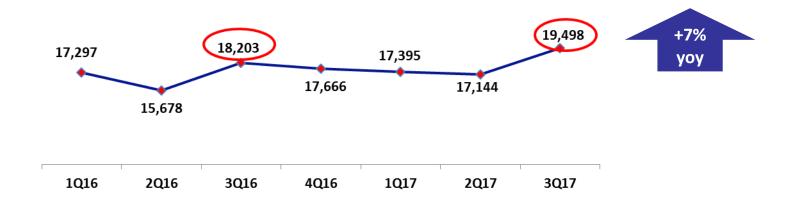




Operational Statistics

Operating Income Trend

(THB mm)



Commentary

- 3Q17 Operating income increased by 7% yoy. This was attributed to
 - Strong revenue growth from hospitals in upcountry +8% vs BKK +7% yoy
 - Revenue growth from Thai +6% vs International patients +8% yoy
 - Increase in both number of patients and price intensity
 - New network hospitals:- Paolo Kaset and Bangkok Surat

Remark:- Operating income is calculated from hospital revenue + revenue from sales of goods and food + other income







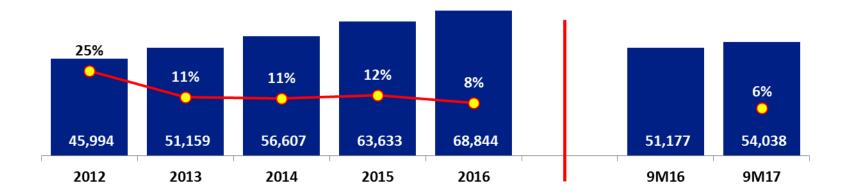






Operating Income Trend

(THB mm)



Commentary

- 9M17 Operating income increased by 6% yoy. This was attributed to
 - Strong revenue growth from hospitals in upcountry +8% and in BKK +4% yoy
 - Revenue growth from Thai +5% vs International patients +8% yoy
 - Increase in price intensity and complexity cases

Remark:- Operating income is calculated from hospital revenue + revenue from sales of goods and food + other income





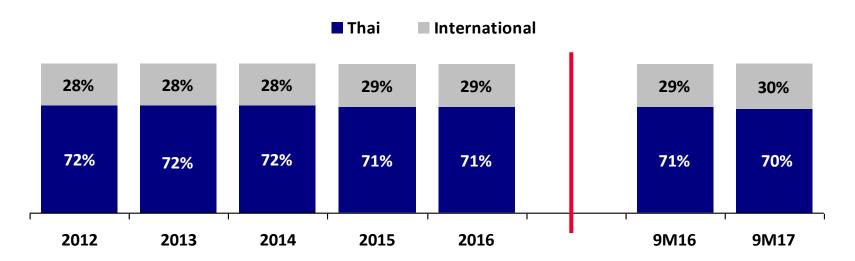






Thai and International Patients

Revenue Contribution by Nationality



Commentary

- 9M17 revenues from Thai patients grew 5% yoy while international patients grew 8% yoy
 - Top 5 international patient revenues are from Japan, Myanmar, UAE, UK and China which contribute 2.3%, 1.8%, 1.7%, 1.6% and 1.6% of total patient revenues respectively
 - Key growth for International patient revenues are China (+27%), USA (+19%) and France (+19% yoy)







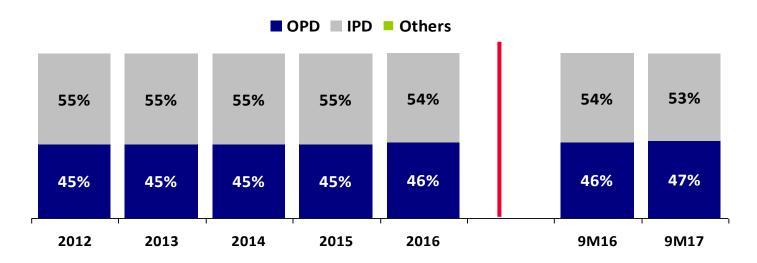




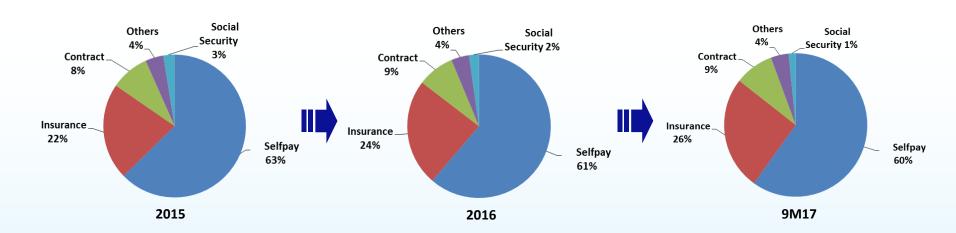


Patient Mix

Revenue Breakdown by Patient Types



Patient Revenue by Payor: Increasing Insurance Portion









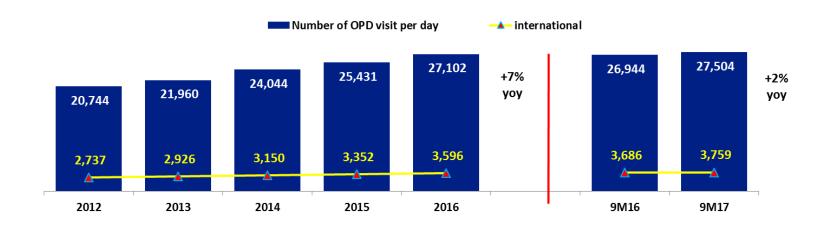




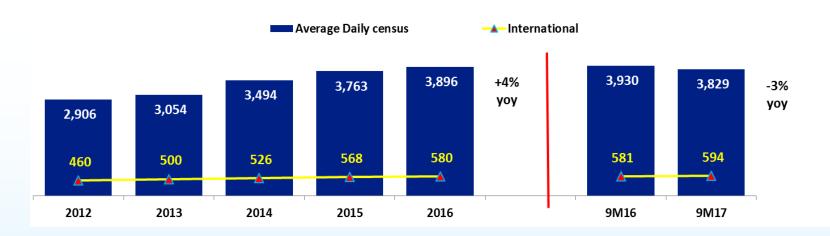


Patient Volume

Number of OPD Visits per Day



Average Daily Census (ADC)



Remarks: - Including social security







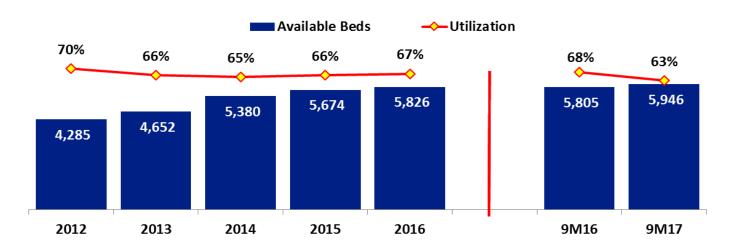




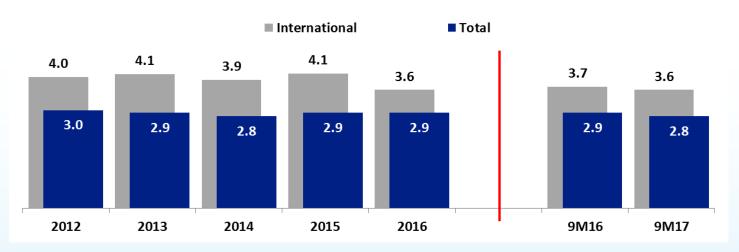


Utilization of Beds

Utilization Based on Available Beds



Average Length of Stay (days)



Remarks:- Including social security patients











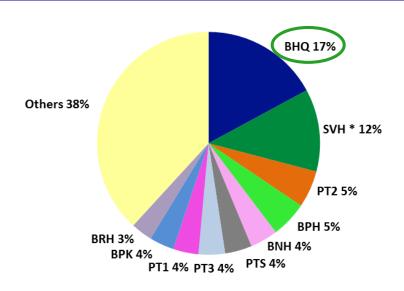


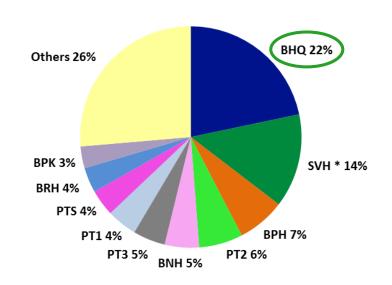
Financial Highlights

Diversified Sources of Revenues and Profitability

Operating Income Contribution in 9M17

Total EBITDA Contribution in 9M17





Commentary

- In 9M17, top 5 hospitals contributed 43% of total revenues and 54% of total EBITDA
- Key hospitals that drive revenue growth were BKN (+39%), SCH (+37%), BCM (+30%), BUD (+22%),
 PLC (+16%) and SIH (+12% yoy)

Remark: - Operating income is calculated from hospital revenue + revenue from sales of goods and food + other income

- EBITDA is calculated from revenue from hospital operations + revenue from F&B + other income – cost from hospital operations – SG&A expenses











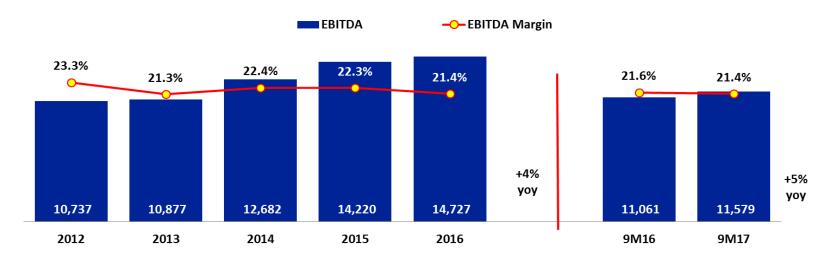


^{*} SVH also included SNH performance

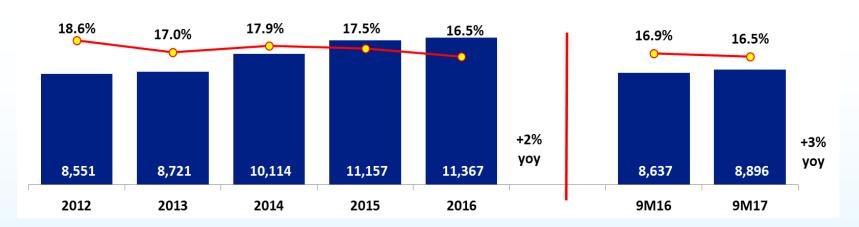
Profitability Trend

EBITDA & EBITDA Margin

(THB mm)



EBIT & EBIT Margin * (THB mm)



Remarks: - Excluding non-recurring items









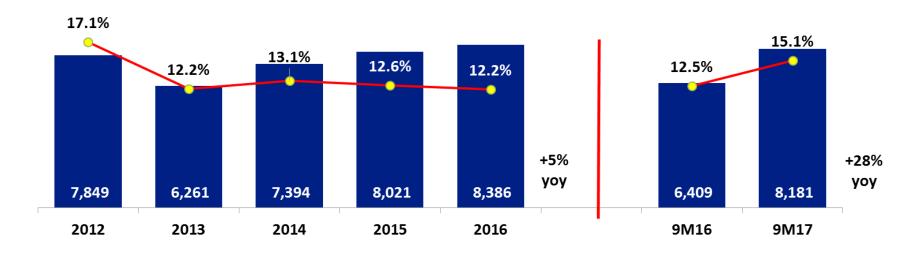




Profitability Trend

Net Profit & Net Profit Margin

(THB mm)



Commentary

- 9M17 net profit increased +28% yoy due mainly to gain on partial sale of investment in BH totaling
 Baht 2,195 million (net of income tax)
- If excluded gain on sales of investment in BH, 9M17 net profit decreased 4% yoy mainly from
 - Increase in finance expenses from convertible bonds and an issuance of debentures in 1Q17
 - Finance expenses would decrease in 4Q17







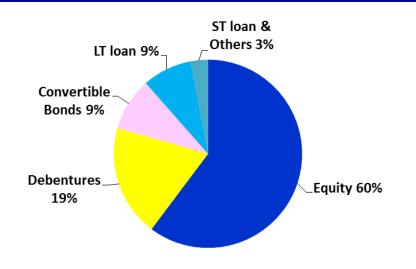




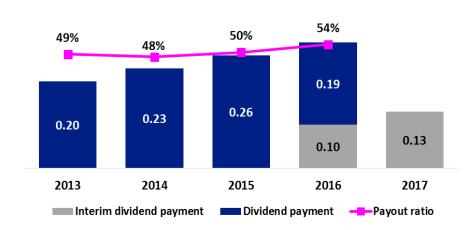


Capital Management

Capital Structure as of September 2017



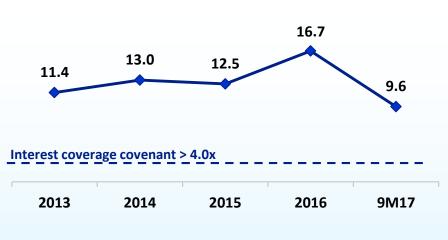
Dividend Payment & Payout Ratio



Gearing Ratios: Well Within Covenants

Net debt / EBITDA covenant < 3.25x 2.3 2.2 1.9 Net debt / equity covenant < 1.75x 1.7 1.7 0.6 0.5 0.5 0.6 2016 2013 2014 2015 9M17 Net Debt/EBITDA Net Debt/Equity

Interest Coverage















Sustainability Development

Your Trusted Healthcare Network

Good Corporate
Governance

Practiced good Corporate Governance to ensure long-term growth and sustainability

Employee Well-Being and Human Rights

Fully committed to support diversity and human rights in term of gender and cultural differences



Encouraged reductions of energy use without reducing the quality of care and raised awareness on efficient energy consumption

Social and Community Development

Encouraged donation of medical supplies and equipment to unfortunate person

Provided health check-up to promote health and well-being of communities























Appendix 1

For More Information:- www.bangkokhospital.com

Group 1 (Bangkok&West&Cambodia)	Ownership	No. of Beds	Group 4 (North&Northeast)		
1. Bangkok Hospital	100% 🥝	343		Ownership	No. of Beds
2. Bangkok Heart Hospital ├─ (BHQ)	100% 🥝	97	26. Bangkok Udon (BUD)	100%	120
3. Wattanosoth Hospital ー	100% 🥝	48	27. Bangkok Phitsanulok (BPL)	100%	195
4. Bangkok Huahin (BHN)	100% 🥝	60	28. Bangkok Khon Kaen (BKN)	100%	140
5. Bangkok Sanamchan (BSN)	100%	200	29. Bangkok Phrapradaeng (BPD)	84.0%	60
6. Thepakorn (TPK)	44.5%	100	Group 5		
7. Muang Petch (MPH)	100%	255	30. Phyathai 1 (PT1)	100%	350
8. Bangkok Muangraj (BMR)	100%	125	31. Phyathai 2 (PT2)		260
9. Royal Phnom Penh (RPH)	100% 🥝	100	32. Phyathai 3 (PT3)	98.2%	240
10. Royal Angkor International (RAH)	80.0%	30	33. Phyathai Sriracha (PTS)	74.8%	350
Group 2			34. Phyathai Nawamin (PTN)	99.8%	140
11. Samitivej Sukhumvit (SVH)	95.8% 🥝	275	35. Paolo Paholyothin (PLP)	100%	300
12. Samitivej Srinakarin (SNH)	95.8%	400	36. Paolo Samutprakarn(PLS)	93.6%	200
13. Samitivej Sriracha (SSH)	69.8%	184	37. Paolo Chokchai 4 (PLC)	85.7%	148
14. Samitivej Thonburi (STH)	63.5%	150	38. Paolo Rangsit (PLR)	100%	150
15. Samitivej Chonburi (SCH)	100%	220	39. Paolo Kaset (PLK)	100%	162
16. Samitivej Chinatown (SCT)	100% 🥝	59	Group 6 (South)		
17. BNH Hospital (BNH)	91.5% 🥝	144	40. Bangkok Phuket (BPK)	99.7%	266
Group 3 (East)			41. Siriroj International (SIH)	100%	151
18. Bangkok Pattaya (BPH)	97.3%	400	42. Dibuk (DBK)	99.7%	100
19. Bangkok Rayong (BRH)	100%	220	43. Bangkok Hat Yai (BHH)	98.8%	200
20. Bangkok Chanthaburi (BCH)	99.7%	170	44. Bangkok Samui (BSH)	100%	52
21. Bangkok Trat (BTH)	99.8%	114	45. Bangkok Surat (BSR)	100%	150
22. Sri Rayong (SRH)	100%	195	Group 7: Non-Hospital		
22.3	20070	200	National Healthcare System	100%	
Group 4 (North&Northeast)			2. Bio Molecular Laboratories	95.0%	
23. Bangkok Chiangmai (BCM)	100% 🥝	181	3. The Medicpharma	87.1%	
24. Bangkok Ratchasima (BKH)	91.4%	180	4. A.N.B Laboratories	100%	
25. Bangkok Pakchong (BHP)	91.4%	31	5. Save Drug Center	100%	
Remark:- Number of beds is structured beds			6. General Hospital Products	45.8%	











Shareholding Structure

(As of 16 March 2017)

		% of Shareholding
1	Mr. Prasert Prasarttong-Osoth, M.D. and family	23.3%
2	Mr. Wichai Thongtang and family	8.3%
3	Bangkok Airways*	7.8%
4	The Viriyah Insurance Co., Ltd.	6.1%
5	Thai NVDR Co., Ltd.	3.8%
6	Social Security Office	3.0%
7	Mr. Chirotchana Suchato, M.D. and family	2.7%
8	Ladpli family**	2.3%
9	Mr. Chuladej Yossundharakul, M.D. and family	1.9%
10	The Bank of New York Mellon	1.9%
	Total	61.2%

Source: Summary of the information from Thailand Securities Depository Company Limited (TSD)

^{**} Consisted of Miss Noppamas Ladpli, Mrs. Atinuch Malakul Na Ayudhaya and Mr. Parameth Ladpli













^{*} Consisted of Bangkok Airways PCL and Bangkok Airways Holding Co., Ltd