



**Bangkok Dusit Medical Services (BDMS)**  
**Investor Presentation 4Q16 & 2016 Results**  
**March 2017**

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# Overview

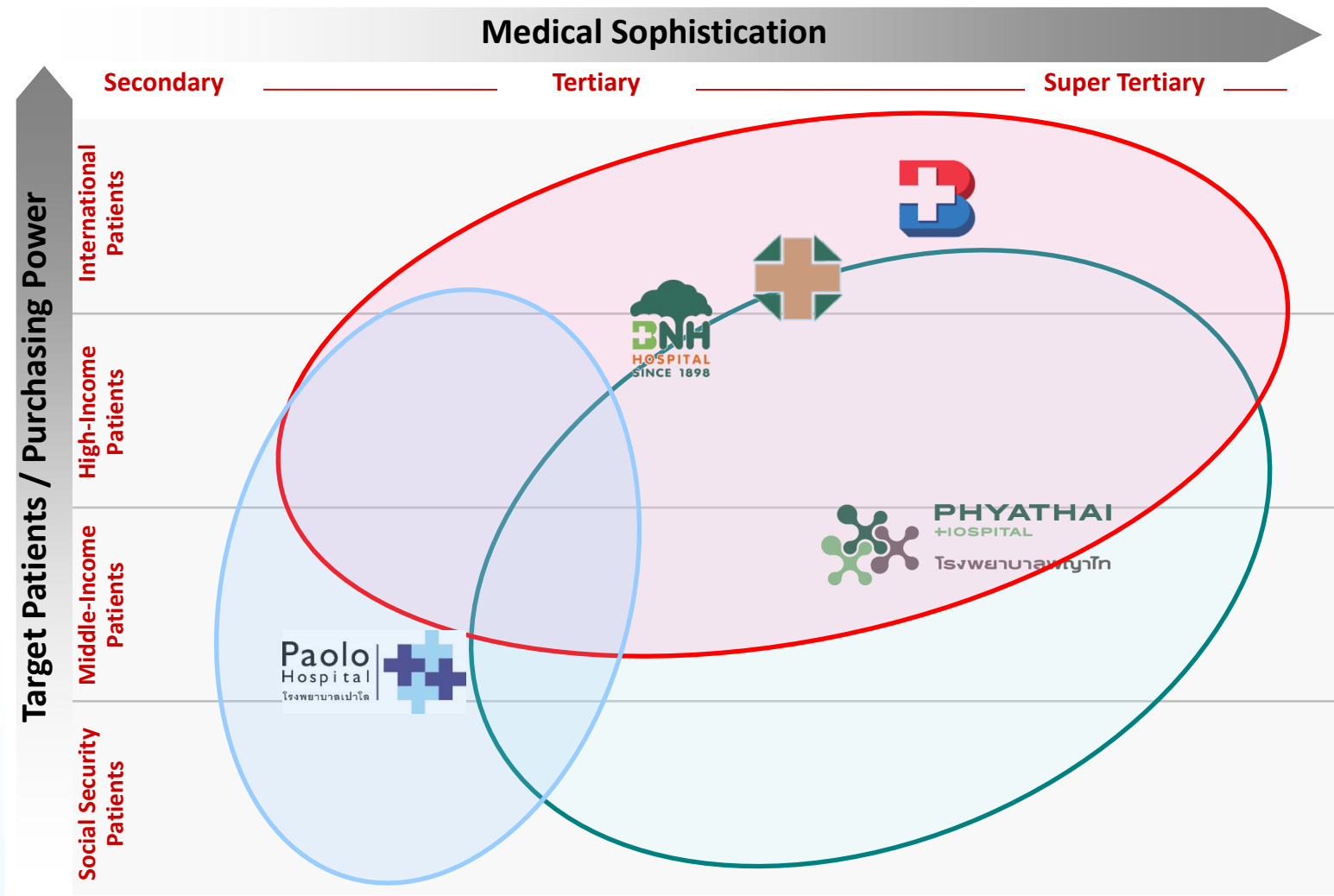
## Overview

- Established on February 26, 1972
- Largest private hospital operator in Thailand in terms of revenues from patient services and market capitalization
- Owns and manages 44 hospitals (with total beds\* of 7,865) under 6 hospital brands:

Brand	No. of Hospitals	No. of Beds*
 Bangkok Hospital	20	3,136
 Phyathai Hospital	5	1,340
 Samitivej Hospital	5	1,229
 Paolo Hospital	5	960
 BNH Hospital	1	144
 Royal Hospital	2	130
Local Hospital	6	926

\* Maximum number of beds according to structure of the hospitals

# Diversification of Patient Mix



# Shareholding Structure

As of 30 January 2017

	% of Shareholding
1 Mr. Prasert Prasarttong-Osoth, M.D. and family	23.4%
2 Mr. Wichai Thongtang and family	8.4%
3 Bangkok Airways*	7.8%
4 The Viriyah Insurance Co., Ltd.	6.1%
5 Thai NVDR Co., Ltd.	3.7%
6 State Street Bank Europe Limited	3.1%
7 Mr. Chirothana Suchato, M.D. and family	2.7%
8 Social Security Office	2.4%
9 Ladpli family**	2.3%
10 Mr. Chuladej Yossundharakul, M.D. and family	1.9%
<b>Total</b>	<b>61.8%</b>

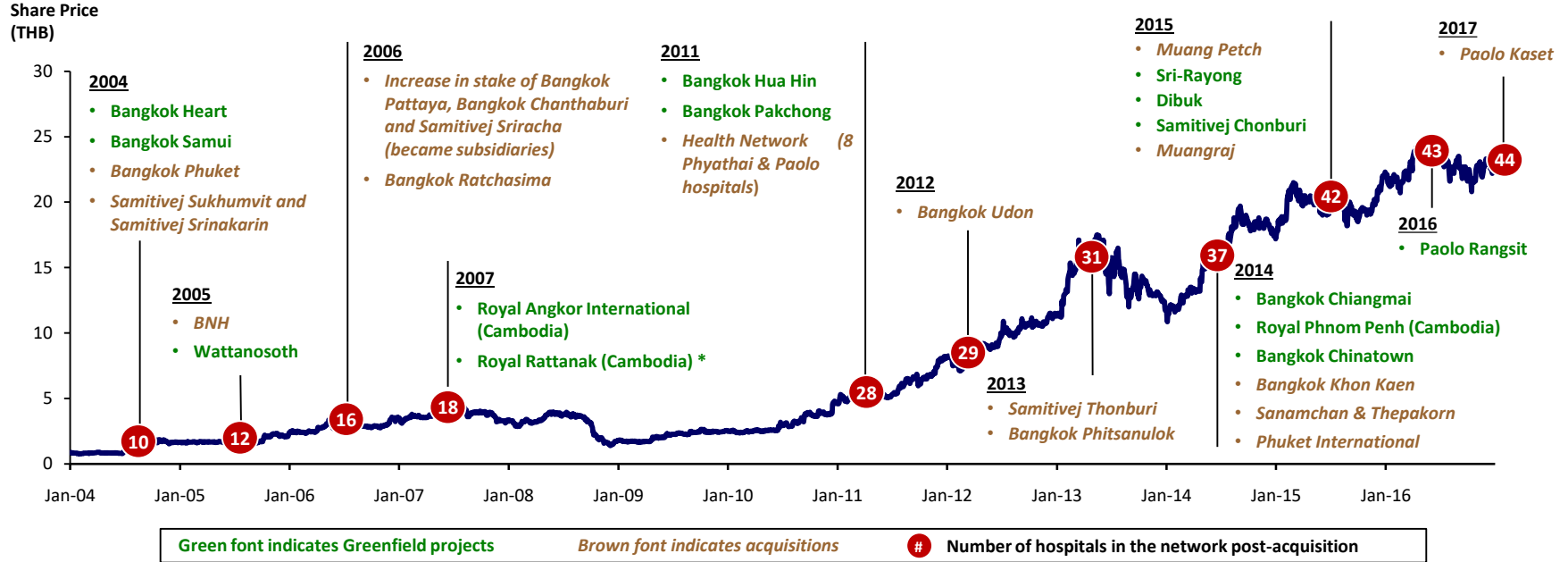
Source: Summary of the information from Thailand Securities Depository Company Limited (TSD)

\* Consisted of Bangkok Airways PCL and Bangkok Airways Holding Co., Ltd

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

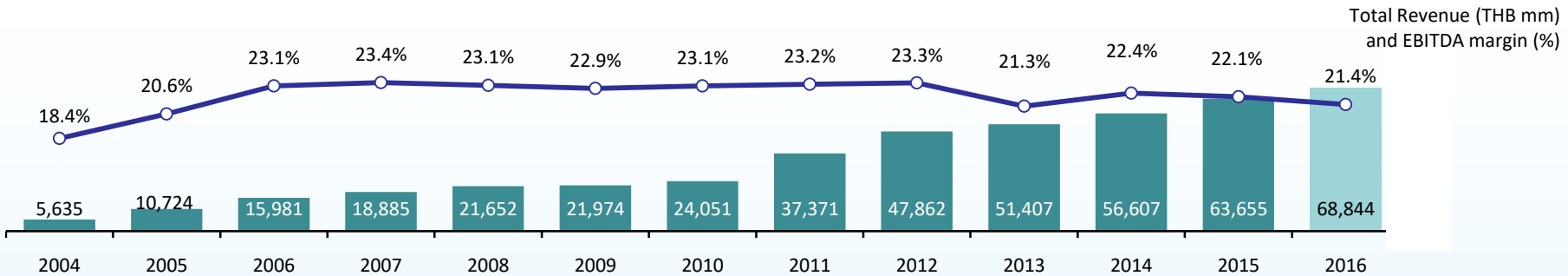
# Successful Track Record of Expansion Through M&A and Greenfield Projects

## 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 (2004-2015 CAGR of 24.7%) with Resilient EBITDA margin



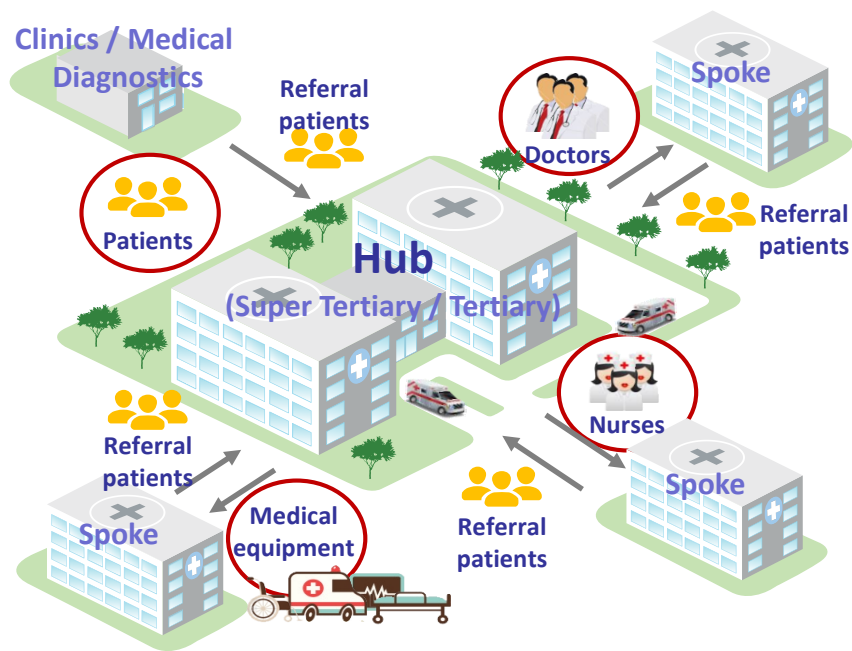
Source: Derived from BDMS' financial statements

BDMS has developed 13 new hospitals and acquired a total of 30 hospitals to date



# 'Hub-and-Spoke' Model

Providing a Proven Patient Referral System and Creating Efficiency Through Scale



- 1 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



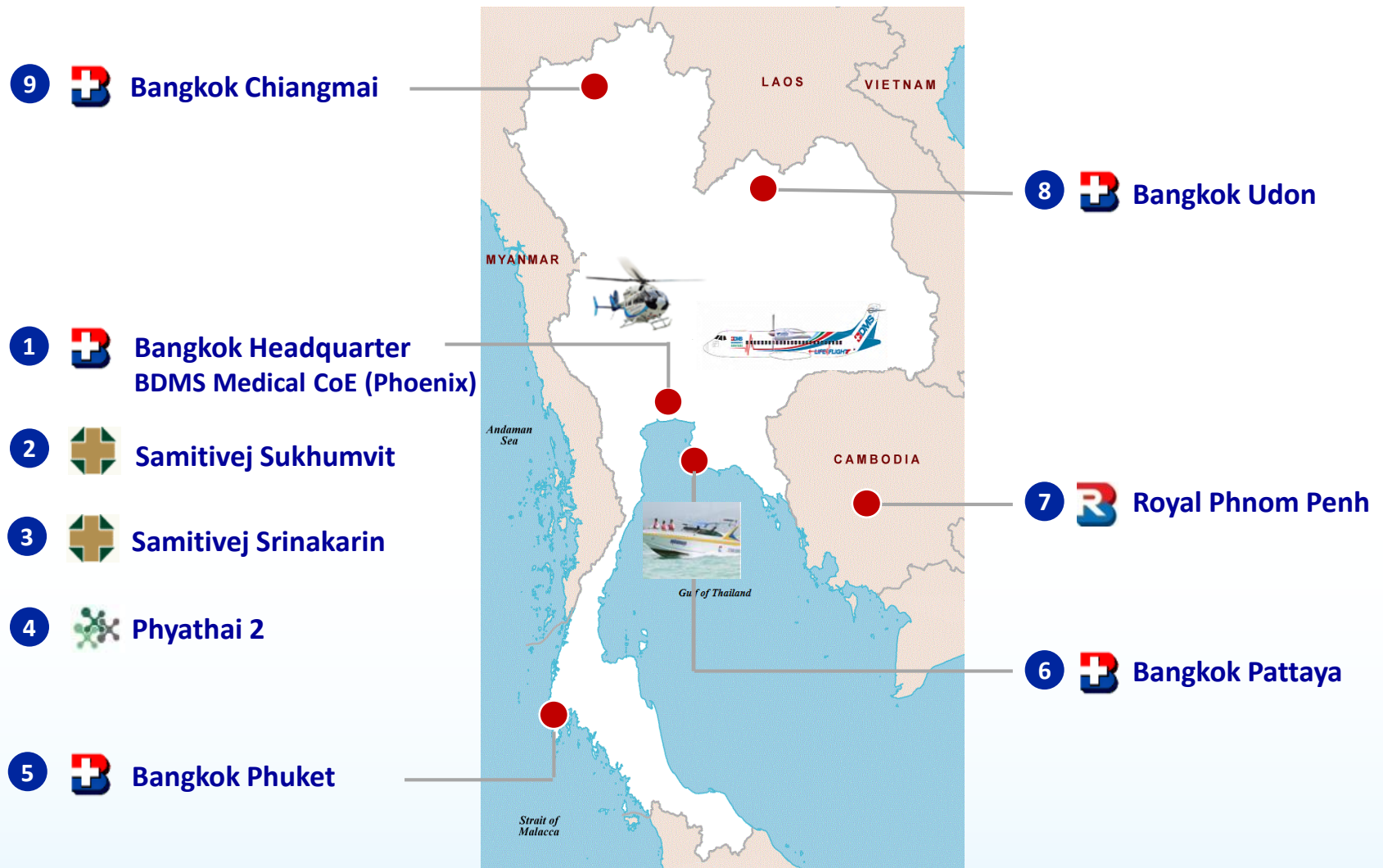
BDMS Wellness Clinic



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

### Others



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



- Collaboration with local institutions



# BDMS Wellness Clinic

## A Brand New Wellness Clinic Delivering World-Class Services



- Acquiring 15 rai of land and 3 buildings in the northern part of the Park Nai Lert (Heart of Bangkok) for THB 10,800 mm and plan for renovation Capex of THB 2,000 mm
- Providing premium comprehensive wellness & preventive healthcare services
- Targeting high-end Thai and International customers

### ■ Timeline

- Sep 2016 Paid THB 1,080 mm for deposit
- Feb 2017 Paid THB 2,000 mm and accepted the transfer of ownership
- May 2017 Will pay the rest of THB 7,720 mm



- 1 Park Nai Lert Hotel (280 rooms)
- 2 Promenade Building
- 3 Staff Canteen Building

# Continue to Expand Our Footprint in the Upcountry

## New Hospitals in Pipeline



Bangkok Hospital Surat



Bangkok Hospital Chiangrai



Hospitals	Total Beds	1 <sup>st</sup> Phase	Project Details	Commission Date
1 Bangkok Hospital Surat	150	50	<ul style="list-style-type: none"> <li>Secondary care hospital</li> <li>Targeting middle income patients in Surat and networking with Bangkok Hospital Samui</li> </ul>	1H17
2 Bangkok Hospital Chiangrai	80	56	<ul style="list-style-type: none"> <li>Basic tertiary care hospital</li> <li>Targeting residents of Chiangrai, Phayao and Nan area and international patients from Southern China, Myanmar and Laos</li> </ul>	2018

# Expansion of Existing Hospitals

## Accommodate Rising Demand in Healthcare



Chiva Residence & Chiva Transitional Care Hospital



Hospitals	Total Beds	Project Details	Commission Date
1 Chiva Transitional Care Hospital	52	<ul style="list-style-type: none"> <li>Focus on elderly care and rehabilitation for patients who require extended hospitalization</li> </ul>	2017
2 Phoenix Project at Bangkok Hospital Headquarter (BHQ)	220	<ul style="list-style-type: none"> <li>Focus on Neurology Center, Orthopedics Center, Spine Center, Longevity Care Center and Rehabilitation Center</li> <li>Located next to BHQ on the land of 4 Rai</li> </ul>	2018



# Expansion of Existing Hospitals

## Upgrading Current Hub Hospitals



Phoenix Project



Expansion of Samitivej Sukhumvit Hospital

Hospitals	Total Beds	Project Details	Commission Date
3 Expansion of Samitivej Sukhumvit Hospital	45	<ul style="list-style-type: none"> <li>Focus on Japanese patients, liver and Gastrointestinal</li> <li>Located near Samitivej Sukhumvit Hospital on the land of 1 Rai</li> </ul>	2018
4 International Hospital	100	<ul style="list-style-type: none"> <li>7- storey building consisted of 2 buildings, dedicated to international patients</li> <li>Relocated international clinics:- Japan, Arabic, CLMV, China and Bangladesh from Wattanosoth hospital</li> </ul>	2019

# Investments

## Investments in Other Hospitals : - Listed Companies

- Ramkhamhaeng Hospital PCL 38.24%
- Bumrungrad Hospital PCL 23.95%

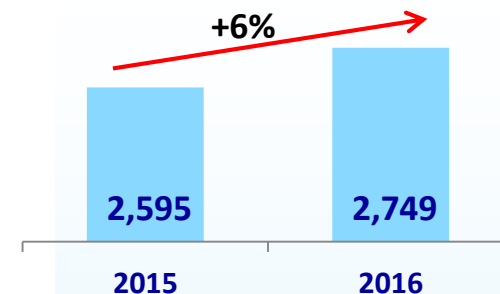
## Non- Hospital Strategic Investments<sup>(1)</sup>

- BDMS Wellness Clinic 100% Providing premium comprehensive wellness & preventive healthcare services
- 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 45% Sterile pharmaceutical product manufacturer

## Other Complimentary Business

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

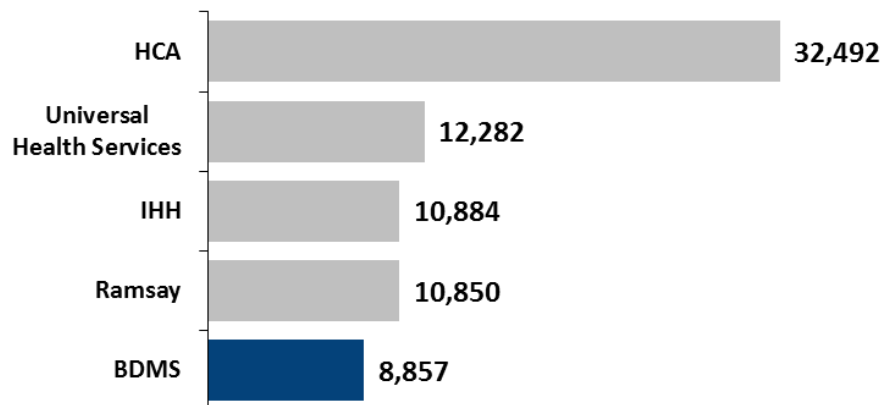
## Non-Hospital Revenues THB mm



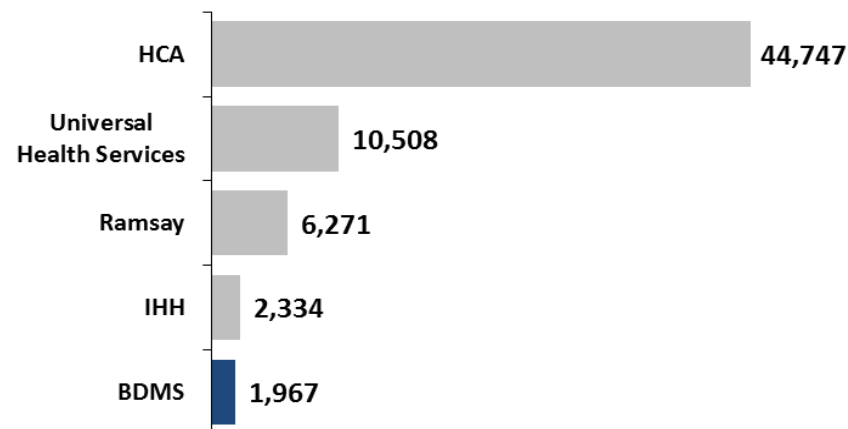
(1) Not included all BDMS' investments

# Global Hospital Rankings

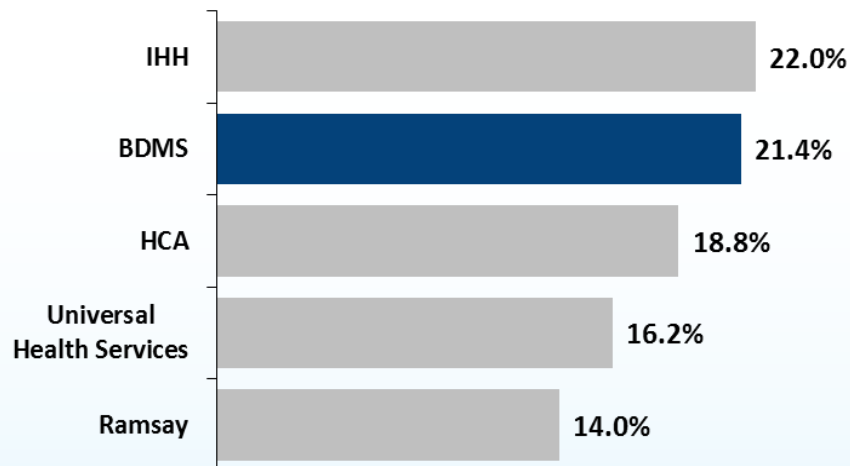
## Market Capitalization (USD mm)



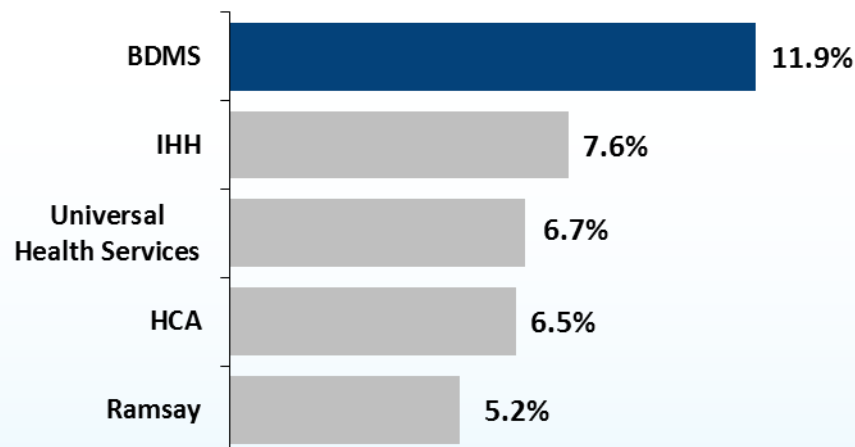
## Revenue (USD mm)



## EBITDA Margin



## Net Profit Margin



Remark: - Market capitalization as of 1 March 2017

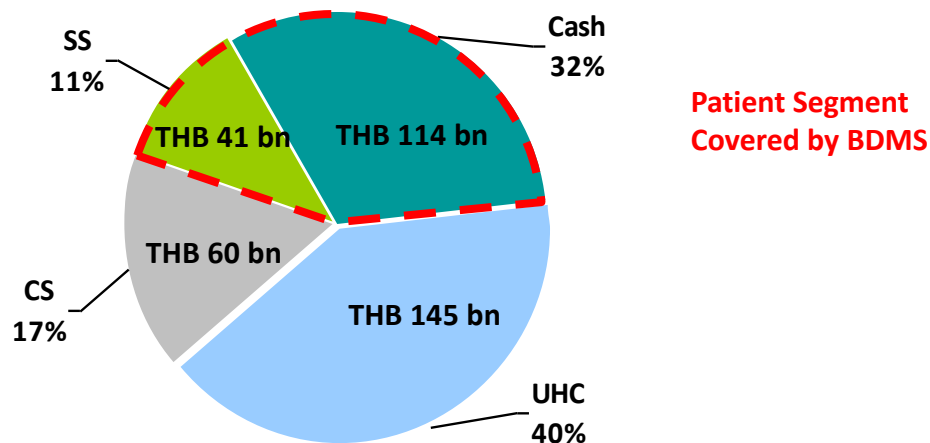
- Financial performance (excluding non-recurring items) for year ended December 2016 except Ramsay for the year ended June 2016

# Healthcare Industry

# 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

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

# Increasing Healthcare Demand

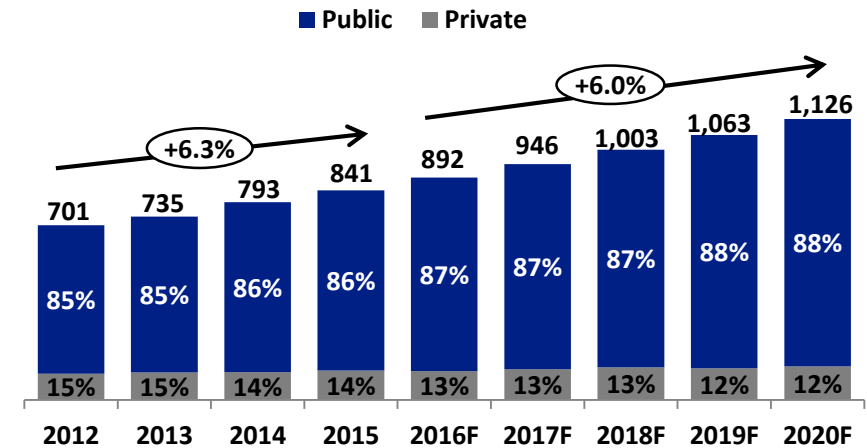
## BDMS Market Coverage (2014)

	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%
<b>Total</b>	<b>34,492</b>	<b>5,593</b>	<b>16%</b>
<b>Number of beds per 10,000 population</b>	<b>Thailand</b>		<b>21</b>
	<b>Global Average (2006-2012)</b>		<b>26</b>

Source: World Health Organization and Department of Health Service Support

## Increasing Healthcare Expenditures in Thailand

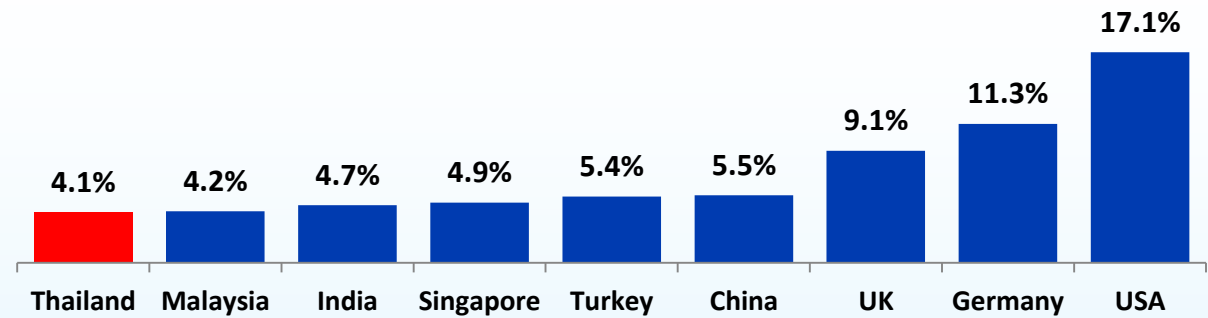
Unit : THB in Billion



Source : EIC SCB, World Health Organization, BMI

## Low Healthcare Penetration

- Healthcare expenditure as % of GDP in Thailand is still low compared to other developing and developed countries

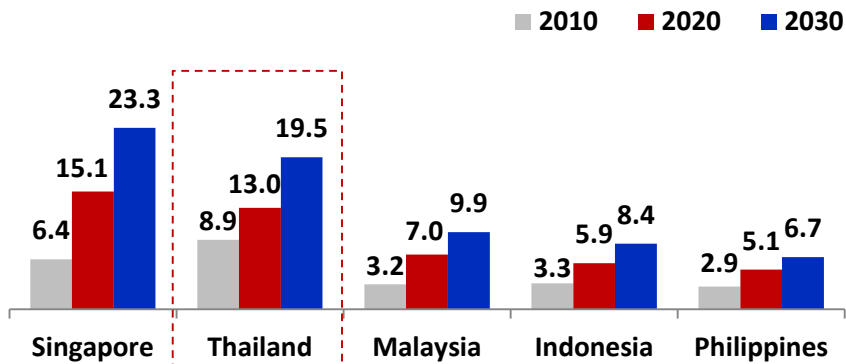


Source: World Health Organization for 2014

# Increasing Healthcare Demand

## Population Growth and Aging Profile

Percentage of population above 65 years (%)

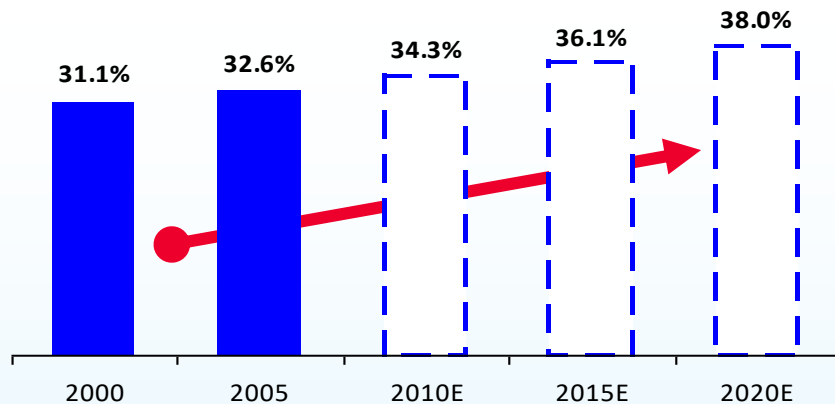


Source: UN Population Database: 2015

## 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

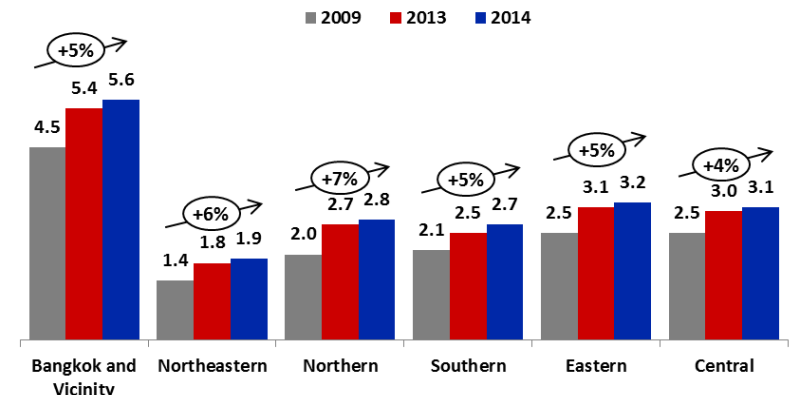
## Urbanization



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

## Rising Income per Capita

Unit : THB in Billion

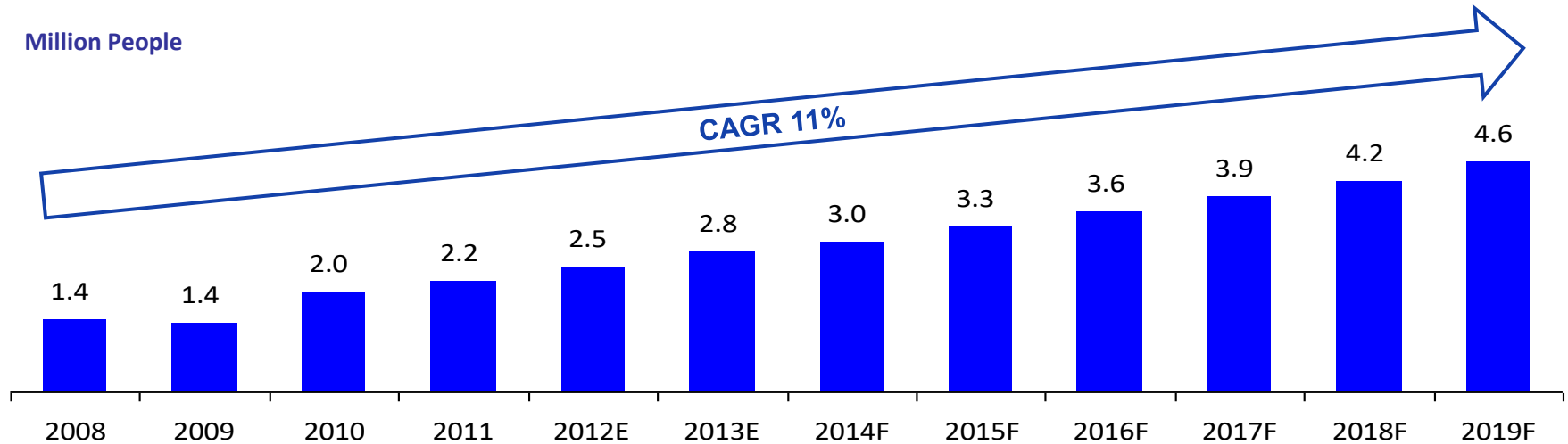


Source : EIC SCB, World Health Organization, BMI

# Medical Tourism

## Increasing trend of international patient visits

Million People



Source: Economic Intelligence Center, SCB and Ministry of Commerce

## Medical Tourism as a Rising Phenomenon

Procedures ( In USD)	USA	Singapore	Thailand	Malaysia	India
Coronary Artery Bypass Graft	88,000	54,500	23,000	20,800	14,400
Valve Replacement with Bypass	85,000	49,000	22,000	18,500	11,900
Hip Replacement	33,000	21,400	16,500	12,500	8,000
Knee Replacement	34,000	19,200	11,500	12,500	7,500
Spinal Fusion	41,000	27,800	16,000	17,900	9,500
Gastric Bypass	18,000	13,500	12,000	8,200	6,800

Source: "Patient Beyond Border" 3rd edition by Josef Woodman (2015)

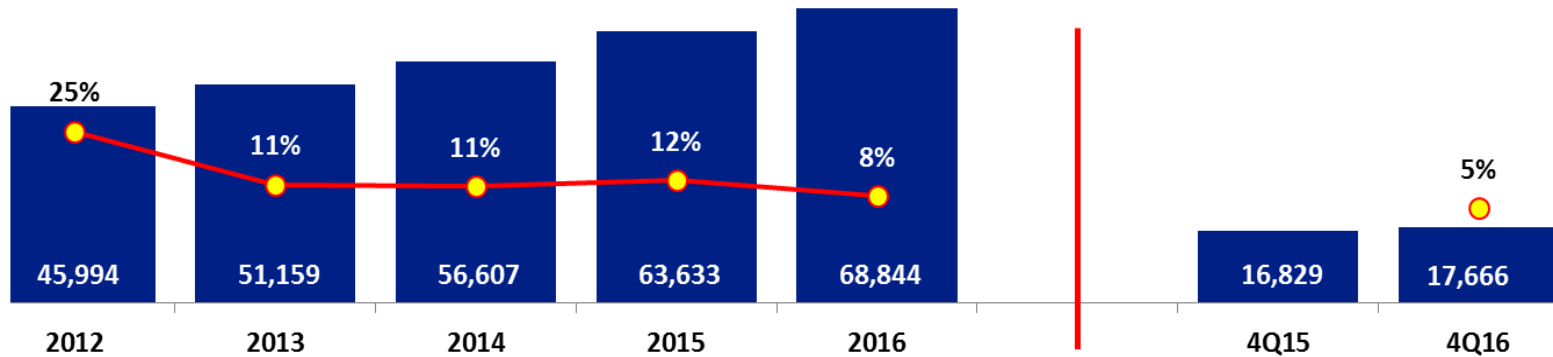


# Operational Statistics

# Operating Income Growth

## Operating Income Trend

(THB mm)



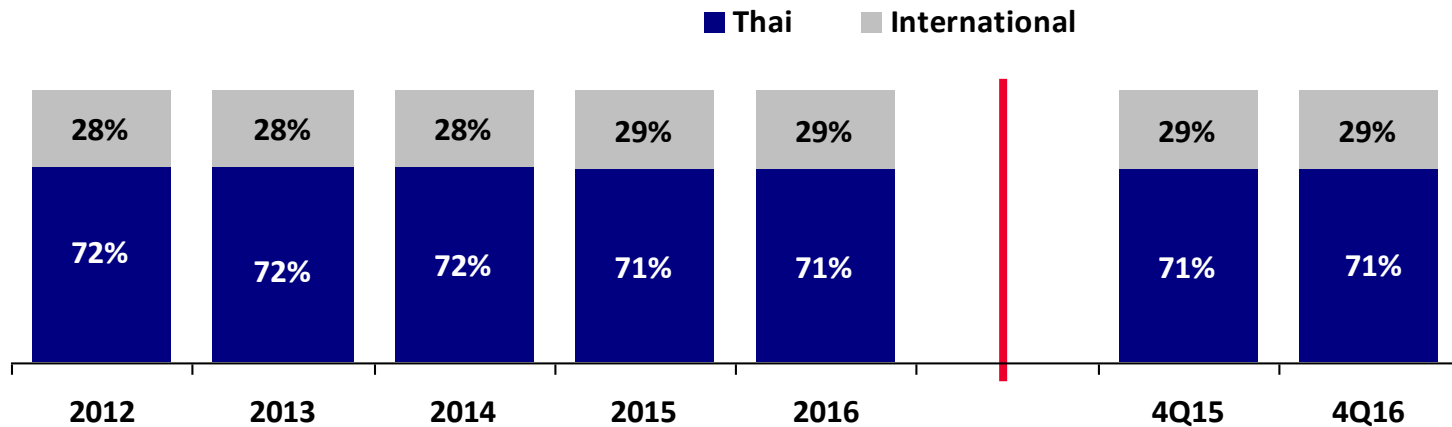
## Commentary

- **2016** Operating income increased by **8%** yoy, primarily from
  - Revenue from hospital operations grew **8%** yoy mainly from
    - Increase in number of patients
    - Increase in healthcare inflation, intensity and complexity cases
    - Consolidation of new network hospitals and patient ward renovation

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

# Expanding Both Thai and International Patients

## Revenue Contribution by Nationality

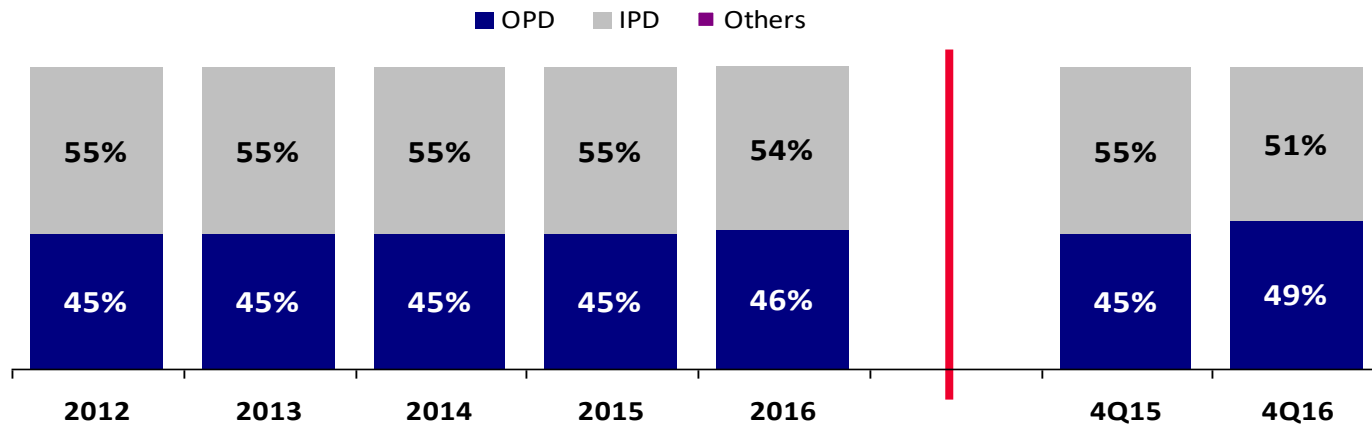


## Commentary

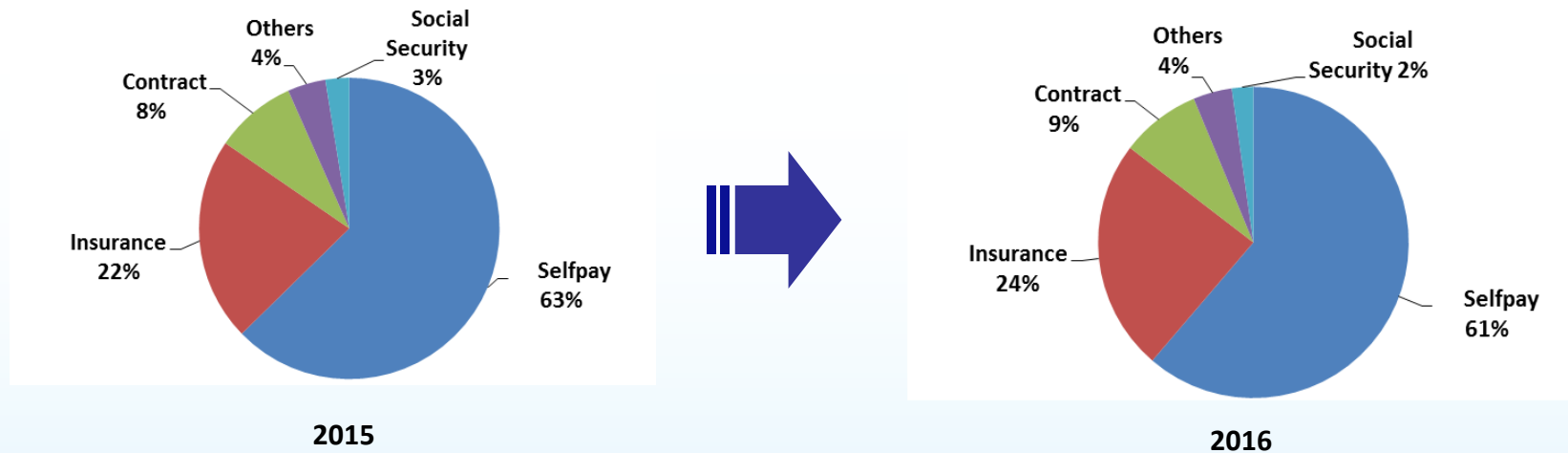
- **2016** revenue from Thai patients grew 9% while international patients grew 5% yoy
  - Top 5 international patient revenues are from Japan, Myanmar, UAE, UK and USA which contribute 2.4%, 1.9%, 1.8%, 1.6% and 1.4% of total patient revenues respectively
  - International patient revenues grew significantly for Cambodia (+31%), Australia (+27%) and China (+26%)

# Patient Mix

## Revenue Breakdown by Patient Types



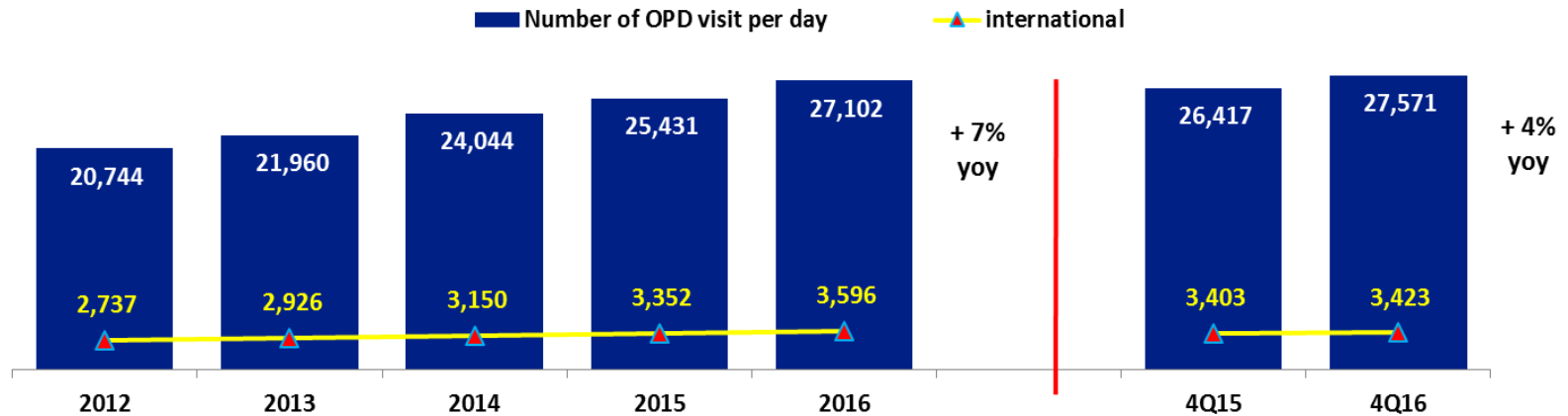
## Patient Revenue by Payor: Increasing Insurance Portion



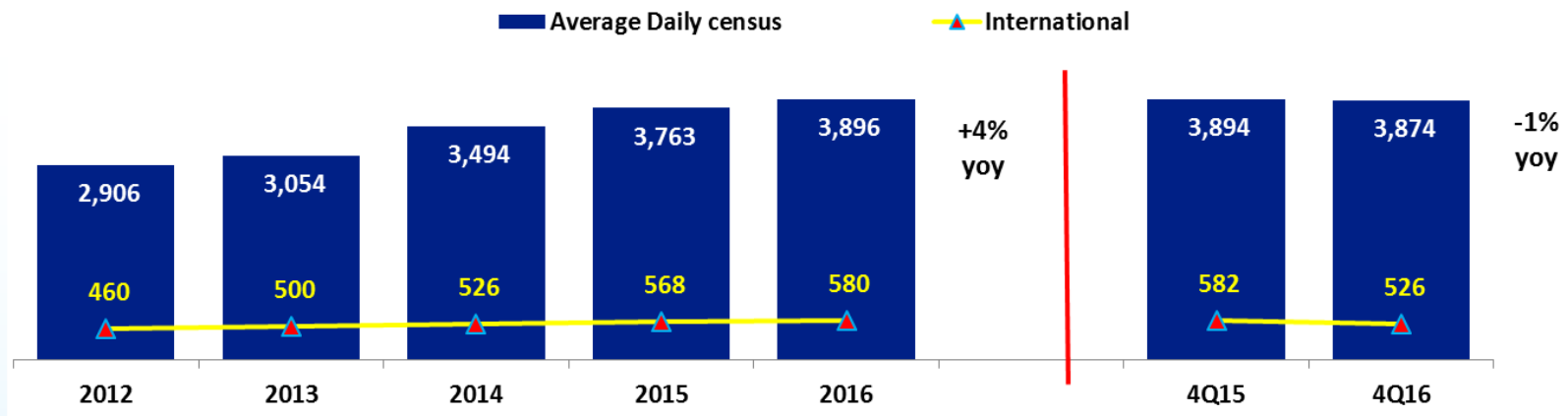
Source:- BDMS management report

# Patient Base Expansion From Both Organic Growth & Acquisitions

## Number of OPD Visits per Day



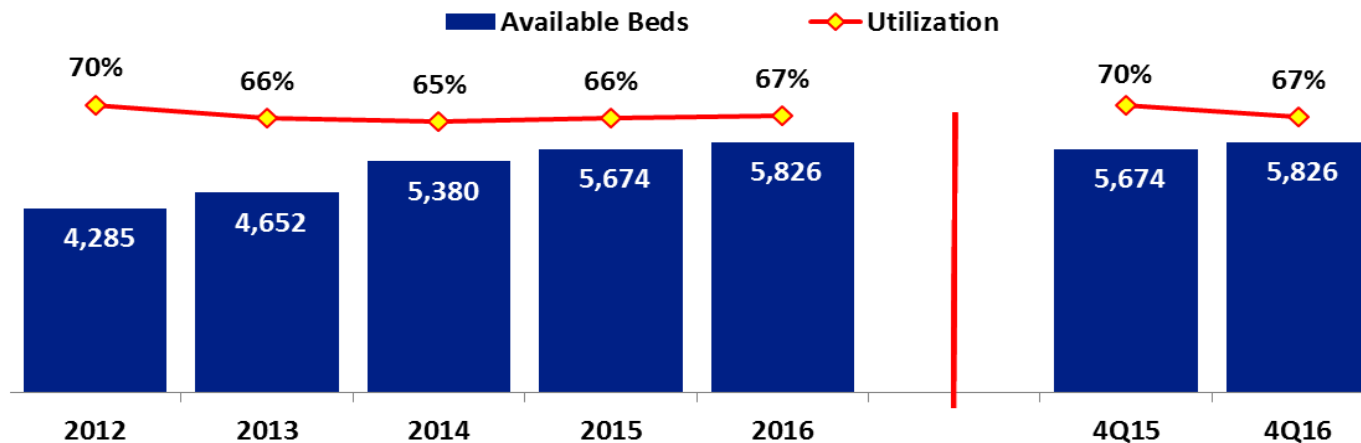
## Average Daily Census ( ADC )



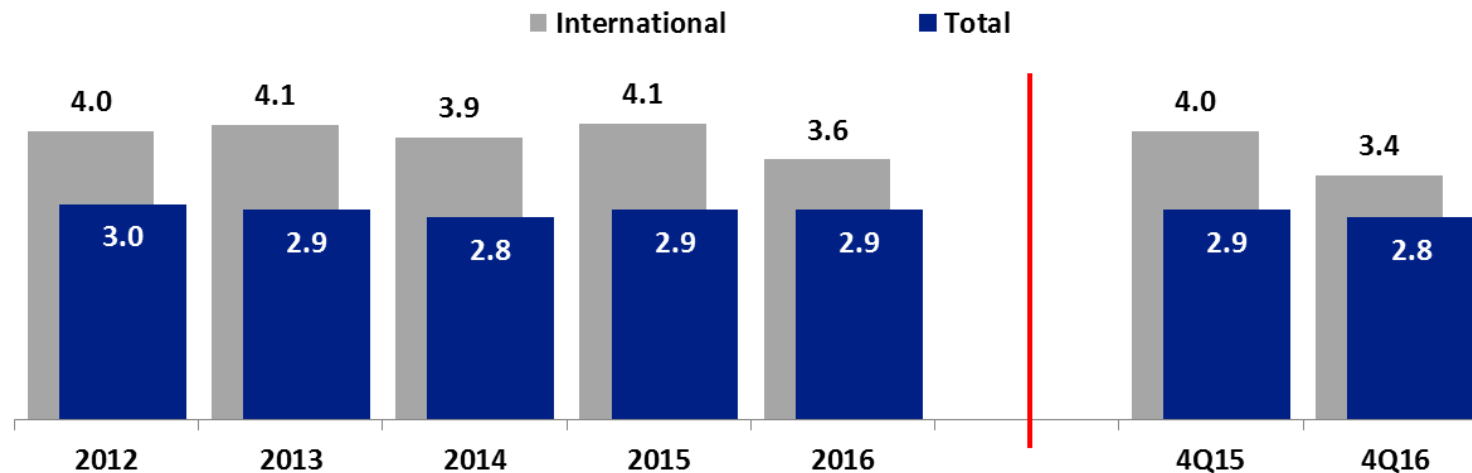
Remarks: - Including social security

# Utilization of Beds

## Utilization Based on Available Beds



## Average Length of Stay (days)

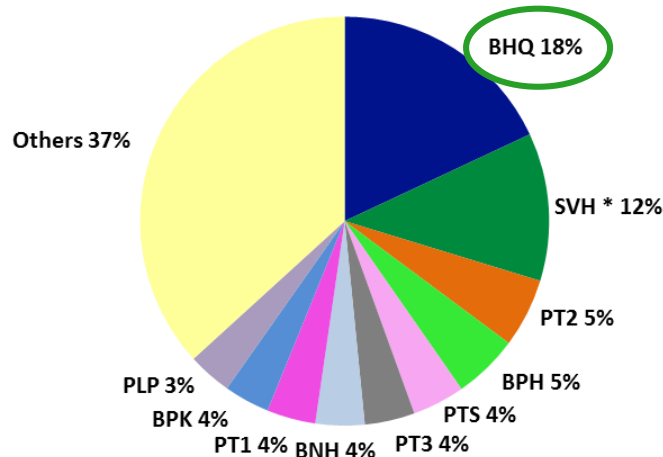


Remarks:- Including social security patients

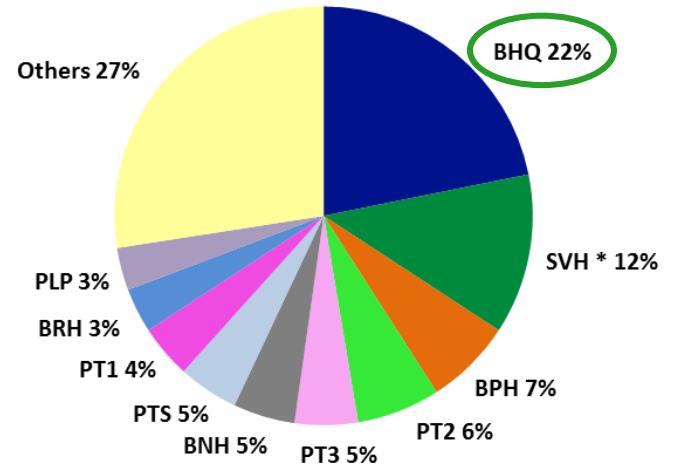
## Financial Highlights

# Diversified Sources of Revenues and Profitability

## Operating Income Contribution in 2016



## Total EBITDA Contribution in 2016



## Commentary

- During **2016**, top 5 hospitals contributed 45% of total revenue and 52% of total EBITDA
- Revenue of Bangkok&vicinity hospitals grew 6% yoy
  - Existing Hospitals that grew more than 6% yoy are STH (+28%), BNH (+11%), PT2 (+11%) and PT1 (+10%)
- Revenue of Upcountry hospitals grew 12% yoy
  - Existing Hospital that grew more than 12% yoy is BUD (+31%), BPL (+19%), BHP (+18%), BTH (+17%) and BHN (+16%)

\* SVH also included SNH performance

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

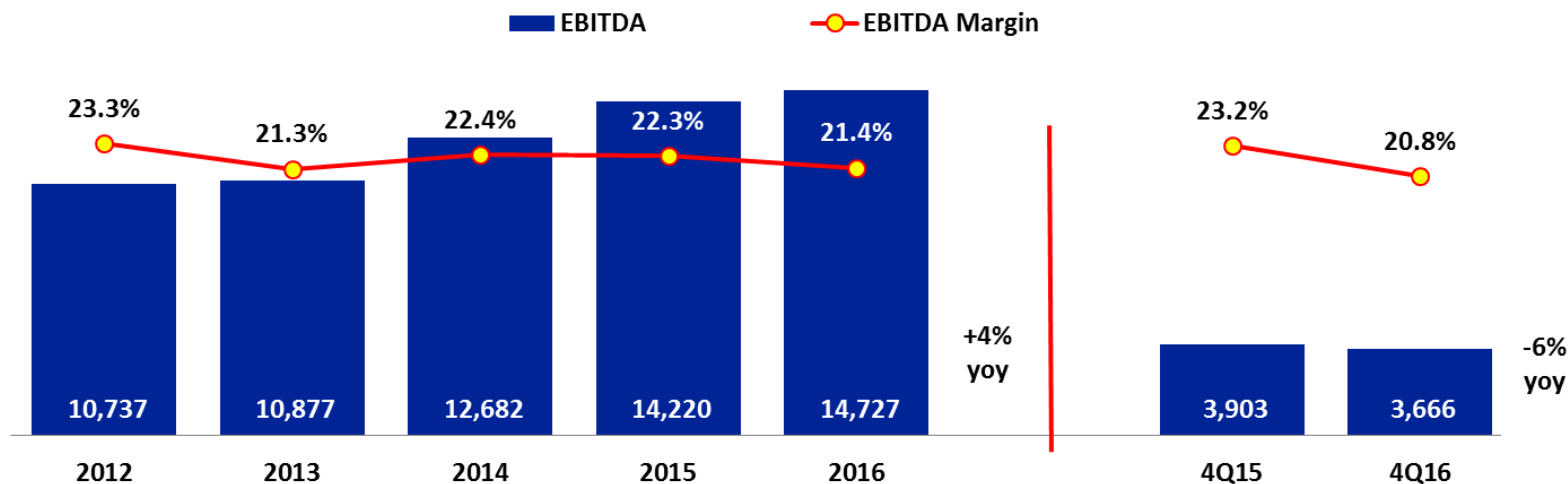
- EBITDA is calculated from revenue from hospital operations + revenue from F&B + other income – cost from hospital operations – SG&A expenses



# Profitability Trend

## EBITDA & EBITDA Margin

(THB mm)



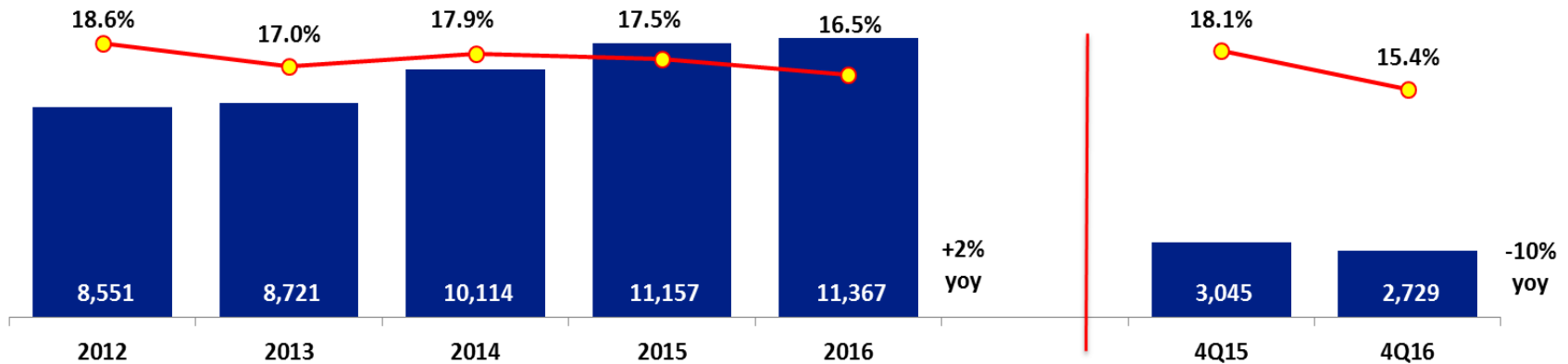
## Commentary

- **2016** EBITDA margin decreased yoy due mainly to
  - Slower growth of international patients' revenue due to decline of Middle East patients' revenue and change in mix of international patients
  - However, Thai patients' revenue and other regions continued to grow

# Profitability Trend

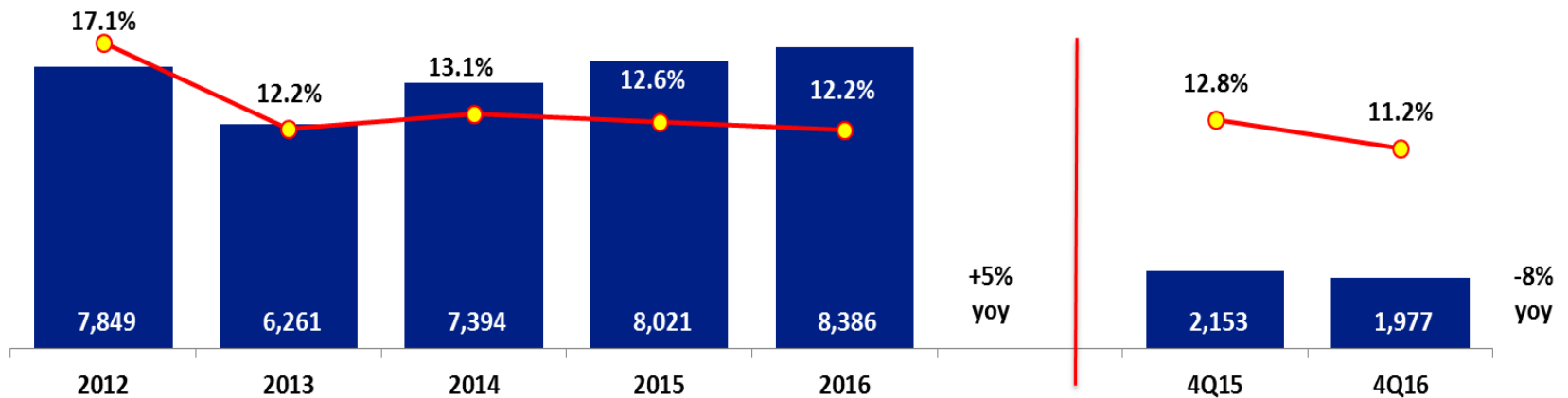
## EBIT & EBIT Margin

(THB mm)



## Net Profit & Net Profit Margin

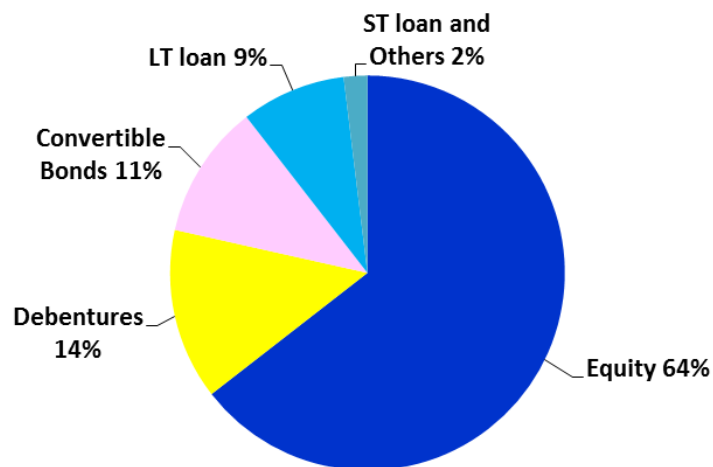
(THB mm)



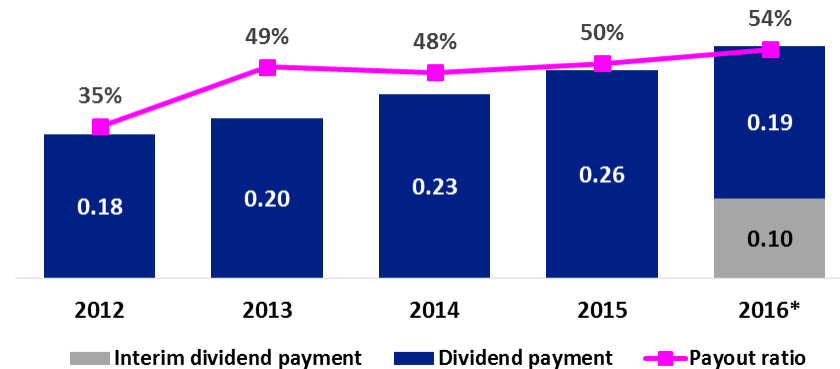
Remark: If excluding non-recurring item, recurring profit margin in 4Q16 and 2016 would be 11.2% and 11.9% respectively

# Capital Management

## Capital Structure as of December 2016



## Dividend Payment & Payout Ratio

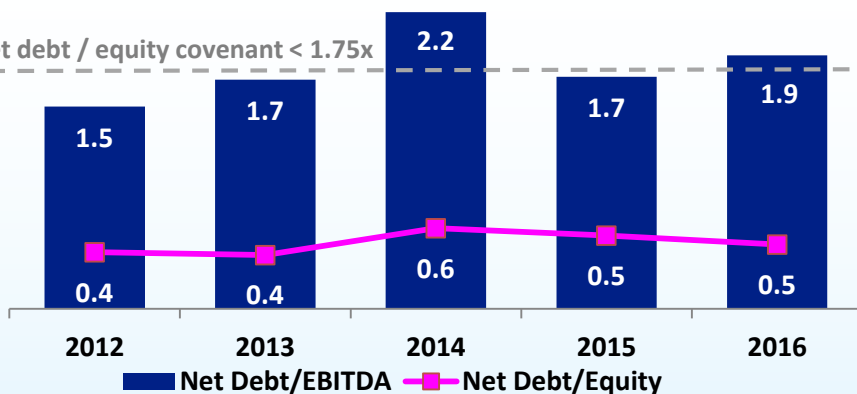


\* Board of Directors had resolution on 28 February 2017 to propose for dividend payment of Baht 0.29 per share.

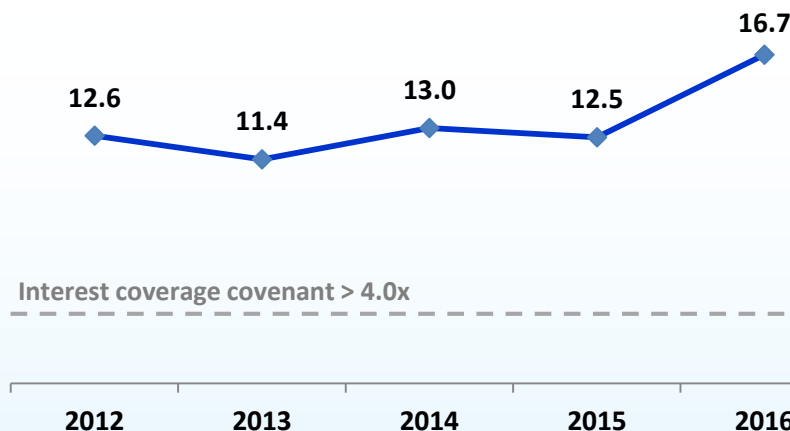
## Gearing Ratios: Well Within Covenants

Net debt / EBITDA covenant < 3.25x

Net debt / equity covenant < 1.75x



## Interest Coverage



# Financial Management Policies




Leverage	<ul style="list-style-type: none"> <li>➤ Maintain conservative leverage ratios                     <ul style="list-style-type: none"> <li>➤ Debt / EBITDA not more than 2.5x</li> <li>➤ Debt / Equity not more than 1.0x</li> </ul> </li> </ul>
Dividend Policy	<ul style="list-style-type: none"> <li>➤ More than 50% of Company only net profit, subject to operational results and the ability to pay dividend each year</li> </ul>
Funding and Liquidity	<ul style="list-style-type: none"> <li>➤ Manage liquidity as a group by using cash pooling system in order to minimize cost of fund and level of Group borrowing</li> <li>➤ BDMS has strong financial flexibility                     <ul style="list-style-type: none"> <li>➤ Has uncommitted short – term bank facilities of THB 10,000 mm</li> </ul> </li> </ul>
Interest Rate Risk	<ul style="list-style-type: none"> <li>➤ Maintain appropriated proportion of fixed / floating interest rate debt</li> <li>➤ Current proportion: Fixed 83% : Float 17% *</li> </ul>
Currency Risk	<ul style="list-style-type: none"> <li>➤ Minimize currency risk by borrowing in THB or using hedging instruments</li> </ul>

\* As of February 2017

# Appendix

## Your Trusted Healthcare Network



### Group 1 (Bangkok&West&Cambodia) Ownership No. of Beds

1. Bangkok Hospital	} (BHQ)	100%		343
2. Bangkok Heart Hospital		100%		97
3. Wattanosoth Hospital		100%		48
4. Bangkok Huahin (BHN)		100%		60
5. Bangkok Chinatown (BCT)		100%		59
6. Bangkok Sanamchan (BSN)		100%		200
7. Thepakorn (TPK)		44.5%		100
8. Muang Petch (MPH)		100%		255
9. Muangraj (BMR)		100%		125
10. Royal Phnom Penh (RPH)		100%		100
11. Royal Angkor International (RAH)		80.0%		30


### Group 2

12. Samitivej Sukhumvit (SVH)	95.8%		275
13. Samitivej Srinakarin (SNH)	95.8%		400
14. Samitivej Sriracha (SSH)	69.8%		184
15. Samitivej Thonburi (STH)	63.5%		150
16. Samitivej Chonburi (SCH)	100%		220
17. BNH Hospital (BNH)	91.5%		144

### Group 3 (East)

18. Bangkok Pattaya (BPH)	97.3%		400
19. Bangkok Rayong (BRH)	100%		220
20. Bangkok Chanthaburi (BCH)	99.7%		170
21. Bangkok Trat (BTH)	99.8%		114
22. Sri Rayong (SRH)	100%		195

### Group 4 (North&Northeast)


23. Bangkok Chiangmai (BCM)	100%		181
24. Bangkok Ratchasima (BKH)	91.4%		180
25. Bangkok Pakchong	91.4%		31

Remark:- Number of beds is structured beds




### Group 4 (North&Northeast)

	Ownership	No. of Beds
26. Bangkok Udon (BUD)	100%	120
27. Bangkok Phitsanulok (BPL)	100%	195
28. Bangkok Khon Kaen (BKN)	100%	140
29. Bangkok Phrapradaeng (BPD)	84.0%	60

### Group 5

30. Phyathai 1 (PT1)	100%		350
31. Phyathai 2 (PT2)	99.2%		260
32. Phyathai 3 (PT3)	98.2%		240
33. Phyathai Sriracha (PTS)	74.8%		350
34. Phyathai Nawamin (PTN)	99.8%		140
35. Paolo Paholyothin (PLP)	100%		300
36. Paolo Samutprakarn(PLS)	93.6%		200
37. Paolo Chokchai 4 (PLC)	85.7%		148
38. Paolo Rangsit (PLR)	100%		150
39. Paolo Kaset	100%		162

### Group 6 (South)

40. Bangkok Phuket (BPK)	99.7%		266
41. Phuket International (SIH)	100%		151
42. Dibuk (DBK)	99.7%		100
43. Bangkok Hat Yai (BHH)	98.8%		200
44. Bangkok Samui (BSH)	100%		52

### Group 7: Non-Hospital

1. National Healthcare System	100%
2. Bio Molecular Laboratories	95.0%
3. The Medicpharma	87.1%
4. A.N.B Laboratories	100%
5. Save Drug Center	100%
6. General Hospital Products	44.7%