GREEN RIVER HOLDING CO. LTD.

Stock Code: 8444.TT



Results
Presentation
2017





1.1 Company Overview



Green River Holding Co. Ltd. (8444.TT)

Year of Founding:	2011	Year of Listing	2015
Chairman	Hsieh, Jung-Hui	CEO	Huang, Teng-Shih
Operating Headquarters:	Thailand	Number of Employees:	885(2017.12)
Market Capitalization	NTD 11.21 billion (USI	O 373.65 million)	

Operating Revenue

2016: NTD 2.83 billion (USD 94.37 million) 2017: NTD 3.46 billion (USD 115.36 million)

Main **Products:**



Solid wood

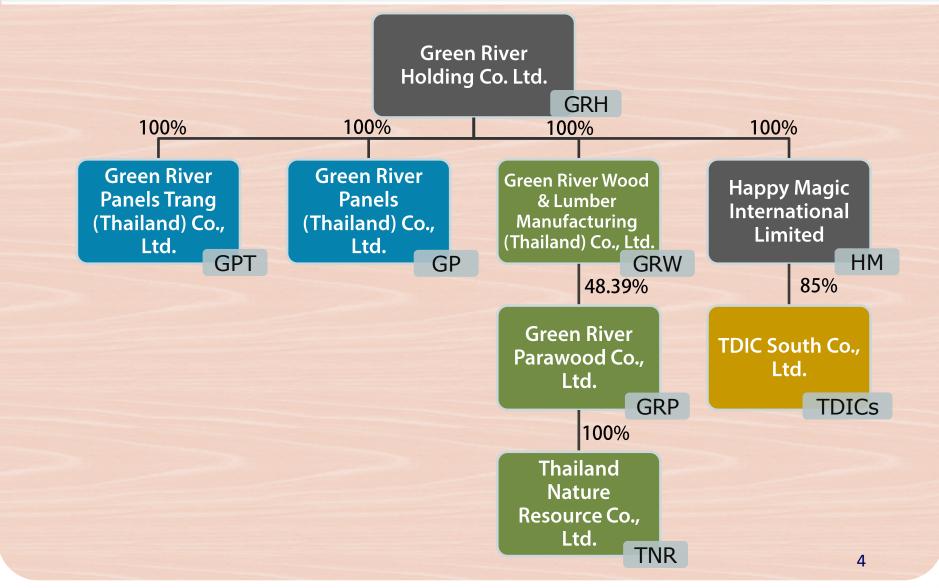


Melamine Faced Chipboard



1.1 Company Overview





1.2 Main Products



Particle Board

Applications by our customers:

Kitchen Cabinets · Office furniture · Drawer Units · Flooring · Pallets · Speaker Boxes · Green Buildings · Eco-Friendly Engineered Building Products

Green

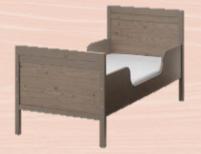
Sustainability

Technological

Cost Effective

Fashionable

















1.2 Main Products



Solid Wood

Applications by our customers:

Table tops ` Chairs ` Floorboards ` Engineered Building Products and other Decorative Products

















2.1 Development of PB Industry



Europe



- ◆ Production: 2.58 Million M³
- ◆ Population: 604 Million
- ◆ Consumption: 4M³/capita '000
- ◆ Production: 39.21 Million M³
- ◆ Population: 743 Million
- ◆ PB: 66% of Wood Panels
- ◆ Consumption: 50M³/capita '000

1961

2004

2016

Future

Asia



- ◆ Production: 15.15 Million M³
- ◆ Population:3.92 Billion
- ◆ Consumption:

 0.004M³/capita '000

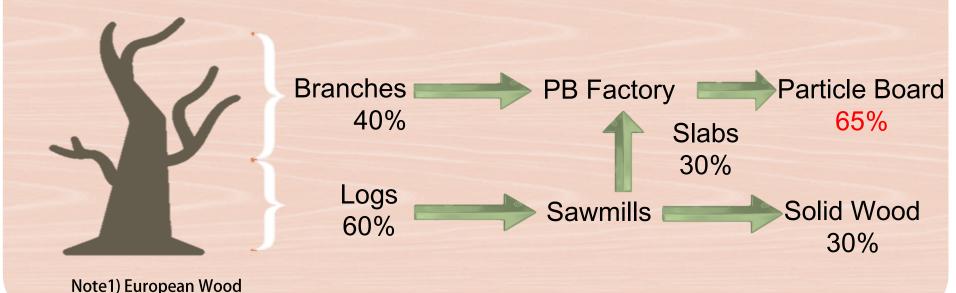
Production: steadily growing

- ◆ Production: 33.52Million M³
- ◆ Population:4.44 Billion
- ◆ PB: 14% of Wood Panels
- ◆ Consumption: 8M³/capita '000
- ◆ <u>6.25 times lower than in Europe</u>

Source:1. FAOSTAT Forestry; 2.UN World Population Clock

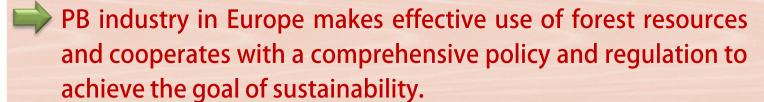


- ◆ "Contrary to the commonly held belief that there is a direct causal link between using wood and the destruction of forests, increasing the use of wood makes a positive contribution to maintaining and increasing forests." (Note1)
- ◆ By applying over 65% of a tree, PB Industry maximizes wood resource utilization.





- ◆European Forest Resources—Sustainable forest management
 - ➤ Under the concept of sustainable forest management (SFM),all European countries have policies and practices requiring reforestation. Ensuring the number of trees planted per hectare will always be more than the number cut.
 - European forests are growing by 0.8 million has a year since 1999. Nowadays, 25% of the world's forest(1,015 million hectares) are in Europe.(Note1)







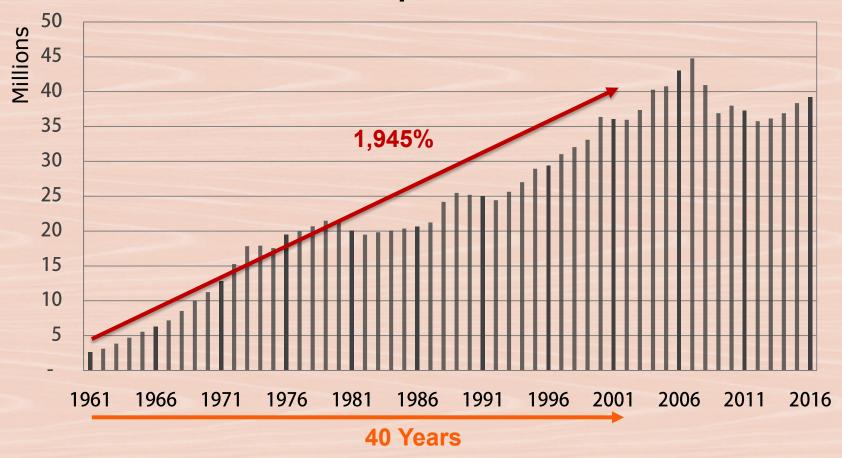
◆Asian Forest Resources—The logging ban in nature forest



- In response to environmental issues such as global warming, Asian countries are facing the destruction of the environment from estrepement and taking the rescue actions.
- Deforestation in natural forest has been banned or partly banned in China, New Zealand, Thailand, Vietnam, Philippines, Taiwan and other Asia-Pacific countries.
- > China, as an example, forest area representing 21.63% of land coverage, is below the global average of 31% (Note 1)
 - 1.To raise its forest coverage rate, China published the "Natural Forest Protection Program" in 1999. Implementing logging restrictions in ancient forest has resulted in declining availability of wood.
 - 2.To protect forest resources, China has "completely stopped commercial logging in natural forests to enlarge its forest area and forest stock volume" in its 13th five year plan. This should increase forest coverage to 23.04% by 2020.
 - The demand of PB in Asia will be fostered by the scarcity of natural forest resources and its character for maximizing wood resource utilization.



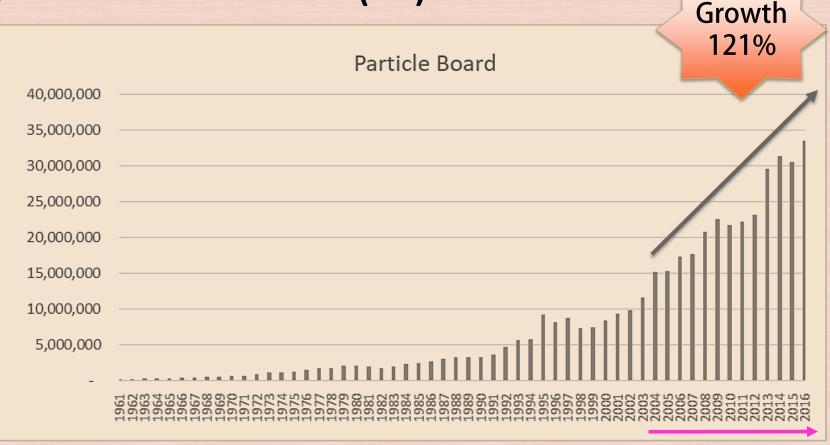
◆PB Production in Europe (M³)



Source: FAOSTAT Forestry; summarized by GRH







Source: FAOSTAT Forestry; summarized by GRH

12 years



◆PB: 4R Material

Reduce the resourcewasting:

Turning residuals and by-products from the forest products industry into higher-value products(PB).

Reduce

Recycled waste paper and fibre can be part of PB materials.

Recycle

Scraps and sawdust can be used as a biomass fuel by recovering the energy in the wood, substituting for fossil fuels.

Recover

Reuse

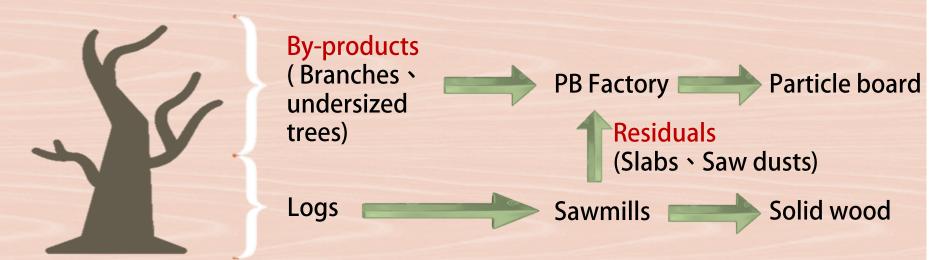
Demolished particle board from building and furniture can be reused in PB production.



♦Reduce:

Particle board manufacturing makes optimal use of residuals and byproducts from the forest products industry, turning this waste and recycled material into higher-value products.

By its very nature, particle board is among the greenest products available for architectural, construction and consumer product applications.(Note 1) •



Note1:The Composite Panel Association, CPA



♦Recover_(Note1):

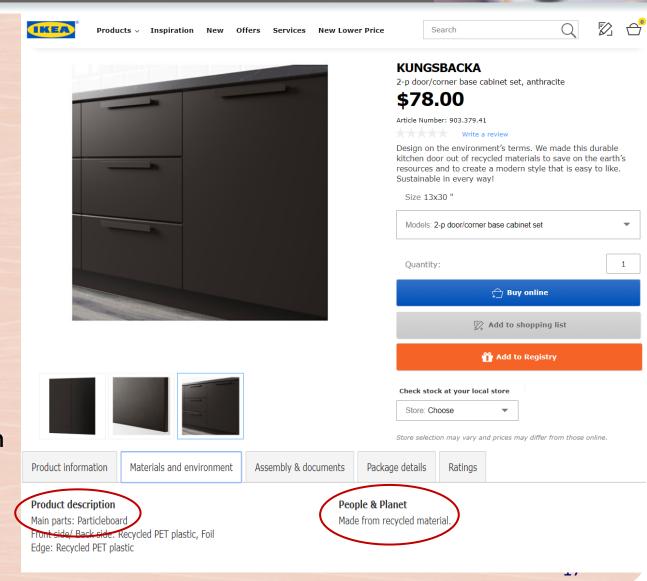
- ❖ The energy needed for PB production can use the wood waste generated in its own production process as a biomass fuel, reducing the pollution caused by using fossil fuels.
- It provides a carbon neutral substitute for fossil fuels. Since it only returns to the atmosphere, the CO2 that has been taken from it by the growing trees, wood combustion does not contribute to global warming or the greenhouse effect.
- Since wood waste contains little of the sulphur or nitrogen which contributes to acid rain, and furthermore produces little ash, wood energy is clean.

Note1: European Wood



◆Reuse:

- Discarded PB furniture can be reused as material for PB' s production.
- ❖ "Using material like PB which can almost utilize every part of a tree is in line with IKEA's long-standing commitment to CSR"-IKEA's Home Living Blog, Taiwan, 2009
- IKEA's new production Line- KUNGSBACKA in 2018,is made from100% recycled material.





♦Recycle:

- ❖ In US, to achieve Eco-Certified Composite (ECC) Sustainability Standard, particle board must be made from a minimum of 75% recycled or recovered fibre; OR at least 50% recycled or recovered fibre AND a minimum of 5% post-consumer fibre.(Note1)
- According to the statistics, using post-consumer wood and paper waste for PB could potentially divert some 95 million tons from landfills. (Note2)
- Adding waste paper and recycled fiber to PB is not only diverting those wastes from landfilling or burning, but also reducing the weight of PB in order to decrease the transportation cost and greenhouse gas emissions.



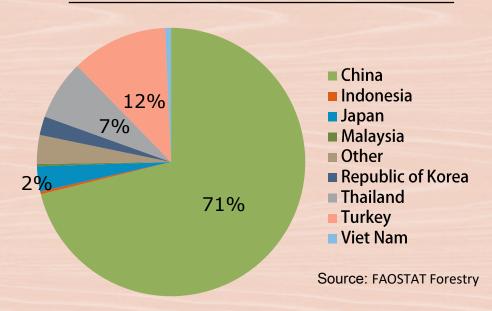
◆The demand for particle board in Asia has not been fulfilled

The demand for PB in Asia



Source: POYRY(forecast 2012~2020)

Production volume of PB in Asia



In 2016, the annual PB production volume of China was 25.72 million M³, of which only 20% was produced by continuous press lines.



2016 China Total Production Volume 25.72 Million M³ 256 PB production lines in China by late 2016
Production
Volume
17.86 million M³

25 Continuous Press Lines Total Production Volume 5.5 million M³/year

Multi-daylight Press Lines Average Production Volume 50 thousand M³/Line/year

<u>DECREASING</u> Production Volume?

By late 2016, nearly 960 production lines have been paused or shut down, with a capacity of 16.30 million M³.



◆The urge to upgrade industries

China published "Environment Protection Comprehensive List " & "Most restrictive environmental Law":

Plywood, PB and fiber boards are included in the list of highly polluting and environmentally risky products. Moreover, engineered wood which complies with environmental standards could be excluded from the list (amended in 2015).

Small factories are or shutdown due to the huge cost of pollution prevention.

China published the "Guidance Catalogue for Industrial Structure Adjustment":

Production will be restrained for lines with yearly capacity under:

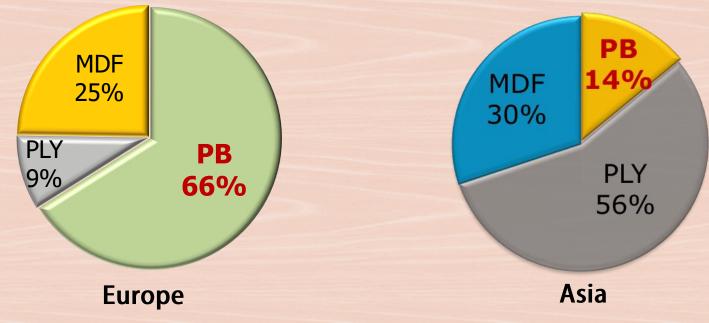
- 50,000 M³ for PB and fiberboard;
- 10,000 M³ for plywood and block board.

"Eliminating small capacity is the only way. For the continuous development of the wood panel industry, it must upgrade and transform, as well as practice green manufacturing." (Note 1)

Note1:QIAN,XIAO-YU (Note2) "Green Manufacturing Is Only Way to Go for China Wood-based Panels Industry" (2016/12) Note 2: QIAN,XIAO-YU, the vice chairman of fibreboard committee of China National Forest Products Industry Association



 Percentage of Engineered Wood Production, 2016 (PB, Plywood and MDF)

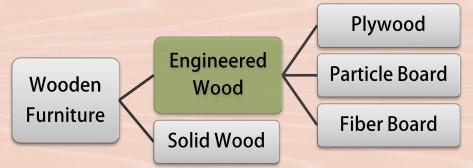


Source: FAOSTAT Forestry; Summarized by GRH

- ➤ PB accounts for 14% of Engineered wood panels in Asia, mainly resulting from
 - 1. Late introduction of PB industry.
 - 2. Fewer applications for particleboard, compared with Europe.

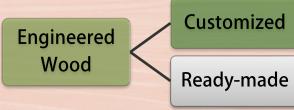


- ◆ Range of Application for Particle Board in Asia
 - > PB in Asia is mainly used for the manufacture of Wooden furniture.
 - Sources of raw material for Wooden Furniture are:



> Furniture made from engineered wood could be distinguished by

production types:





The rise of Chinese customized furniture manufacturing which has boosted the use of particle board; the use of solid wood furniture is decreasing gradually due to the increasing scarcity of material.



- Customized Furniture market has expanded in China which improves the demand for particle board in wooden furniture.
- > 2016 was named the first year of Chinese customized furniture:

Ready-made furniture using engineered wood panels was mainly made from MDF in China until recently. With the rise of customized furniture manufacturing for local consumption in residential and commercial properties, greater use is made of particle board.

Customized Furniture is the Future:

1.China published the "Regulation of house decoration and repairing-in detail practice":

The trend is away from traditional "bricks & mortar" housing construction with a long term goal of furnishing houses with customized built-in kitchen cabinets, closets, bathroom wash basins and bedroom cupboards. The scale of the customized furniture market in China will reach 449.3 million yuan by 2020. And its CAGR will be 21.73% between 2017~2020 which is larger than ready-made furniture with 3.53% CAGR.

2. Higher Penetration and expanded categories of customized furniture will enlarge the scale of the customized furniture market in China.

Customized furniture in China is mostly kitchen cabinets and closets, with 60% and 30% penetration respectively. With the higher penetration and more categories of customized furniture in the future, China continues to expand its customized furniture market.



◆Wide range of applications is expected.

Applications	Europe	Asia
Kitchen Cabinets	~	~
Furniture(H&O)	~	✓
Countertops	~	
Door cores	~	
Floor underlayment	✓	
Manufactured home decking	✓	
Shelving	~	
Stair treads	~	





Enlarging capacity by horizontal expansion

High production efficiency

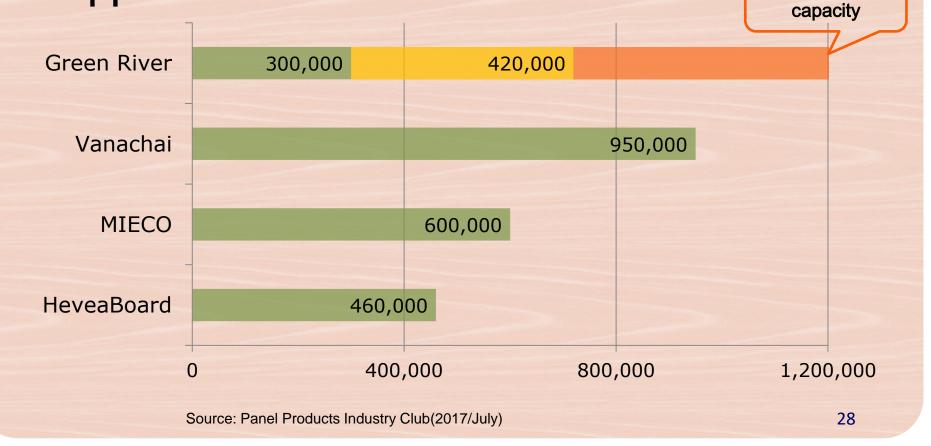
Abundant material resources

Logistcal Advantages



◆ With our latest PB Line (GPT), 500,000 M³ as yearly capacity, Green River is becoming the largest PB suppliers in Asia.

GPT designed





GPT-The Largest PB production line in Asia



PANEL MANUFACTURING

which is Green River's third, will see metres, making it one of the largest production powerhouses in Southeast Asia. It will be delivered by Siempeliamp.

Treefin Kiver Parties to set to be build Southeast Asia's biggest to build Southeast Asia's biggest to biggest a particlebaard plant, boasting to green product a particlebaard plant, boasting to green product a proposal attention and the longest in the region. The new line, longest in the region. The new line, a marriage, we welcome open and billosophy.)

team were single minded about Green River's commitment to producing green products. (Green River is named for the company's environmental

and wood that is too poor for solid furniture often end up in the backyard of a particleboard line, which makes

banks on the belief that Asia is overflowing

Jurgen Philipps, speaker of the The first board is expec Siempelkamp Management Board, in the last quarter of 2019. added, "We are happy and honoured to be selected for this project. This is our second success in three months the upcoming line is based in in Southeast Asia. It is a good sign as

uous press to Asia. It will

y 2018 - Sourc I - PANELS & FURNITURE ASIA

The upcoming line is based in Trang, Thailand, over 200km away from Green

with European suppliers often see him working late into the small hours. But being busy is a good thing, he jests,

The green field investment was conceived over two years ago, even before the second line was fully operational. Mr Huang says the planning



featuring SE Asia's longest CONTINUOUS PRESS | By Lee Zhuomin

an oversupply situation, followed by a lack of raw materials. But this does not bother Mr Husng, After all, these trends are cyclical, almost normal. Instead, he is looking forward to Asia's

Instead, he is looking forward to Asia's bullish furniture market buoyed by a slow but sure rising middle income class among the region's four billion people. As standards of living improve, so will robust buying, especially that of green' products—the very thing Green River offers. Rather than wait, he is keen to capture this potential before others do.



PANES & FURNITURE ASIA - bone 1 - January / February 20

http://www.panelsfurnitureasia.com/ebook/PFA JanFeb2018/22/index.html



- **◆**Abundant material resources
 - Located in rubber plantations

Green River

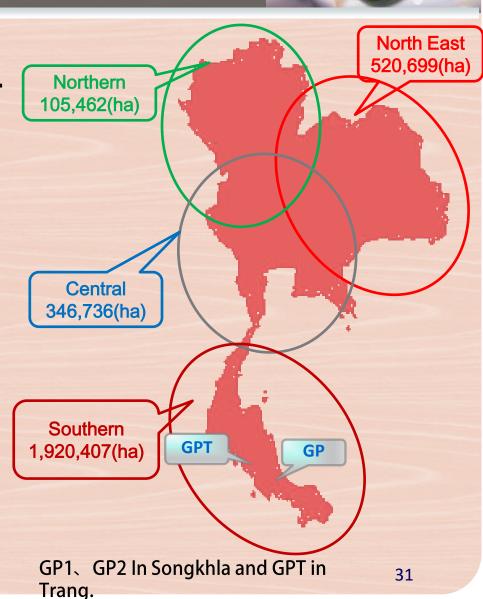
- Single species in material to ensure quality consistency.
- Rubber woods are planted as high value cash crops rather than ordinary forestry. Rubber trees are fell and replanted as latex productivity declines and becomes uneconomical, which usually after 25 years.
- Zero material from forestry; Minor influence of national forest policy changes



◆ Located in Southern Thailand, the main rubber wood plantation region.

Region	Plantation%
Northern	3.65%
Northern East	17.99%
Central	11.98%
Southern	66.38%
Total	2,893,304(ha)

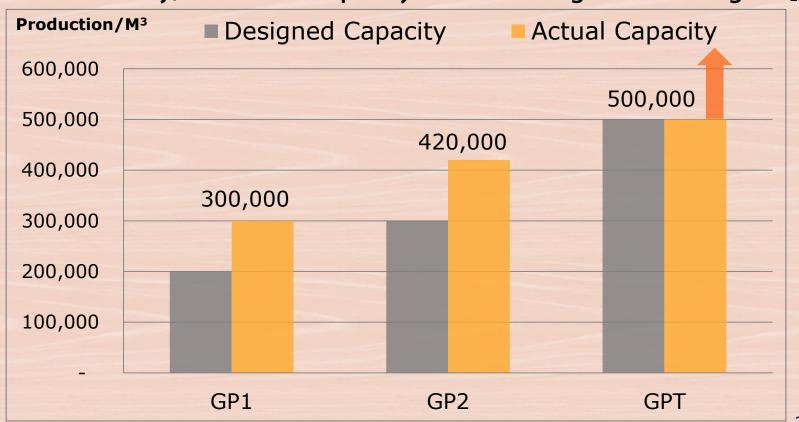
The Thai Rubber Association (2015)





◆ Actual capacity exceeding the designed capacity

With high production efficiency and improving the process continuously, our actual capacity are 140% larger than designed.

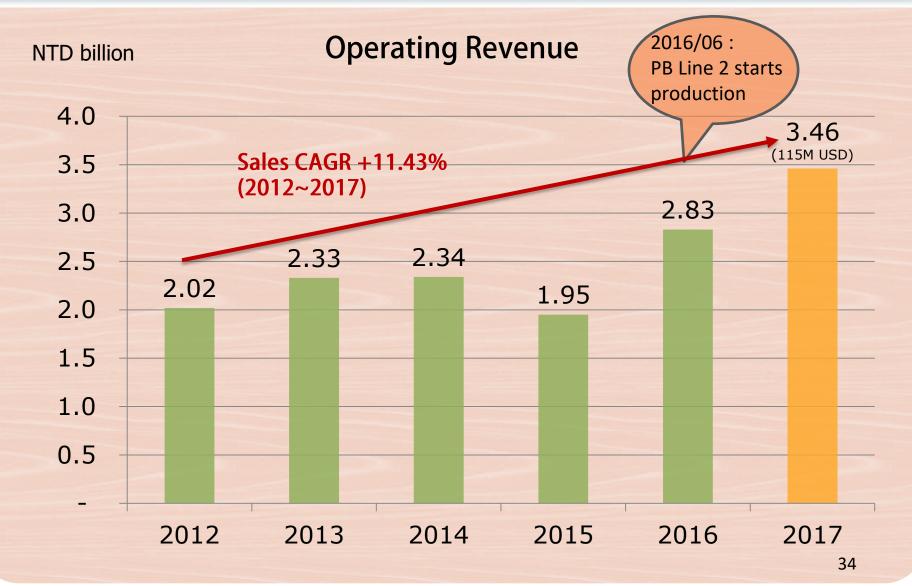




◆ Heart of ASEAN, situated at the transportation hub

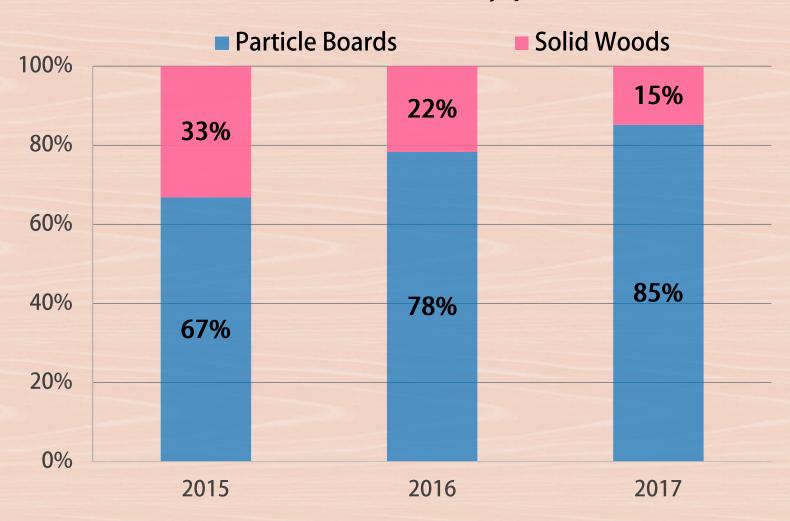








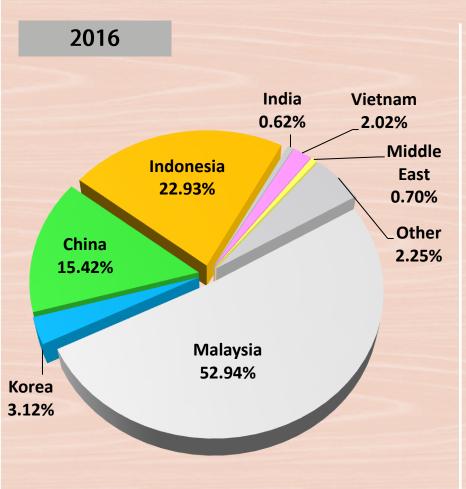
Sales Revenues by product

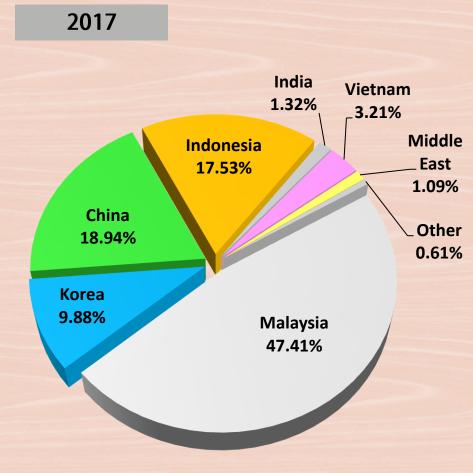




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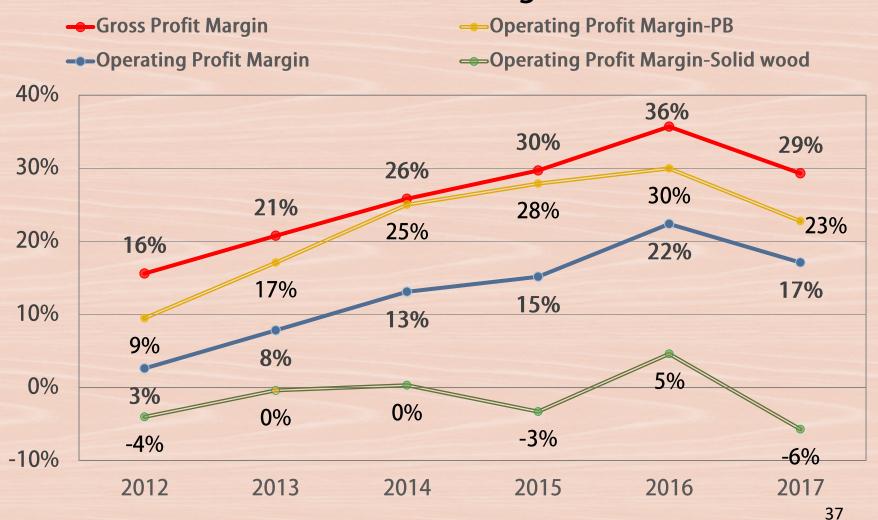
Market Sales Analysis - PB



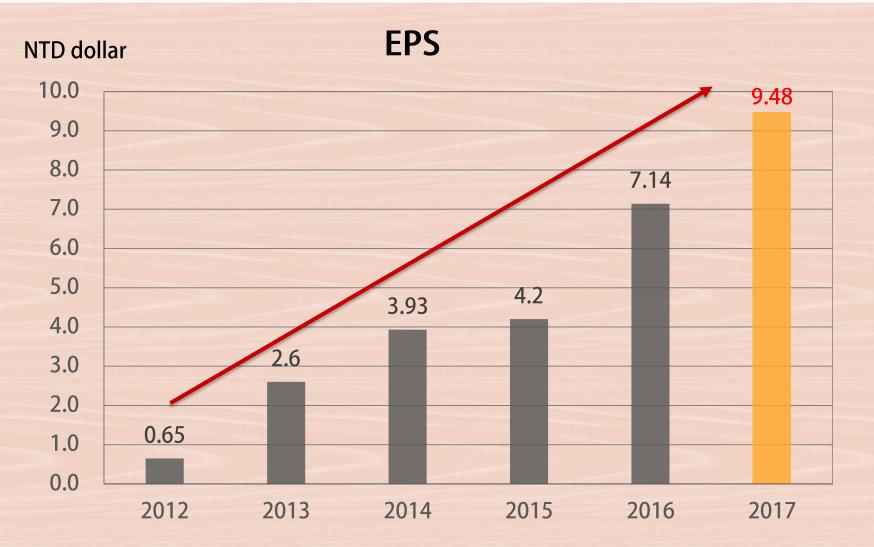














Operational Efficiency NTD/000'						
ITEM	2014	2015	2016	2017		
Cash and cash equivalents	633,896	405,065	703,964	3.59B (120M USD)		
Cash Conversion Cycle	22 days	21 days	18 days	22 days		
EBIT	287,070	304,671	652,026	825,898		
Interest Protection Multiples	8.19	10.20	10.64	10.85		



Financial Ratios & Dividends Distribution

	2014	2015	2016	2017
Debt Ratio	47%	49%	51%	66%
ROE	17%	14%	23%	26%
EPS	3.93	4.20	7.14	9.48
Dividend-Cash (NTD)	2.00	2.20	3.1	4.2
Dividend-Stock (NTD)	_	_	0.1	-
Payout Ratio	51%	52%	45%	44%

3.3 Comparison with other company

	Green River	Vanachai	Mieco	HEVEA Board	Guangxi Fenglin	JiLin Forest	HongWei (Asia)
Stock Code	8444	VNG	5001	5095	601996	600189	08191
Listing Place	TW	TH	MY	MY	SH	SH	НК
ROE(%)	25.88	11.92	11.86	14.38	6.58	-6.82	8.15
EPS	9.48 NTD	0.64 Baht	0.0913 MYR	0.1194 MYR	0.13 CYN	-0.3 CYN	0.0364 HKD
P/E Ratio	15.66	14.76	5.15	6.76	34.67	-	11.91
Market Cap. (USD)		446.70M	62.34M	109M	698.33M	571.64M	32.88M
Profit Margin(%)	17.12	9.29	14.58	11.35	5.67	-53.8	6.02

Q&A

Disclaimer



- This presentation contains forward-looking statements based on a number of factors such as economic conditions and industry environment which subject to significant risks and uncertainties.
- The actual operating results, financial condition and the business prospects may be different from those forecast due to various reasons beyond the company's control.
- The forward-looking statements in this release reflect the current belief of the company as of the date of this release. We accept no obligation to update these forward-looking statements with new information, future events, or other unforeseen circumstances.