



**2011 Leader: Building Material & Fixtures Sector** Ranked Gold Class: 2011, 2010, 2009, 2008

DJSI member since: 2004

**Ranking by SAM** 

ASEAN Forum - Bangkok Hosted by CLSA March 15, 2012

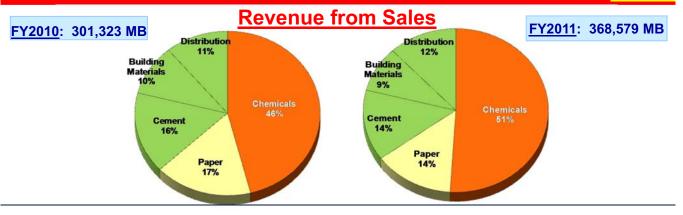
# <u>Agenda</u>

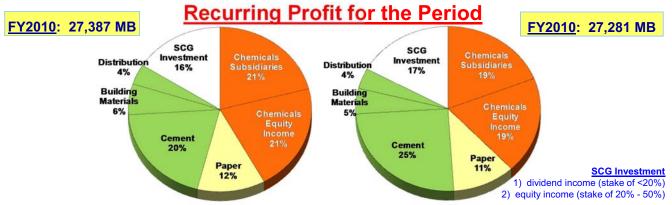


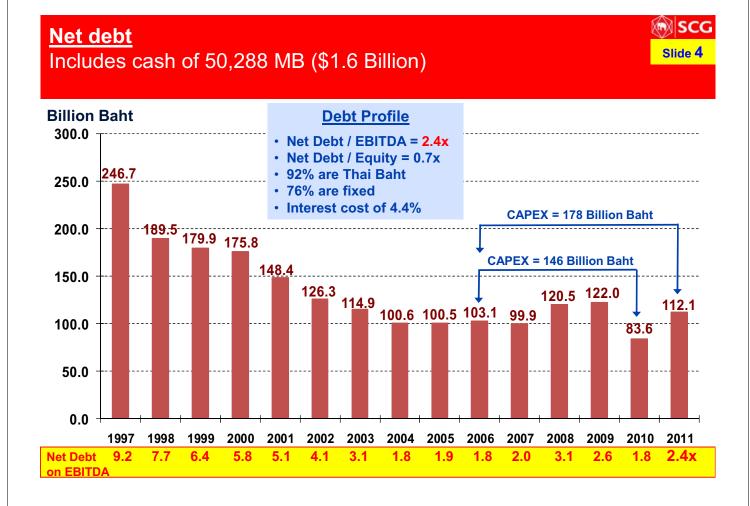
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## **Segments**



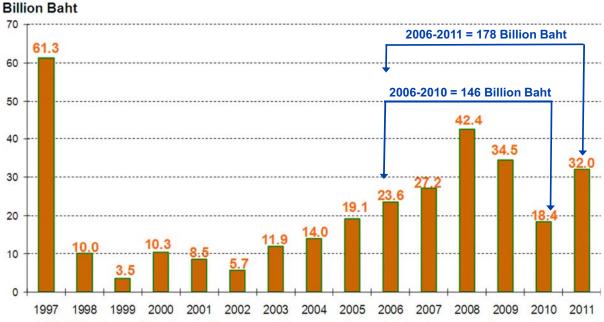






# **CAPEX & investments**

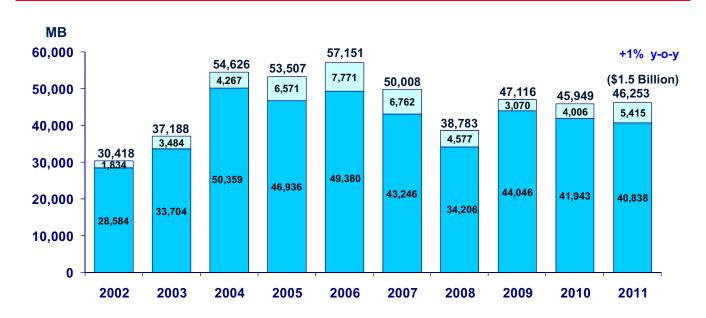




- CAPEX includes debottlenecking, expansion projects, and major turnaround.
- Investments are acquisitions and purchase of shares.

# **Consolidated EBITDA**





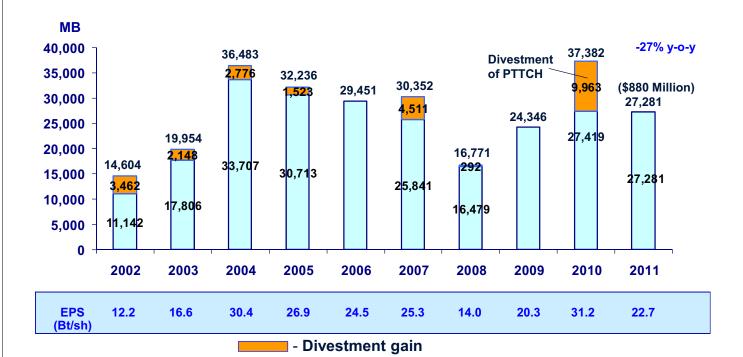
Dividend from associated companies

- EBITDA from Operations

Note: EBITDA includes dividend received

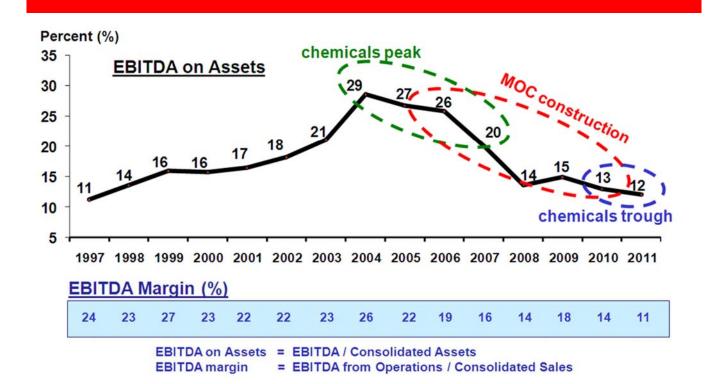
## **Consolidated profitability**





## EBITDA on Assets, and EBITDA Margin





# <u>Agenda</u>



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# **Strategy**



# **GROWTH**

1) ASEAN expansion

2) HVA products & services

## **DISCIPLINE**

"Cash return on investment" hurdle of 15%

Dividend payout policy of 40-50%

# **SCG's CAPEX cycles**



# **Current Phase 2011 - 2015**

- Past Phase 2006 2010
- **CAPEX of 146,026 MB (\$4.7Bill)**
- Cash-flow financed
- Mostly green field

- CAPEX of +150,000 MB
- Cash-flow financed
- Cash on hand of 50,288 MB
- Mostly M&A

...ASEAN expansion of <u>core businesses</u>

# Primary use of cash



#### **Past Phase**

(MB)	2006	2007	2008	2009	2010	2006 - 2010
EBITDA	57,151	50,008	38,783	47,116	45,949	239,007
Profit for the Period	29,451	30,352	16,771	24,346	37,382	138,302

CAPEX & Investment	23,574	27,160	42,379	34,535	18,378	146,026
Dividend	18,000	18,000	9,000	10,200	15,000	70,200
Tax	4,036	5,898	4,562	5,168	13,959	33,623
Finance Costs	5,169	5,273	6,089	5,649	4,670	26,850

### **Current Phase**

2011	2011 - 2015
46,253	
27,281	

32,053	
15,000	
7,504	<b>*</b>
6,048	<b>—</b>

# SCG's incremental capacity: Previous investment phase (2006 – 2010)



(Capacity at year end = '000 tons)		Т	otal Ca	р		Incr	ease	Project Cost		
	2007	2008	2009	2010	2011	2007 - 2011		SCG Stake	CAPEX (MB)	
Chemicals Upstream (Cracker)						Сар	Times			
Ethylene (subsidary)	800	800	800	1,700	1,700	900	2.1 x	<b>7</b> 67% <b>√</b>	45,600 MB	
Propylene (subsidary)	400	400	400	1,200	1,200	800	3.0 x	0/%	(\$1.2 Bill)	
Chemicals Downstream										
HDPE (subsidiary)	780	780	780	1,180	1,180	400	1.5 x	100%	17,100 MB	
PP (subsidiary)	320	320	320	720	720	400	2.3 x	J-100%-	(\$450 mill)	
PVC (45% stake in TPC)	820	790	870	940	940	120	1.2 x	45%	2,200 MB	
LLDPE (Dow JV)	300	300	300	650	650	350	2.2 x	50%	2,100 MB	
Specialty Elastomers (Dow JV)	C	-	Apr	start 🗕	220	220	120	50%	3,000 MB	
Propylene Oxide (Dow JV)	-	-	Oct	start -	390	390	20	50%	2,400 MB	
MMA (Mitsubishi Rayon JV)	85	85	85	175	175	90	2.1 x	470/	2 500 MD	
Cast Sheets (Mitsubishi Ravon JV)			20	20	20	_20_		47%	2,500 MB	
<u>Paper</u>			1							
Printing & Writing Paper	365	565	565	565	565	200	1.5 x	100%	7,300 MB	
Packaging Paper	1,660	1,660	1,880	1,880	1,880	220	1.1 x	70%	5,200 MB	
Box	550	637	692	741	795	245	1.4 x	70%	3,200 MB	
Cement										
Cambodia Grey Cement (MT)	23	24	24	24	24	1	1.04x	90%	3,000 MB	
Building Products										
Ceramic Tiles (M sqm)	95	122	122	122	149	54	1.6 x	54% to 100%	6,800 MB	
Ceiling & Wall product (M sqm)	34	50	57	57	65	31	1.9 x	100%	3,200 MB	
Lightweight concrete (M sqm)	3	3	3	15	15	12	4.0 x	68%	1,600 MB	

# SCG's capacity ranking

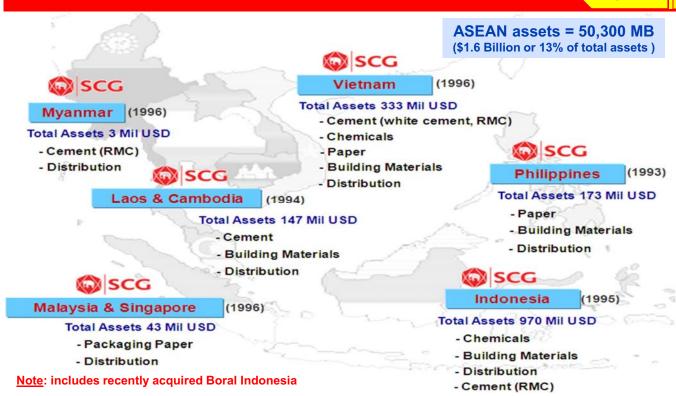


	<u>Thailand</u>	<u>ASEAN</u>
Downstream Chemicals 7.2 million tons	1	1
Packaging Paper 1.9 million tons	1	1
Cement 24 million tons	1	2
Building Products  149 mill sqm of ceramics	1	1

NOTE: includes recent acquisition of Chandra Asri Petrochemical

## Synergy within ASEAN

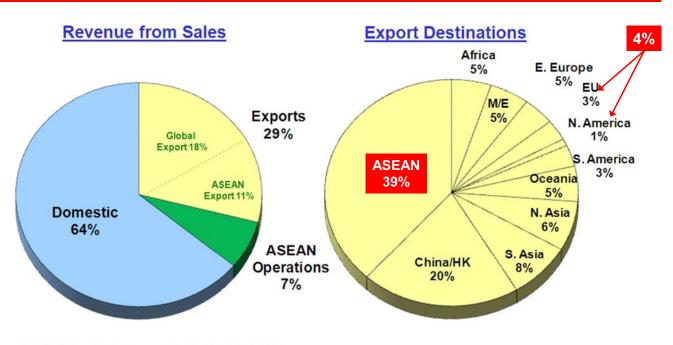




## **Export destinations FY2011**

ASEAN was 39% of exports, or 18% of sales.





<u>ASEAN Operations</u> - subsidiaries in ASEAN. <u>Export Destinations</u> - from Thai subsidiaries



		2006	2007	2008	2009	2010	2011	Feb/12
Sales	%	3%	5%	5%	7%	7%	7%	7%
	MB	7,700	13,400	14,600	16,700	20,200	23,700	-
Assets	%	3%	5%	5%	7%	7%	13%	13%
	MB	6,800	13,000	14,500	22,500	26,700	47,000	50,300
HR*	%	5%	10%	11%	11%	12%	19%	24%
	Staffs	1,180	2,628	2,974	3,225	3,777	6,519	9,253

<sup>\*</sup> Incl. SCG's international staff (Thai)

#### Regional growth opportunities Slide 18 **ASEAN Paper Plastic** Cement Indonesia Bangladesh 🗍 Laos Myanmar Philippines Cambodia Cambodia Vietnam Philippines Philippines China India Vietnam Thailand Indonesia Indonesia Laos Japan Thailand Thailand Singapore Malaysia Malaysia Malaysia Vietnam S. Korea Singapore Singapore 20 40 0 50 100 150 500 1000 (Kg/Head) (Kg/Head) (Kg/Head)

Low Consumption per Capita in ASEAN

NOTE: figures for 2011

## Indonesian acquisitions (Q1/11 - Q1/12)



#### **Boral Indonesia – RMC**

- Leading ready-mixed concrete (RMC) with 2.2 Mill cu.
- Businesses includes concrete pipes, precast concrete, quarries, and limestone reserves for expansion.

#### **Chandra Asri Petrochemicals – integrated chemicals**

- Acquired 30% stake from Temasek and Barito Pacific.
- Conclusion of project upgrades:
  - Cracker debottleneck, and downstream expansion.
  - Operational excellence for process control, and cost saving initiatives.
  - Accelerate development of HVA.

#### Kokoh – distribution of building materials

Network of 22 distribution centre and +10,000 wholesalers and retailers.

#### KIA - ceramic tiles

- Market share of 10% and capacity of 27 M sqm.
- SCG's total capacity has increased to 149 M sqm (from 122).

## Other investments (Q1/11 - Q1/12)



### TPC tender offer... valued 10,000 - 15,000 MB

Additional 30% shares (to 76%, from 46%), and resulting mandatory T/O for all remaining shares.

### Vietnamese white cement grinding plant... valued 200 MB

Buu Long is a dominant producer of white cement in Vietnam.

#### Vietnamese box plant... valued 750 MB

 Alcamax (53,000 tons) has a leading domestic market share with large multinational clients.

## Expansion of modular homes in Thailand... valued 2,900 MB

- JV with Sekisui Heim of Japan.
- Capacity expansion to 1,000 homes per year.

# <u>Updates – Cement expansion</u>



## **Under Study**

■ Indonesia 1.5 – 3.0 MT integrated cement 1.5 – 3.0 MT integrated cement

## **Existing**

Thailand
 Cambodia
 Vietnam
 23 MT (since 1913) integrated cement integrated cement
 0.2 MT (Q1/12 M&A) white cement grinder

# **Updates - Chemicals expansion**



## **Vietnam Complex:**

- JV Agreement signed on Feb 9/12.
- JV partners consists of:
  - QPI Vietnam (subsidiary of Qatar Petroleum Int'l)
  - PetroVietnam, and Vinachem
  - Thai Plastic and Chemicals
- Final configuration and financing in 2013.



# SCG Chemicals' cracker capacity



Future	Location	Start-up	Stake	Olefins Capacity
Vietnam Complex	Vietnam	2017-2018	SCG 28%	1,400
Vietnam Complex	Victiaiii	2017 2010	(TPC 18%)	1,400
(Flex-feed cracker)				

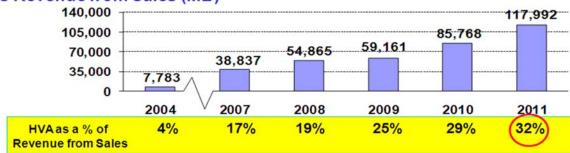
Existing	Location	Start-up	Stake	Olefins Capacity (ton)				
LAISTING	Location	Start-up	Stake	Ethylene	Propylene   To   400   1,2   800   1,7	Total		
1) ROC Complex	Thailand	1999	SCG 64%	800	400	1,200		
2) MOC Complex	Thailand	2010	SCG 67%	900	800	1,700		
3) Chandra Asri	Indonesia	1995	SCG 30%	600	320	920		

Existing Total 3,820

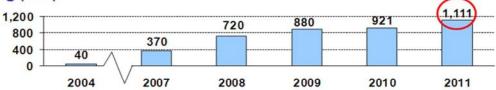
# HVA = High Value Added Products & Services HVA on Sales target of 50% by 2015, from subsidiaries.



#### 1/ HVA's Revenue from Sales (MB)



#### 2/ R&D Spending (MB)



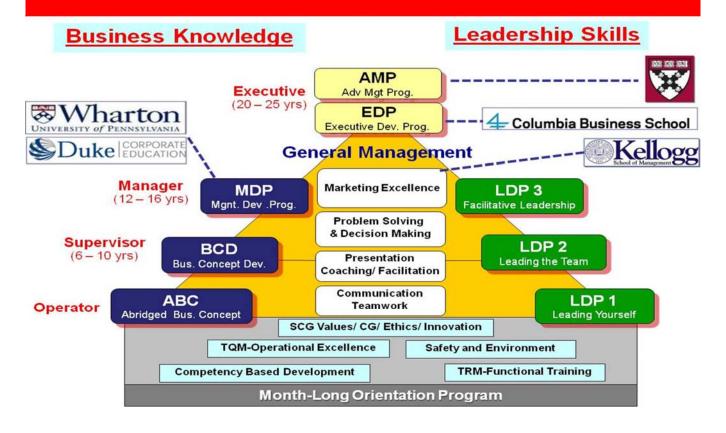
# 3/ R&D and Product Design Team (staffs / Jan/12)





# Systematic training roadmap Competent staffs are key.





# SCG's external training program



Programs	Current	Since	Years	Staffs
AMP Advanced Management Program	Harvard	1982	31	65
AMP - Advanced Management Program	Wharton	2007	6	
EDP - Executive Development Program	Columbia	2007	6	172
MDD Management Development Program	Wharton	1980	33	1,307
MDP - Management Development Program	Duke	2011	2	111
Marketing Excellence Program	Kellogg	2006	7	406

(as of Feb/12)

# Corporate scholarship program Began in 1973, with +400 scholarships granted.



### MBA Scholarships

	<b>'08</b>	109	110	'11
US Chicago	-	-	-	-
Chicago	-	-	-	-
Stanford	-	-	-	-
Wharton	2	1	1	-
MIT	2	2	2	1
Columbia	1	1.77	-	2
UC Berkeley	•	-	-	-
NYU Stern	-	•		1
Kellogg	2	2	3	-
Dartmouth	-	-	-	-
Michigan	-	1	1	-
Duke	-		1	1
IMD	-	-		-
EU LBS	-	1	=	-
INSEAD	2	244	1	-
ISB (India)	-	-	-	-
Tsinghua	-	•		-
ASIA CEIBS	7	-	-	-
HK UST	-	-	-	1
Sasin	-	1	1	-
Total	7	8	10	6

### **Engineering Scholarships**

	_								
	<b>'08</b>	<b>'09</b>	10	'11		'08	109	10	*11
MIT	-	1	72	-	EU Cambridge	-	2	-	-
(US Stanford	-	-	-	-	Imperial College	2	1	1	2
UC Berkeley	-	-	-	7.	Oxford	-	1	-	-
Illinois	1		-	=	RWTH Aachen	-	1		17.3
Califonia Tech	-	-	-	-	U. of London	-	-	1	-
Georgia Tech	100	3	1	-	CU-Warwick	-	-	1	
Carnegie Mellon	155	170	2	2	Queen Mary (UK)	-	=	1	-
Michigan	-	1	3 <del>-</del> 8	-	Queen's U. Belfast (UK)	-	-	1	-
Cornell	1.71	-	-	-	U. Of Southampton			1	
UT Austin	•	2	-	-	(UK)	(=)	-	1	-
North Western	-	-	-	-	Brunel U. (UK)	376	1	17.	17.0
U. Southern California	100	1	-	-	UEC, Birmingham (UK)	-	1	-	-
Penn State U.	-	1	1	-	U. Manchester (UK)	1	-	-	2
John Hopkins U.	-	-	-	-	U. Aberdeen (Scotland)	1	1	-	-
Virginia Polytech	-	-	-		U. Dundee (Scotland)	2	1	-	-
U. Washington	-	-	1	3-3	IFP School (FR)	-	-	1	-
Western Michigan U.	-	1	-	3	Domus Academy (GER)	1	1	-	-
U. Massachusetts,		1			U. Tokyo	1-1	-		=
Lowell					ASIA Kyoto U.	5.70	-	-	-
U. Wisconsin-Madison	-	1	-	-	Tokyo Tech	-	2	-	-
U. North Carolina	1	-	-	-	Waseda U. (JAP)	-	1		1
U. Portland State	1	-	7.	-	Ceramics Tech. (JAP)	>=0	-	1	=
Purdue U.	1	-	-	12	AIT		-	1	-
Current 53 student	s (45	overse	eas).		Total	11	19	14	3
MBA 15, Tec	hnica	l, 38							

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- Ranked Global Sector Leader (Building Materials & Fixtures) in 2011 by SAM.
- From 2008-2011, SCG also was ranked "<u>Gold Class</u>" and has been a member of the DJSI since 2004.
- Represents the top 10% of the largest 2,500 stocks in the Dow Jones Global Total Stock Market Index, based on long-term <u>Economic</u>, <u>Environmental and Social</u> criteria.

 Established in 1999, and is the first truly global index to monitor the sustainability initiatives of listed companies.

- +60 global funds in 16 countries follow the DJSI.
- For further details: www.sustainability-index.com



# **DJSI sector overview**Building Materials & Fixtures



#### SUSTAINABILITY LEADERS

As of September 8, 2011

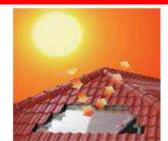
Company	Country Industry Leader	DJSI World		DJSI Europe		DJSI North America		DJSI Asia/Pacific		
			Universe	Member	Universe	Member	Universe	Member	Universe	Member
# of Companies			45	8	10	3	5	1	10	3
ASAHI GLASS	Japan		1	<b>√</b>					4	1
BORAL	Australia		1						1	1
CRH PLC	Ireland		1	1	1	1				
HOLCIM	Switzerland		1	4	1	4				
LAFARGE	France		1	1	1	1				
OWENS CORNING	USA		1	4						
SIAM CEMENT	Thailand	1	1	1						
тото	Japan		1	4					1	1
WEYERHAEUSER	USA		1	1			1	1		

# SCG eco value

Thailand's first eco label, accounting for 13% of SCG's 2011 sales, or approx 47,000 MB.







Cool Roofing System 40% Energy Reduction



Cerafino Solar Roof Tiles Solar Power





COTTO Sanitary Ware and Fittings Reduces Water Usage by 25%



# **Agenda**

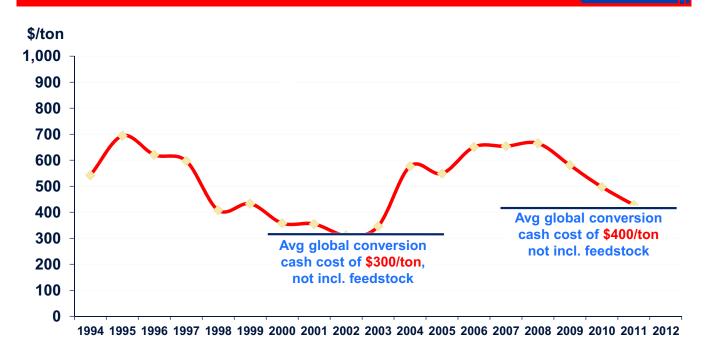


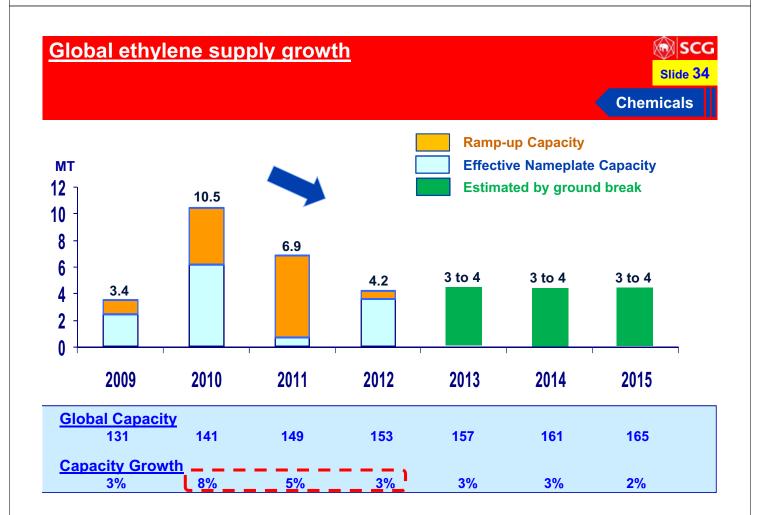
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# Historical margin: HDPE - Naphtha

Trough floor is supported by conversion cash cost.





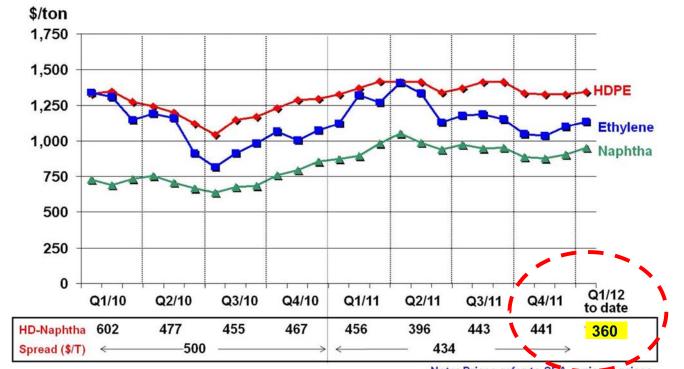


# HDPE - Naphtha

Trough margins till the end of 2012.



Chemicals



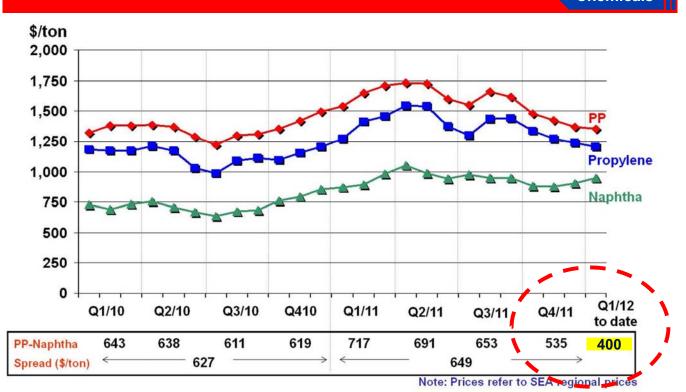
Note: Prices refer to SEA regional prices

# PP - Naphtha

PP margins are expected to outperformed HDPE.



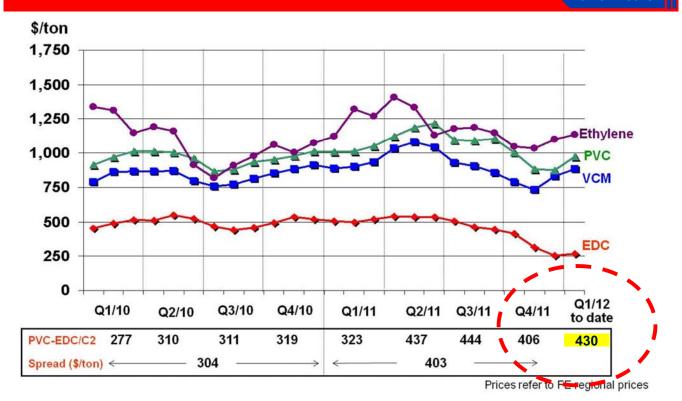
Chemicals







Chemicals



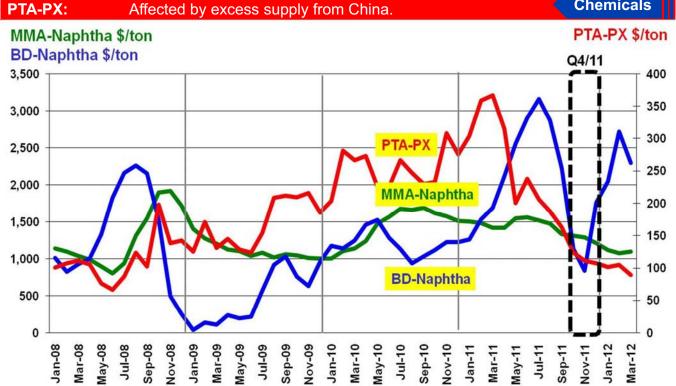
# Price gaps of associates

SCG

MMA-Naphtha: Weak demand from electronics. **BD-Naphtha:** Better margins, due to tight supply.

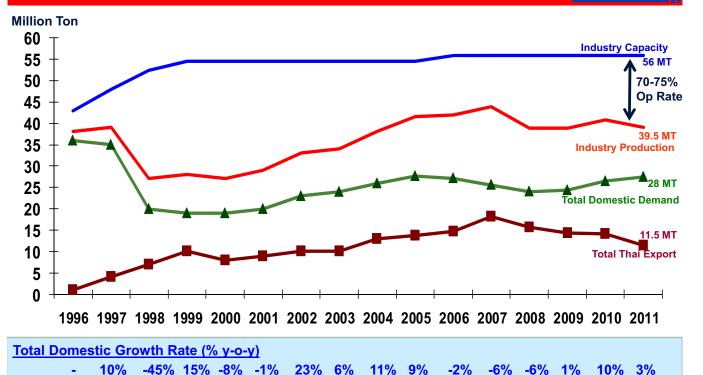
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**Chemicals** 



# Domestic cement industry Domestic demand growth of 5% in 2012.

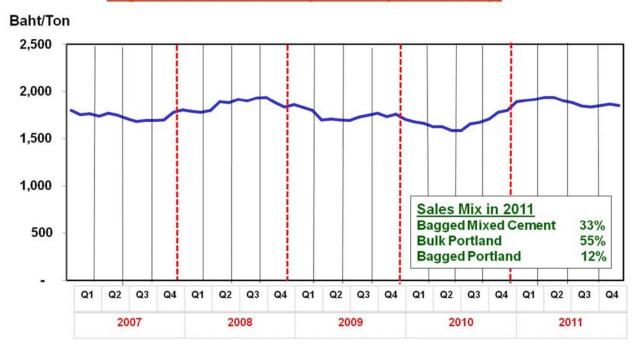


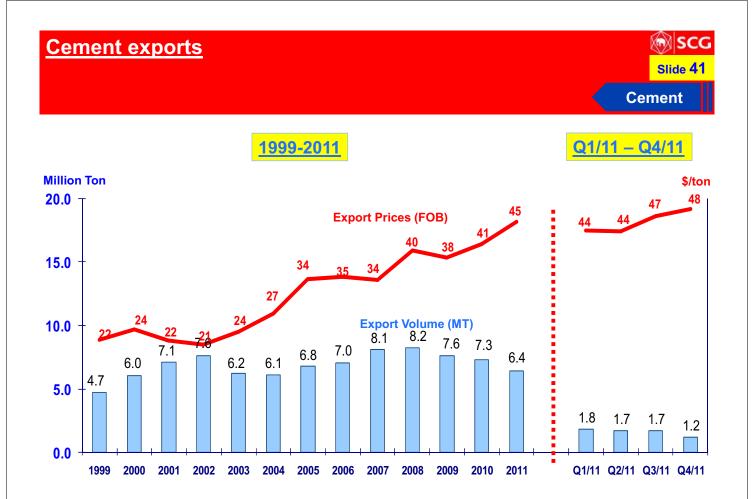


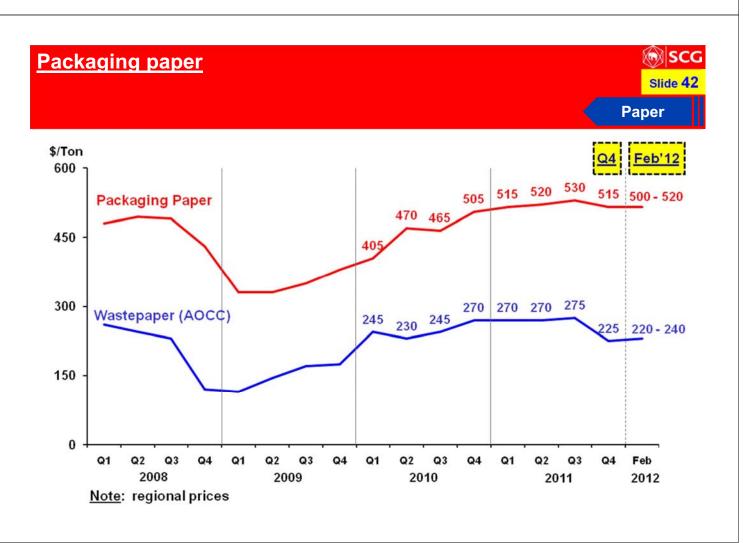
Domestic cement prices
Was approximately \$60/ton in Q4/11.



#### Avg Domestic Price of Grey Cement (Net ex-factory)







#### P&W paper Slide 43 **Paper** \$/Ton 1,200 P&W Paper 990 980 945 900 900 840 - 860 Long Fiber 870 840 810 810 670 - 690760 740 705 680 600 **Short Fiber** 570 560 - 580 300 Q1 Q2 Q3 Q4 Q2 Q3 Feb 2008 2009 2010 2011 2012 Note: regional prices

# **Business outlook**



## **Chemicals**

- Trough margins to remain in 2012.
- Continued challenges in PTA, while recovery of MMA and Butadiene to be driven by Asian demand growth.

### **Cement**

- Domestic demand grow of 5% in 2012.
- Demand from flood infrastructures, and growth of commercials / industrials.
- Moderate expansion from residential sector.

### **Paper**

- Flood recovery of box plants is not expected until Q2/12.
- Low growth volume.



# **Thank You**

# <u>Agenda</u>

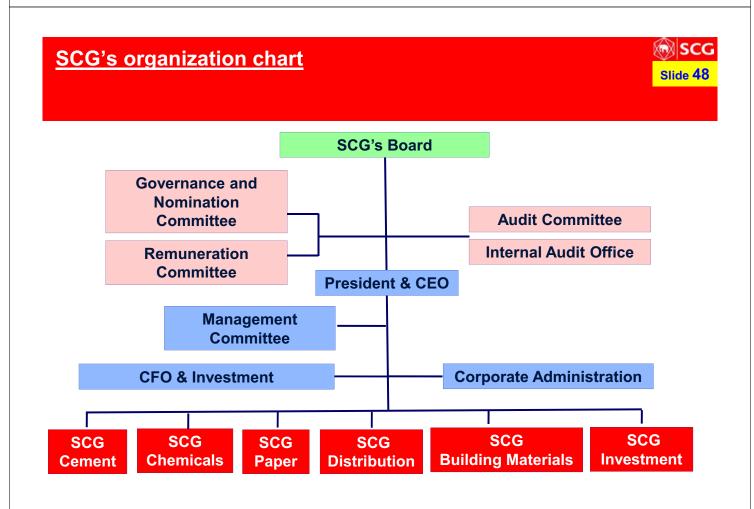


- Financial Updates
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### **Background**

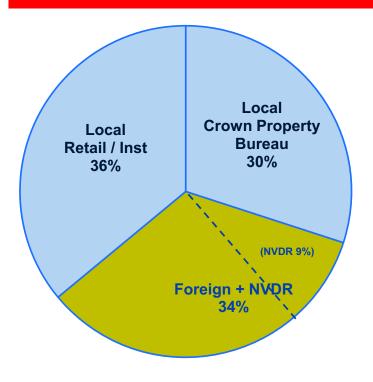


- Founded in 1913.
- Listed in 1975 on the SET.
- Market cap of \$13.8 Billion (local share price of 360 Bt/sh), and free float of approx 70%.
- Roots in cement, with expansion to building materials, paper, chemicals, and distributions.
- Currently employ approx 37,300 staffs.
- Asset of 374.7 Billion Baht (\$12.1 Billion)
- Key figures (FY2011):
  - Net Sales 368.6 Billion Baht (\$11.9 Billion)
  - EBITDA 46.3 Billion Baht (\$ 1.5 Billion)
  - Net Profit 27.3 Billion Baht (\$ 0.9 Billion)



## **SCG's shareholders**





Local 66%	
– Institution / Retail	36%
- Crown Property Bureau	30%
Foreign 34%	
<ul><li>Foreign Board</li></ul>	25%
– NVDR	9%
Jan 2	25, 2012

# SCG's operational history



**1913** – 1970's

1970's - 1980's

1980's - 1990's

1998 - 2003

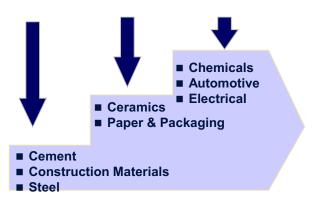
2004 - onwards

Organic growth in construction material

Takeover of "ailing" industries Entry into new industries

Restructure

Regional & Innovation



#### **Core businesses today**

- ■SCG Chemicals
- ■SCG Cement
- ■SCG Building Materials
- **■SCG Paper**
- ■SCG Distribution
- **■SCG Investment**

# Capacity at the end of 2012



Chemicals - Naphtha Cracker (consolidate	d)	Chemicals - Associates (equity accounting)			
Ethylene	1,700,000 tons	Dow Chemicals JV (50%)			
Propylene	1,200,000 tons	- LLDPE	650,000 tons		
Chemicals - Downstream (consolidated)		- Propylene Oxide	390,000 tons		
HDPE	1,180,000 tons	- Specialty Elastomer	220,000 tons		
LDPE + LLDPE	200,000 tons	- PS	120,000 tons		
PP	720,000 tons	- SM	300,000 tons		
PVC (Thailand, Indo, Vietnam)	940,000 tons	- Synthetic Latex	18,000 tons		
		Mitsui Chemicals JV (20% - 50%)			
		- PTA (50%)	1,440,000 tons		
Cement (consolidated)		- PET (20%)	100,000 tons		
Grey Cement (Thai + Cambodia)	24 million tons	- PP Compound (46%)	86,000 tons		
Ready-Mixed Concrete	19 million metre <sup>3</sup>	Mitsubishi Rayon JV (47%)			
		- MMA	175,000 tons		
Building Products (consolidated)		- Cast Sheets	20,000 tons		
Ceramic Tiles (Thai, Indo, Phil)	149 M sqm	Chandra Asri JV(30%)			
Roofing Tiles (Thai, Cam, Phil, Viet)	87 M sqm	- Ethylene	600,000 tons		
Ceiling & Wall Products	65 M sqm	- Propylene	320,000 tons		
Autoclaved Lightweight Concrete	15 M sqm	- HDPE / LLDPE	320,000 tons		
		- PP	480,000 tons		
Paper (consolidated)		- SM	340,000 tons		
Packaging Paper (Thai, Phil, Viet)	1.88 million tons	Bangkok Synthetic (26%)			
Box (Thai, Malay, Sing, Viet)	795,000 tons	- Butadiene	140,000 tons		
Printing & Writing Paper	565,000 tons	- BR	50,000 tons		
Short Fibre Pulp	425,000 tons	- SBR	70,000 tons		
		•			

# SCG's ASEAN branding









# SCG eco value: eco process

## eco = Ecology + Economy

Balance and Sustainable relationship of economy, society and ecology

#### value

Value for stakeholders, society and environment received from innovative products and services











Reduced water usage



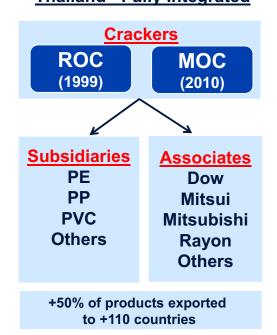
Reduced CO,

# **SCG Chemicals**

Integrated and competitive operations.



#### **Thailand - Fully Integrated**



#### **Regional Player**

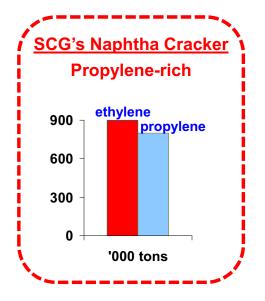


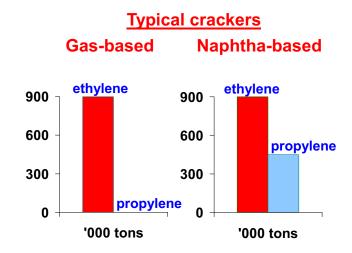
# **SCG Chemicals**



The second naphtha cracker is propylene-rich.

versus

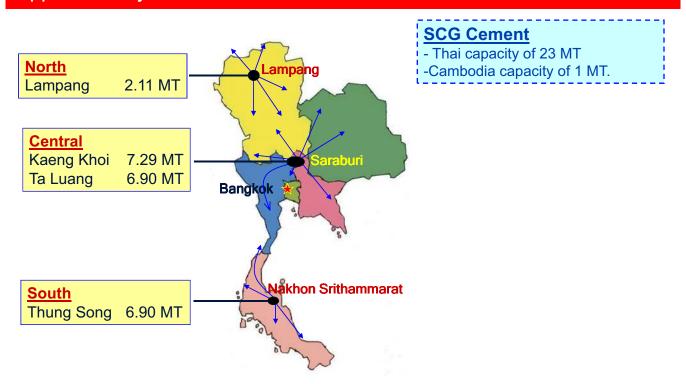




## **SCG Cement**



Nationwide network, and domestic market share of approximately 40%.

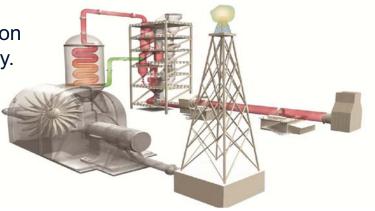


# **SCG Cement**

# Waste-heat power generators



 Utilize heat from the production process to generate electricity.



Phase 1

Phase 2

Phase 3

total

2,000 MB

350 MB

3,400 MB

5,750 MB

Thailand

Cambodia

**Thailand** 

-started in Q1/08

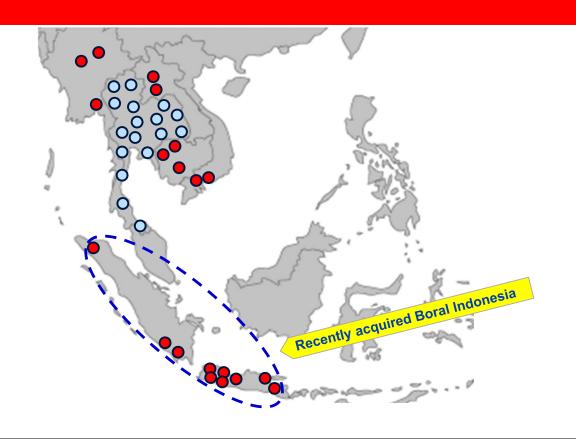
-started in Q2/09

-started in Q4/09

Return of 25% or 1,600 MB/yr

# SCG Cement RMC expansion into ASEAN.

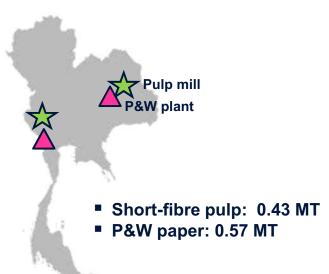




# SCG Paper Operations within ASEAN

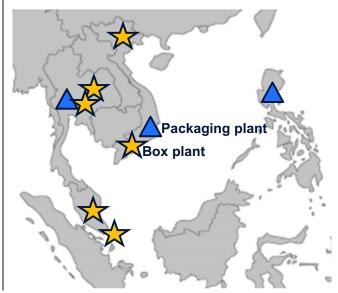


# P&W



## **Packaging**

■ 1.9 MT: integrated to box plants, with Rengo as ASEAN JV partner



# SCG Paper Integrated operations



### **Printing & Writing Paper**

**Internal Eucalyptus Pulp** 





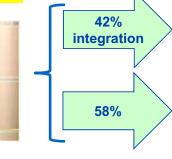
#### **Printing & Writing Paper**





## **Packaging Paper**





## **Internal Sales**

-Corrugated Box

## **External Sales**

-Containerboard -Paperboard





## **SCG Building Materials**



World's top 2 largest ceramics producer, with diversified offerings of products and services.

## **Broad range of product offering**

Roofing, fiber cement, and autoclaved lightweight concrete products, in addition to sanitary ware / fitting (TOTO jv), and landscaping services.

### Integrated solutions provider

- Roofing Center
- Cotto tile studio
- Cotto speed bathroom
- Modular house (Sekisui Heim jv)

## **Environmentally-friendly products and services**

- Non-asbestos fiber cement products.
- SCG Eco Value label.
- VA accounts for >40% of existing sales.

## **SCG Distribution**



Primarily logistics, global trading, and domestic distribution.

- Leading supply chain solution provider, whereby non-SCG clients accounts for approx 40% of total sales.
- Global international trading coverage is provided by the 35 global offices in 24 countries.
- Domestic logistics service provider to +200 clients, with +30 MT hauled in FY2011.
- Network of more than 450 exclusive domestic distributors nationwide.

## **SCG Distribution**

# Kokoh's 22 distribution centre in Indonesia

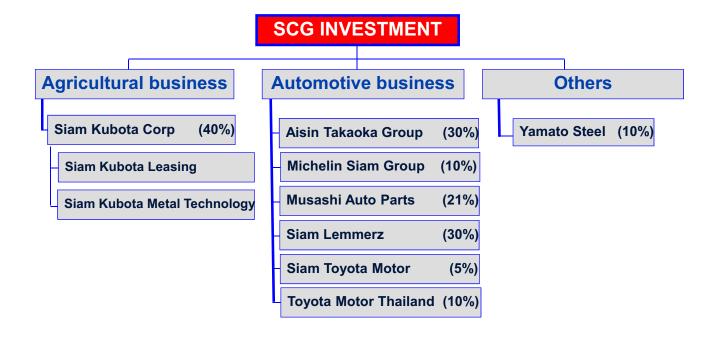




# **SCG Investment**

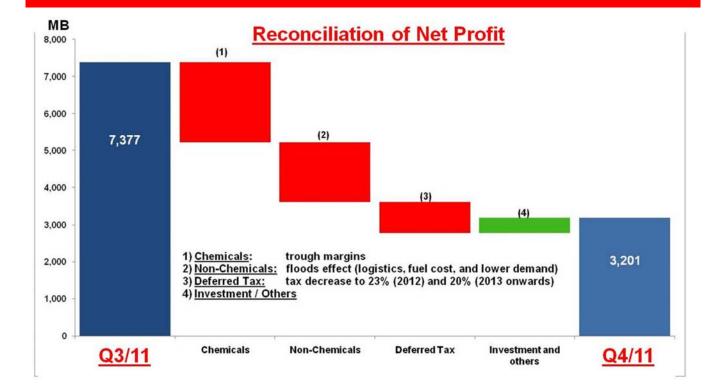
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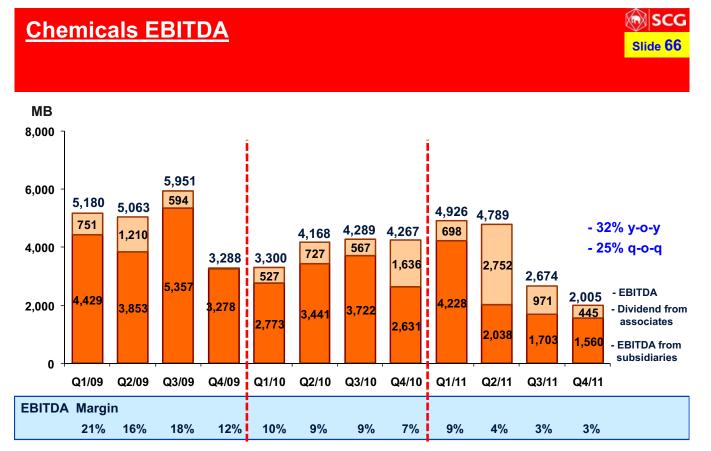
Contribution in FY2011 was approx 1,009 MB in equity income, and another 2,346 MB from dividend income.



# Q4/11 was a challenge



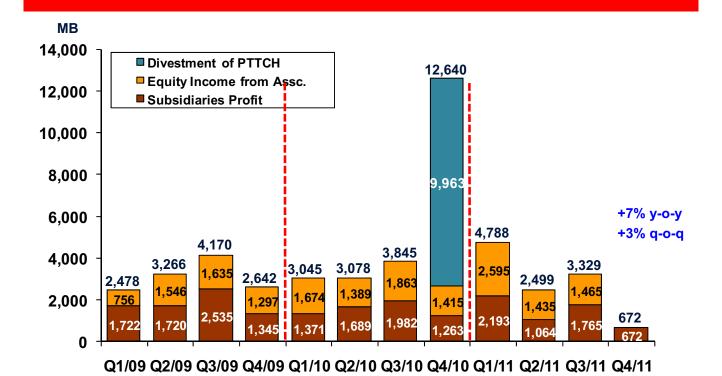


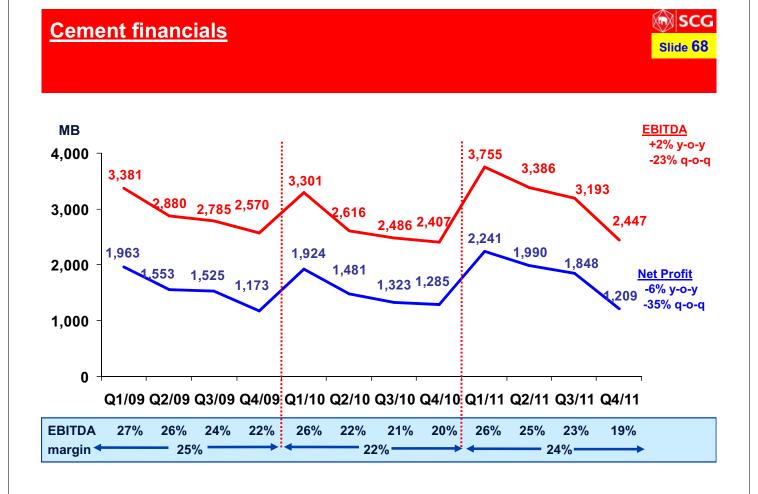


**Note**: EBITDA = EBITDA from operations + dividend from associated companies

# **Chemicals profitability**

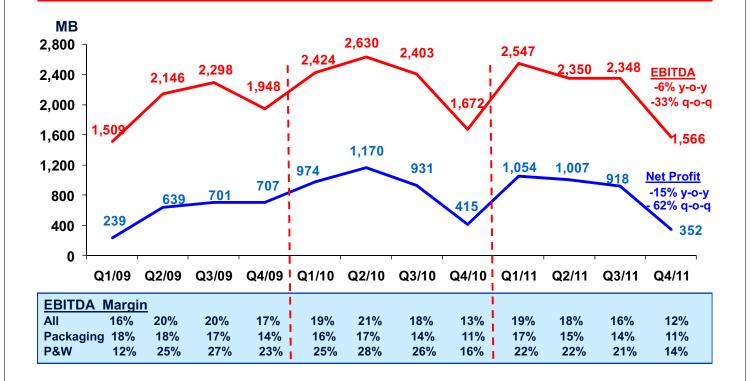






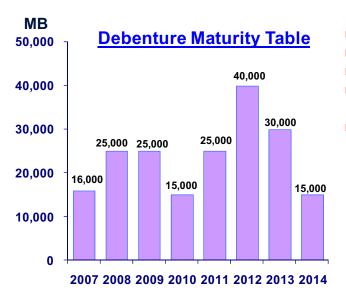
# Paper financials





## **Debenture profile**





- Retail investors only.
- Unsecured, unsubordinated.
- No debt covenant.
  - Thai Baht, fixed rate, and mostly 4-yr maturity tenure.
- Current "A" rating by Fitch (local).

**NOTE**: Debentures amount to 110,000 MB, as of Q4/11.

# **Segmented financials**



Sales (MB)	2008	2009	2010	2011
Consolidated	293,230	238,664	301,323	368,579
Chemicals	136,527	101,115	144,317	192,929
Paper	47,110	42,729	51,714	54,839
Cement	49,999	46,661	48,954	54,249
Building Materials	23,351	26,873	30,719	34,171

Assets (MB)	2008	2009	2010	2011
Consolidated	285,776	315,986	359,219	374,653
Chemicals	138,504	165,947	165,087	176,614
Paper	51,089	48,271	50,127	52,542
Cement	60,770	60,680	61,018	60,180
Building Materials	22,654	22,992	24,796	35,804

EBITDA (MB)	2008	2009	2010	2011
Consolidated	38,783	47,116	45,949	46,253
Chemicals	12,598	19,482	16,024	14,394
Paper	6,660	7,901	9,129	8,811
Cement	11,272	11,616	10,810	12,781
Building Materials	4,085	4,907	5,489	5,060

Profit for the Period (MB)	2008	2009	2010	2011
Consolidated	16,771	24,346	37,382	27,281
Chemicals	6,136	12,556	22,609	11,190
Paper	1,658	2,286	3,490	3,331
Cement	6,006	6,214	6,014	7,288
Building Materials	778	1,617	1,872	1,476

EBITDA Margin (%)	2008	2009	2010	2011
Consolidated	12%	18%	14%	11%
Chemicals	7%	17%	9%	5%
Paper	14%	18%	18%	16%
Cement	23%	25%	22%	24%
Building Materials	16%	18%	17%	14%

EBITDA / Assets (%)	2008	2009	2010	2011
Consolidated	14%	15%	13%	12%
Chemicals	9%	12%	12%	8%
Paper	13%	16%	16%	17%
Cement	19%	19%	19%	21%
Building Materials	18%	21%	20%	14%