

F R O S T & S U L L I V A N

“ We Accelerate Growth ”

Strategic Analysis of the Asia Pacific Paint & Coatings Industry



Chemicals, Materials & Food Practice
Frost & Sullivan
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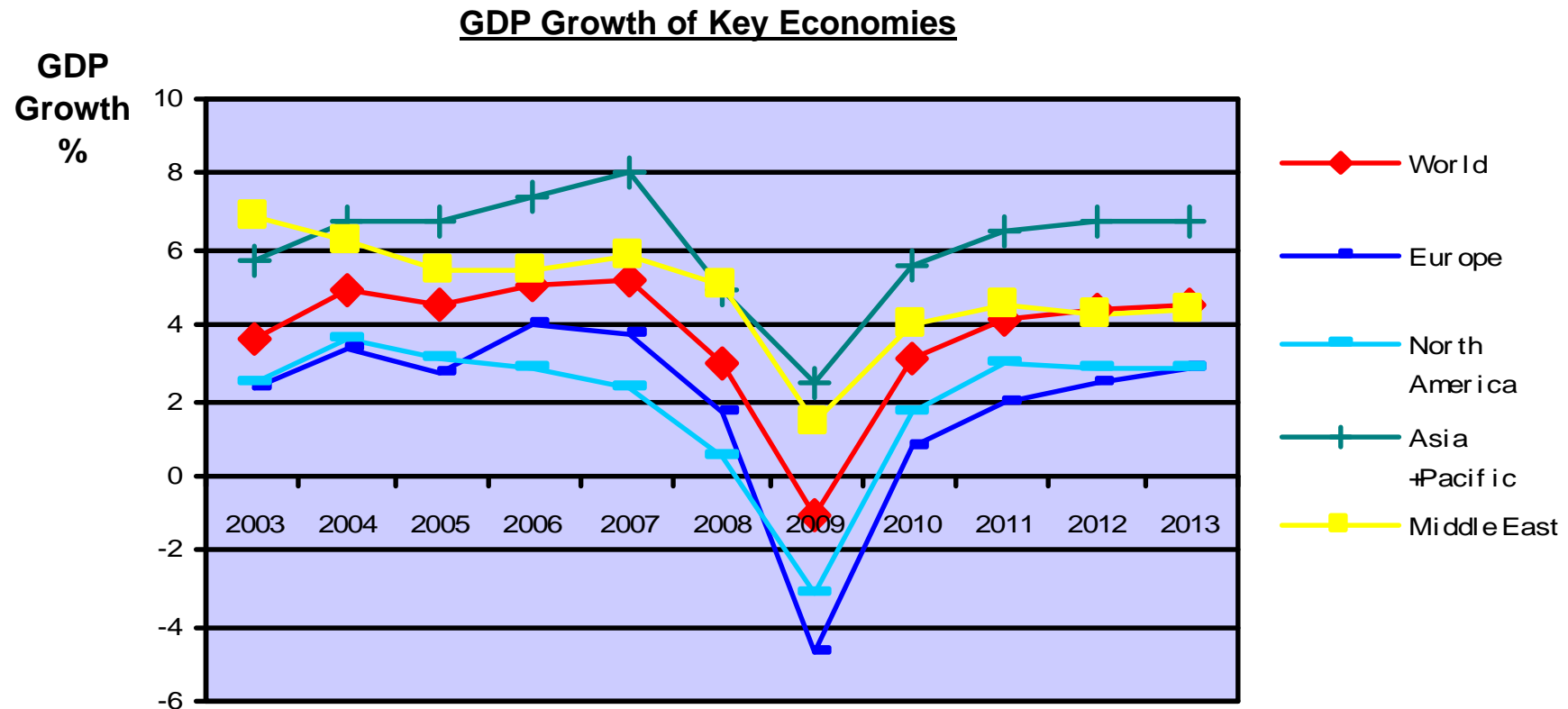
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Economic Outlook



Macroeconomic Scenario-World

World Economic growth- Comparison of key economies



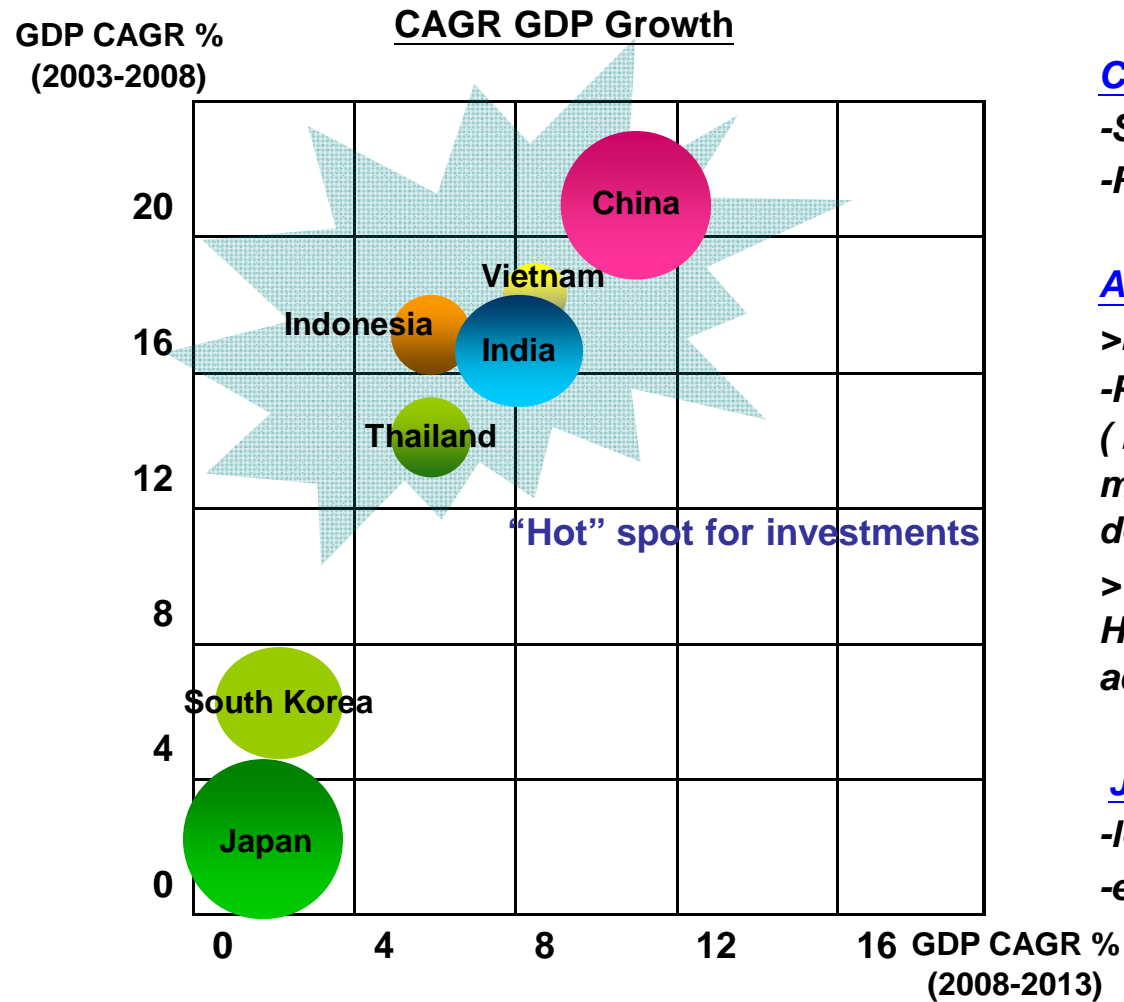
Source: IMF(World Economic Outlook, Oct 2009)

- After a deep global recession, economic growth has turned positive.
- *The global economy appears to be expanding again, pulled up by the strong performance of Asian economies and stabilization or modest recovery elsewhere.*

Macroeconomic Scenario – Asia

APAC economic growth- Comparison of key economies

*Bubble indicates nominal GDP size-2008



China and India

- Slower growth from their average pace
- Rebound expected in late 2009.



ASEAN:

- >Indonesia and Vietnam
- Positive growth over the next two years (lower share in advanced manufacturing and higher growth from domestic demand)
- >Thailand, Malaysia and Philippines
- Hardest hit (higher dependence on advanced manufacturing exports)



Japan and Korea

- long and severe recession
- extensive global financial links.



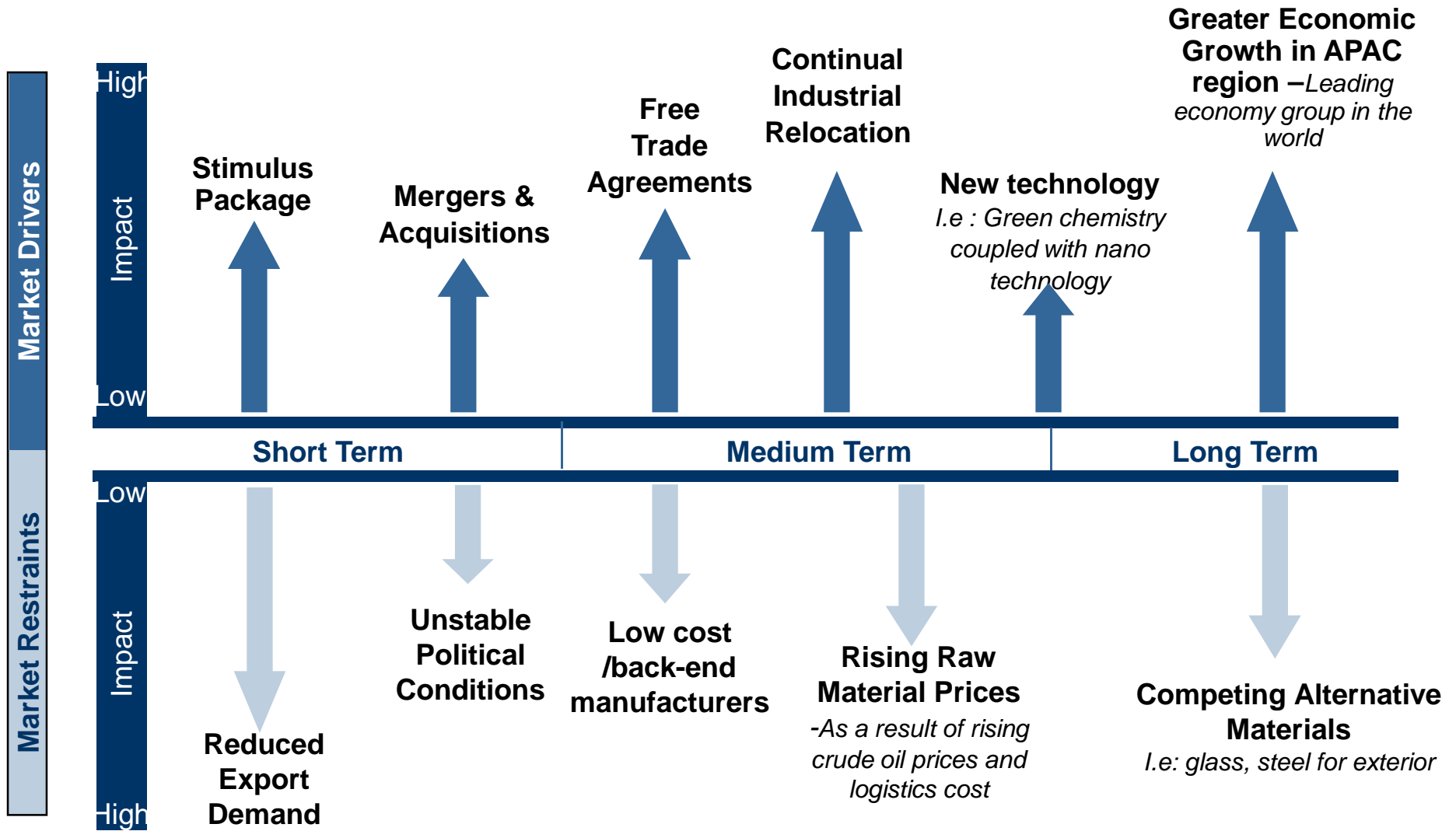
Source: Data from IMF, Analysis: :Frost & Sullivan

APAC Paint & Coating- Market Analysis



Market Analysis

Market Drivers & Restraints

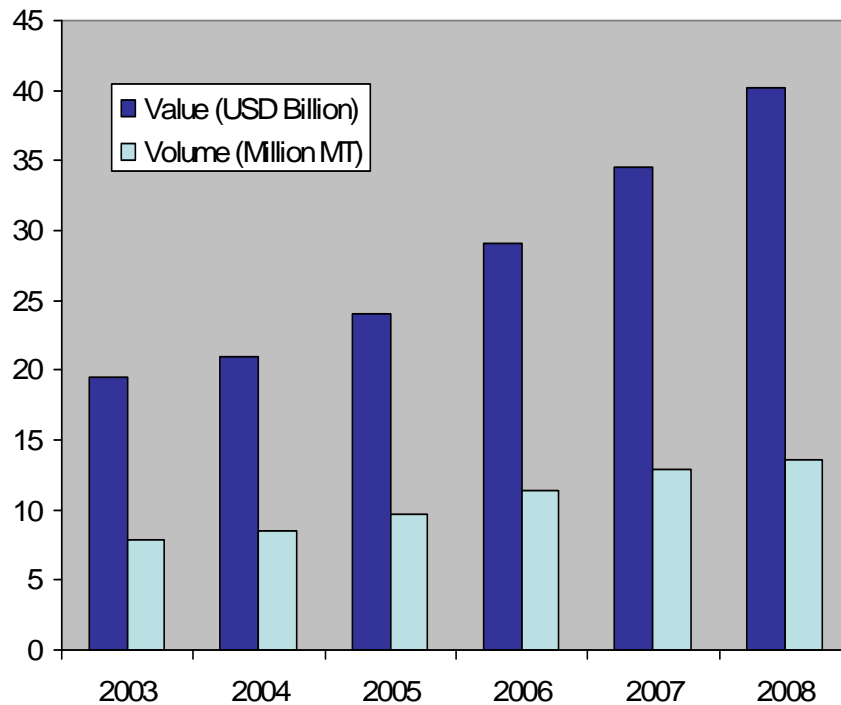


Source: Frost & Sullivan

Market Analysis

Market Size By Value and Volume

APAC Paint & Coatings Market Size (2003-2008)



•2003-2008 CAGR (Value) = 15.5%

•2003-2008 CAGR (Volume) = 11.7%

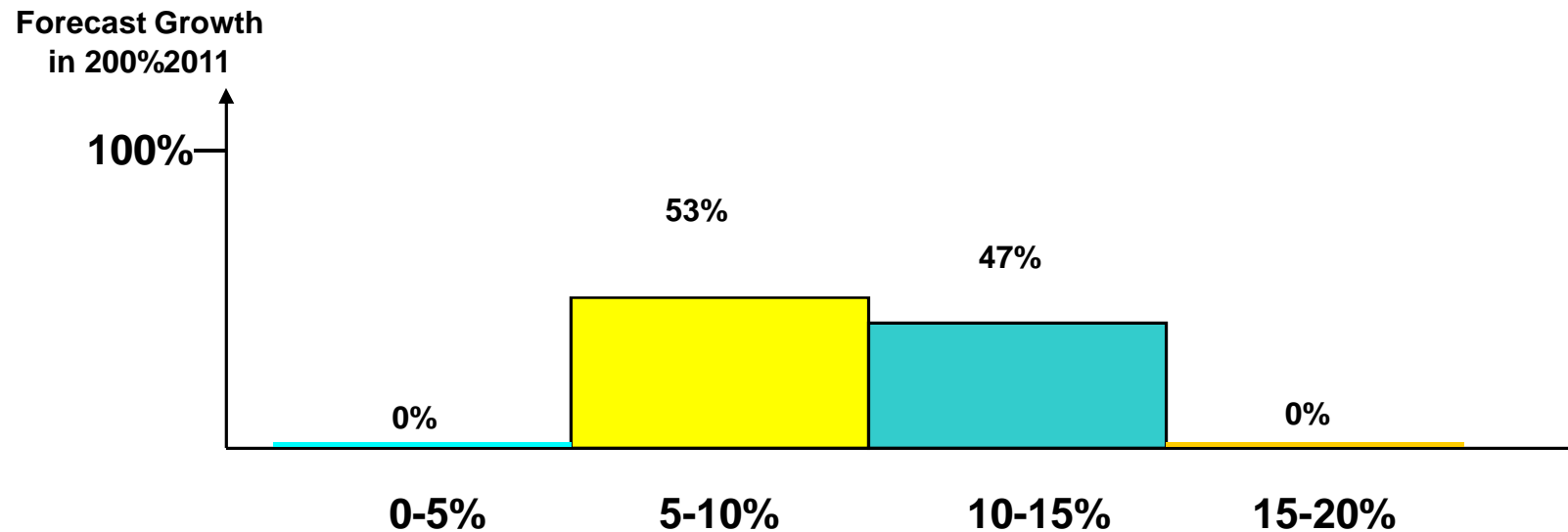
- **In 2008, the APAC paint market was valued at USD 40.1 Billion with a market size of 13.6 Million MT.**
- **2009: Witnessed a continued slowdown particularly in the first 2 quarters of the year. However, in the second half of the year, the market became to pull up especially as end use industries began to expand positively.**
- **2009: Total APAC market estimated marginal growth only-Negative growth in most countries buffered by the positive (albeit small) growth in China and India.**
- **2010-2011: Industry players are confident of positive industry growth numbers.**

Source: Frost & Sullivan

Poll Questions

Note: The following is based on a Frost & Sullivan poll to members of the APAC paint & coatings industry conducted in Q1, 2010

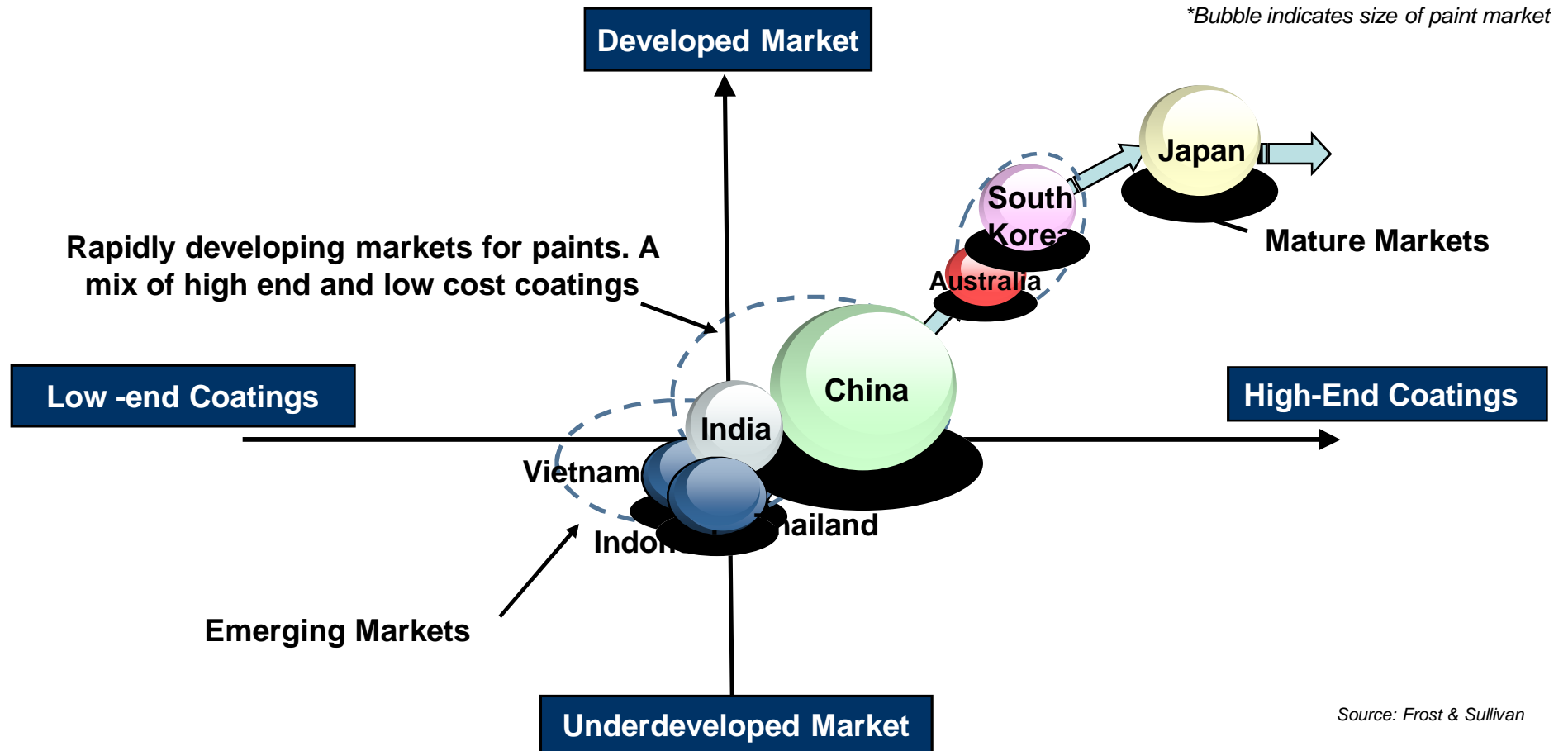
Poll Question: In your opinion what is the projected forecast growth for the APAC paint & coatings market in 2010 & 2011?



- An overwhelming 53% of the audience polled projected growth in 2010& 2011 to be between 5-10%
- An additional 47% projected growth in 2010-2011 to be even higher at 10-15%

Market Analysis

Country Placing In APAC Paint Market



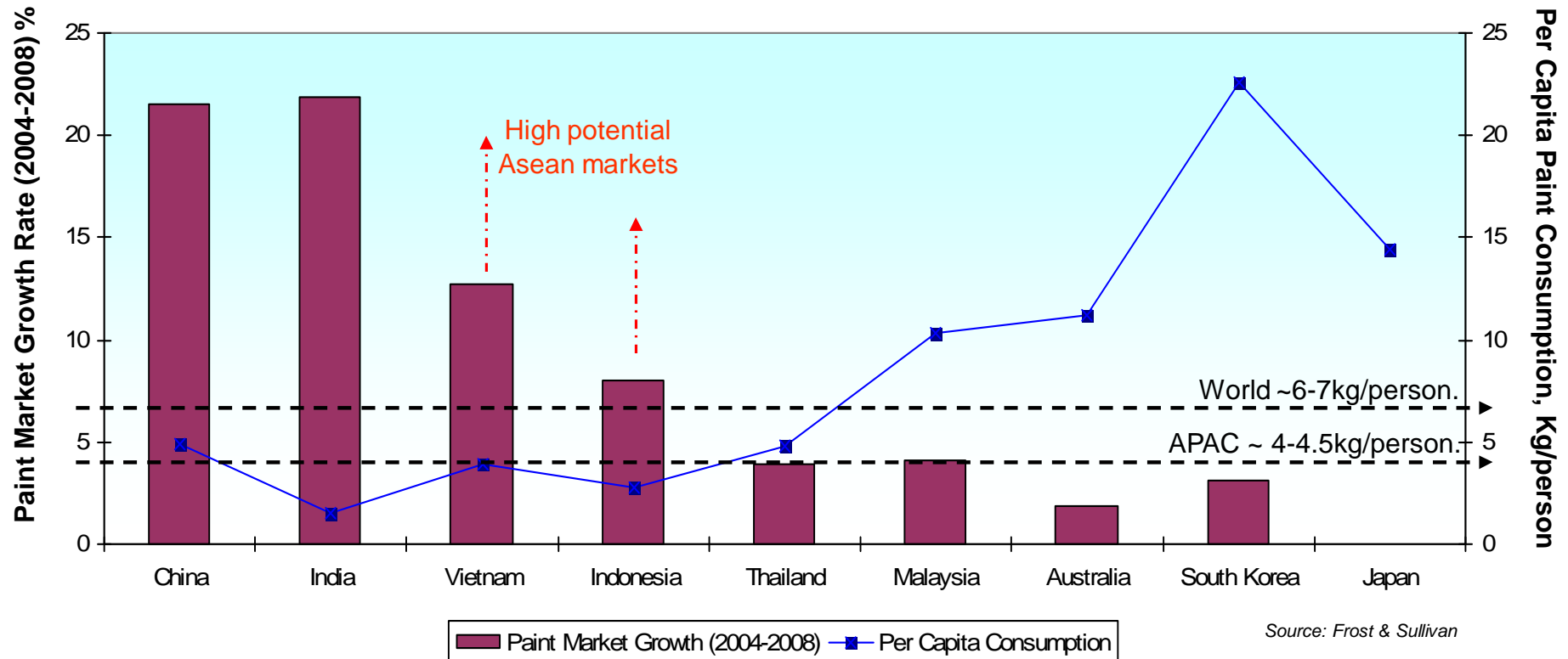
•Focus is now on “Emerging markets”

- Upside > high growth potential, access to technology transfer, potential consolidation.
- Downside > relatively more price-conscious consumers and low end coatings

Market Analysis

Paint Market Growth Rate & Per Capita Paint Consumption

Paint Market Growth Rate versus Per Capita Consumption

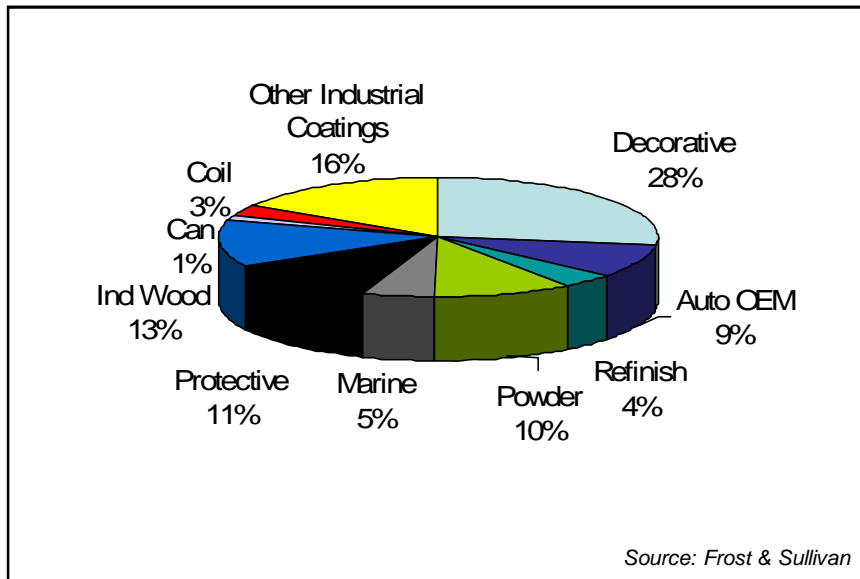


- Low paint consumption markets have a higher potential for growth from domestic demand
- High paint consumption markets typically are pioneers of new coating technologies

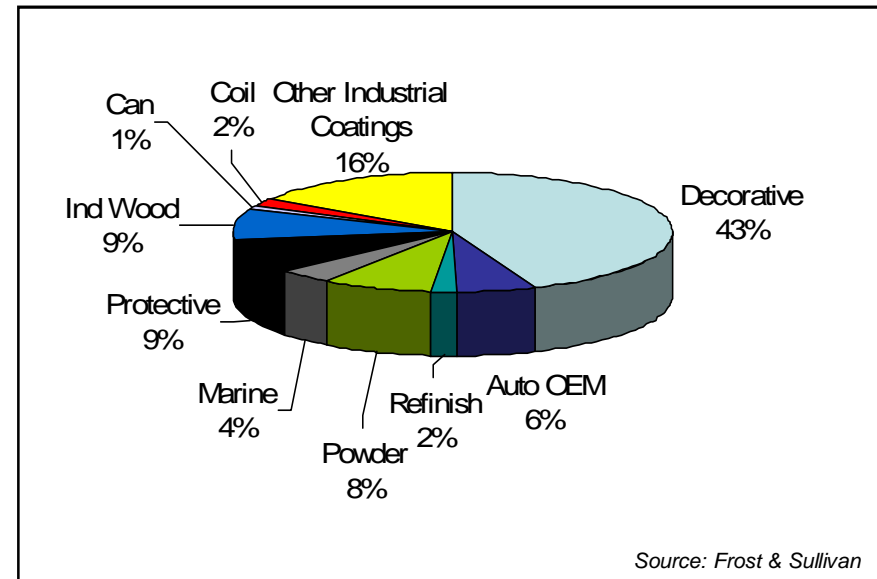
Market Analysis

Market Split By Segment

Market Share By Value



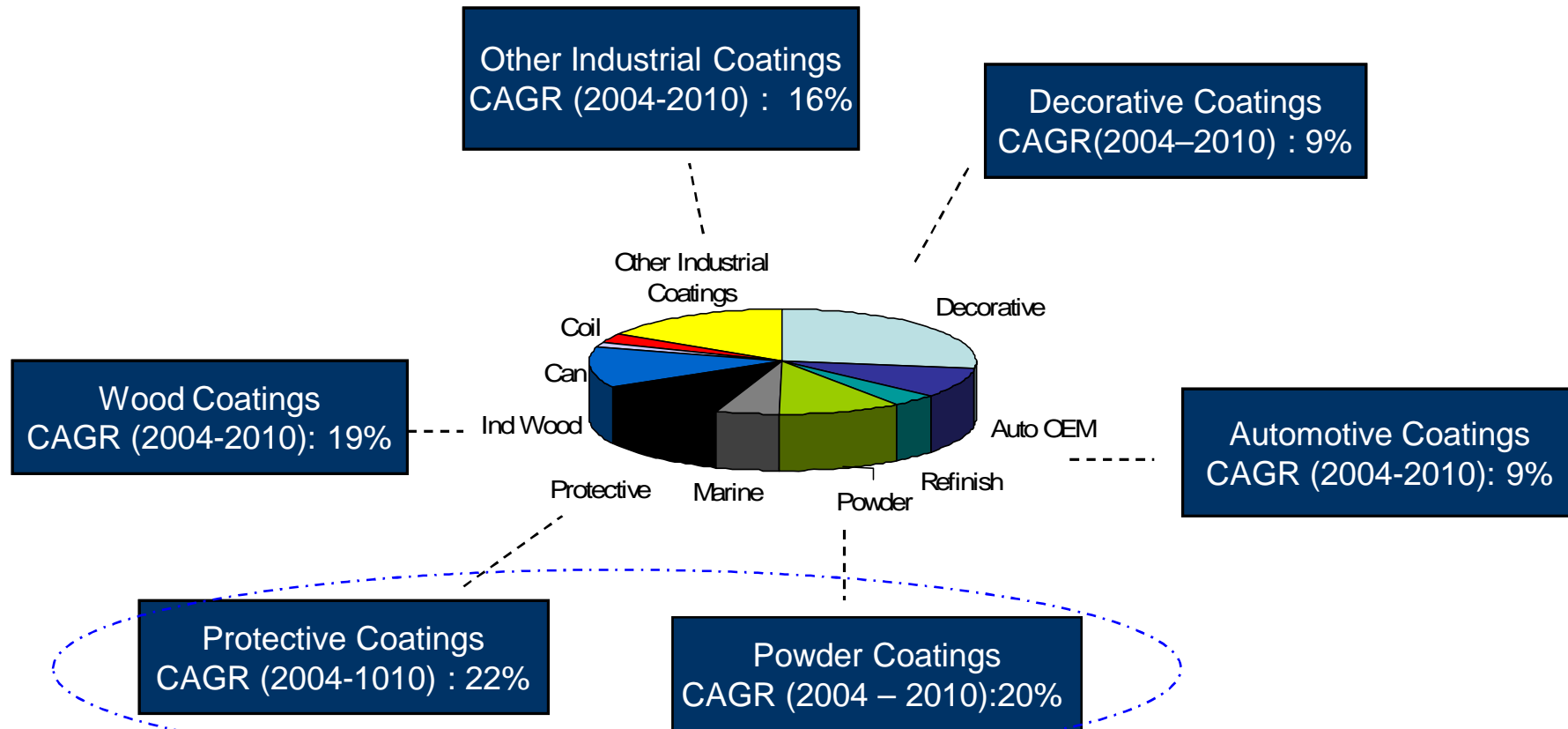
Market Share By Volume



- Industrial coatings-high value segment
- Largest individual segments : Decorative, Protective and Industrial Wood Coatings. Growth spurred by shift to urbanization, higher industrial growth, increased activity in the oil & gas industry and a healthy export market.

Market Analysis

Growth Rates of Key Segments



Source: Frost & Sullivan

• **Protective coatings and powder coatings estimated to witness rapid growth in the future, however 2009 has been badly hit due to reduction in export demand of white goods and postponement of key construction projects.**

Market Analysis

Competitive Analysis

Parent	Country of Origin	Notable Tie-ups/ Joint Venture/Acquisitons	Combined Market Share in APAC
Nippon	Japan	Nippon	8-10%
Akzo Nobel	Netherlands	Akzo Nobel, ICI Paints, International Paints, Sikkens	7-9%
Kansai	Japan	Kansai Nerolac (India), Sime Kansai (MY)	7-9%
PPG	US	Ameron, Sigmakalon, Yung Chi (TW), Taubman (NZ)	3-4%
Valspar	US	Dongguan Lily (CH), Guangdong Huarun (CH)	2-3%
KCC	Korea	KCC	2-3%
Hempel	Denmark	Hempel-Hai-hong (CH)	2-3%
Asian Paints	India	Asian-PPG (India)	1-2%
DuPont	US	DuPont-Shinto (JP/TW)	1-2%
Chugoku	Japan	Haiphong-Chugoku (VN)	1-2%
Orica	Australia	-	1-2%
Jotun	Norway	-	1-2%
SKK	Japan	-	1-2%
Guangdong Carpoly	China	-	1-2%
Wattyl	Australia	Taubman (Aus)	0.8-1%

•Top 5 players are major players in decorative as well as industrial coatings

•Mergers, acquisitions-current trend

•Chinese players entering the major player league

Source: Frost & Sullivan

Industry Highlights



Country Highlights

China



Overview:

- High growth but highly diversified and fragmented competitive market.
- With a total production volume of 7500 thousand tone in 2009, China is primed for placing in world coating production and consumption.
- Despite the downturn, estimated 2009 growth was at ~10% driven mainly by increase in domestic consumption and spurred by investments in infrastructure

High growth paint sectors

- Powder coatings-worlds largest producer, Industrial wood, protective coatings, automotive OEM and refinish
- China as hub for 3 C manufacture- good area to look at for growth.

Technology Trends

- Emphasis on climate change and environmental issues: (China recently announced a 45% cut in green house gas emissions by 2010 as well as 2 major objectives in increasing energy saving rates (up to 50% by 2010))

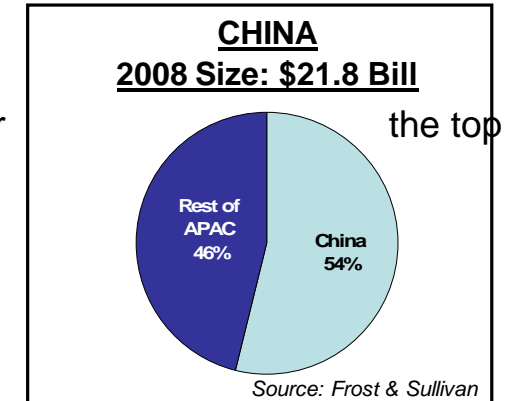
Key legislations impacting paint industry

- CCEL (China Environmental Labelling Program)



Key Regions

- Yangtze River Delta, Pearl River Delta, Bohai Rim (wealthy coastal regions)
- May 2006, Guangdong was officially named as the Hometown of China Coatings, which means that Guangdong plays a decisive role in the nationwide market of coatings, printing ink and adhesive



Country Highlights

India



Overview:

- Driven by domestic demand. CAGR of around 15% over the last few years
- Estimated 5% growth for 1H, 2009 and ~10% for 2H.
- Dominance of regional players acts as a barrier for new entrants to gain market share. Leaders in the organized paint industry are Asian Paints, Kansai Nerolac, Berger Paints and Akzo Nobel.

High growth paint sectors

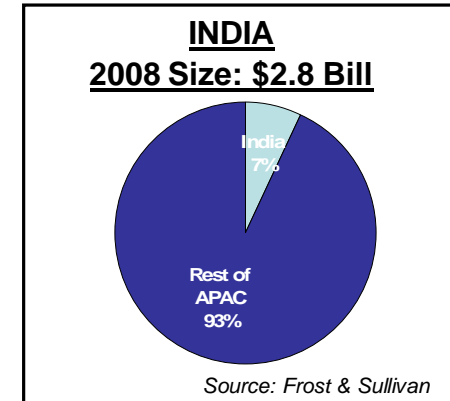
- Decorative-more than 60% of the market value. Demand from growing middle class and increased sale of premium paints in urban areas. Also the SEZ projects commissioned by the government.
- Automotive OEM (average growth of automobile industry approximately 10-15% p.a). Chennai is the automobile capital in India (~Detroit of Asia)

Technology Trends

- Industrial paints- still mainly traditional solvent technology. However in automotive refinish, technology switch from nitrocellulose to polyurethane and in protective coating -technology switch from low cost alkyds to Epoxies and Polyurethane.

Key legislations impacting paint industry

- Currently still no mandatory standard for regulating lead in paints or VOC emissions. Based on industry players initiatives.-*I.e initiatives by Asian Paints and Kansai Nerolac*



Country Highlights

Asean-Focus on Indo, MY, SG, TH, VN



Overview:

- Industrial coatings segments more badly impacted compared to decorative.
- Particularly powder, protective, automotive OEM. Between 15-30% decline.
- Decorative aided by boost from stimulus packages involving construction build managed to record approximately 3-5% growth for decorative segment.

High growth paint sectors

- 2010-automotive OEM and protective expected to rebound positively

Technology Trends

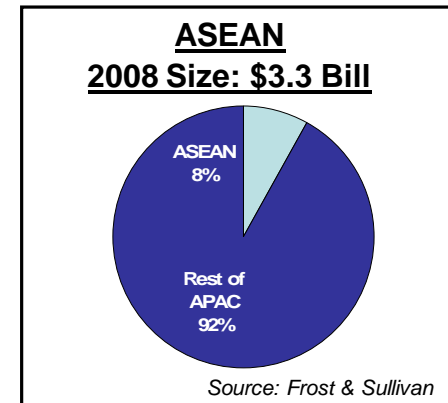
- Higher interest on environmental issues however more push from industry players rather than local governments.

Key legislations impacting paint industry

- Singapore- Green label
- Malaysia-recently launched GBI and Sirim Eco Label

Key Regions

- Indonesia and Vietnam expecting higher growth in 2010-2011



Singapore



Malaysia



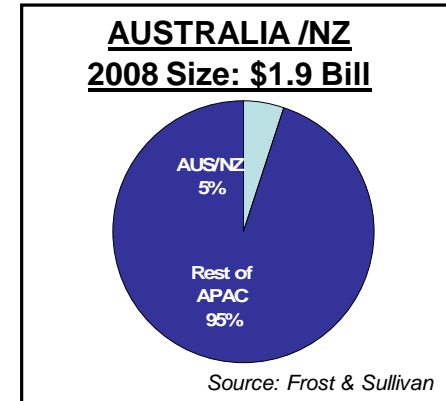
Country Highlights

Australia and New Zealand (ANZ)



Overview:

- Decorative for new constructions and protective for industrial structures badly impacted. Slow down in demand coil, wood and can coatings.
- Maintenance/refurbishment sectors held well with the strong recovery in Q4,2009.
- 2009-overall market was estimated to drop nearly 7%.
- 2010-market expected to remain flat (except protective coatings displaying stronger recovery ~5%).
- 2011-market is expected to growth steadily in line of the GDP growth.
- Nippon rapidly expanding in the decorating coating sector.



High growth paint sectors

- Maintenance market expected to fair better across all product segments.
- 2010: Protective, auto refinish, coil, can and other industrial coatings expected to continue the strong recovery in the 4th quarter Q4,2009.

Technology Trends

- Low VOC- the technologies for low VoC paints are ready but the high cost has stalled the uptake. Customers would be compelled to switch to the products once the regulation is issued. .

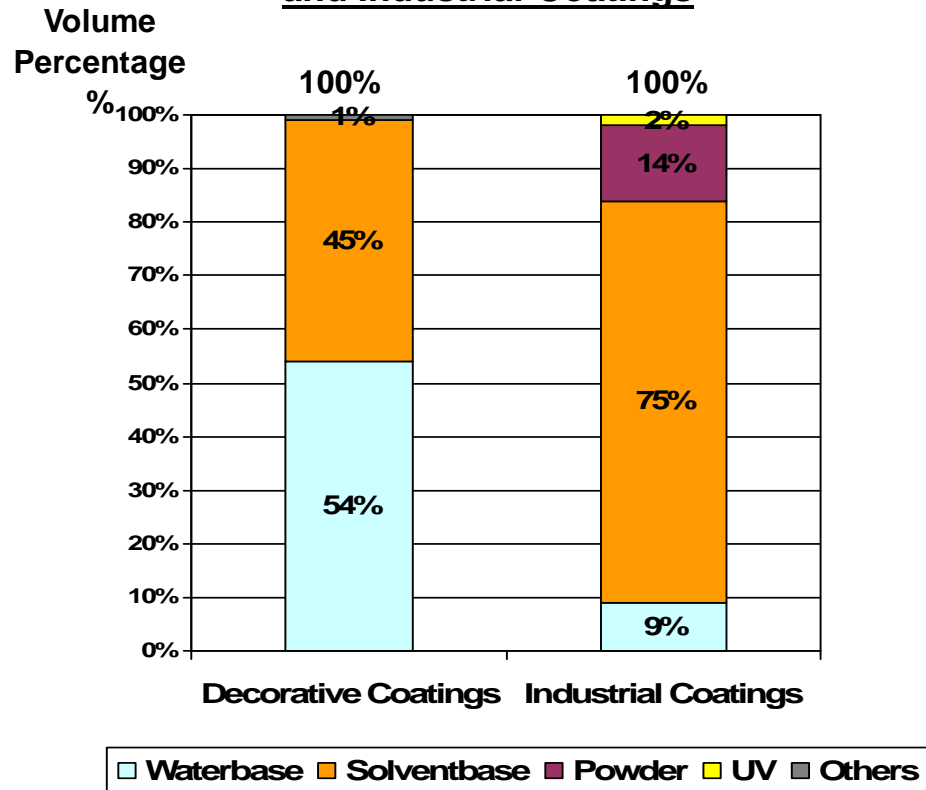
Key legislations impacting paint industry

- Now new regulations regarding paints and coatings issued during the last year.

Technology Highlights

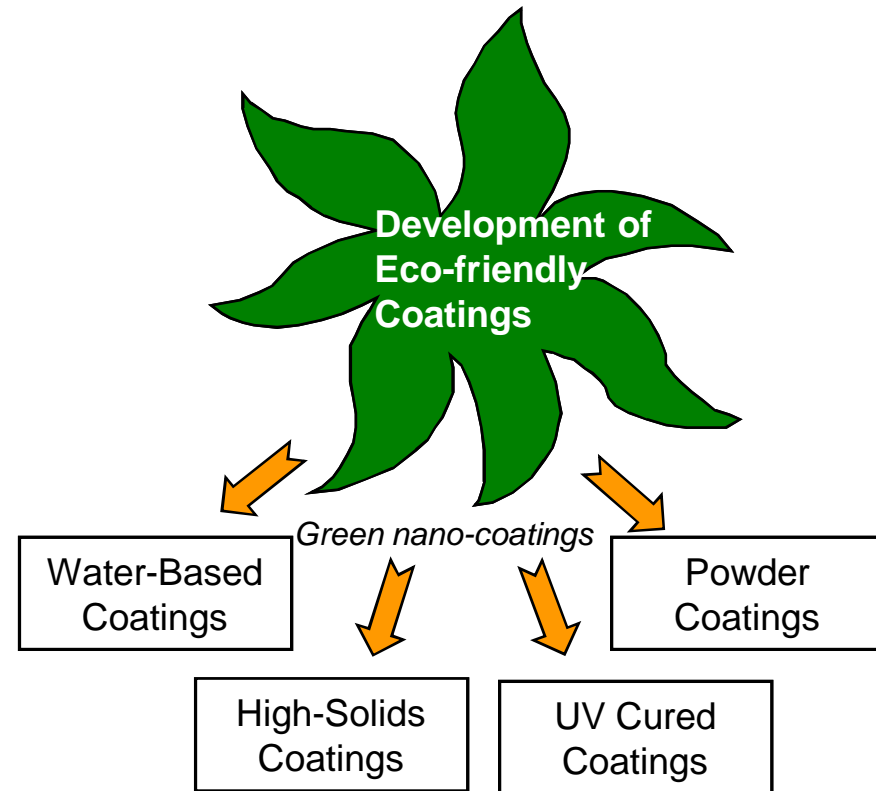
Growth of Green Coatings

Technology Split for Decorative and Industrial Coatings



Source: Frost & Sullivan

Future is Green!

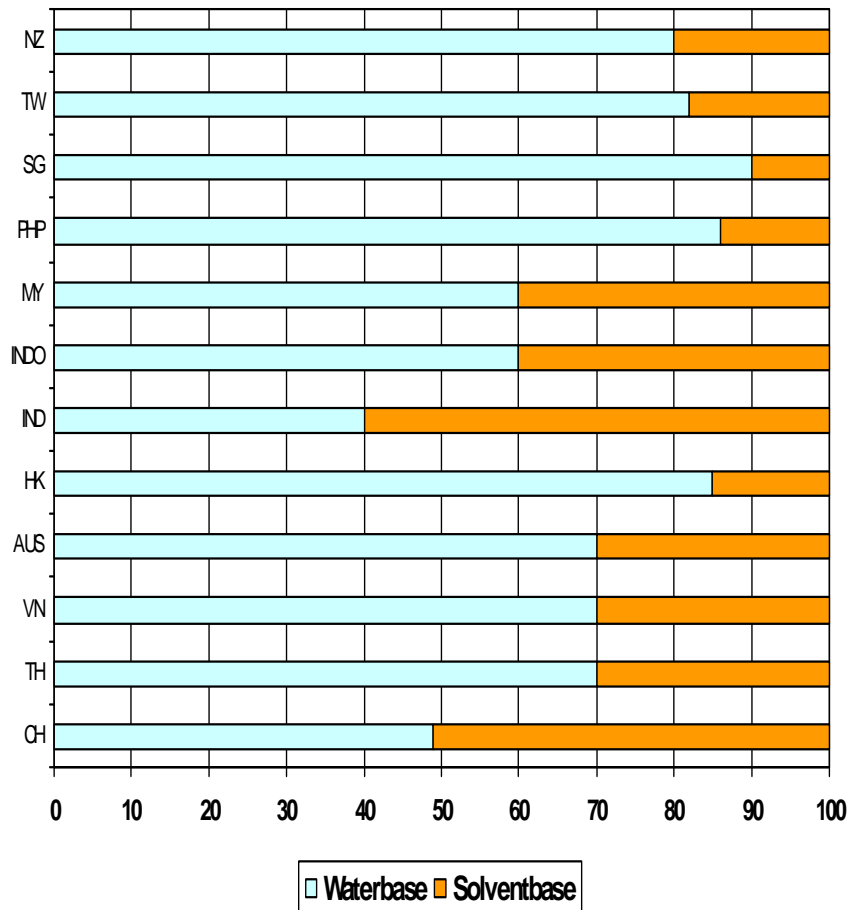


•Technology trend moving towards “green”: Stricter Environmental Regulations, low VOC emissions, less usage of coatings and fewer coats.

Technology Highlights

Decorative Coatings Technology -Trend in the Region

Decorative Coatings-Market share by Technology (Volume)



- Though the water-based decorative coatings in Asia appears to have achieved significant market penetration, there is a marked variation across geographic markets
- In emerging markets like China, India and SE Asia, there are numerous unqualified coatings manufacturers who supply low-end water-based coatings in the market
- Singapore is an exception in SE Asia as it is a mature market and is ahead of other countries in SE Asia in technology
- On an average, low-end/tier coatings make up approximately 40-43% of the total decorative coatings market in APAC.

Technology Highlights

Growth of Radiation Cure Coatings



Main Uses of Rad-Cure in Coatings:

- Wood coatings (flooring, cabinets and post-assembled furniture), Plastic, Flexible packaging, Interior aerospace and defense

Key Industry Challenges:-

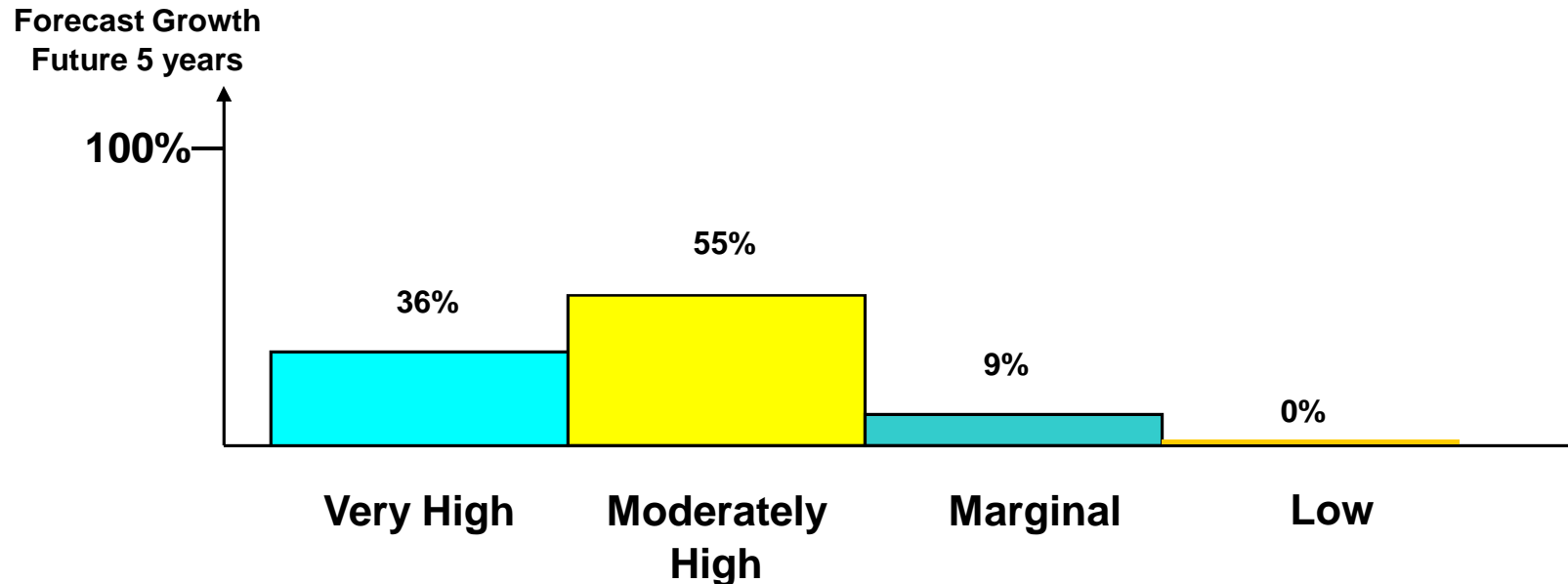
- Global end-users shift
- Price Limitation
- General perception about health and safety concern
- Non availability and high cost of raw materials
- Reluctance of companies to change to new technology
- Performance limitation
- Competition from other technologies
- Lack of chemists and other skilled workers

Radiation cure coatings offer much opportunity for growth to coating manufacturers and raw material suppliers alike who are willing to invest in this technology.

Poll Questions

Note: The following is based on a Frost & Sullivan poll to members of the APAC paint & coatings industry conducted in Q1, 2010

Poll Question: How do you foresee the growth of Green Technology in the paint & coatings industry for the collective APAC region within the next 5 years?



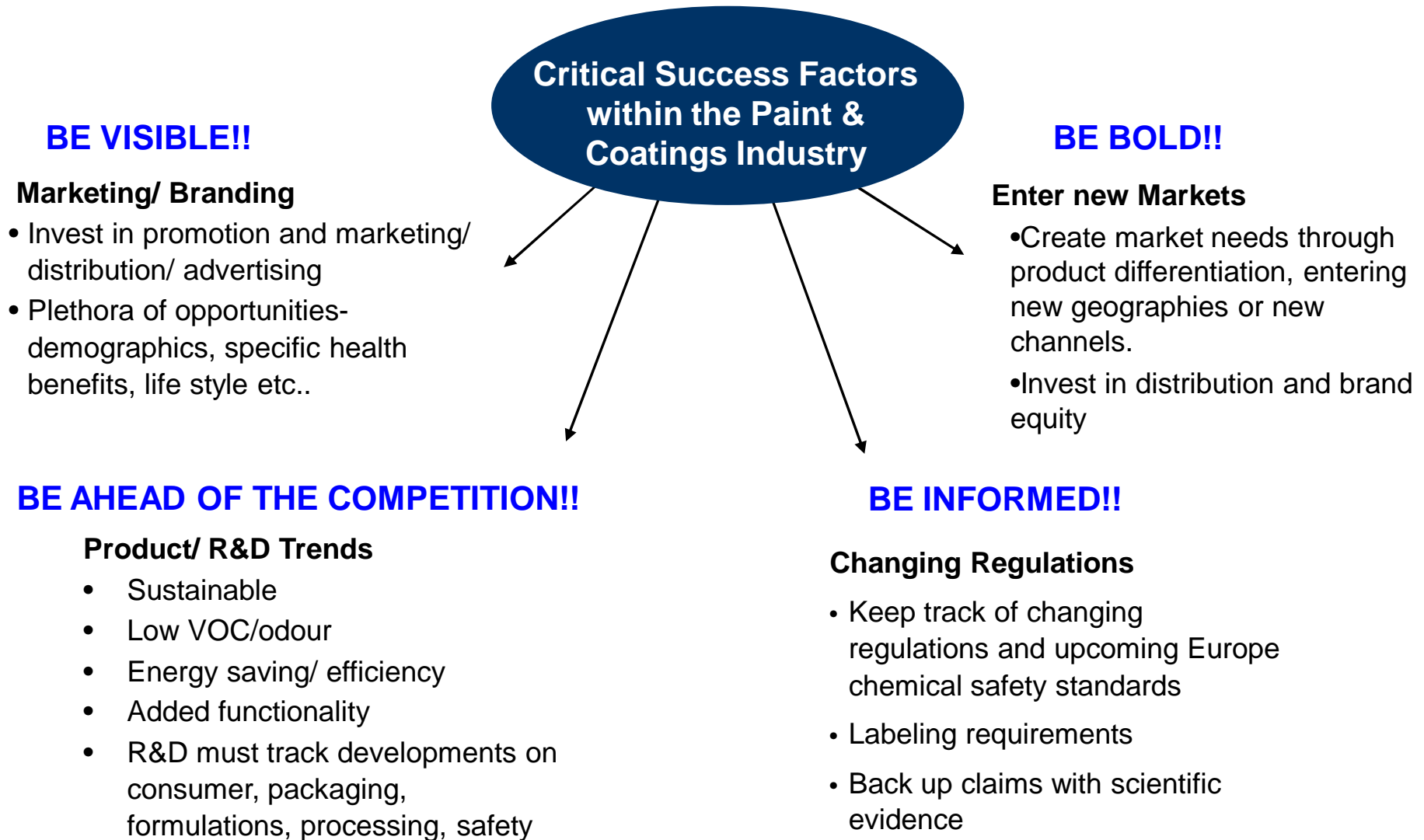
•An overwhelming 36% of the audience polled projected growth of Green Technology in the paint & coatings in the coming 5 years to be moderately high and a further 55% projected Moderately high growth.

Conclusion



Conclusion

Critical Success Factors



For Additional Information

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