

Styrene Market in Asia



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NIHON OXIRANE CO.,LTD.

The 3rd Asian Aromatics & Derivatives Conference
SINGAPORE JUNE 28th-29th 2007

NIHON OXIRANE

Incorporated : August 25,1972

Shareholders : Sumitomo chem 60%

Lyondell 40%

Capacity : SM 425 kt/Y (CSM 110 / 270 kt/Y)

PO 181 kt/Y (Sumitomo 200 kt/Y)

PG 100 kt/Y

Employees : 80 people

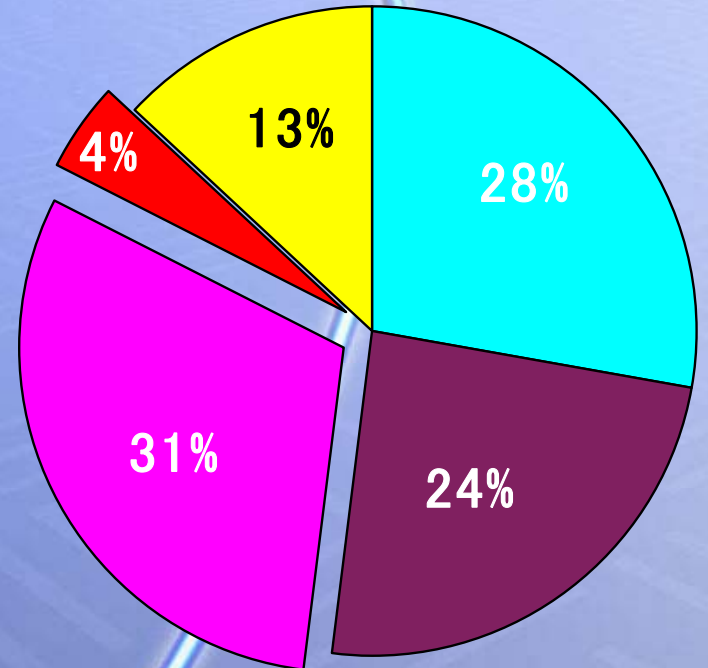
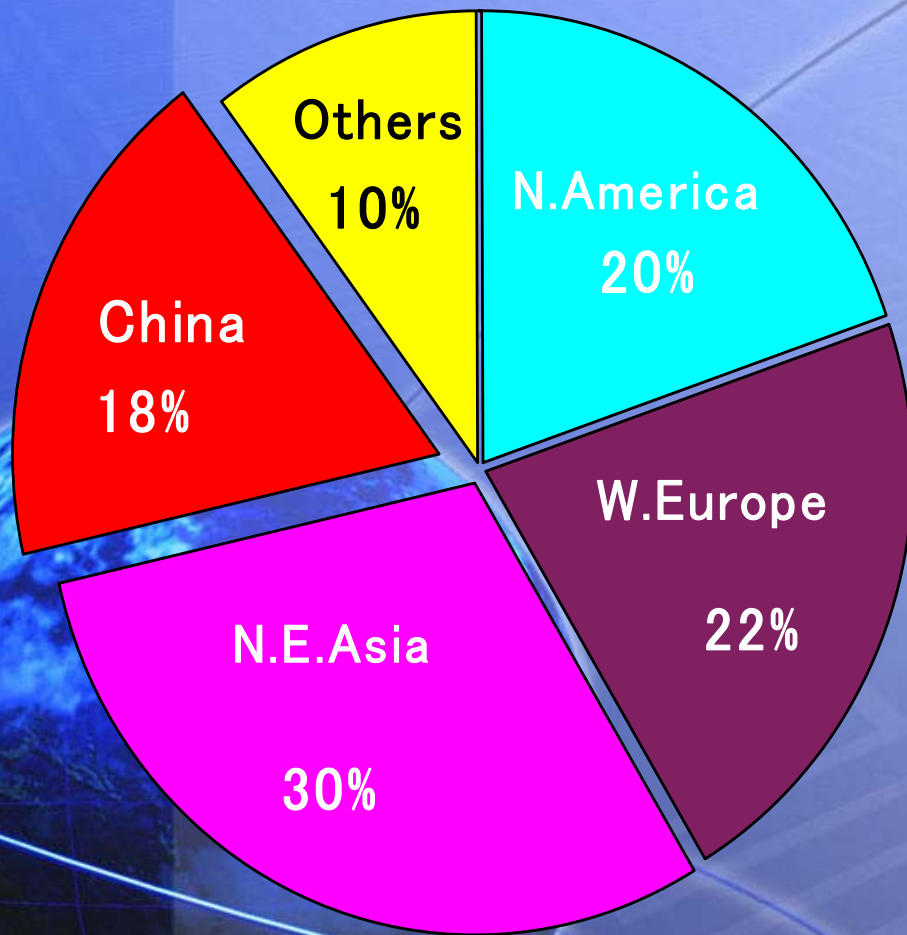
Today's Agenda

Asian Styrene Market

- Overview
- Review
- Forecast



2006 SM Demand by Region

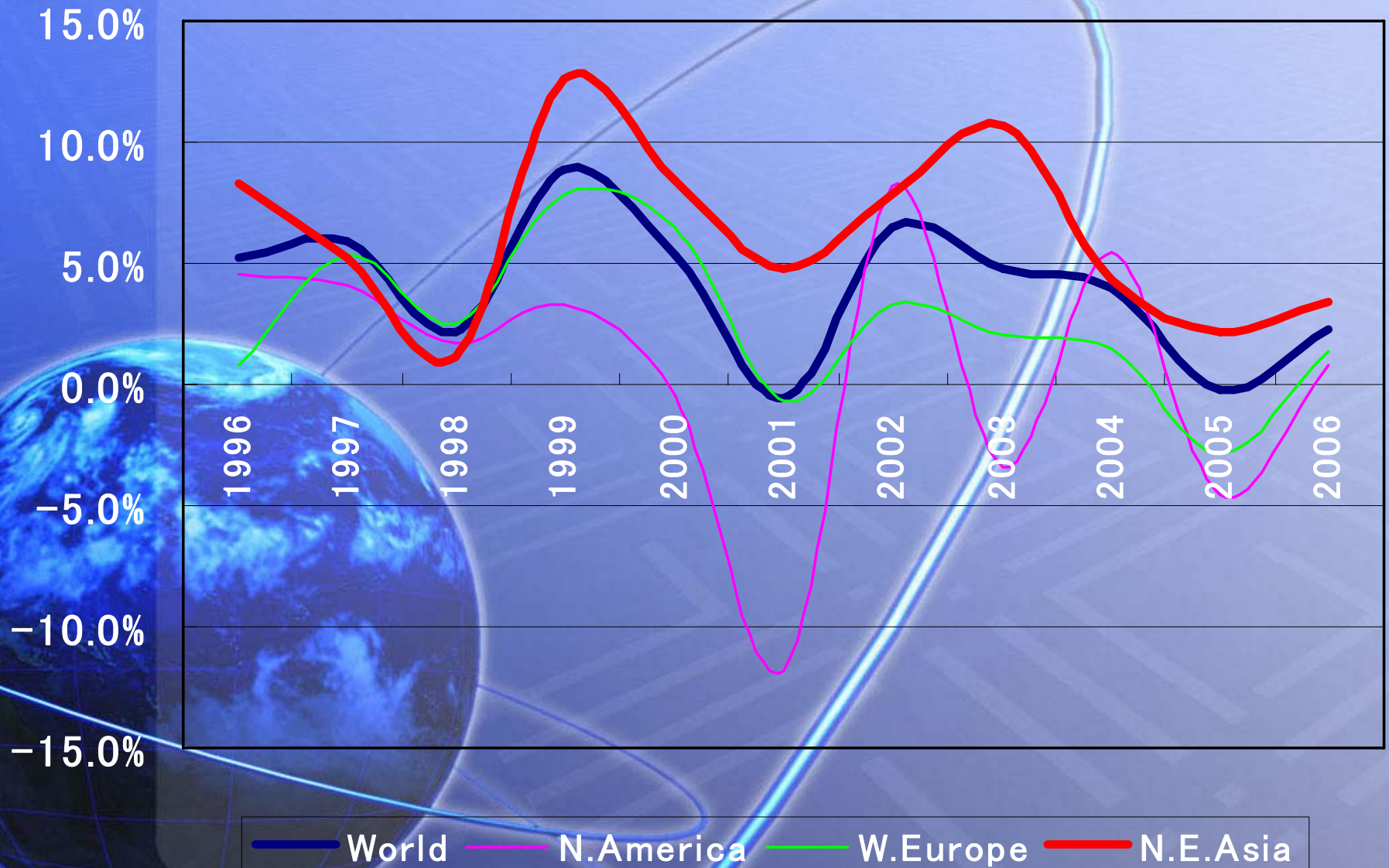


1997 = 18mil
+ 7 mil (+ 39%)

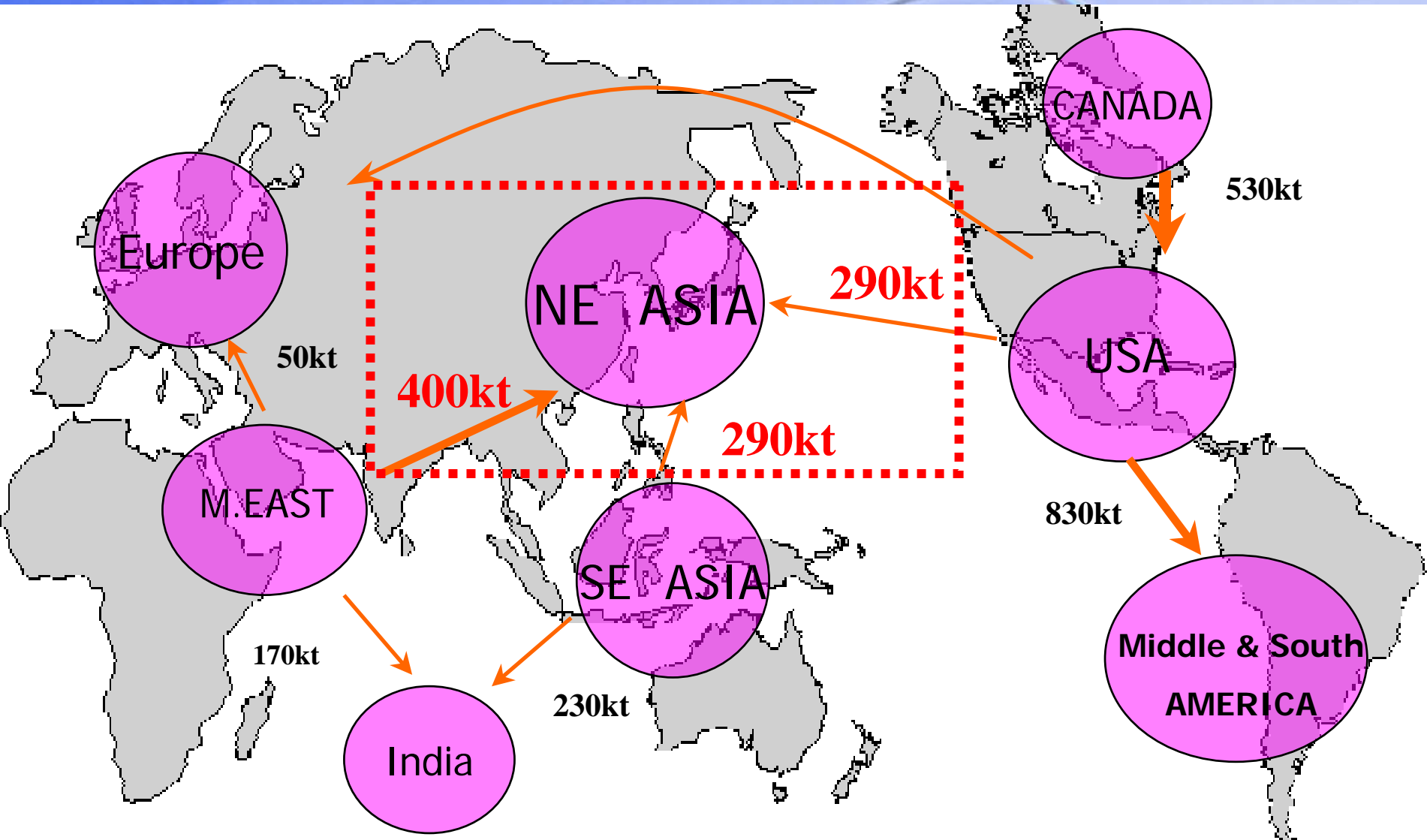
2006 SM World Demand = 25mil



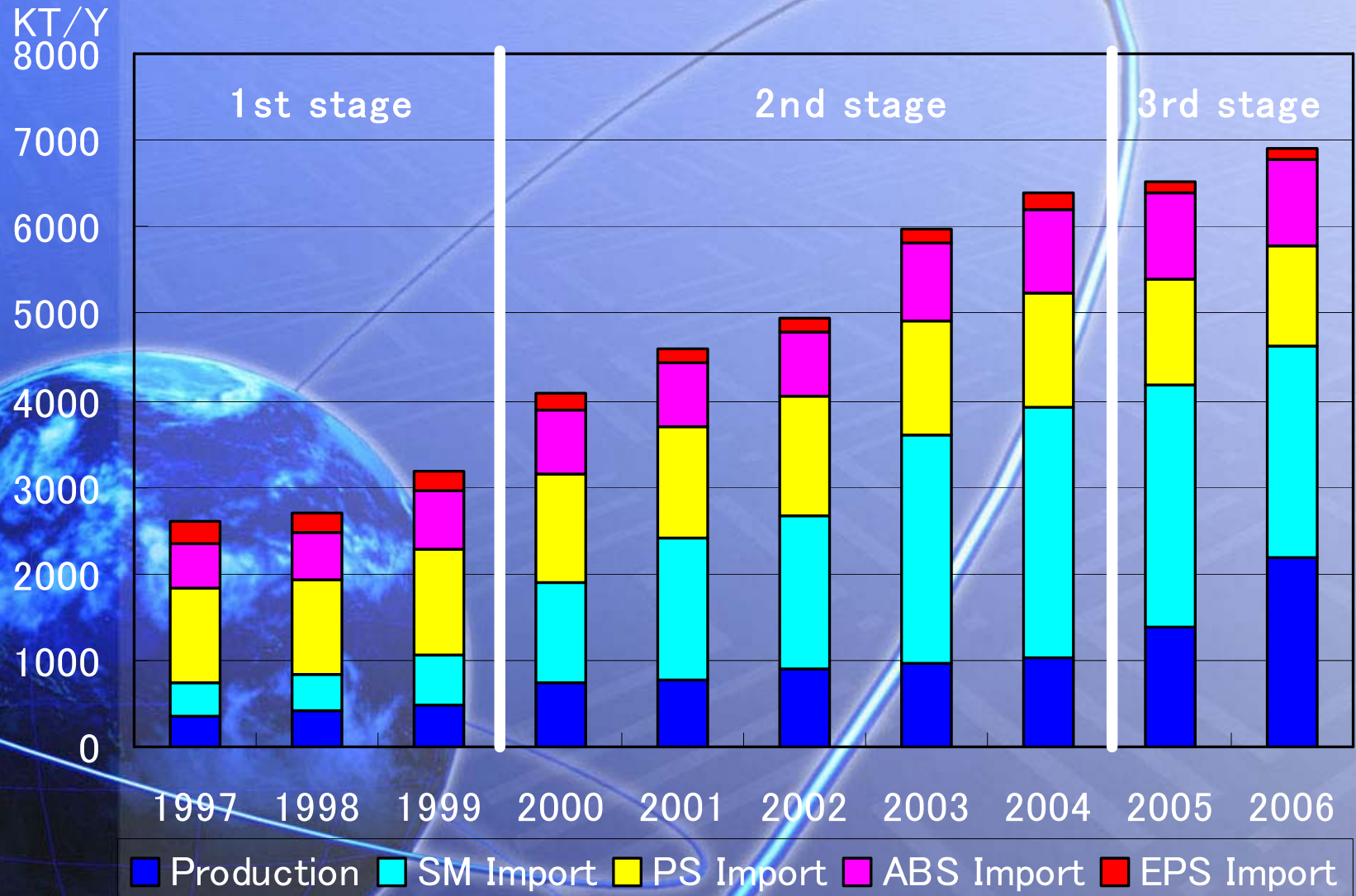
G/R of SM Demand by Region



2006 SM World Trade



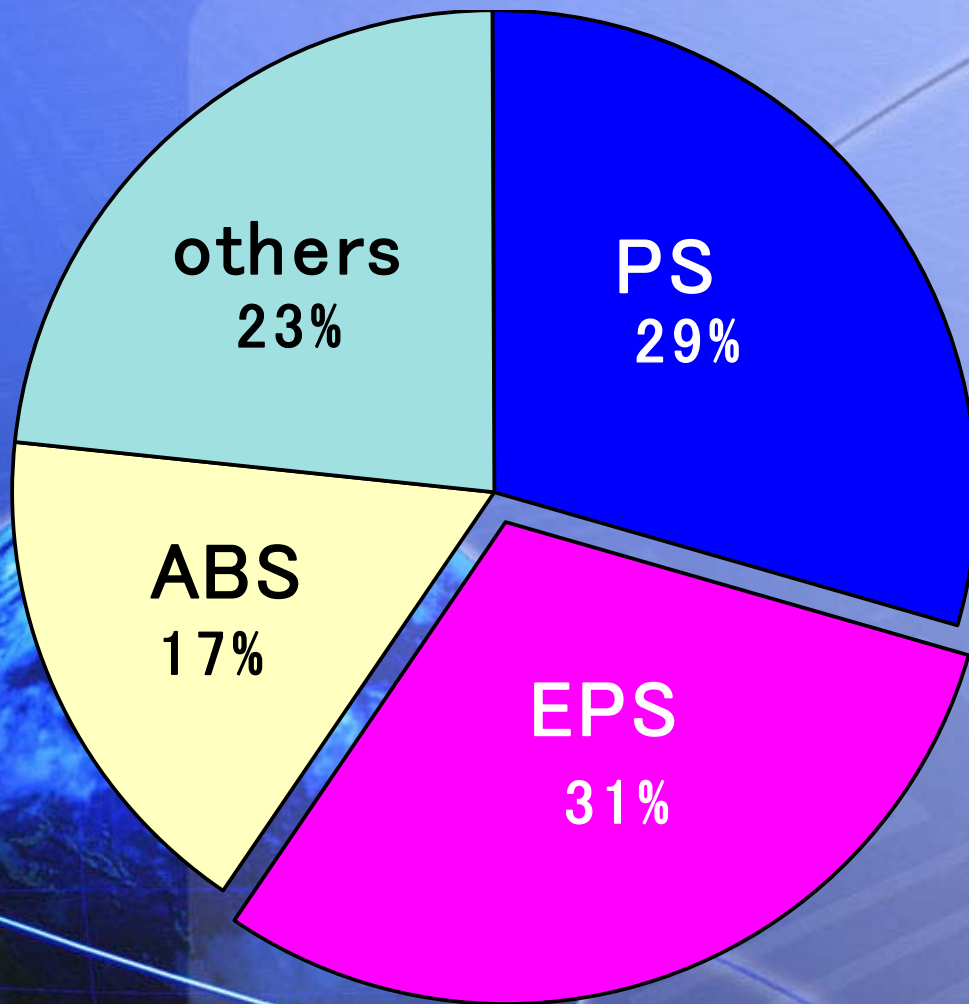
SM Demand in China



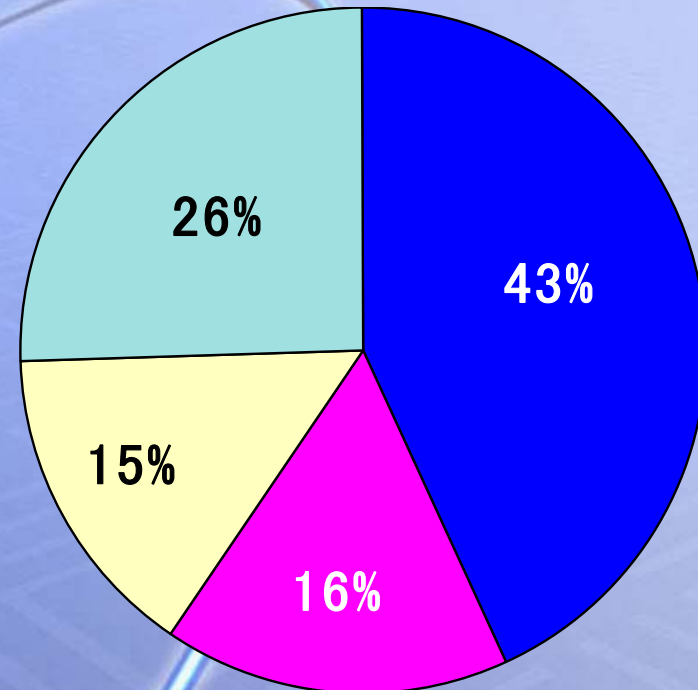
SM & Derivatives Capacity in China

	1999	2004	2006
SM	675	974	2469
PS	986	1556	2091
EPS	677	1987	2420
ABS	285	1185	1380
UPR	674	868	1018
SB LATX	93	182	341
SBR	370	475	613

Chinese SM Demand by Derivatives



China



World

Overview - Conclusion

- **SM in Asia has occupied an important position in the World.**
- **Asia has absorbed the excess production in US & M.E.Asia.**
- **Asia, especially China, has been the engine of growth.**
- **EPS is key industry for Chinese SM biz.**
- **China has just entered into 3rd stage.**

1 st stage :	~2000	import polymers
2 nd stage :	2001~2005	import monomer
3 rd stage :	2006~	stand on own production

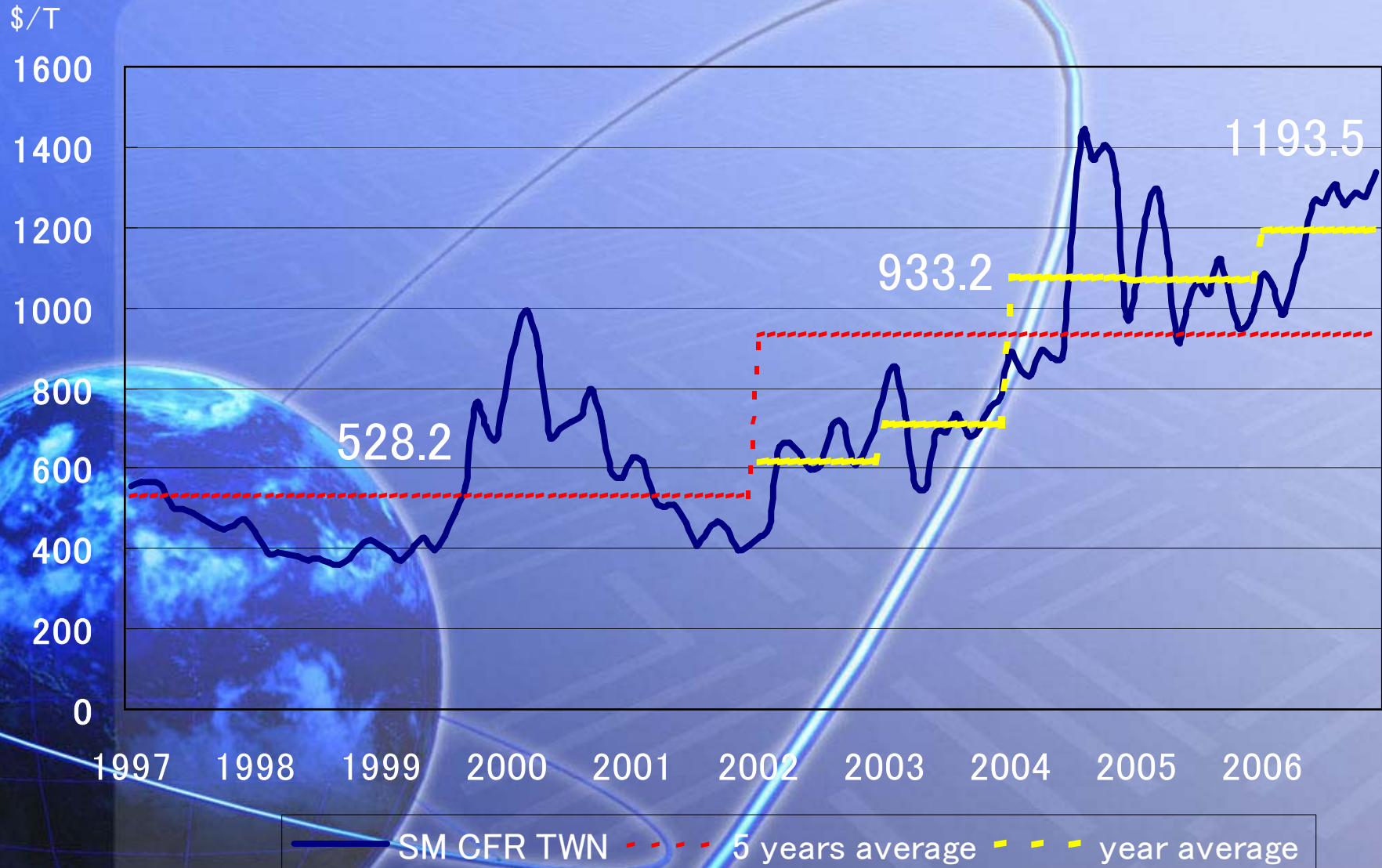
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Asian Styrene Market

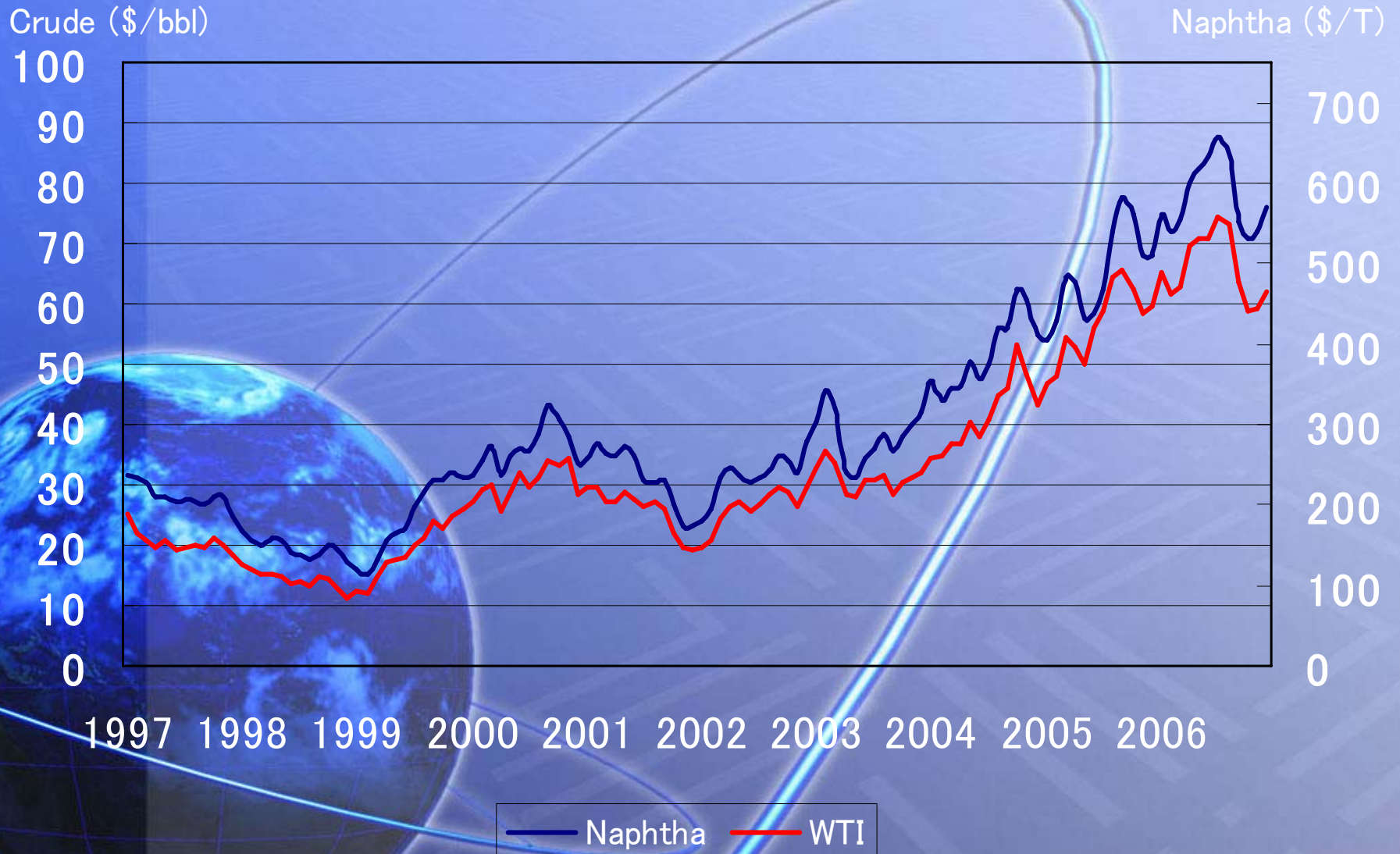
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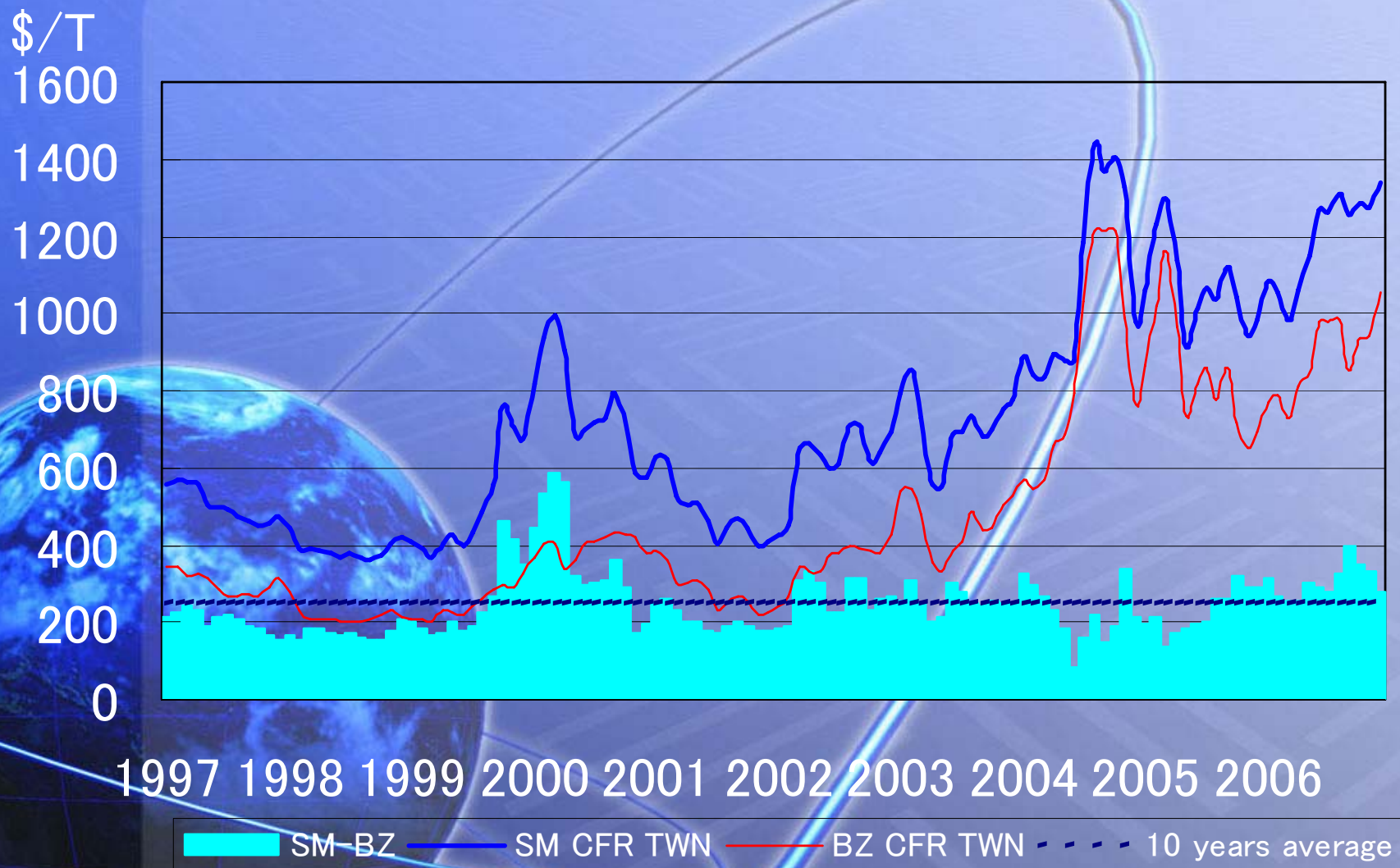
SM Spot Price in Asia (CFR Taiwan)



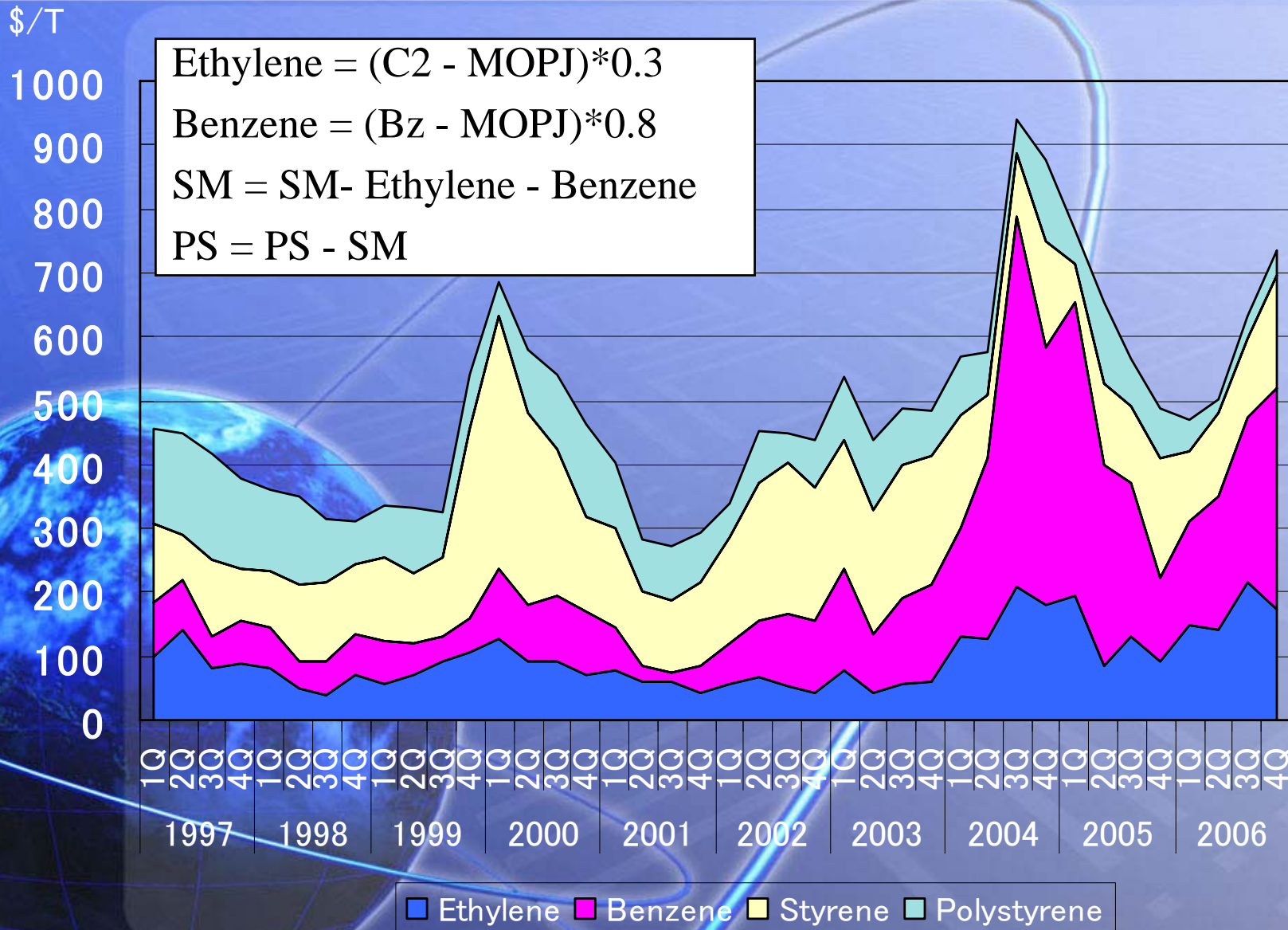
Crude (WTI) & Naphtha (MOPJ)



Price Spread between SM & Bz



Margins of SM Chain in Asia



PS Price & RMM in Asia

PS CFR F.E.Asia
(\$/T)

PS RMM (\$/T)



World Incremental Demand by Derivatives

KT/Y
2000

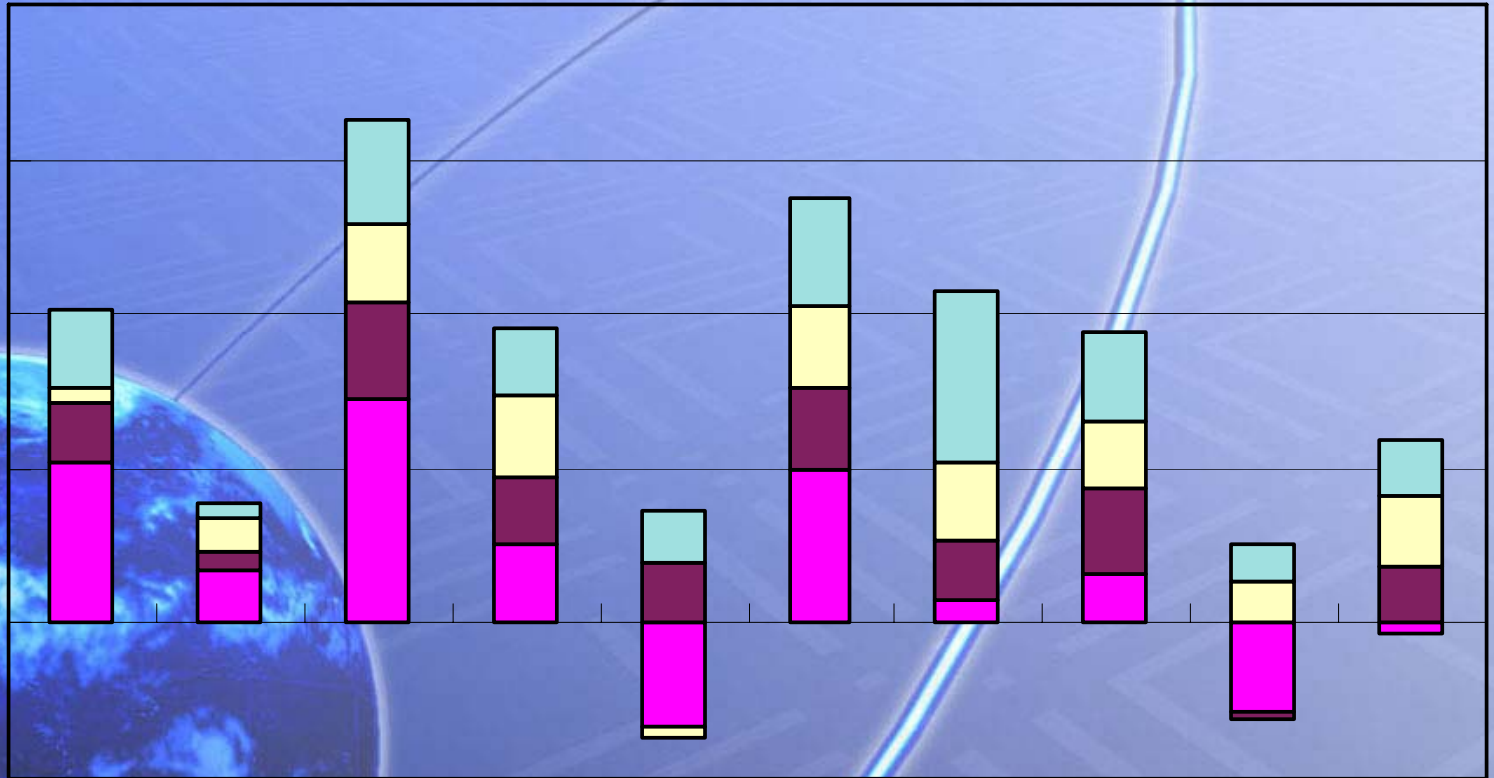
1500

1000

500

0

-500

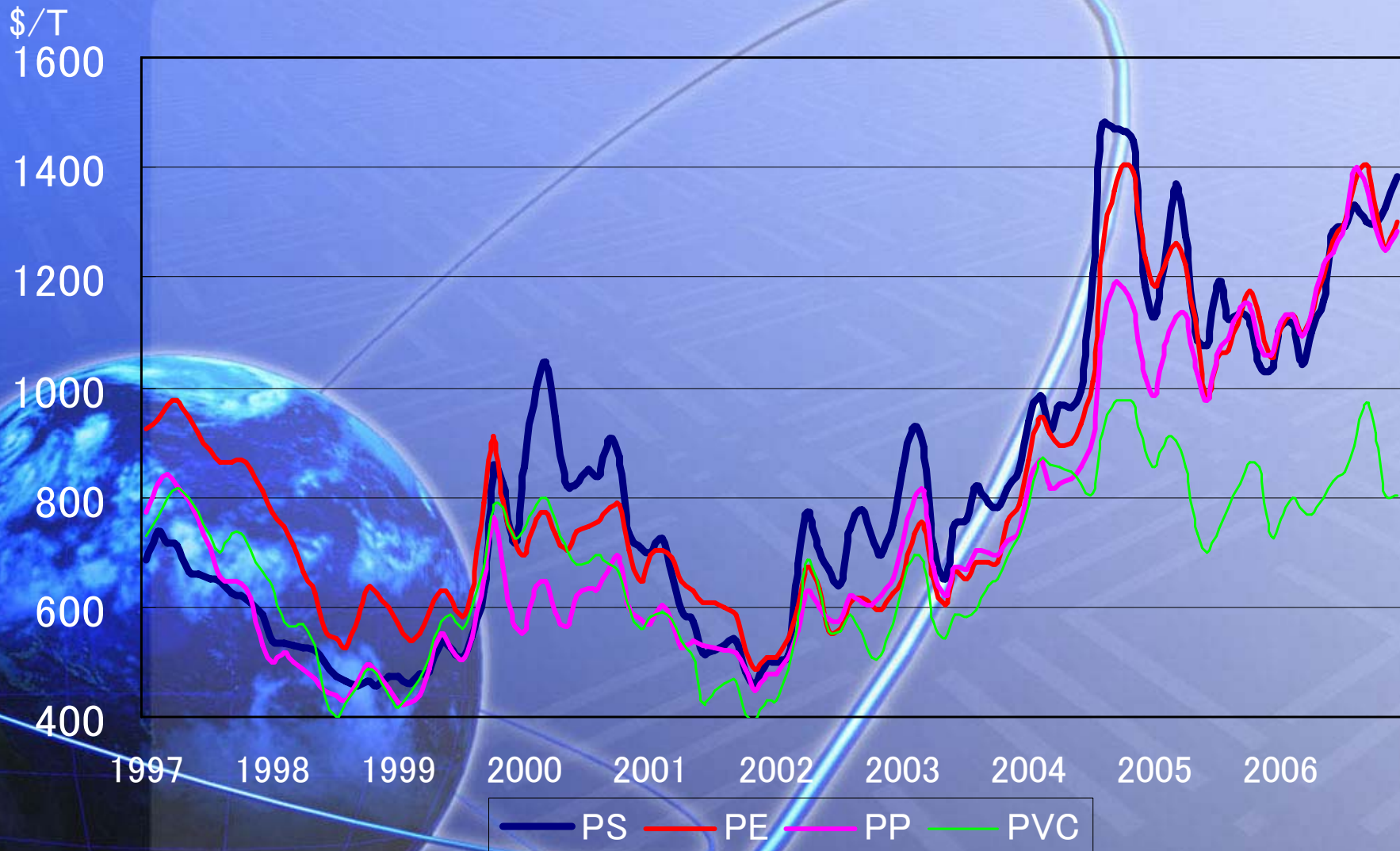


1997 1998 1999 2000 2001 2002 2003 2004 2005 2006

PS EPS ABS others



Polymer Price in Asia



Review - Conclusion

- The long range view;

 - ~ 1999 PS enjoyed the good margins

 - 2000~2003 Expansion of SM derivatives in China
boosted SM margin

 - 2004~ High raw materials have squeezed
the margins of SM chain

- PS is still important industry for SM,
however, no growth and no margin.

- **Weak PS has set ceiling for SM.**

Today's Agenda

Asian Styrene Market

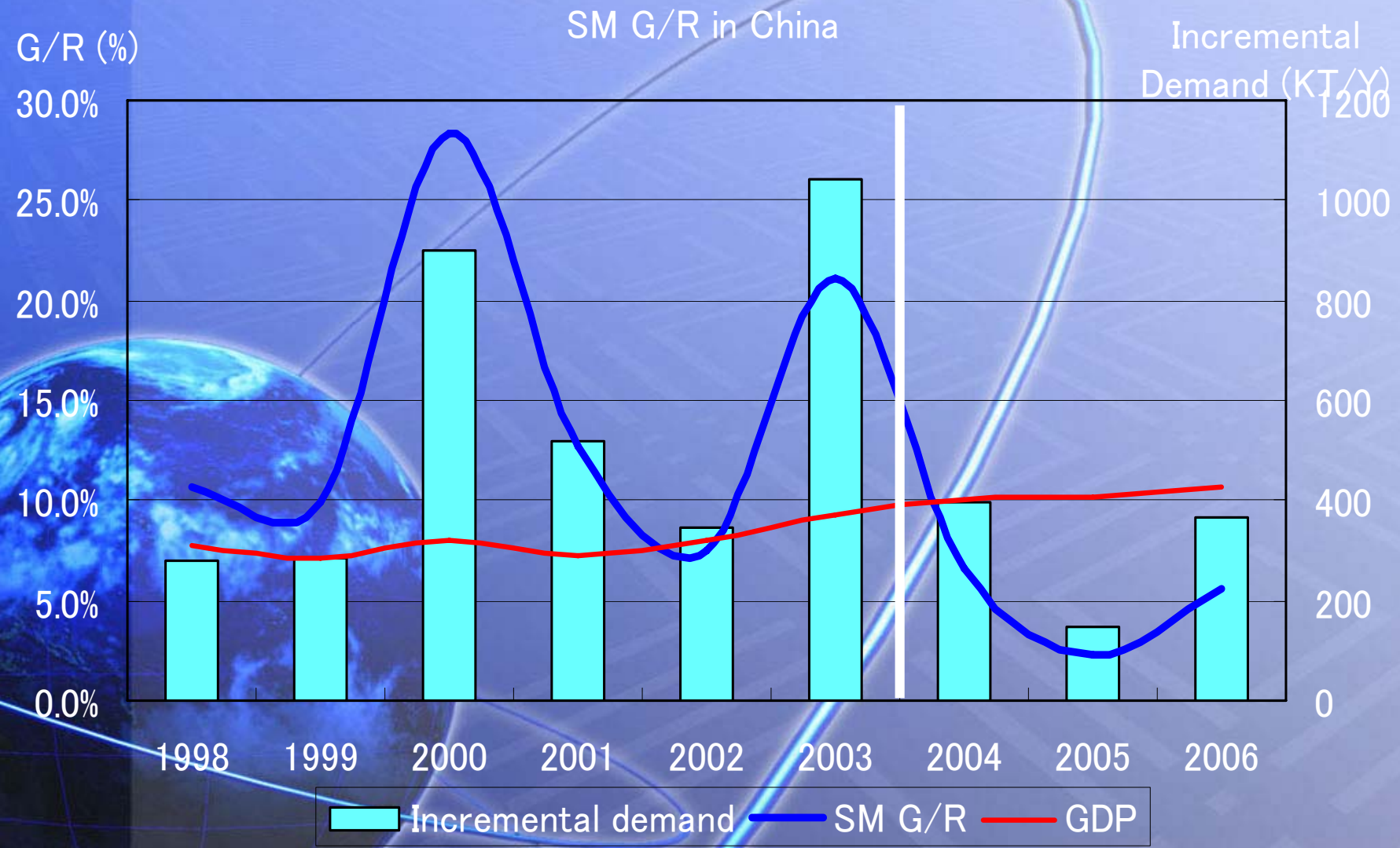
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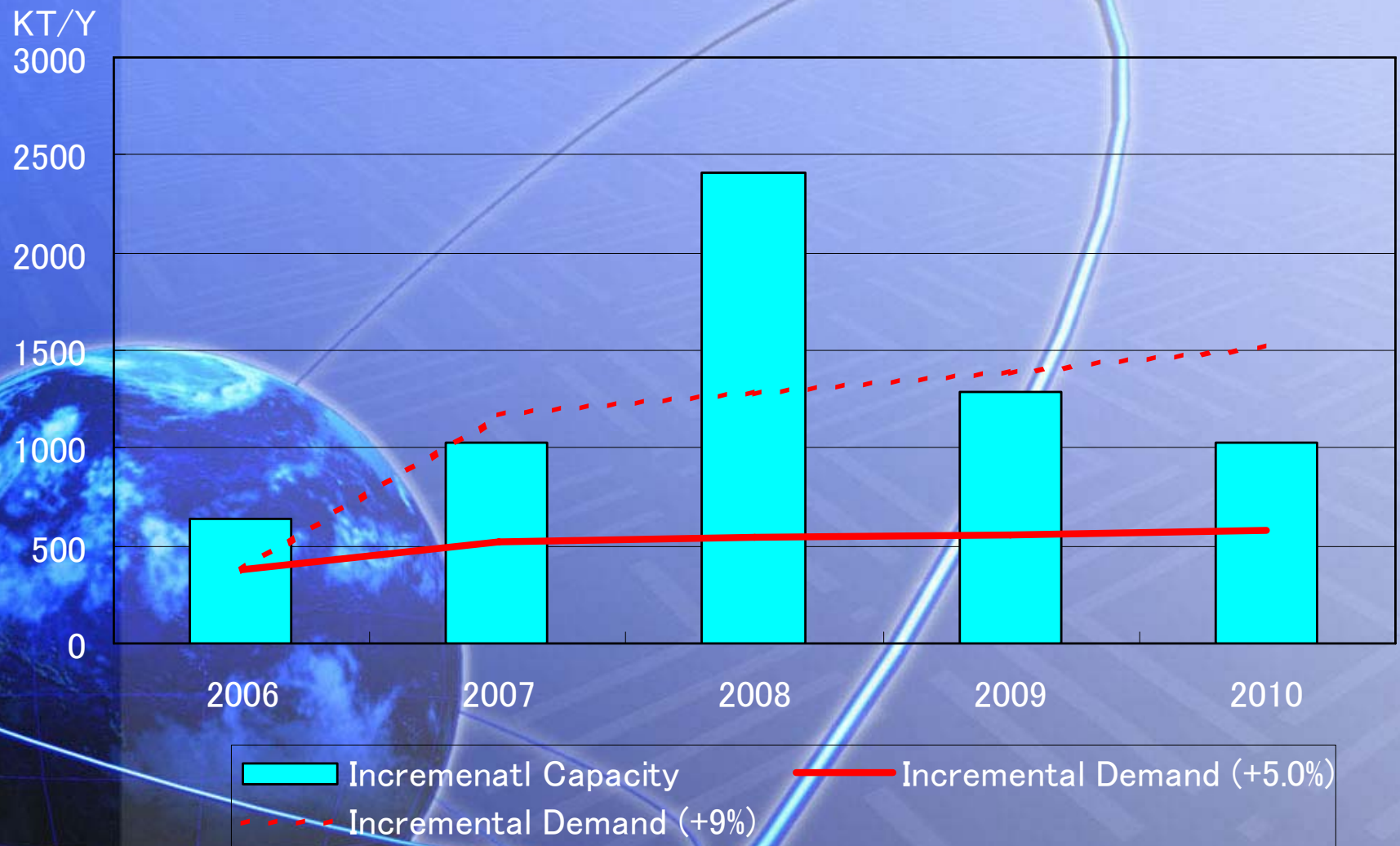
Frequent Questions

- **Is China able to continue their growth ?**
- **Will the balance of SM be long ?**
- **Will POSM's competitiveness continue?**
- **Who is able to survive ?**

Is China able to continue their growth ? → **Yes, however...**



Will the balance of SM be long ? → Yes !



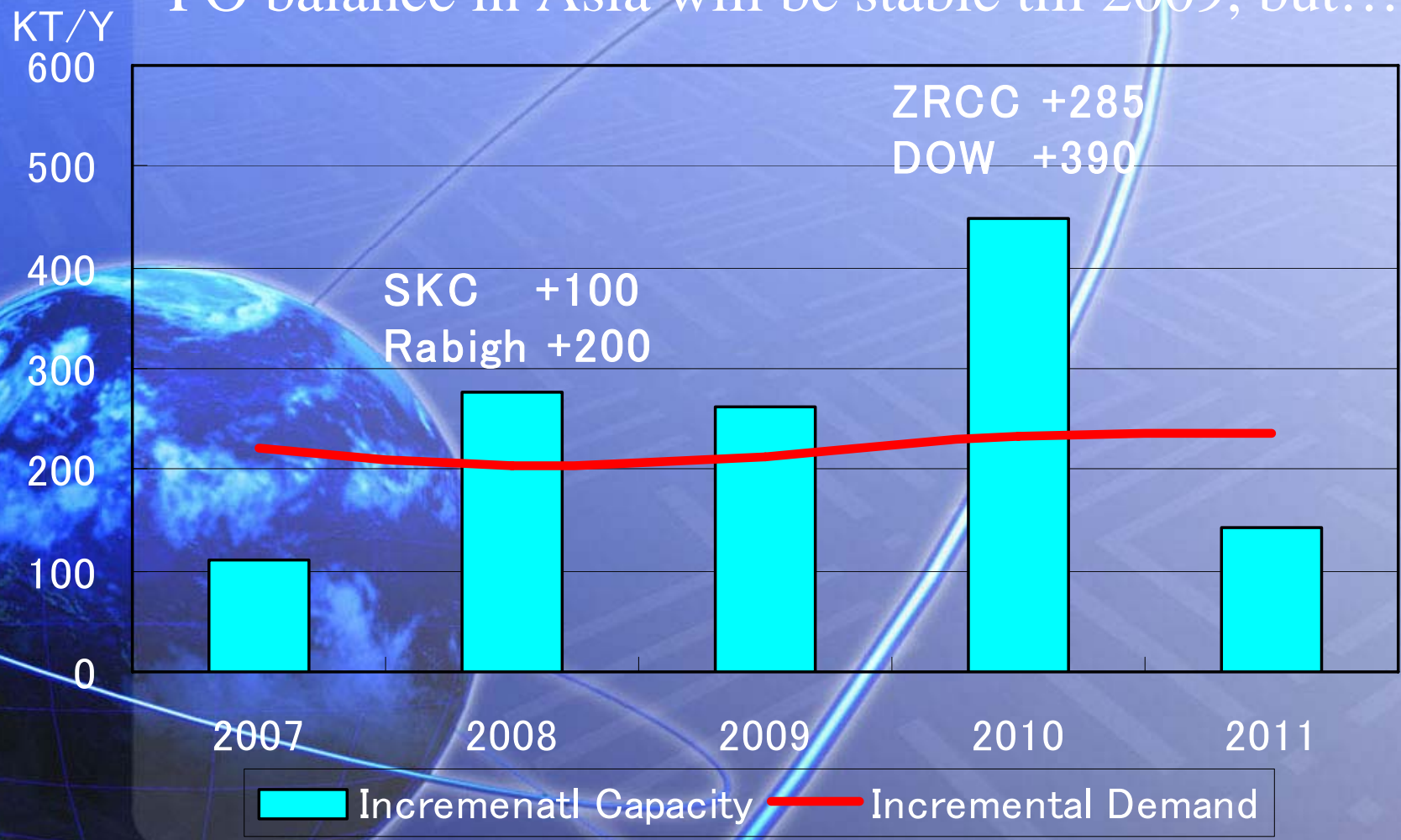
SM Expansion Plan in Asia

2007	Garson Hainan	China	Jan	80
	Samsung-Total	Korea	Jun	200
	FCFC	Taiwan	Feb	600
	CP-Chem	S.Arabia	end	777
	Pars	Iran	end	600
2008	Shuanliang	China	1st Q'ter	210
	Sichuan Meifang	China	Mid	200
	TSMC	China	Mid	350
	SECCO	China	Mid	150
	Lotte	korea	Mid	150
	Kuwait SM	Kuwait	4th Q'ter	450
2009	Dushanzi	China		320
	Jilin	China		210
	Qatar PC	Qatar		600
2010	ZRCC	China		620

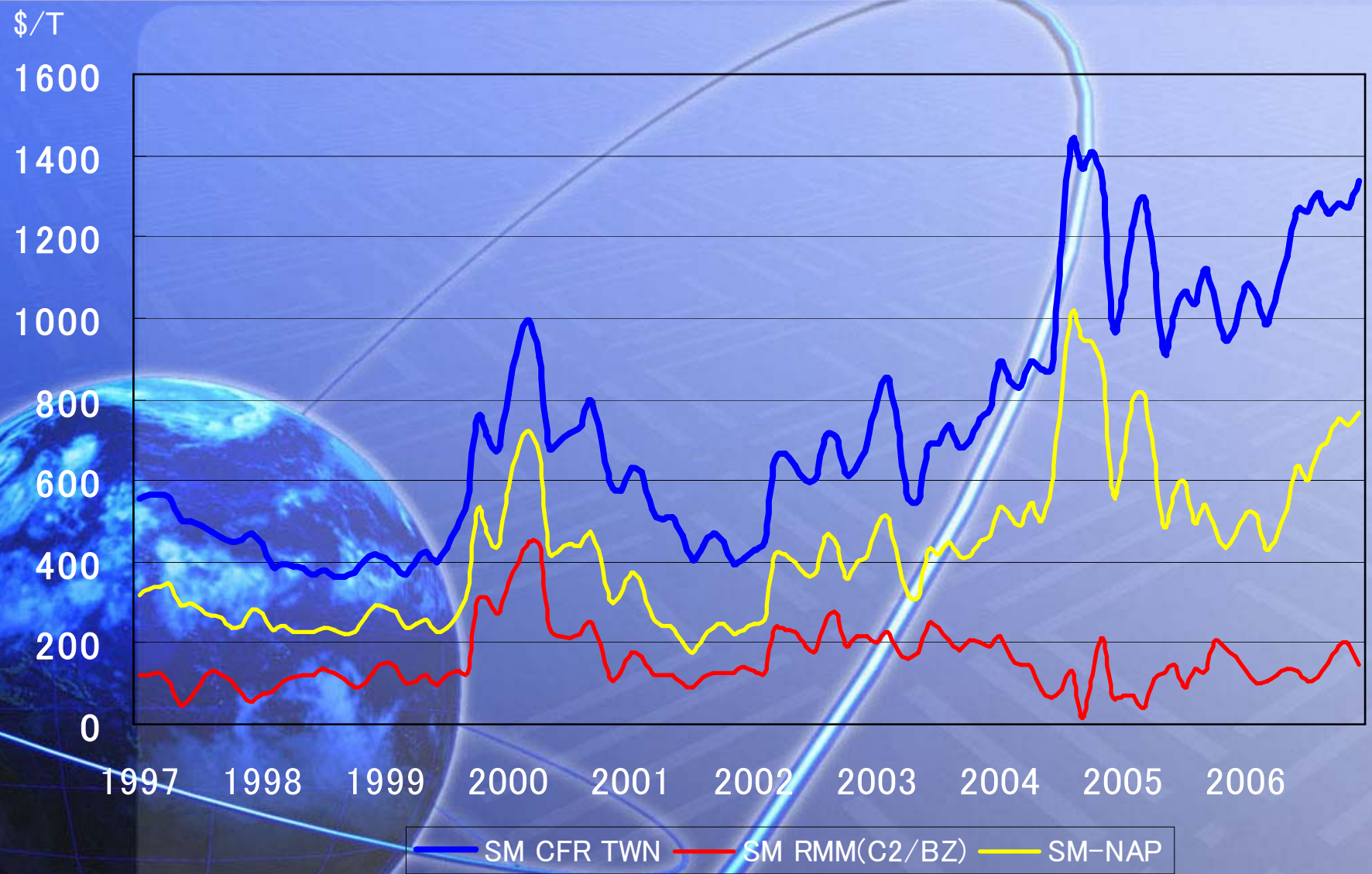
Will POSM's competitiveness continue? → No.

2005 Demand in Asia = 2.4mil G/R = +8%

PO balance in Asia will be stable till 2009, but...



Who is able to survive ? → **Integrated producer**



Forecast – Conclusion

- **The growth will continue in China, however, the G/R will decrease.**
- **SM balance will be long, and some producers, especially non-integrated, will face difficulties.**
- **After 2010, POSM's competitiveness will be tested.**



Thank you