

## The China Challenge – A Unique & Competitive Market

### Challenges for the Generic Medicines Industry

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**Mark G Lotter**

1. The MNC challenge – China in perspective.
2. China – key drivers of growth / attractiveness.
3. The pharmaceutical challenge in China.
4. Recommendation

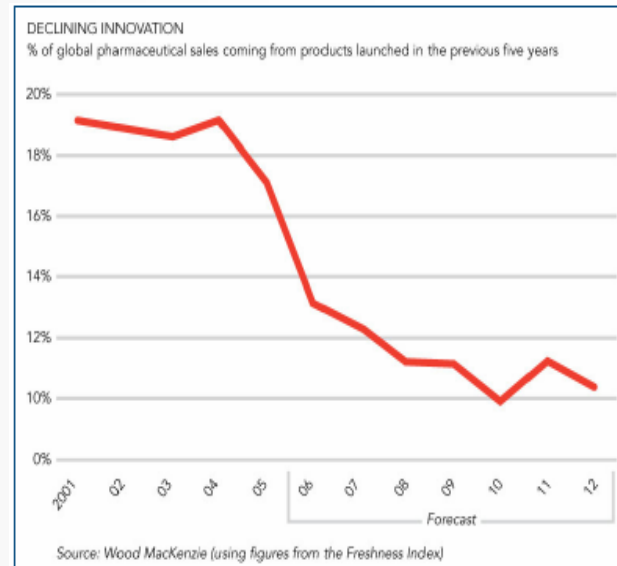
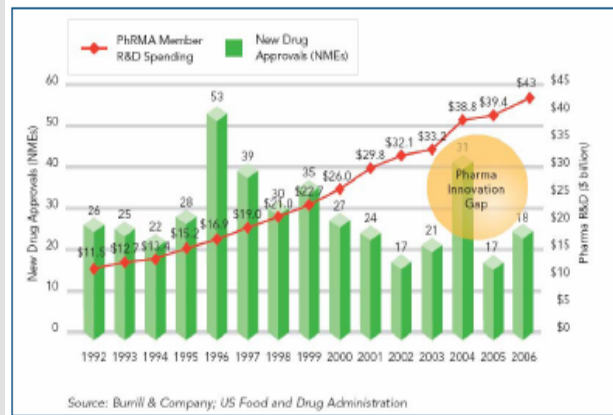
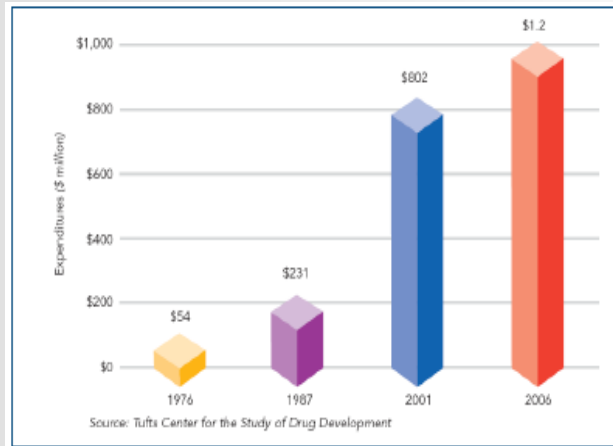
The Pharma Challenge – China in perspective.

## Challenges faced by the industry



1. Pricing pressures from Funders.
2. Life cycle challenges i.e. managing patents.
3. Escalating costs ( both R&D as well as sales & marketing ).
4. Reputation – from both the regulators as well as the public.

# MNC Challenge ....



# Revenue Performance Gap



... Closing the gap is a challenge

1. Managing Expiring Patents and the Competition from Generics
2. Capitalizing on an Apparent Shift in Drug Development from Blockbusters to Specialty Products
3. Leveraging Technology to Enhance Product Development
4. Mitigating the Impact of Increasing Regulation and Price Pressure
5. Redefining the Role of the Pharmaceutical Sales Representative
6. **Maximizing the Potential of Emerging Global Markets.**

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China

# An extraordinary transformation



PUDONG 1900



PUDONG 1990



PUDONG 2000



## China On The World Stage



mobile phones : world's largest market

steel : world's largest

oil : world's 2<sup>nd</sup> largest

Beer : world's largest

detergent : world's 2<sup>nd</sup> largest

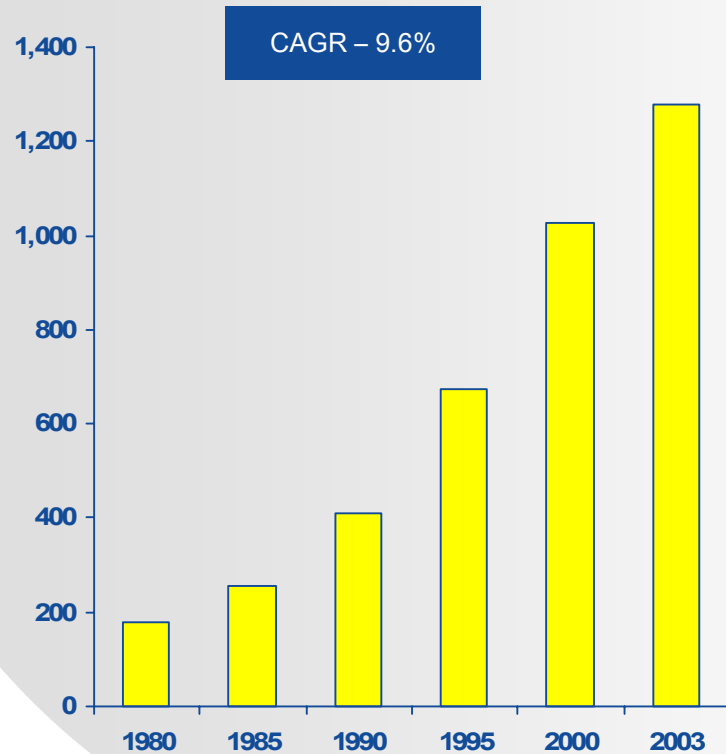
cars : world's 3<sup>rd</sup> largest

Source: EMC World Cellular Database; IISI; BP Statistical Review of World Energy; Euromonitor; Global Insight; "The Chinese Century", T. Fishman, New York Times, 4 July 2004

# China's Has Undergone the Greatest Economic Transformation in History



Real GDP <sup>(1)</sup>  
(US\$B)

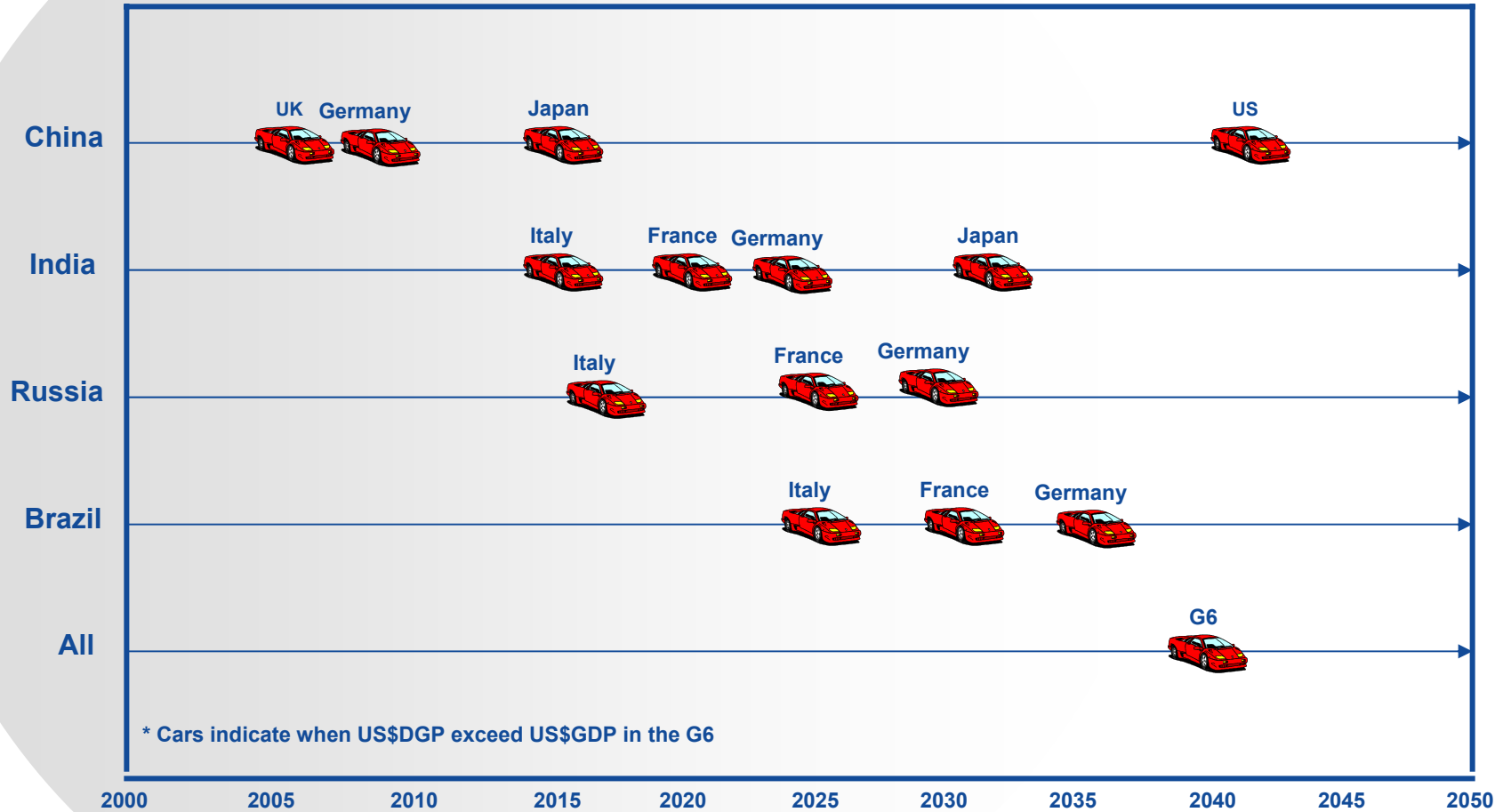


	GDP/cap Growth	Time period
China's 20 year reform	7X	over 20 years
Japan post WWII recovery	6X	over 25 years
2nd Industrial Revolution	3.5X	over 60 years
1st Industrial Revolution	2.5X	over 100 years

Notes.

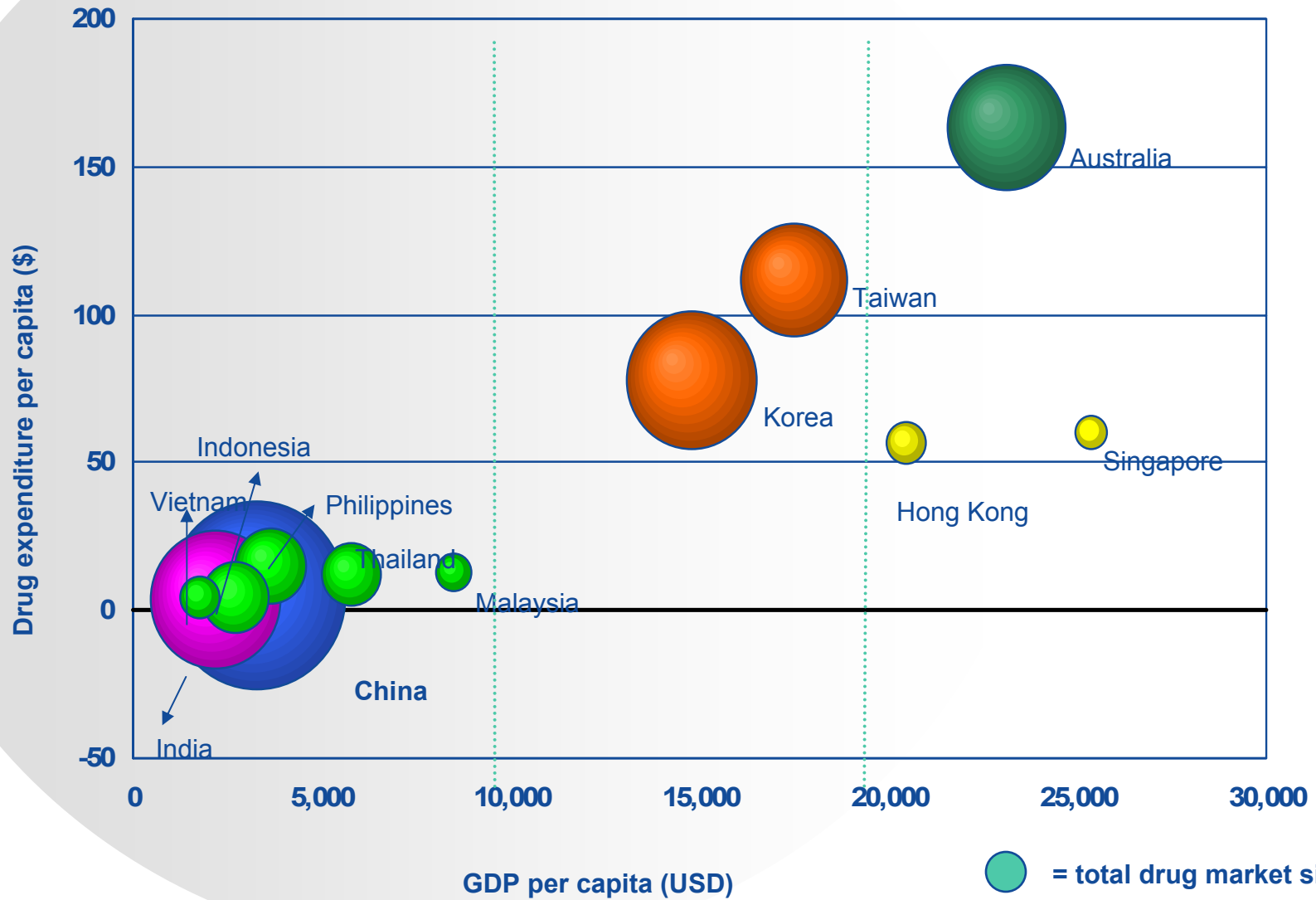
1. US\$ at 1996 prices. Source: EIU Country Data, Time

# Overtaking the G6: China US\$GDP starting to beat Europeans...



Source: Goldman Sachs

# Market Has Immense Long Term Potential...



- **Increasing affordability**
- **Higher health awareness improving diagnostic and treatment rates**
- **Ageing population**
- **Emergence of western based diseases**
- **More regulated and efficient competition post WTO accession**

### China Pharmaceutical market size

**2010 : USD 28 bn**  
16.3% annual growth is predicted

Source: China Statistics Yearbook IMS

### CHINA'S PHARMA MARKET TO BECOME #5 WW BY 2010

China's market size for ethical & OTC drugs in USD\$Billion

2002 Top 10		2005 Top 10		2010 Top 10	
USA	196	USA	262	USA	466
Japan	53	Japan	65	Japan	81
Germany	20	Germany	24	Germany	37
France	19	France	21	France	28
UK	14	UK	16	<u>China</u>	<u>24</u>
Italy	13	Italy	15	UK	24
Spain	9	<u>China</u>	<u>14</u>	Italy	23
Canada	8	Brazil	10	Canada	17
Mexico	8	Canada	10	Spain	16
<u>China</u>	<u>6</u>	Spain	10	Brazil	15
Total	346	Total	447	Total	731

Source: Boston Consulting Group



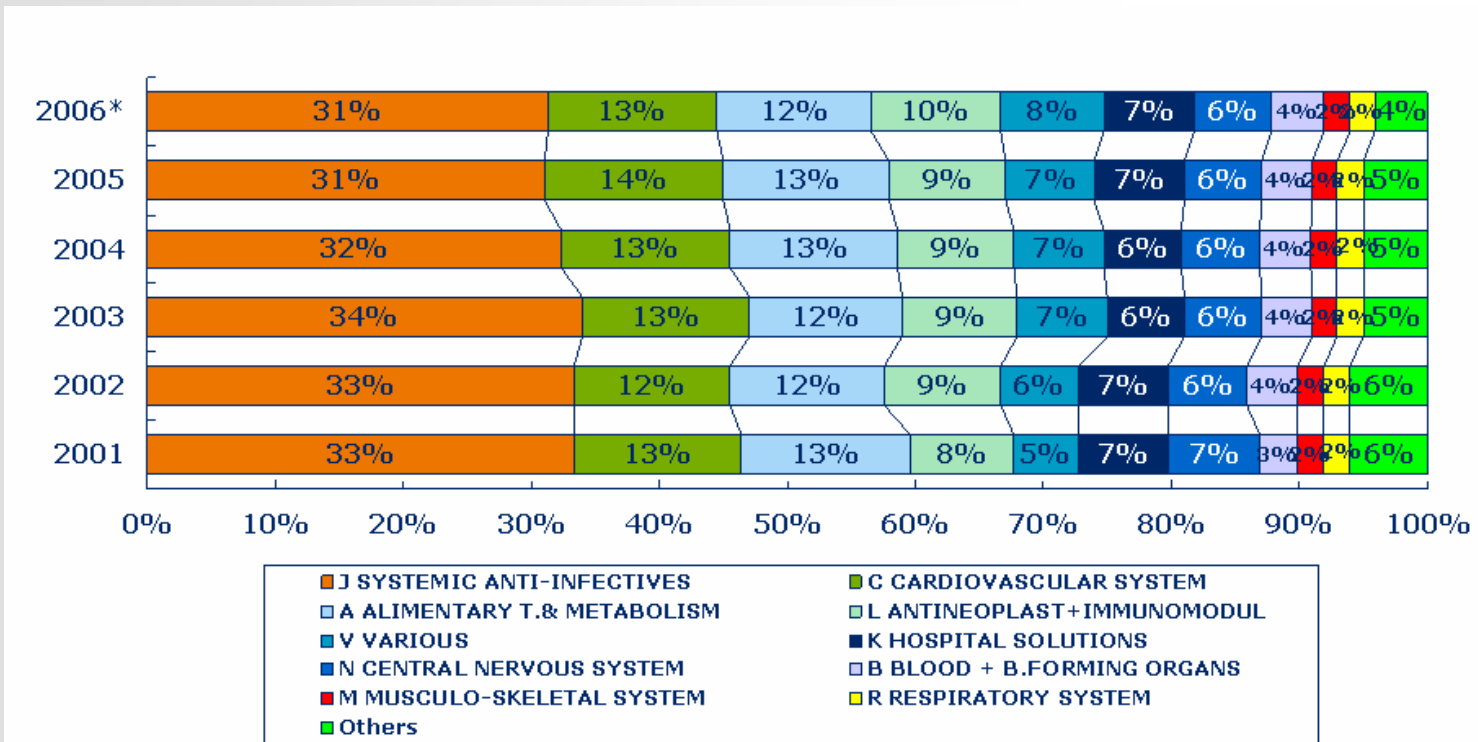
## Drug sales to double to \$1.3 trillion by 2020

1. According to the global report by PwC seven newly rich countries, Brazil, China, India, Indonesia, Mexico, Russia and Turkey could account for one-fifth of global drug revenues by 2020, up from just 8% in 2004
2. China alone, on the other hand, may be the second or third-biggest market in the world, the international consultancy predicted

# Therapeutic class split

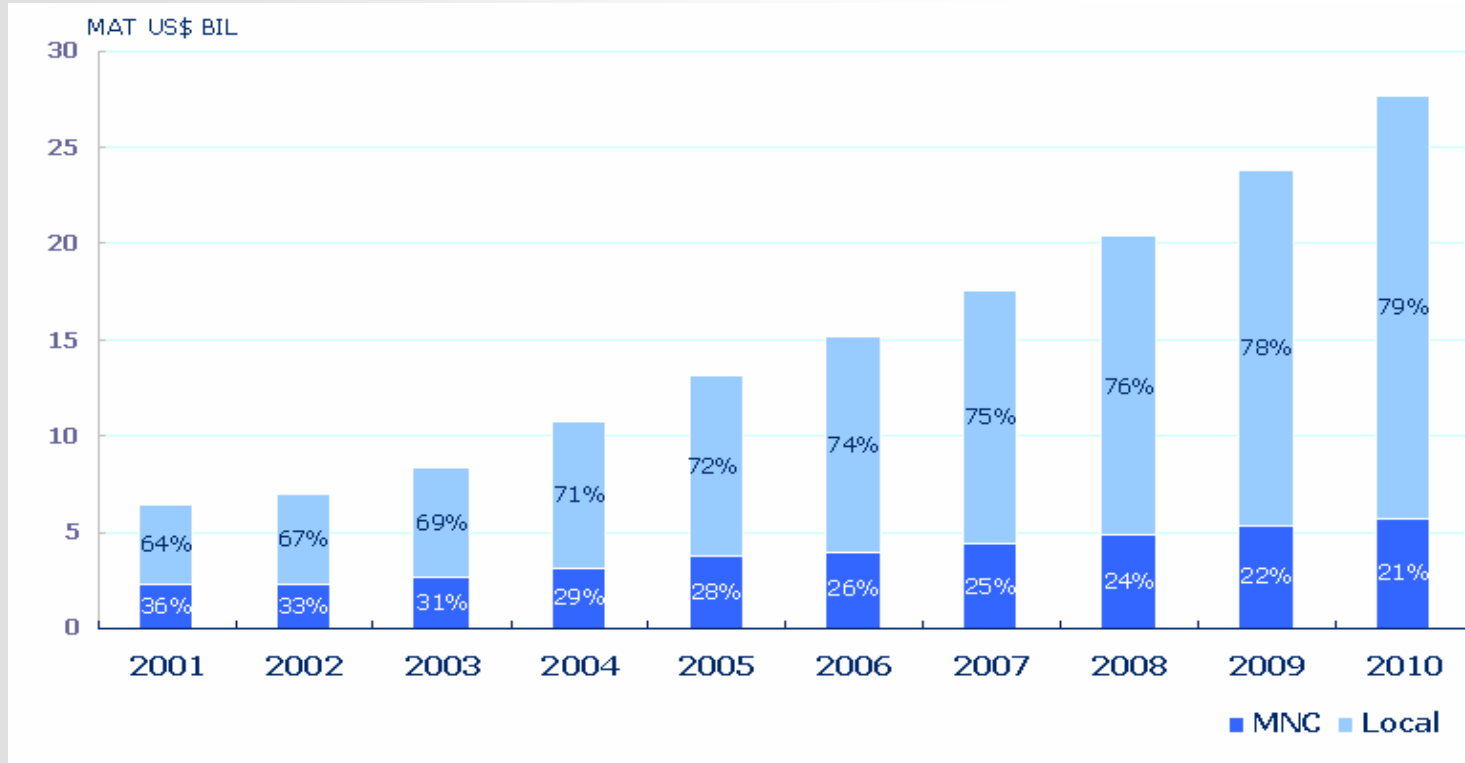


Top 10 ATCs in China is still led by anti-infectives - drugs for chronic diseases are catching up -  
 Top 10 TCs account for 95% of the total market



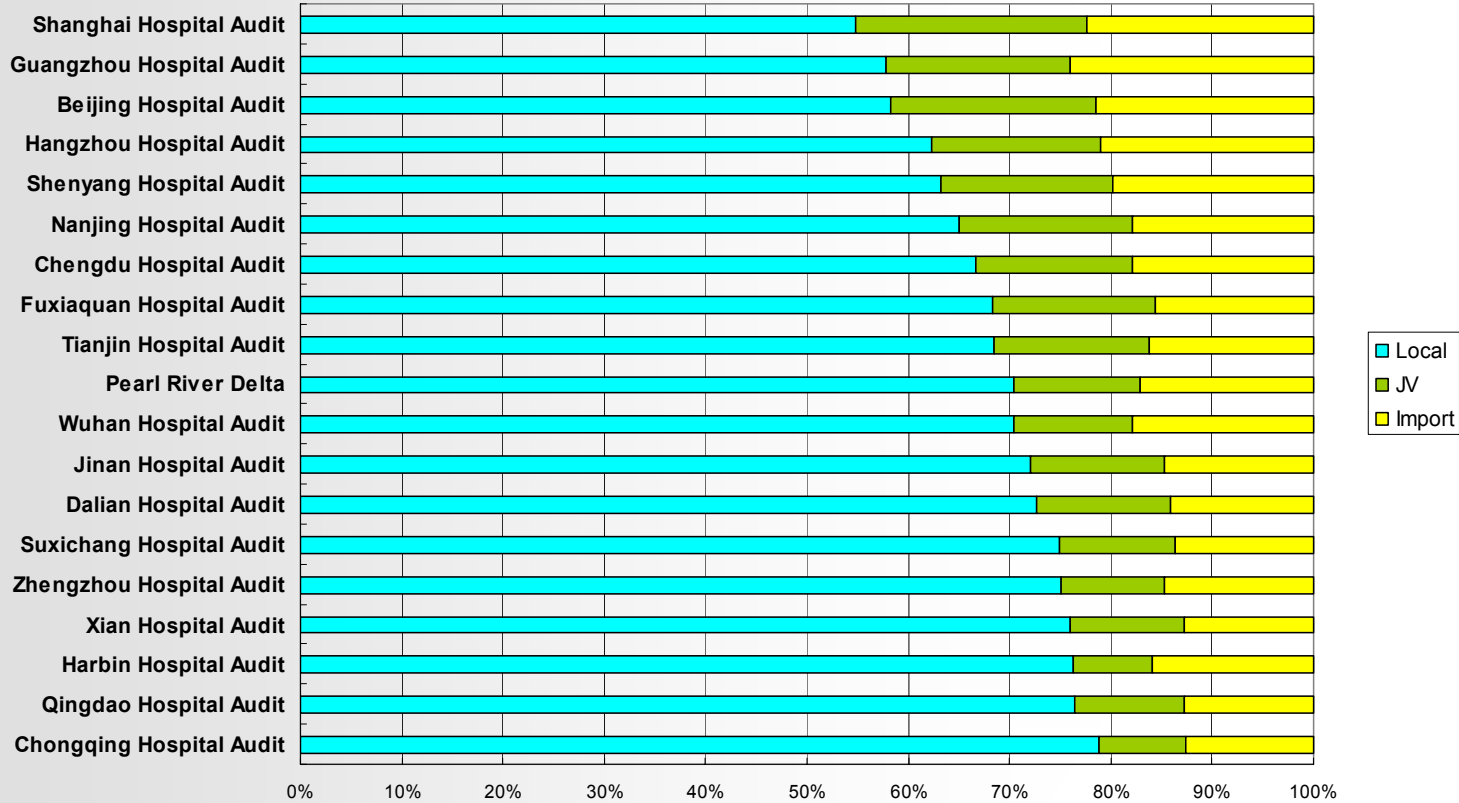
Source: IMS CHPA, Data as of MAT4Q05  
 \* Data of 2006 only includes the first two quarters

# Forecast : MNC vs. Local firms

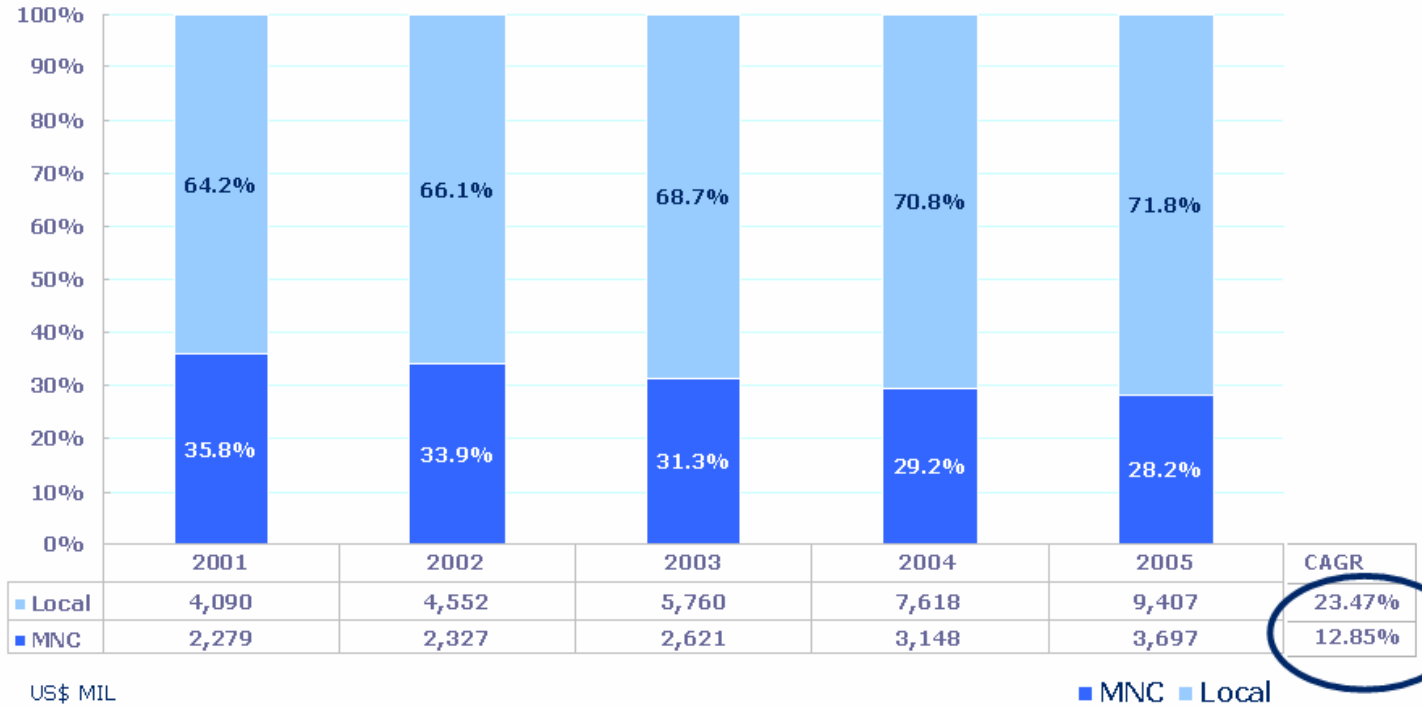


Source: IMS CHPA Data

# Generic products – regional splits

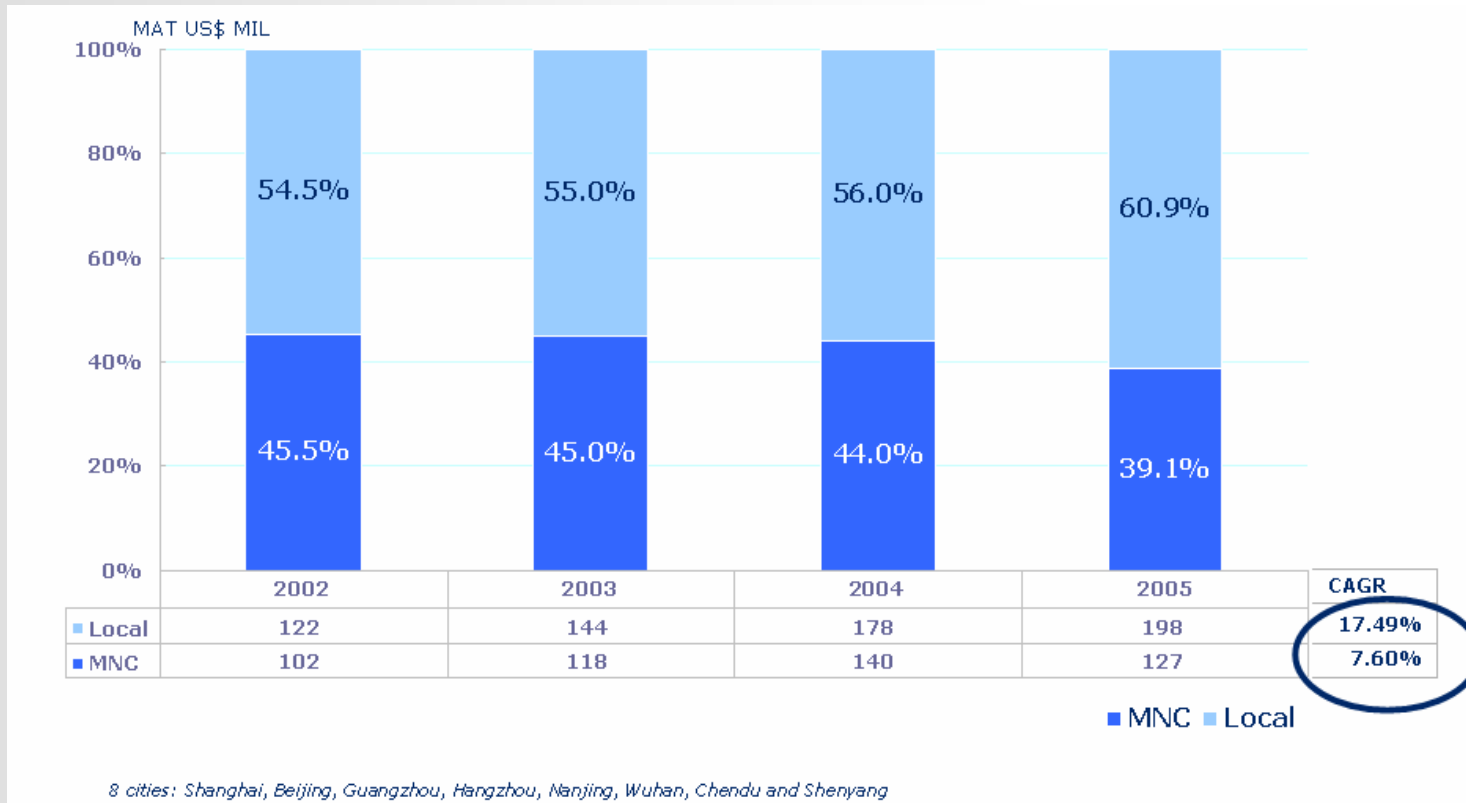


# MNC V.S. Local firms: sales trend and share - Hospital



Source: IMS CHPA, Data as of MAT4Q05

# MNC V.S. Local firms: sales trend and share - Retail ( 8 cities )



Source: IMS-URC Retail Data

# MNC 2006 Base



Company	Abbr.	Sales Rank YTD2006	Sales Rank '05 WY	05 Sales (Million)	06 Sales (Million)	Growth
XIAH-JANSSEN PHARMACEUTICAL LTD	JSII	1	1	¥ 2856.8	¥ 3014.3	6%
GLAXOSMITHKLINE	GSK	2	2	¥ 2636.3	¥ 2717.7	3%
ASTRAZENECA CHINA	ASZ	3	3	¥ 2221.9	¥ 2606.1	17%
PFIZER	PFZ	4	4	¥ 1857.4	¥ 2072.6	12%
SHANGHAI ROCHE	ROC	5	6	¥ 1609.6	¥ 2002.8	24%
BEIJING NOVARTIS PHARMA. LTD	IVT	6	5	¥ 1719.6	¥ 1764.5	3%
BAYER HEALTHCARE CO LTD	BAY	7	9	¥ 1102.1	¥ 1526.5	39%
MERCK SHARP & DOHME (CHINA)	MSD	8	7	¥ 1227.0	¥ 1352.1	10%
BRISTOL-MYERS SQUIB	BMS	9	8	¥ 1196.6	¥ 1321.3	10%
LILLY	LLY	10	10	¥ 921.3	¥ 1062.3	15%
BOEHRINGER INGELHEIM	BI	11	11	¥ 347.5	¥ 402.7	16%
SCHERING AG	SHG	12	12	¥ 292.2	¥ 364.1	25%
FUJISAWA HONG KONG	FJA	13	13	¥ 284.5	¥ 348.1	22%
WYETH-WHITEHALL PHARMACEUTICAL CO LTD	WYE	14	17	¥ 141.3	¥ 220.5	56%
ZHUHAI SCHWARZ PHARMA	SCH	15	14	¥ 188.6	¥ 209.6	11%
ABBOTT LABORATORIES	ABT	16	15	¥ 169.1	¥ 183.1	8%
DAIICHI PHARMACEUTICAL (CHINA) CO LTD	DAI	17	16	¥ 149.3	¥ 180.9	21%
TIANJIN TAKEDA	TAK	18	20	¥ 108.1	¥ 169.5	57%
ORGANON	ORG	19	19	¥ 136.6	¥ 162.2	19%
SANKYO	SAH	20	18	¥ 137.4	¥ 146.2	6%
ALTANA PHARMA	ALT	21	22	¥ 91.2	¥ 104.9	15%
MERCK KGaA	MCK	22	25	¥ 62.7	¥ 102.3	63%
SOLVAY	SLV	23	21	¥ 92.1	¥ 100.6	9%
BEIJING MUNDIPHARMA PHARMACEUTICAL CO LTD	MUH	24	23	¥ 84.3	¥ 97.9	16%
GRUNENTHAL PHARMACEUTICAL (CHINA) CO LTD	GTL	25	24	¥ 69.9	¥ 75.8	8%
UCB	UCB	26	26	¥ 22.2	¥ 22.8	3%
SHANGHAI ETHYPHARM PHARMACEUTICALS CO LTD	EPM	27	27	¥ 12.9	¥ 15.5	20%
<b>Total</b>				<b>¥ 19725.7</b>	<b>¥ 22331.5</b>	<b>13%</b>

## Brand Performance



RX+OTC Products		TC	Company	'06 Sales (M)
1	MOTILIUM	A3F	JSII	¥ 739.19
2	HEPTODIN	J5B	GSK	¥ 715.33
3	GLUCOBAY 50M	A10B	BAY	¥ 694.98
4	LOSEC	A2B	ASZ	¥ 642.70
5	DAKTARIN	D1A	JSII	¥ 602.39
6	NORVASC	C8A	PFZ	¥ 483.73
7	CELLCEPT	L4A	ROC	¥ 473.78
8	BETALOC	C7A	ASZ	¥ 467.24
9	PLENDIL	C8A	ASZ	¥ 394.40
10	FENBID	M1A	GSK	¥ 379.44
<b>Total</b>				<b>¥ 5,593.19</b>
RX Products Only		TC	Company	'06 Sales (M)
1	HEPTODIN	J5B	GSK	¥ 715.33
2	GLUCOBAY 50M	A10B	BAY	¥ 694.98
3	LOSEC	A2B	ASZ	¥ 642.70
4	NORVASC	C8A	PFZ	¥ 483.73
5	CELLCEPT	L4A	ROC	¥ 473.78
6	BETALOC	C7A	ASZ	¥ 467.24
7	PLENDIL	C8A	ASZ	¥ 394.40
8	LOTENSIN	C9A	HVT	¥ 366.64
9	TIENAM	J1P	MSD	¥ 352.00
10	ADALAT 7'S	C8A	BAY	¥ 326.22
<b>Total</b>				<b>¥ 4,917.02</b>



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## Unique Factors



1. Domestic companies dominate – 80%+ plus.
2. Variable impact on sales post the loss of patent – this will change.
3. Sales driven environment with strong / unique relationship value – business continuity is important.
4. OTC and Rx portfolios remain key.
5. Unique role of distributors.
6. Product P&L ( mainly back ended )
7. Legislation – greater impact on domestic Pharma

## The China Challenges – The Market



- Hospital based healthcare system – no GP ( gatekeeper )
- Emerging challenges : bidding , listing , reimbursement , key decision maker etc
- Emerging retail sector – large variation by product type and geography.
- Shifting power / decision making base.
- The market is OTC , RX and TCM based.
- Reimbursement paradox.

- There is a very steep sales concentration curve i.e. high concentration of sales across a relatively small base of customers - this could result in a high margin of error in the targeting and segmentation of customers.
- Price cuts – driven via mandatory cuts and bidding.
- Regional differences and complexities.
- Hospitals - pharmaceutical driven revenue and profit ( 50%+ )

- The past continues to shape the future for many companies in China.
- Article 53 – generic substitution.
- Key commercial enablement is complex and generally not well managed across many companies. The core processes include
  - Reimbursement
  - Bidding
  - Hospital listing
- The non sales channel is under developed – challenge for NCE adoption.

Going forward .....

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## Managing the PLC



1. Early market access is important.
2. Product ever greening through line extensions.
3. Rx-to-OTC switching
4. "Flanking" generics & exclusive partnerships.
5. Defensive pricing strategies ( tenders )
6. Chirality.



## An Introduction to NovaMed Pharmaceuticals Inc

### **Mission :**

To build the largest and most profitable portfolio of licensed drugs in China by becoming foreign pharmaceutical companies' preferred outsourcing partner along all steps of the value chain.

### **Vision :**

A new breed of global pharmaceutical companies that will return significantly higher on equity on a risk adjusted basis, through

- **Labor cost arbitrage** : a lower cost structure enabled by their network of outsourcing partners in developing worlds, unencumbered by legacy.
- **IP cost arbitrage** : licensing or acquisition of IP for China at cost below value, focusing on non-block buster drugs and smaller drug companies who lack resources to focus on China.
- **Selective acquisition of worldwide IP** based on insider knowledge from outsourcing partners.

## Three Types of Commercial Models



**Acquire products already  
commercially enabled  
in China**

**Acquire in-line products  
not yet registered in  
China**

**In-license late stage  
development  
compounds**

**Minimum 3 year  
exclusive  
distribution  
agreement in China**

**Registration and +5  
year exclusive  
distribution  
agreement**

**Clinical development  
and 10-20 year  
license agreement**

**Commercialization engine built and led by some of the best sales managers in China's pharmaceutical industry**

## One-Stop-Shop Service Through Network



### Research

- Basic chemistry
- Pre-clinical
- Biotech

### Development

- Investigational new drug application (IND)
- Phase 1 to 3 NDA
- Phase 4 – marketing phase

### Regulatory

- Clinical trial registration
- Drug dossier registration
- NDA

### Manufacturing

- Intermediates
- APIs
- Specialty based drugs
- Finished dosage forms

### Distribution

- National capabilities
- Logistics + commercial advantage

**NovaMed's commercial capability provides distinct value to IP owners looking to leverage cost advantage and achieve optimal market potential in China**

## Summary



1. NovaMed is a novel and unique new pharmaceutical entity in China.
2. The company has a well validated business and commercial model to capture both strategic and arbitrage opportunities across the pharmaceutical value chain.
3. The company has attracted a leading sales and marketing team from across the MNC industry.
4. The management team is China based and experienced and have a proven track record.
5. Importantly , the company is fully aligned to good business practice and corporate governance thereby allowing partners a high degree of compliance.
6. The network and alliance partners have been selected and today exhibit best in class status in China.
7. The advisory board allows for global knowledge , networking and NBD.
8. The company has a unique high value and contributing shareholder base.