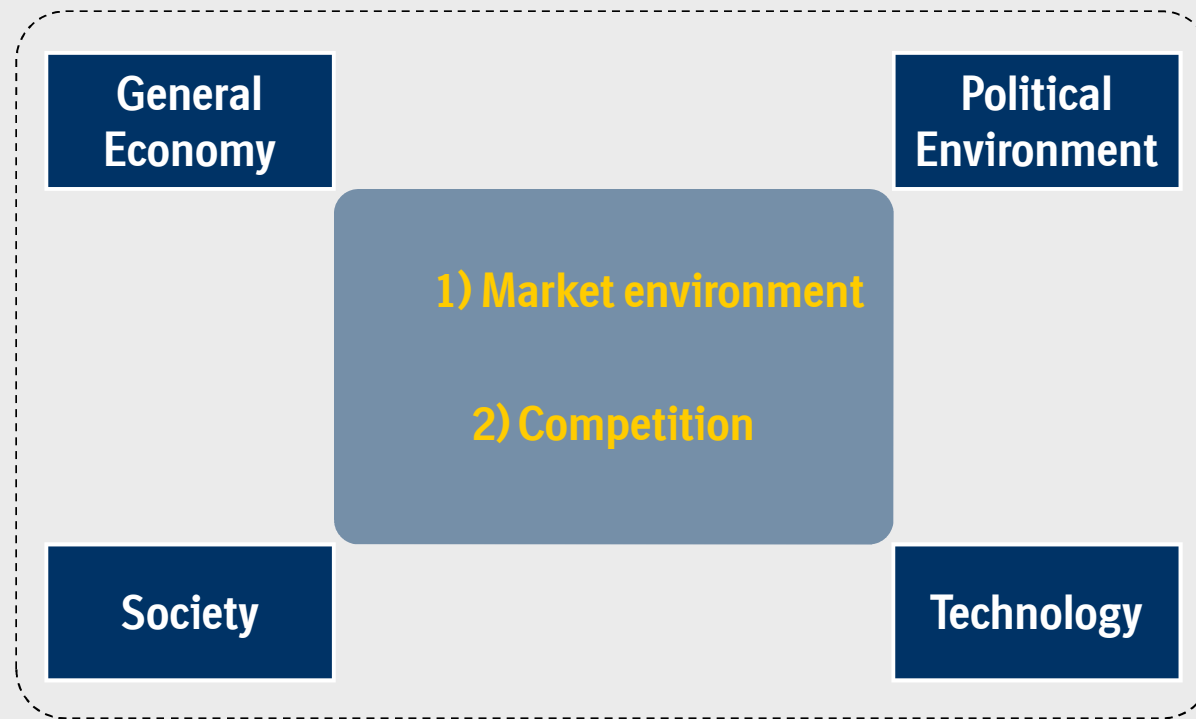




Werte schaffen durch Innovation: “Pharma 2020”

Prof. Dr. Wolfram Carius
LMU München, 26.11.2010

External Situation: Market environment and Competition



⇒ WHAT DOES IT MEAN IN 2010-2014 and ≥ 2020

The pharma industry has, and is, undergoing fundamental changes

Historical Growth Drivers

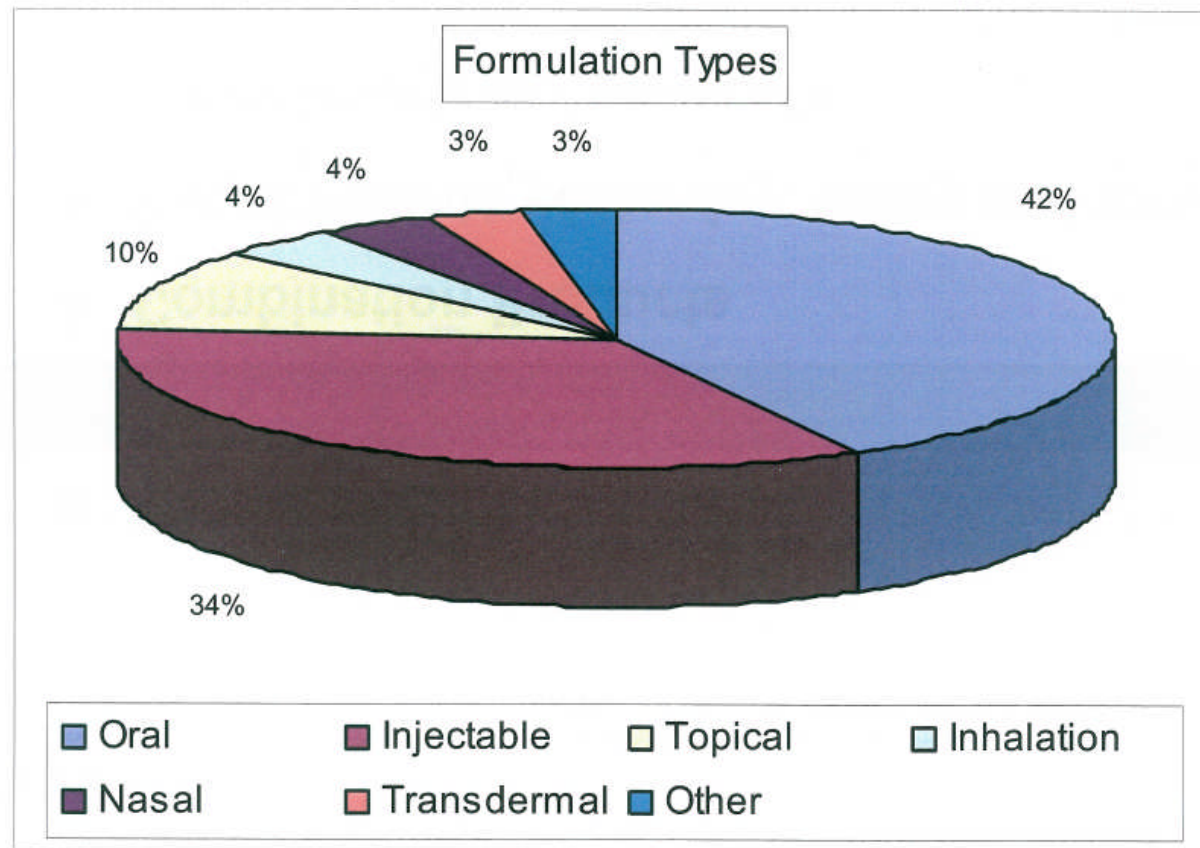
- Historical 5yr Global CAGR: 6.7%
- Increased power of market access bodies, HTA advisors, increased complexity at sub-national level
- Increased variety in cost containment
- Evolving generics and biosimilars dynamics
- Parallel trade dynamics



Future Growth Drivers

- Forecast 5yr Global CAGR: 5-8% under pressure
- Unprecedented patent cliff
- Macroeconomic factors driving cost-containment targeting pharma
- Generic penetration will continue to grow
- More financially potent launches in the next 5 years vs. the last 10
- Pharmerging markets will grow in attractiveness
- Diversification into broader healthcare business models
- Changing decision makers impact pharma business/commercial model

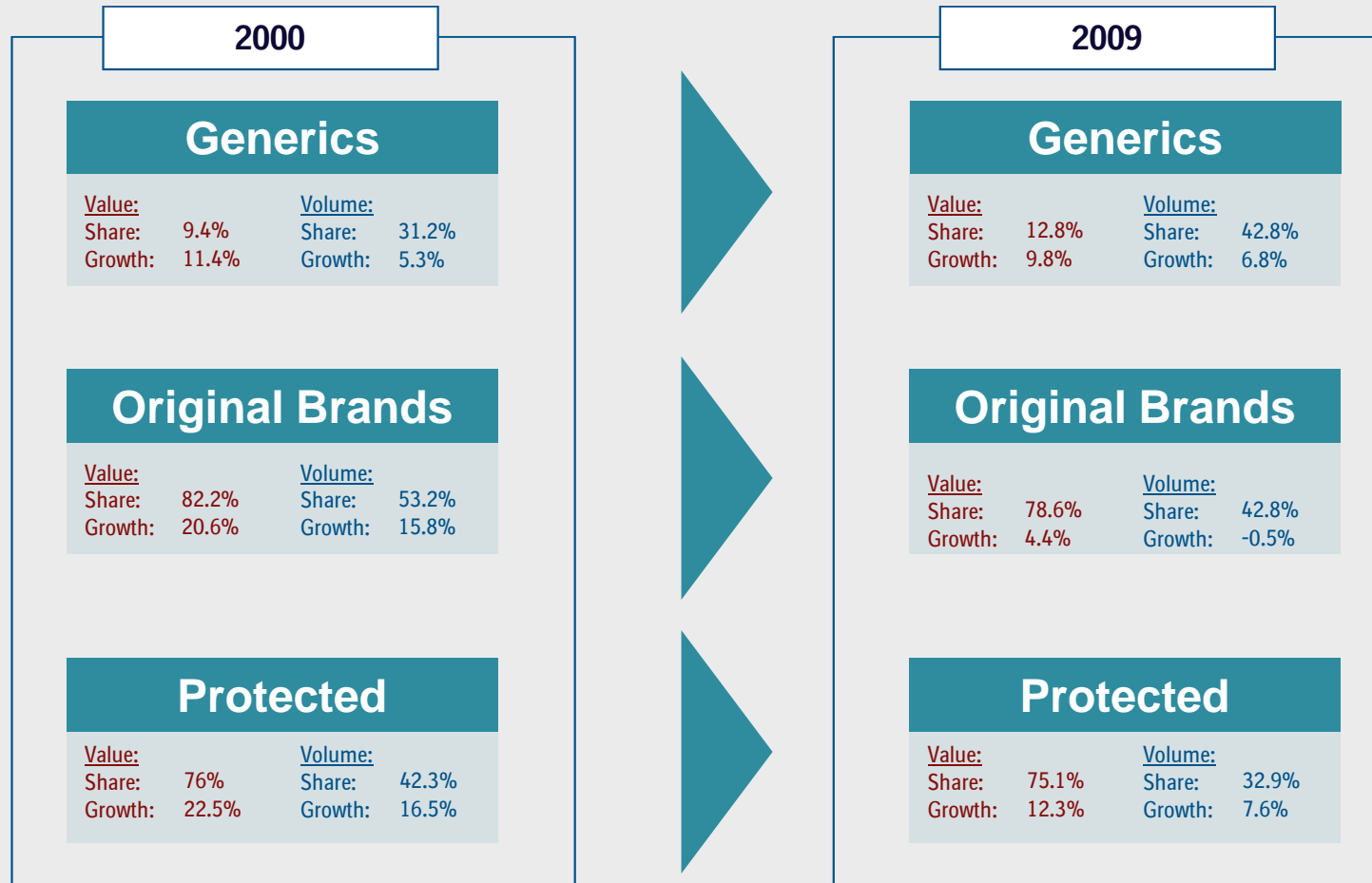
New drugs are mainly parenterals and orals



Source: IMS, Tufts CSDD

Generics moving towards 50% volume but value share <15%: protected growth down to 12%

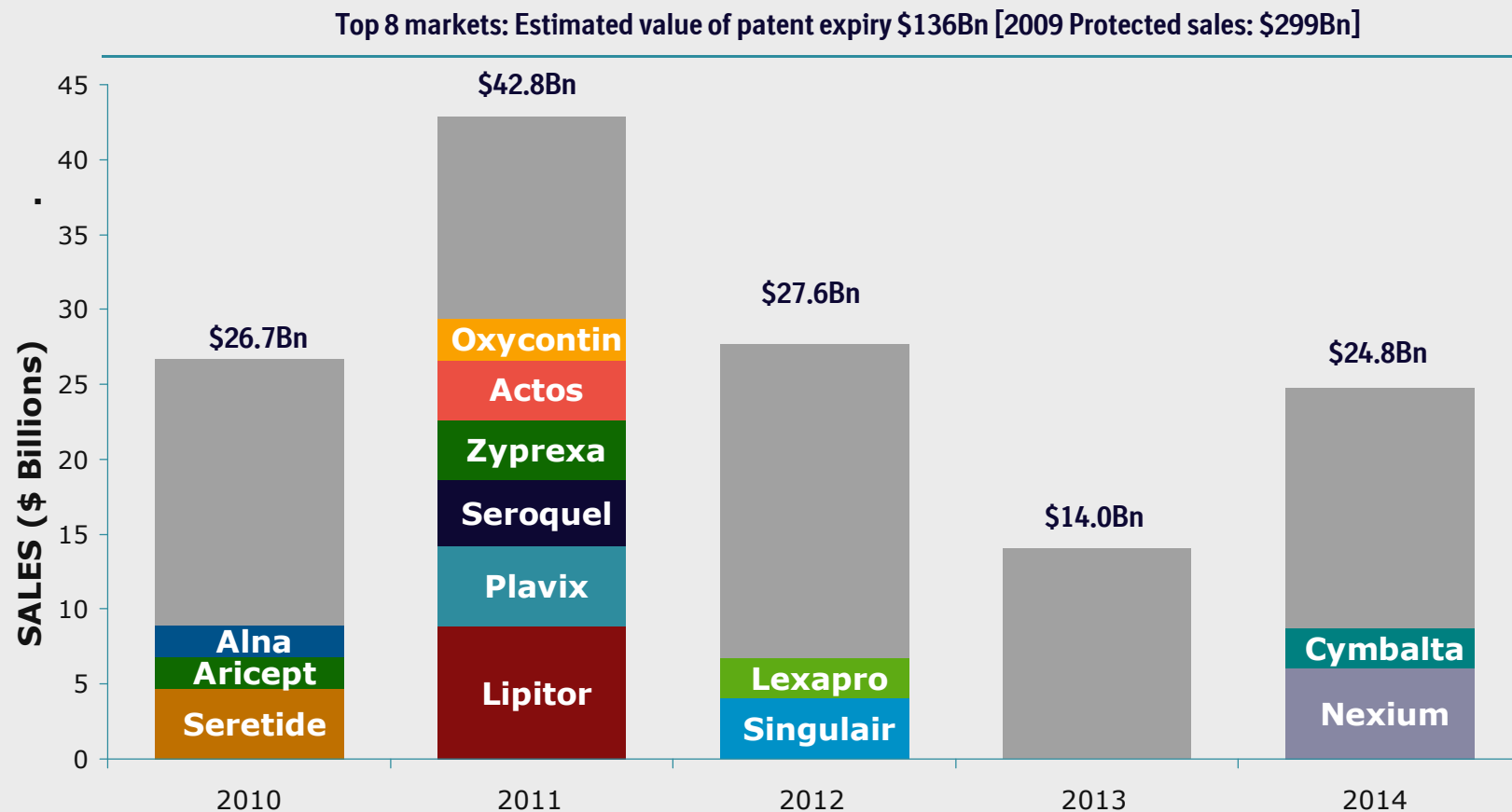
The fundamental challenge



Source: IMS MIDAS mat_12_2009 SU, USD/MNF, LCD/MNF

The top 8 markets globally will lose ~45% of current protected brand value to 2014

About \$146Bn at risk which could help Payers arrest growth



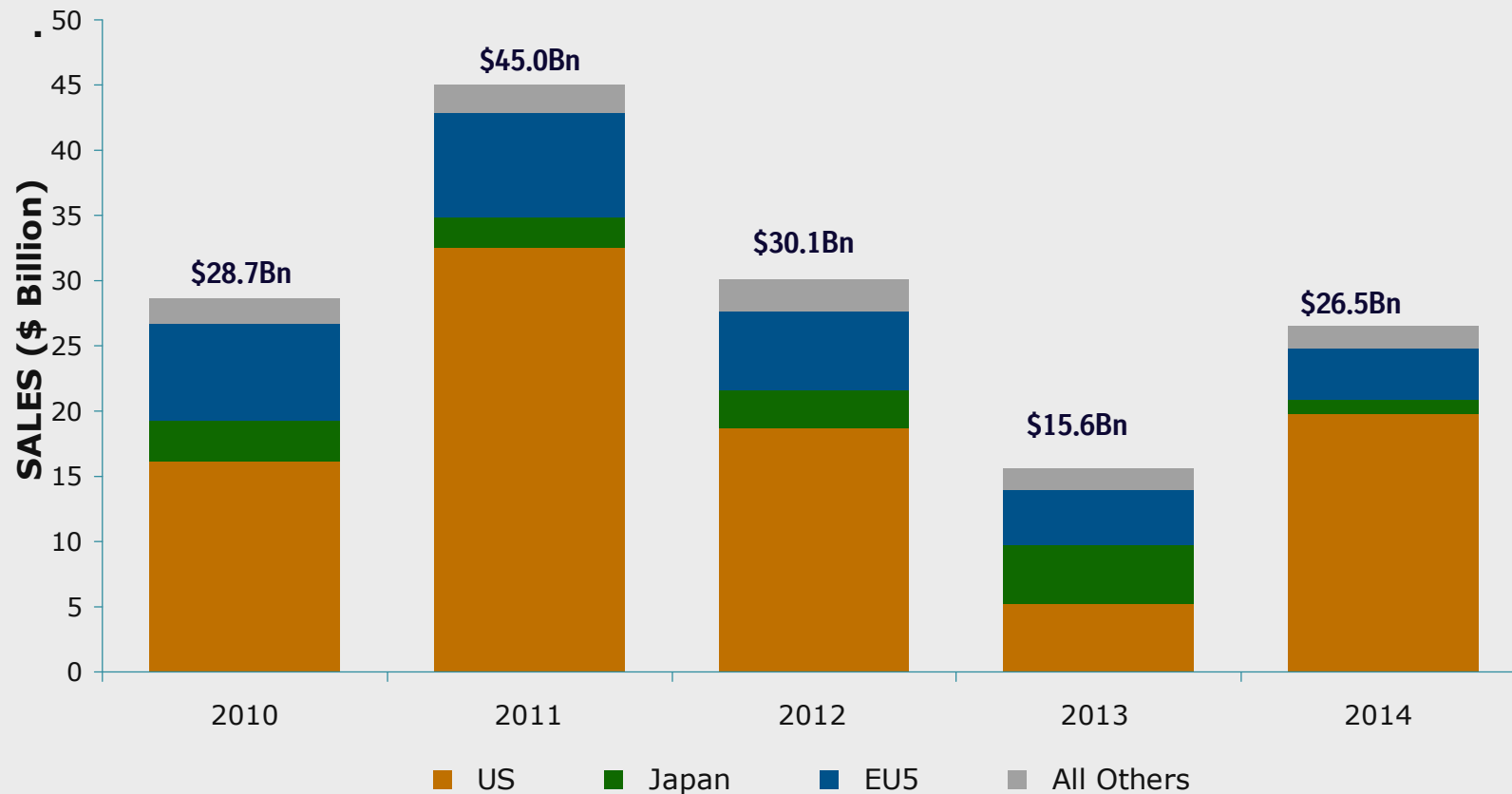
Source: IMS Health MIDAS Market Segmentation December 2009. Products shown have >\$2Bn sales in 2009.

*Assumptions based on no price erosion following generic entry to the market.

Expiry dates: MAT December

US will take the biggest hit in generic exposure over the next 5 years

Global: Estimated value of patent expiry \$145.8Bn [2009 Protected sales: \$322Bn]

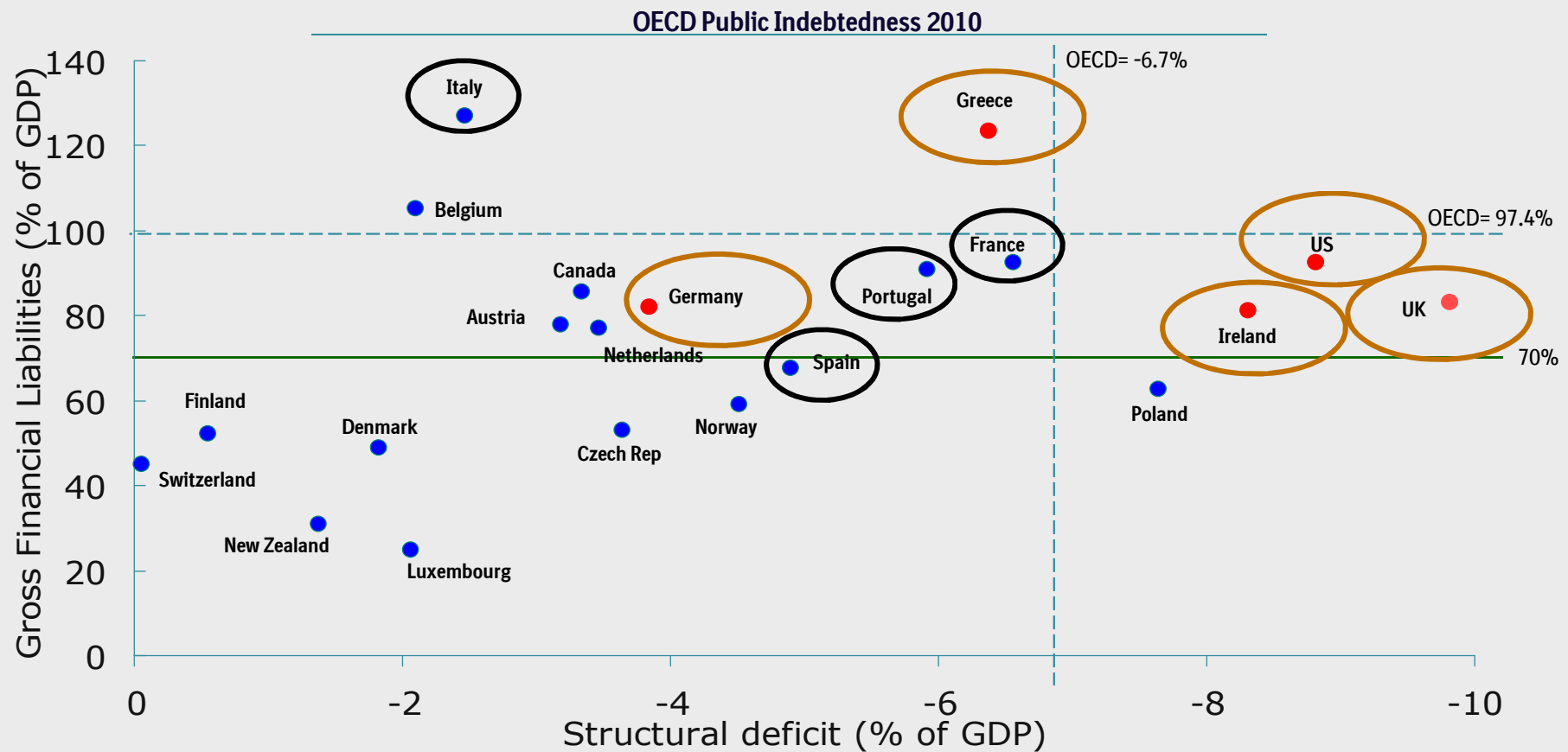


Source: IMS Health MIDAS Market Segmentation December 2009

*Assumptions based on no price erosion following generic entry to the market.

Expiry dates: MAT December

High debt burden and deficit augment calls for greater efficiency in public healthcare financing



Source: OECD December 2009

Key growth drivers and resisters for pharma between 2009 and 2014

Resistors for Pharma

- **The patent cliff** – Pharma set to lose \$78 billion between 2009 and 2014
- **Price and reimbursement cuts** – continued use in developed and emerging markets to contain costs
- **Growing regulatory pressure** – focus on drug safety and restrictions of pharma marketing continue

Neutral for Pharma

US Healthcare Reform

- **Short-term sales dip** – due to increased discounts and rebates
- **Mid-term sales growth** – due to larger sales volume from the newly insured
- **Long-term negative impact** – due to intensifying cost-containment pressures

Drivers for Pharma

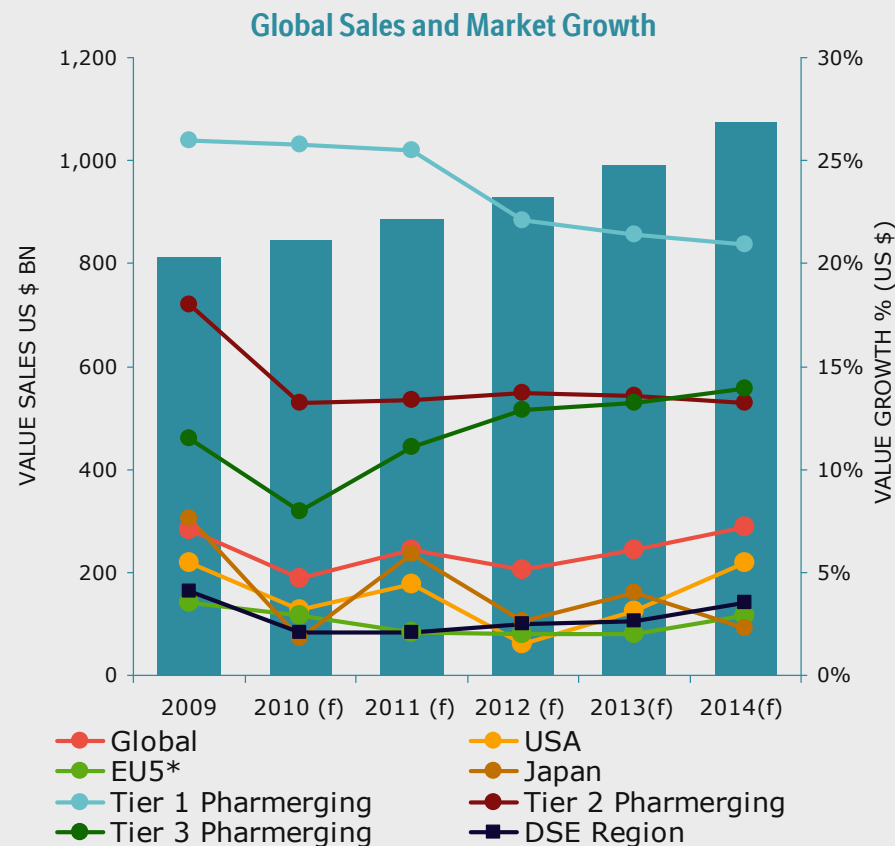
- **Emerging market expansion** – growth potential of 12% year-on-year
- **Biologics market expansion** – biologics set to grow by \$41 billion between 2009 and 2014
- **Cost saving initiatives** – cost-cutting required to grow profits, offsetting slowing sales growth

Source: Datamonitor DMHC2599, March 2010

Global Pharma growth will start to recover in 2013

Mature markets at the lower end: Pharmerging leads

Global Pharma Historical Market Dynamics & Current Economic Environment



Source: IMS Health Market Prognosis, Sep 2010; *DSE Region: 12 countries

Pharmaco challenges

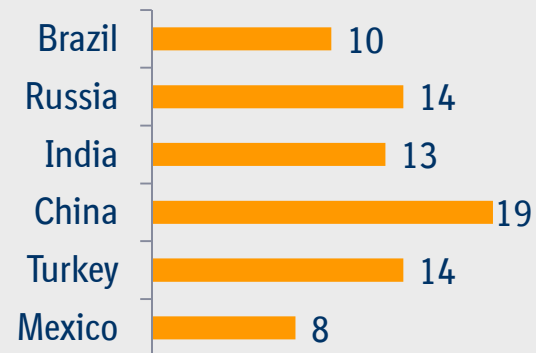
Mature Markets CAGR 2010-2014	
US	2-5%
Japan	2-5%
Germany	1-4%
France	0-3%
Italy	1-4%
Canada	2-5%
Spain	2-5%
UK	1-4%
S. Korea	6-9%
Mature	2-5%

Growing importance of emerging markets



Emerging markets

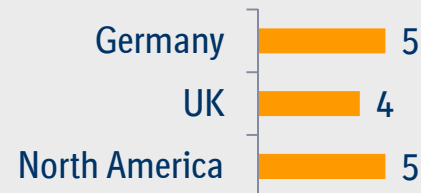
Pharma Sales
CAGR 2007-12
Percentage



Total pharma
market, 2012
USD billions



Developed markets



SOURCE: IMS Market Prognosis; McKinsey analysis

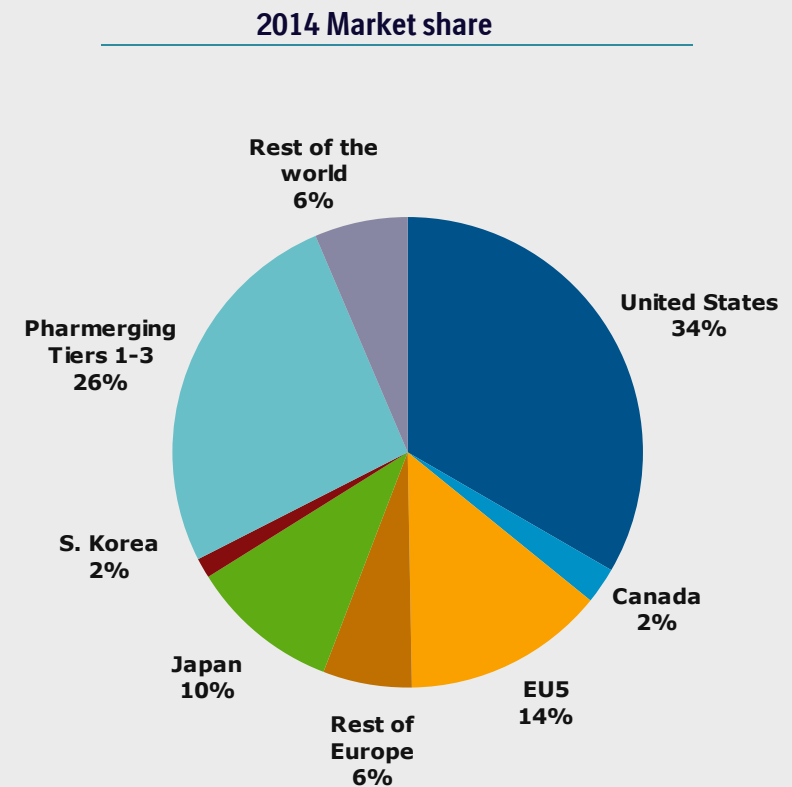
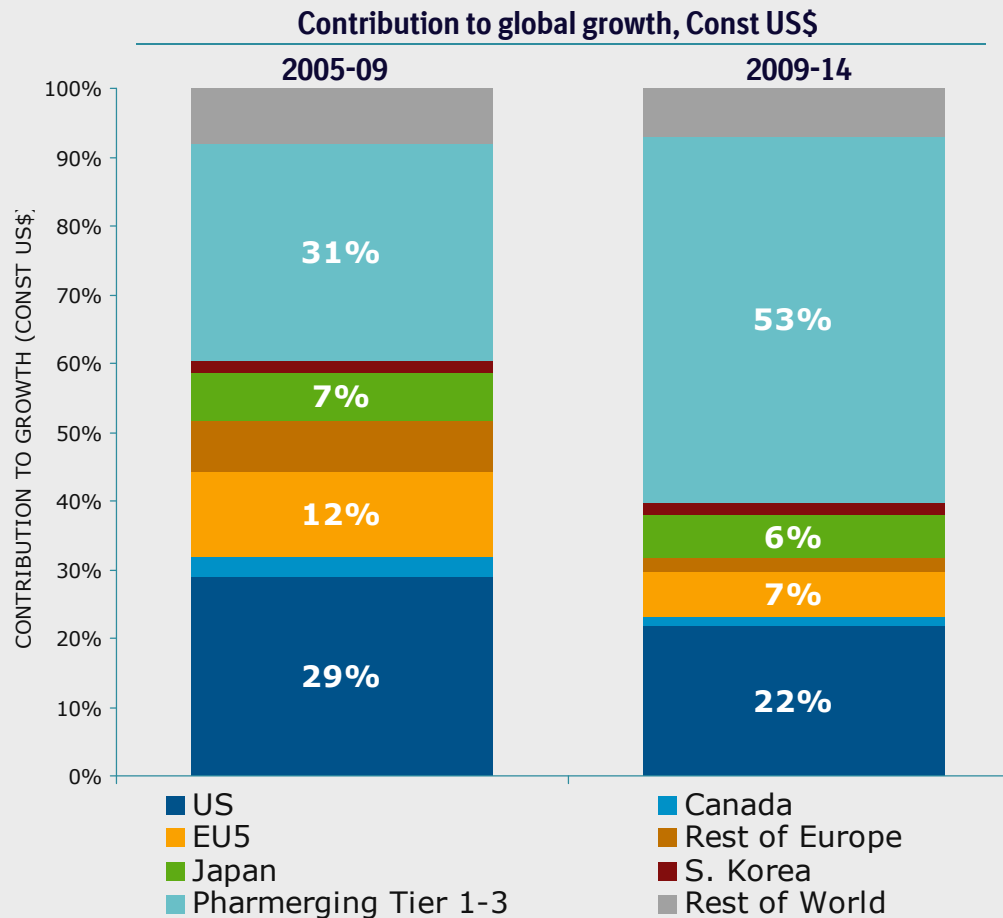
A new world order will evolve through 2014, with China becoming #3

UK to drop out of top 10: volatility in 11-20 group

2004 Rank		2009 Rank		2014 Rank
1	United States	1	United States	1
2	Japan	2	Japan	2
3	France	3	Germany	3
4	Germany	4	France	4
5	Italy	5	China	5
6	United Kingdom	6	Italy	6
7	Canada	7	Canada	7
8	Spain	8	Spain	8
9	China	9	United Kingdom	9
10	Brazil	10	Brazil	10
11	Mexico	11	Russia	11
12	Australia	12	Mexico	12
13	South Korea	13	India	13
14	India	14	Australia	14
15	Netherlands	15	Turkey	15
16	Belgium	16	South Korea	16
17	Poland	17	Greece	17
18	Turkey	18	Poland	18
19	Greece	19	Netherlands	19
20	Russia	20	Belgium	20

Source: IMS Health Market Prognosis, Sep 2010. Market size ranking in constant US\$

The European market will deliver significantly lower growth 2010 - 2014



Source: IMS Health Market Prognosis, Sep 2010



Curriculum Vitae

Prof. h.c. Dr. Wolfram Carius



Wolfram Carius, born 1961 in Zweibrücken/Germany, Prof., Ph.D., is Member of the Board of Managing Directors of Boehringer Ingelheim GmbH since January 01, 2009, responsible for the Corporate Board Division Human Resources and Operations.

He received his degree as pharmacist and his doctorate in pharmaceutical technology from the Saarland University. In 2009 he was awarded the scientific title of Professor h.c. from the University of Biberach.

Wolfram Carius began his professional career as a manager of quality control at Dr. Karl Thomae GmbH in Biberach. In the following years he took over different functions in plant development, management and technology for Boehringer Ingelheim in Germany, Japan and Brazil. Before joining the Board he was Senior Vice President Biopharmaceuticals and member of the managing board of Boehringer Ingelheim Pharma GmbH & Co KG, Germany and from September 2005 on he was responsible for the worldwide Pharmaceuticals Production of Boehringer Ingelheim GmbH as Corporate Director.

Presently he is additionally active as:

- Member of the controlling board, scientific advisor and professor at the University of Biberach, Germany
- Advisory board member of the National Institute of Bioprocessing, Research and Training (NIGRT, Ireland)
- Board member of the association of research driven pharmaceutical industry in Germany (VFA)
- Member of the foreign trade association of the chemical industry in Germany (VCI)
- Member of the global Pharma Manufacturing Forum (PMF)